SELF-ORGANISATION IN COURSE DESIGN: A COLLABORATIVE, THEORY-BASED APPROACH TO COURSE DEVELOPMENT IN INCLUSIVE EDUCATION

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CERTIFICATE OF AUTHORSHIP

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Charles Sturt University or any other educational institution, except where due acknowledgment is made in the thesis. Any contribution made to the research by colleagues with whom I have worked at Charles Sturt University or elsewhere during my candidature is fully acknowledged.

I agree that this thesis be accessible for the purpose of study and research in accordance with the normal conditions established by the Executive Director, Library Services or nominee, for the care, loan and reproduction of theses.

Signature:       Date:
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ABSTRACT
This study identified and described the need for reform in higher education, teacher education and inclusive education and the convergence point of four areas of need identified in the literature, creating a conceptual framework and course design process that addressed these needs. These were the need for a theoretical base to inform an effective course design process, the need to reduce the theory-to-practice gap, the need to utilise collaborative practice and the need to examine the impact of institutional practice on course design and reform.

The design process examined was a longitudinal study of a change initiative within Regional University (RU – a pseudonym used throughout the study). Complexity theory was used as a design tool and provided a theoretical basis for the content of the course while design-based research informed the design process. A three-phased design process was employed to create a course design approach within the higher education context that was practical, responsive to contextual needs and reflective of contemporary standards in the field of inclusive education. The framework was informed by design-based research and was significantly influenced by a process of development initially suggested by Herrington, McKenney, Reeves and Oliver (2007). The study involved applying the design-based methodology to enact six principles of self-organisation to create an inclusive education course. This included studying the nature of the interaction among members of a design team, the collaboration and feedback process, how the methodology evolved and adapted over time, and the way a course and subjects were designed to provide a coherent, interrelated experience for students.
Design-based research processes led to the evolution and examination of the course through three phases. Phase 1 focused on establishing the areas of need in the field using extant literature and a validation process to determine that the needs existed in the setting where the research was conducted. After determining that these needs existed, the processes of design and review at the study institution were examined. Phase 2 involved the development of a theoretically derived course design process and the application of a theoretical framework to address the needs. Phase 3 focused on the experiences of design team members and examined their views and perspectives on the development of a design approach, use of theory, the design process, course and subject design and the cycles of feedback. To further triangulate and validate these experiences, student feedback and studies published by design team members that utilised some of the design principles from this study were highlighted.

The knowledge gained from the design, approach and results of this study was used to develop a set of design principles and a course design model. The design process contributed new knowledge to the process of course design in the higher education context and mapped a process within teacher education, and more specifically inclusive education. This study demonstrated that theory could be incorporated successfully into both the design process and course content, in a way that responded to areas of need identified in the field.
CHAPTER 1. INTRODUCTION

1.1 Overview of the Chapter

The study presented in this thesis details an innovation in the higher education context demonstrating that a theoretically derived course design model and process can be sustained over time. Although the need for a theory base for practice in education is often discussed (Bell, 2004; Franz, 2007; Tellings, 2011), little research has focused specifically on course design processes in higher education. The development of clearly articulated course designs is a necessary prerequisite to any study of their efficacy and to the identification of specific features to which a determination of efficacy can be attributed. In this study it is argued that knowledge about such a process is of considerable value for quality institutional practice in the sector.

This chapter contains an advance organiser for the study and presents the case for the research and its intents. A brief summary of the origins and background for the study, a description of the conceptual framework, along with the goals of the study are provided. The need for a theoretically derived course design process based on higher education, teacher education and inclusive education literature is outlined. This is followed by a brief overview of the design principles used for the study as well as the study’s focus questions.

1.1.1 Terminology used

The nomenclature used to describe university offerings varies internationally and also within Australia. The terms used at Regional University (RU), an Australian higher education institution, are used throughout this study to ensure consistency. The decision to use RU terminology was taken because the study involved a deep interrogation of institutional documents which meant that reference to RU terms occurred frequently in the discussion. The introduction of an alternative nomenclature within this context was
identified as a potential source of confusion. In the context of this study subject is equivalent to course; course is equivalent to program.

1.2 Origin of the Research
This study focused on the design of a graduate inclusive education course, Master of Inclusive Education, at RU, a regional Australian University. The Australian Government classifies a university as regional based on geographical classification of remoteness that factors “the accessibility of services, defined largely in terms of distance” (Barber, 2011).

There were three key catalysts for the creation of a new graduate inclusive education course. The first was entirely pragmatic: the existing course was due to undergo a process of review. At around this time, the faculty was approached by an external stakeholder about the possibility of creating a course that included a practical project relevant to practicing teachers wishing to up-grade their current qualifications in inclusive (special) education or to move into the field from mainstream education. This became the second motivating force for the creation of a new theoretically derived course. The third was the appointment within the faculty of a senior academic in the inclusive education field, coinciding with the course review schedule.

Within the faculty, no theoretical or conceptual model of course design had ever been articulated. The review process for any course focused on procedural documentation rather than the design of curriculum and pedagogy. The procedural nature of the review emphasised adherence to university regulations, with no real focus on the theoretical or design characteristics of courses. The process served faculty requirements but offered little guidance beyond a few pages identifying the data entry that needed to be
completed in order to receive approval. The inclusive education team charged with responsibility for developing the course did not want to reinforce a process of which we were generally critical, but the team was unsure of what constituted a realistic and possible alternative.

With a new senior appointment in the inclusive education team along with the resultant leadership boost, the support of leadership and the commitment of team members and a faculty educational designer (a support person/s provided by the Division of Student Learning to each faculty with expertise in university teaching including educational technologies and the design of curriculum), we proceeded to create the conditions for a new course design framework and process, to be detailed later, that became the focus of this study. The practical implication of an institutional course review schedule and the constraints of course approval demands helped structure the design team’s work in terms of deadlines and resources dedicated to the process.

A group of six inclusive educators plus a faculty educational designer became the design team referred to throughout this study. Within the design team I took on the role of participant-researcher as I observed the behaviours and actions of the design team, collected physical documentation and recorded the details of the process. This team designed the framework, determined the ways it would be evident throughout the course and viewed the task of aligning the framework and its implicit values with its explicit reflection in practice as a wonderful opportunity. The intention was to create a framework that was sufficiently complex to reflect common beliefs across the course, yet flexible enough to respond to and reflect the unique demands of individual subjects. The study presented here explored an innovation in the higher education context. This
innovation demonstrated that course design and the subsequent process could be informed by theory.

1.3 Overview of the Study

The aim of the study was to investigate the creation of a collaborative design process for higher education course development, employing principles of complexity theory and self-organisation and using design-based research as a methodological approach. Complexity theory was used as the theoretical basis for the content of the course (Gell-Mann, 1994; Merry, 1995; Waldrop, 1992) and as a design tool (Bain, 2007), and design-based research provided the theoretical basis for the course design process.

The appeal of using a set of theoretical principles of self-organisation deriving from complexity theory within the higher education context was that it directly challenged many of the assumptions on which contemporary management and organisation were based (Goldspink, 2007). These assumptions included that common interests and needs existed among a faculty group and that hierarchical management and top-down control were desirable organisational structures. In contrast, the application of theoretical principles of self-organisation were not dependent on hierarchical control, were distributed and local in their operation and had the potential to lead to system-wide influence and stability (Goldspink, 2007; Mason, 2009; Zellermayer & Margolin, 2005).

Design-based research was employed as the methodological framework for this study. The subject of study was a complex system involving emergent properties that arose from the interaction of more variables than those initially known to the design team, including variables stemming from design team members themselves (Brown, 1992). Not only did this description of design-based research support the aims of this study, it
incorporated numerous key concepts of complexity theory that made the use of design-based research and complexity theory an ideal match.

This study identified four key areas of need in the higher education, teacher education and inclusive education literatures. The convergence of these issues provided the rationale to create a conceptual framework and course design model. The areas were: the need for a theoretical basis of course reform and design (Goldspink, 2007; Johnson, 2004; Levin, 2010); the need to close the theory-to-practice gap between (a) research in higher education, teacher education and inclusive education, and (b) what was done in practice (Angelides, 2004; Berry, 2007; Darling-Hammond, 2006b; McVarish & Rust, 2005); the need to utilise collaborative practice, including the way groups of people worked together to achieve common goals (Furlonger, Sharma, Moore & Smyth-King, 2010; Johnston, 2000; Winn & Zundans, 2004); and the impact of institutional practice on course reform, design and innovation (Bradley, Noonan, Nugent & Scales, 2008; Levin, 2010; MacDonald, 2003; Sabri, 2010).

A three-phase design process was employed in this study to create a course design approach within the higher education context that was practical, responsive to contextual needs and reflective of contemporary standards in the field of inclusive education. This approach was informed by design-based research and was significantly influenced by a process of development initially suggested by Herrington, McKenney, Reeves and Oliver (2007). According to these authors, design-based research “implies outputs in the form of both knowledge and products” (p. 7). The three modes of output development – design principles, designed artefact(s) and professional development of participants – were adapted for the context and used as a framework for the process
dimension of this study. This three-phase design process was utilised in order to respond to various aspects of course design.

The first phase of the Herrington et al., (2007) model focused on a comprehensive examination of the design principles informing the research being undertaken. In their view, this allowed readers to judge whether the research undertaken and insights provided had some relevance to their own setting (Herrington et al., 2007). For the purposes of this study, Phase 1 incorporated a review of the literature, an examination of existing course design and review processes in the study institution, design team members’ experiences and identification of stakeholder requirements, to establish areas of need and focus for the design process.

The second phase focused on the product of the design that was positioned as the major output. In this study, Phase 2 examined the development of the theoretical model and the design principles that anchored the process and informed the creation of a course that responded to needs identified in Phase 1. The synthesis of the various components of this phase culminated in a final design artefact that was the course created through the enactment of evaluation and feedback processes embedded within this phase.

The final phase targeted the collaboration and feedback processes required to complete a design-based research study (Herrington et al., 2007). For this study the concept was taken further to look at how capacity was created among those involved in the process. Thus Phase 3 focused specifically on the experience of the design team throughout the process, how their professional capacity was developed throughout the process, and triangulated that with the feedback provided by students and key stakeholders and
subsequent peer-reviewed research publications of design team members to support or refute claims made. Further, the needs identified and evaluated in Phase 1 were again examined to see whether the creation of a theoretically derived course responded to these areas of need.

1.4 The Purpose of the Study
The purpose of this study was to employ a design-based research approach to account for and document a course design process that responded to four areas of need consistently identified in the higher education, teacher education and inclusive education literature: the need for a theoretical basis of course reform and design, ways to close the theory-to-practice gap, the need to utilise collaborative practice and the need to examine the impact of institutional practice. My original contribution to knowledge was the creation of a set of empirically derived course design principles and a course design model informed by the experiences of this design process.

1.4.1 Goal of the study
The goal of this study was to build a responsive model of course design employing complexity and design theories. This goal was achieved by:

- employing the context of inclusive education, teacher education and specifically the development of a graduate course in higher education for the development of a course design model;
- using design-based research to describe and account for the design process from the perspective of the design team;
- investigating the application of a theory and practice of course design to an inclusive education graduate teacher education course;
- recording the emergent behaviour exhibited as the process developed;
employing design theory and investigating the course design process to develop a set of empirically derived design principles and a design model for use in course design in the researcher’s own institution and other contexts.

1.4.2 Research framework
Within design-based research methodology, theories and frameworks are conceptualised and then implemented in natural settings in order to test the ecological validity of theory and to generate new theories and frameworks for learning, instruction, design processes and educational reform (Herrington et al., 2007; Reeves, Herrington & Oliver, 2005; Sandoval & Bell, 2004). Design principles are generally drawn from theory, literature in the field and prior research (Tabak, 2004, p. 226). Participants are treated as co-participants and collaborators rather than subjects, in both the design and process (Barab & Squire, 2004; Design-Based Research Collective, 2003; Edelson, 2002; Tabak, 2004).

Design-based research was particularly well suited for this study because of how well the five key design characteristics responded to the goals of the study outlined above. The characteristics of design-based research are:

1) The central goals of designing an environment and developing theories of learning are intertwined;
2) Development and research take place through continuous cycles of design, enactment, analysis and redesign;
3) Research on design must lead to sharable theories that help communicate relevant implications to practitioners and other educational designers;
4) Research must account for how designs function in authentic settings (documenting success and failure) and focusing, too, on interactions that refine our understanding of the learning issues involved;
Methods here should document and connect the processes of enactment and outcomes of interest.

(The Design-Based Research Collective, 2003, p. 5)

The course design process examined in this study was theoretically driven and grounded in relevant research, theory and practice. Further, the design was conducted in a real-world setting where the design process was embedded in, and studied through, design-based research. All members of the design team were involved in the design process and worked together as flexible design participants.

1.4.3 Course design theoretical framework

The theoretical framework for the course design undertaken as part of this study was taken from the work of Bain (2007) and Bain and Weston (2012), who focused their research in school reform on six key theoretical principles derived from the field of self-organisation and complex adaptive systems. These principles were simple rules, embedded design, emergent feedback, similarity at scale, dispersed control and common schema. For this study, the theoretically derived process of reform was applied to the higher education context. The reform principles were further considered in terms of their suitability and application in this context and explored through the design process using design-based research. The higher education, teacher education and inclusive education literatures along with complexity theory as a design tool for the course, were used as the starting point from which to generate the research questions, with both research literature and theory informing the content of the course.
1.5 The Study Questions
The study questions were mapped around the three phases of design-based research (Herrington et al., 2007). The study was built around three major questions aligned with each phase.

1.5.1 Phase 1: Conceptualisation of Institutional Context (Analysis of issues)
Do the design and review processes at RU address the areas of need identified in the higher education, teacher education and inclusive education literature?

1.5.2 Phase 2: Development (Iterative cycles of design)
How did the theoretical principles of self-organisation inform the course design process and the work of the design team, and what was produced as a result?

1.5.3 Phase 3: Capacity building (Convergence of need, design and process)
What were design team members’ experiences of the course design process and how did this work respond to the areas of need in higher education, teacher education and inclusive education?

1.6 Significance of the Study
This study utilised literature in higher education, teacher education and inclusive education to determine four consistently identified areas of need evident in all three contexts. The challenges in higher education were doubly difficult as they required general reform as well as reforms particular to teacher education (Murray, 1998) and inclusive education (Forlin, 2010)

This study was significant due to the context: it was a longitudinal study that tracked a course design process and the story of the design team and members’ professional development. It focused on an education faculty within a rural community at a particular time when the opportunity presented to try something different. The design process
established contributed new knowledge to the process of course design in higher education and mapped a process within teacher education, and more specifically inclusive education, that could be used in other settings. It demonstrated that theory could be incorporated successfully into both the design process and course content, and in a way that responded to the needs and concerns in the field.

1.7 Assumptions and Scope of the Study
Embedded within this study and the recommendations was the overriding assumption that the establishment of a theoretically derived course design process was something of value and useful to those in higher education. This study detailed the experiences of a design team in a single case: the inclusive education team at RU. Their work was studied in depth, over time, and through iterative feedback cycles informed by design-based research, using a variety of data sources (Denzin & Lincoln, 2005). Through deep interrogation of the design process, from the establishment of a theoretical base to the incorporation of design-based research as a methodological process and through a detailed account of course development, the intention was to provide a rigorous process that incorporated a design approach and sound theoretical principles. In this context, generalisability was not assumed. It is the prerogative of readers to determine whether the context, methods and results suggest that the process would be applicable to other settings and circumstances. Certainly the use of case studies, in this instance to explore the formation and development of a course in higher education, was a valid methodology seen throughout the literature (Burns, 2000; Creswell, 2003; Stake, 1995).

1.8 Structure of the Thesis
This chapter has provided a brief overview incorporating the research background and purpose that pre-empted the need for a theoretically driven course design process. The key areas of need identified in the higher education, teacher education and inclusive
education literature, to be elaborated in Chapter 2, were also briefly articulated to provide readers with an understanding of the relationship between them and the theoretical and methodological drivers for the study. From this, the research questions were established and an overview developed of the significance of the study within the higher education context. The chapter concluded with a summary of the assumptions and scope of the study.

In Chapter 2, literature in higher education, teacher education and inclusive education is reviewed around the four areas of need that have consistently appeared in all three fields: the need for a theoretical basis of course reform and design, the need to close the theory-to-practice gap, the need to utilise collaborative practice and the need to understand the impact of institutional practice. The literature review will take up each of these themes and then connect the issues.

This is followed by Chapter 3 in which the theoretical context of complexity theory is established as a precursor to demonstrating how it may be utilised as a design tool and applied in higher education. An explanation is then provided for the use of complexity theory in this study, the six principles of self-organisation focused on, how these principles respond to the needs presented in the previous chapter and their intended use in this study. Chapter 4 describes the research design and methodology, including the theoretical framework used throughout the design process as well as the analytical process used to critique this data. This chapter also includes an explanation of the use of case study, the role of participant-researcher, a description of the design team members (participants) and the data audit trail.
The results section of the thesis has used the three output processes of design-based research as an organisational tool. Chapters 5, 6 and 7 each focus on a phase of the three-phase process. Chapter 5 incorporates a brief re-cap and review of the literature, an examination of existing course design and review processes in the study institution, description of design team experiences, and the identification of stakeholder requirements. Chapter 6, a discussion of Phase 2, focuses on the design and formulation of a course design process that incorporates design principles and responds to the identified areas of need. The discussion of Phase 3 in Chapter 7 reflects on the course design process through the capacity-building of design team members, the feedback of stakeholders and the resultant product, the course.

Chapter 8 provides a summary of the results presented in the previous chapters, examines the four areas of need and how effectively they were addressed through the course design process, considers the implications for practice, proposes a set of course design principles and a course design model for future work in the field, and provides suggestions for further research.
CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

The introductory chapter provided an overview including the goals of the study, the key research questions and a brief introduction to complexity theory and design-based research. In this chapter issues in higher education, teacher education and inclusive education literature are examined and triangulated, in order to establish areas of need for the practice of course design. The evidence-based essential characteristics of sound courses are detailed and the synergies between the three contexts – teacher education, higher education and inclusive education – are highlighted throughout. Each section explores what has been done in the field, identifies the current climate, summarises the key findings and finally considers what needs to happen in order to address the areas of need identified.

2.1.1 Operational definitions

For consistency the term inclusive education rather than special education is used throughout this thesis to reflect the nomenclature used at the study institution (RU). The term children is used when referring to school pupils and the term student when referring to university level students. The term theory is used in a broad sense, and this review examines not just major theoretical underpinnings, methods and systems but also the notion of practical theory and the practice of enacting theoretical concepts in an educational setting.

Due to the nature of education, terms used in the field have different meanings in different contexts (Graham & Sweller, 2011). This is particularly true of the term inclusion, which makes it important to explicitly indicate the particular discourse of inclusion used as a basis for this study. While the broader scope and meaning of inclusion now often incorporates concepts of social inclusion and equity (Ashman &
Elkins, 2012; Foreman, 2011; Gill, 2008), this study focuses on practices and attitudes specifically relating to children with disabilities (Graham & Sweller, 2011; Taylor, 2006). Historically, there has been a tradition of the psycho-medical paradigm in special education that positions deficits within individual children rather than focusing on what can be done to ensure that all opportunities are provided in relation to a child’s education. The term inclusion has superseded integration in the vocabulary of special educators as a more radical construct located within a human rights discourse (Avramidis & Norwich, 2002). The shift from the term special education to inclusive education recognises the diverse needs of children and their active participation to achieve to their potential within a mainstream setting (Wu, Ashman & Kim, 2008).

As mentioned in the previous chapter, the term course is used for program and subject for course due to Australian nomenclature used in the study institution. In instances when a direct quote is used or when altering the terminology would alter the meaning, the equivalent term used in this study is included in parenthesis.

2.2 Setting the Context in Education
The need for more responsive and coherent teacher education courses has been well documented (Darling-Hammond, 2006a; Fullan, 1999; NCATE, 2000). This includes a focus on essential teaching competencies and the incorporation of contemporary instructional methods that are shaping educational settings, including differentiation, evidence-based practice and the use of collaboration (Fuchs, Fahsl & James, 2014; Sayeski & Higgins, 2013). Moran (2007) suggests that most teacher educators have not had the opportunity to critique and challenge many of the conservative assumptions that provide the foundation for teacher education courses in higher education settings,
including working alone and in silos. The development of a new course design and
development process creates the ideal opportunity to challenge such assumptions.

2.3 What Do the Reports in Education Suggest?

In Australia over the past 20 years a number of reports and reviews have been
commissioned in the area of teacher education, resulting in hundreds of suggestions for
suggested, these reports have had limited impact and very few of the recommendations
have been taken on board by the government or universities. This trend of inaction
appears to have continued with the release of more recent reports and reviews into
higher education and teacher education (Bokor, 2012; Gonski, 2011; Hartsuyker, 2007;
Ramsey, 2000). The more optimistic findings of the Australian inquiry into teacher
education by the Australian House of Representatives, Top of the Class (Hartsuyker,
2007), appear in strong contrast to prior reports addressing similar issues. In fact the
Foreword to the report explicitly states that “the teacher education system is not in
crisis” (p.vii), although many of the concerns addressed throughout the report would
suggest otherwise. These concerns, including teacher quality, the disconnect between
theory and practice, different stakeholder agendas, the need to collaborate more
effectively and the low priority of teacher education in higher education, are not unique
to the Australian context (Carnegie Task Force, 1986; DeLeon, 2001; Fullan, Galluzzo,

Quality Matters (Ramsey, 2000), a review of teacher education in New South Wales (a
state of Australia), found that the recommendations from more than 20 reviews of
teaching and teacher education over the previous two decades about what should happen
in teacher education had extremely limited impact (p. 14). The key findings at the time
were that there was a need for teachers of the highest possible quality to be produced,
that teacher educators were viewed as disconnected from schools and that there was a
diverse range of stakeholders in teacher education, each with their own agendas that
often obstructed worthwhile recommendations. Ramsey was also critical of the position
of teacher education in many universities and suggested that it needed to be seen as a
priority for institutions committed to the field. Many respondents to the review drew
attention to what they felt was the division between theory and practice in teacher
education.

What was particularly alarming was the very blunt statement that even after the
publication of multiple reports over the past two decades indicating the need for
universities to strengthen teacher education, most did little or nothing to change
(Ramsey, 2000, p.22). Ramsey explicitly stated in his review that “These are critical
times in teacher education and in teaching” (p. 18). This sense of urgency was lacking
in the subsequent major report into teacher education in Australia, *Top of the Class*
(Hartsuyker, 2007) which seemed to downplay many of the issues identified by Ramsey
and other research literature produced during the 7 years between the publication of the
two reports. *Top of the Class* (Hartsuyker, 2007) noted that there had been numerous
inquiries into teacher education over the past 20 years (p.xxii) but suggested that
substantial changes had been made in teacher education. Little evidence was provided to
support this claim and the information contained within the report indicated that the
quality of teacher education (p. xxi) and what quality in teacher education meant was
variable (p. 4). That “inadequate funding for research to ensure that teacher education
and teaching is research evidenced-based” (p. xxi) and that a “gap between theory and
practice” (p. xxi) was still evident meant that “a fragmented approach to teacher

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education” (p. xxi) was still a major on-going concern that had not been adequately addressed.

There was also obvious concern in Ramsey’s report (2000) about the limited research into the effectiveness of different models of teacher education. A key problem seemed to be that a number of teacher education courses embedded the practices that they criticised. For example, although many respondents to the *Quality Matters* review of teacher education (Ramsey, 2000) noted the division between theory and practice in teacher education, and although evidence-based research was promoted as critical in the field and as a key way to identify effective models of teacher education, little of this style of research was actually done (Burkhardt & Schoenfeld, 2003; Cologon, 2013; Hempenstall, 2006; Ure, Gough & Newton, 2009).

In addition to these issues has been the suggestion that “teacher education is, at best, ineffectual and, at worst, harmful and insidiously ideological” (Borko, Liston & Whitcomb, 2006, p. 199). A submission to *Quality Matters* (Ramsey, 2000) expressed a similar sentiment: “if…teachers succeed in New South Wales, it is now often in spite of, not because of, the quality of teacher education” (p. 54). These comments reflect, in part, broader concerns about higher education and teacher education course design and development. Reports (particularly from the United States (US)) suggest that accreditation programs and accountability procedures have done little to actually improve teacher quality, attitudes or behaviours (Cochran-Smith & Zeichner, 2005; Marsh, Springer, McCaffrey, Yuan, Epstein, Koppich et al., 2011). This is partially due to the facts that no minimum quality benchmark has been set and notions of quality are varied (Cochran-Smith, 2005a) – both major issues in the teacher quality debate.
Interestingly, although the *Quality Matters* report indicated that no firm conclusions about the overall quality of teacher education in Australia could be made, as there was not a rich enough body of research evidence and no established definition of what was meant by “quality”, one of the key recommendations was the establishment of professional standards and an accreditation body to respond to issues relating to teacher quality. In the US, a federal mandate was established that required all new teachers entering the field be highly qualified (Paige, 2004, p.9) and it is apparent that establishing a similar benchmark in Australia has been seen as a solution to lifting the status of the teaching profession (Dyson, 2005; Smith, 2006).

Internationally, *Educating School Teachers*, a report compiled by Arthur Levine (2006) in the US, raised similar issues to those identified by Ramsey in Australia 6 years earlier. Levine noted various disputes about how to prepare high-quality teachers, what teachers need to know as well as how and when to learn these skills. It is evident that teachers need to be prepared to educate *all* children to achieve the highest learning outcomes. With this consideration, teacher education needs to redesigned for a new era (Booth, Nes & Stromstrad, 2003; Caldwell & Sutton, 2010; Leigh & Ryan, 2006). It is apparent that there is disagreement among stakeholders regarding a reform agenda and the process attached to it and, as Fitzmaurice (2010) indicated, there is a growing concern that teaching is being reduced to the acquisition of a set of competencies. *Teachers for a New Era* (2006) examined the role of the teacher in educational reform. It looked at what constituted quality teacher education courses and how excellence was incorporated. Conclusions invariably pointed to the need for evidence-based research in the field along with the use of successful design principles in the construction of teacher education courses.
Levine (2006) suggested that teacher education curriculum was designed and implemented in a patchwork manner and that academic instruction and practical instruction were disconnected. It was clear that the best courses integrated theory and practice, but teacher education was explicitly identified as having either “a chasm between theory and practice” or “an abyss between theory and practice”.

In the field of inclusive education, Forlin, Chambers, Loreman, Deppeler and Sharma (2013) provided an overview of inclusive education in Australia and internationally. Their report identified research and evidence-based literature on outcomes of inclusive education for children with disabilities in these contexts, but focused more specifically on Australia. In terms of aspects that had a more direct impact on inclusive education in higher education, they noted that curriculum differentiation, the application of universal design, use of information technologies, planning for individual child needs, and a focus on quality teaching for all children were the most prominent practices (Forlin et al., 2013, pp. 32-35).

In summary, over the past 15 years, teacher education and higher education courses have been subjected to widespread international criticism in national reports and the broader literature (Bank, 2012; Bradley et al., 2008; Caldwell & Sutton, 2010; Cochran-Smith, 2005b; Grossman, Hammerness, McDonald & Ronfeldt, 2008; Hartsuyker, 2007; National Research Council, 2010). The concerns described in these reports are extensive, although they focus on the recurring themes of relevance, lack of collaboration and course cohesion in both content and delivery, as well as fundamental difficulties in making demonstrable changes in practice (Korthagen, 2004; Leigh & Ryan, 2006).
2.4 Higher Education

Higher education institutions are continually transforming, with varying levels of success (Bokor, 2012). Not only are there internal and external pressures to consider, institutions need to critically examine their current situation, evaluate available options, consider vested interests, potential costs and benefits, and factor in context-specific considerations before undertaking any reform process. The *Bradley Review of Australian Higher Education* (Bradley et al., 2008) challenged all Australian universities to see the push for increased participation in higher education as a driver for curriculum reform. With current curriculum reform promoting the importance of catering for the needs of individual students across all disciplines, changes in education courses and their delivery are also necessary. As part of this reform process there is also a need for separation in terms of goal setting and assessment of the university as an institution and the university as a service that delivers pedagogical knowledge to students (Harris, Farrell, Bell, Devlin & James, 2008).

Other countries have already moved to address participation and have invested in tertiary education in order to remain internationally competitive. The OECD report, *Education at a Glance* (2010) indicated that as a percentage of GDP (gross domestic product) the USA, Canada and Korea invest the most in tertiary education. However, when the level of investment is examined from public sources (primarily taxes) Canada, Denmark, Finland and Sweden invest heavily. *The Melbourne Declaration on Educational Goals for Young Australians* (Dawkins, 2008) maps closely to the Bradley Review in terms of areas of focus and general values. To be internationally competitive, Australia requires a higher education sector that is responsive to change (Bradley et al., 2008; Gonski, 2011) and encouraged to be innovative.
2.4.1 Appetite and readiness for change and reform in course design

Although the term ‘reform’ is used frequently within the higher education literature, “the specific nature of reform varies across countries due to unique combinations of historical, cultural, institutional and political factors” (Hopkins & Levin, 2000 p.21). Even though there has been a dramatic increase in educational reform efforts over the past 25 years, it is having insufficient impact (Hopkins & Levin, 2000). Many reform efforts around the world, appeared to have been guided by issues currently in the public mind rather than by evidence of value or potential impact (Goldspink, 2007; Levin, 2010). Coate and Tooher (2010) and Levin (2010) all touched on the disconnect between the academics who work at the ‘coal face’ of education and reform directed predominantly by political interests. These researchers suggested that academics instrumental in curriculum reform were open to innovations, change, and enhancing teaching and learning. They operated differently from politically driven reform where improvement was centred around structural aspects of the system – governance, finance, workforce and accountability.

Lunenberg and Willemse (2006) synthesised past research suggesting that institutional reform often seemed to take place on the basis of political influence or a model forced on academics to adopt from higher in the institutional hierarchy. The push for accountability also had an impact on higher education institutions, as more and more people not directly involved with education and without an educational philosophy for actions taken focused on targets without consideration of the human impact (Hardy, 2010; Lingard, 2011; Ravitch, 2007). Without a clear vision of the goals of higher education, and how reform goals can be incorporated within this vision, change will continue to be ad hoc and guided by special interests (Jacobs & van der Ploeg, 2006).
Further, without a considered and informed theoretical base, reform efforts will continue to demonstrate little evidence of sustained improvement (Levin, 2010).

How university courses are designed has not been addressed through reform, although traditional design methods have been criticised (Florian, Young & Rouse, 2010; Forlin, 2010; Song-Turner & Willis, 2011). The way that universities tend to work is not conducive to responding to these criticisms. Although many in higher education institutions recognise these faults and want to participate in change, ineffective reform efforts continue and do not reflect a change in attitudes and perspectives (Goodlad, 2002). Explicit and careful consideration of course design could overcome many of these criticisms during the course creation process (Coppieters, 2005).

In Australia, Song-Turner and Willis (2011) examined how courses were designed and delivered to cater for the needs of Chinese students undertaking study at their institution. As they noted, although previous research had examined the pedagogical aspects of cohorts in Australia, little had focused on the design and delivery from a student perspective. The researchers conducted semi-structured interviews that took place as either group discussions or bilingual individual interviews. The student group consisted of 19 onshore Chinese students located at five campuses and 27 offshore students in four locations in China. Four particular aims of the study were identified as examination points – what students feel and think about various aspects of the subject design and delivery; what makes a ‘good’/’poor’ course; how much should courses be adapted to suit individual needs; what makes a successful experience.
In relation to the aims that had most applicability to the present study, subject design and delivery and what made for good versus poor subjects, the responses covered a number of aspects. Subject design and delivery responses indicated that having a variety of teaching and learning activities, using plenty of examples, adjusting language and using practical and up-to-date material all positively affected the student experience. Aspects that led to student perception of a good subject included a number of qualities relating to the instructors – their knowledge and expertise, personality, enthusiasm – as well as the use of appropriate instructional materials and well-designed assessment. Implications highlighted by this study identified the need for higher education institutions to equip students with skills considered useful for their careers as well as careful and holistic consideration of subject and course design processes and how the needs of particular students were addressed. As the authors stated, “Determining what needs to change in course (subject) delivery and design is not a one-off activity, but rather it is a process of continuous analysis, reflection, and adjustment...” (Song-Turner & Willis, 2011, p. 549). This summation is reflective of the approach pursued in the present study through the application of design-based research and iterative cycles of feedback.

Tension exists between the organisational structure and realities of higher education institutions and their daily operations. The everyday restrictions and constraints of higher education practice, such as tight deadlines and expansive documentation requirements, appear to work against design coherence and depth. Educators have observed the variability in both content and rigour in courses, while also recognising that quality relates to the content of courses and how these courses are organised and delivered (Borko et al., 2006; Tudor, 2006).
Curriculum reform has been impacted by numerous studies (Cochran-Smith, 2006; Darling-Hammond, 2006a, 2006b; Darling-Hammond & Sykes, 2003; Dyson, 2005) suggesting that there is a lack of quality and consistency across institutions and that previous reform efforts have been too narrow, with smaller pockets of faculties and schools within larger institutions able to demonstrate significant change in terms of quality, rigour, theoretically driven reform, increased enrolments. At a broader institutional level however, little change is evident.

Some researchers believe that at an institutional level, little impact is made in terms of innovation and change as the higher education literature simply describes the current state of the academy rather than taking a visionary perspective (Andrews, Pritchett & Woolcock, 2012; Fumasoli & Stensaker, 2013). One of the key issues is that organisations exist to support sustained improvement but must also be mindful of the impact of particular decisions and administrative restrictions (Levin, 2010). Further, university governance is generally recognised for the long and slow approval process linked to any review and renewal (Mortimer & Sathre, 2007) and educational institutions have been found to be highly resistant to change (Pegg, 2013). Academic identities are often connected and informed by the institutional context from which they emerge. This means that university executives need to consciously consider the culture and values they are projecting to their staff (Chalmers, 2011; Sabri, 2010).

Change requires the commitment of individuals who also need to construct their own meaning for change (Fullan et al., 1998). However, autonomy may be limited to specific parameters. This need for autonomy in the structure of courses and subjects has been articulated by university staff. From the university perspective, restrictions are placed
on these in order to maintain quality control, yet this level of control may also be detrimental to innovation. A dichotomy is created because although there may be no formal documentation regarding levels of change and reform, there are still unofficial guidelines about what is acceptable and what is not, created by the university culture itself. As Kezar and Lester (2009) observed, individuals working within an institution develop a particular type of expertise that allows them to function within the institutional structures. This means that inefficiencies continue to be perpetuated as institutional foundations remain unchanged.

To remain true to the traditional idea of the university as a site for academic autonomy, there is a need for educators to be active participants in the reform process at both institutional and community level, as this will allow them to advocate strongly for what they consider to be indicators of quality in a course, including generalist teacher education and inclusive education courses. As mentioned earlier, directives for educational reform, including accountability and higher standards, often come from outside the educational system. Universities are placed under pressure to respond to initiatives and demonstrate change as quickly as possible, often in order to be “rewarded” for measuring up, or else feel the economic consequences of falling short. Tensions exist between the organisational structure of universities and their daily operations that appear to work against coherence and depth in courses.

Darling-Hammond (2006a) suggested that education systems, including institutions of higher education and schools, need to work together on a reform agenda, as many issues are similar across these interest groups. The belief is that focusing on shared problems increases political power, develops the learning capacity of the “system” as a larger
entity. Ultimately the needs of schools would directly affect and be addressed by teacher education practices within institutions (Coppieters, 2005; Lunenberg & Willemse, 2006; Zimpher & Howey, 2005).

2.4.2 Theory-to-practice gap in higher education
A common theme that runs through the critiques of higher education research is that there is a gap between research and practice with the most prevalent explanation suggesting that researchers and practitioners operate within quite different cultures (Kezar, 2000; Schalock, Schalock & Ayres, 2006). Kezar (2000) additionally suggested that the dichotomy between theory and practice is a social construction. Within the institutional context, theory is broadly constructed to mean work that is done in research, principally in university settings, and the extent to which it has an impact upon the field. Berry (2007) further articulated that views of knowledge in higher education have traditionally been organised in two ways: “knowledge that is propositional or theoretical, and knowledge that is experiential or practical” (p. 11). This distinction between the forms of knowledge has shaped the ways that knowledge has been organised, understood and valued in researching education (Berry, 2007) and has led to the notion of a theory-to-practice gap.

Van den Bos and Brouwer (2014) examined the learning process of 12 Dutch novice university teachers. The participants were asked for their opinions about core themes concerning teaching and learning before and after their completion of the induction program. The researchers wanted to know what changes were evident in participants’ experience and the program features and instructional actions that were particularly helpful in this development. The program consisted of 14 one-day meetings over a 5-month period and also required participants to complete logbook entries during this
time. The meetings focused on effective teaching strategies, mentoring individuals, and supervising group work and course design and assessment.

Logbook entries indicated that participants were reflecting more on teaching processes and trying out new teaching techniques. Program features and instructional practices that participants found particularly helpful included active teaching techniques, using formative assessment to guide and support the learning process, and the importance of teacher-student interactions. Participants also reported their recognition of the importance of interactions as particularly effective and resisting the urge to cover all content during lessons. Participants in this study also highlighted that modelling by the teacher educator was extremely beneficial to their experience. The need for more of this type of instruction in higher education has been identified by other researchers in the higher education and teacher educations fields (Cochran-Smith, 2005b; Darling-Hammond, 2006a; Northfield & Gunstone, 1997). The relevance to this study include the need to be mindful of adaptations for a group with particular needs and the value in positioning educators as students for additional perspectives about what works and should be considered in course and subject design. The course designed in the present study was based upon a collaborative approach to practice and encouraged interactions throughout.

The field of higher education often appears to operate in conflict with the means of overcoming the theory-to-practice gap and providing purposeful integration of theory and practice. In this context faculties reward an orientation to academic culture and a separation from practice (Kezar, 2000). The individual nature of acquiring practical knowledge and the fact that it does not conform to established paradigms of
measurement such as validity and reliability means that practical knowledge is downgraded when compared with “traditional theoretical” knowledge (Berry, 2007). Kezar (2000) suggested that multiple factors come into play at the higher education level that continue to separate theory from practice – the culture of the institution, socialisation of the faculty, the discipline focuses of the institution and the continued tension within higher education itself as a professional identity.

2.4.3 Collaboration in higher education
An organisation has at its core a system of beliefs and routines that are the dominant behaviours that lead to its stability (Kezar & Lester, 2009; O’Day, 2002). However, these are not static. As new people enter an organisation, new ideas are presented that are considered and potentially adapted through the interactions of colleagues with one another and their environment.

Successful collaboration involves various factors, the most critical of which are relationships that develop a sense of trust and mutual respect (Daniel, Auhl & Hastings, 2013; Supovitz & Tognatta, 2013). The collaborative process is one that requires a sense of shared purpose, clearly defined roles and equality in relation to power, leadership, ownership and responsibility (Friend & Cook, 2013; Gajda & Koliba, 2007, 2008). Collaborative practice in itself should encourage relationship building through social interaction, conversation, debate, creative tension, questions, and acceptance of divergent perspectives among individuals. In working through this process, different opinions, understandings, new positions, and professional growth are provoked as well as the valuing of the expertise and input of all those involved (Deppeler, 2006; Kezar, 2006). Genuine collaboration and interactions between individuals can lead each to new positions in thinking. However, such interaction is influenced by the social, cultural,
political, and philosophical agendas that are brought by the individuals involved (Awbrey, 2005; Kezar & Lester, 2009).

Successful and long-term change requires collaboration, but higher education is often a solitary and isolating profession, with university structures separating disciplines. Thus varied decision making is encouraged at a local rather than an institutional level (Mortimer & Sathre, 2007). After reflection on multiple higher education reforms in the US, Zemsky (2009, p. 2) synthesised the lessons from these reforms as:

- “strong rhetoric changes nothing,
- demand for reform must be internal,
- outside agencies (such as government) cannot prescribe change but must create the conditions that make change possible,
- adequate resourcing is essential, and
- it is best to focus on true systemic change.”

A key focus of the work of Kezar and Lester (2009) was the conditions that needed to be in place at a higher education institution to support collaboration. They noted that there were few research-based resources on the topic of collaboration in higher education, with most work being anecdotal or contained in books and articles on the value of specific types of collaboration. They examined the qualities of four university campuses in the US with high levels of collaboration. These qualities were examined in greater depth through their extrapolation in one campus to demonstrate how teaching, research, governance and management all needed to be altered to support the collaborative process. Across the four sites, the organisational features that facilitated collaboration were “mission, vision, and educational philosophy; values; social
networks; integrating structures; rewards; external pressures; and learning’” (Kezar & Lester, 2009, p. xiv). The lack of a number of these qualities in the focus institution for this study, RU, significantly affected the experience of design team members.

Collaboration, and the process involved for effective collaboration, can be viewed at several levels: collaboration at institutional level where academics work together; the specific example of this study where academics in a specialist field worked together to create and develop new course content; collaboration in the field; and collaboration between educators in different contexts, such as between academics and teachers or academics and their students. It is a skill that is highly valued and prominently positioned within teacher education courses in inclusive education (Brownell et al., 2005, p. 5) because of the need to work effectively with educators, other professionals and families in practice. Norton, Sonnemann and Cherastidtham (2013) indicated that, despite recognition of the benefits of collaboration, teachers in Australian universities continue to largely work in isolation.

2.4.4 Quality in higher education

The increasing emphasis on quality in higher education places new demands on staff development and on finding promising models and methodologies that will guide development approaches (Norton, 2012). The quality issue is challenging and has become a priority for higher education worldwide (Ho, 2000), even as critics argue that teacher education courses, in particular, are not intellectually challenging and actually dissuade intelligent potential students from entering the profession (Brownell, Ross, Colon & McCallum, 2005).
As recommended by the *Bradley Review of Australian Higher Education* (Bradley et al., 2008), Australia has followed the lead of other countries by establishing a national body for regulation and quality assurance. The Tertiary Education Quality and Standards Agency (TEQSA) is Australia’s regulatory and quality agency for higher education whose primary aim is to ensure that students receive high quality education at any Australian higher education institution. The Tertiary Education Quality and Standards Agency Act 2011 (TEQSA, 2011) established TEQSA as an agency as well as a new national regulatory and quality assurance environment within Australian higher education. TEQSA began to register and evaluate the performance of higher education providers in five domains: provider standards, qualification standards, teaching and learning standards, information standards and research standards (TEQSA, 2011). The introduction of student demand-driven funding in response to the *Bradley Review of Higher Education* guaranteed every eligible domestic student who gained entry into an undergraduate course at a public Australian university a government-supported place (Higher Education Support Amendment, 2011). This openly competitive environment to attract and retain students makes sound curriculum reform and high quality course design even more imperative.

2.4.5 Resolving areas of need in higher education

Through their research, Knapp and Brandon (1998) identified four prominent features of university structure: knowledge-based organisation, position hierarchy, promotion system, and departmental autonomy. They considered that these features created great challenges for academics attempting anything a little different and innovative. Since that research, others have picked up some of these themes and noted tensions when a level of flexibility is sought against centralised control within this complex environment (Knight, 2001; MacDonald, 2003); when the enthusiasm for self-organisation
demonstrated by educators is dampened at administrative levels due to concern about potential risks that may never eventuate (Goldspink, 2007); and when the greatest focus is on rationalisation and efficiency (Coate & Tooher, 2010). Teacher education and inclusive education are affected by all the conditions mentioned above to various degrees, particularly in relation to funding and accountability in the education sector (Bradley et al., 2008; Gonski, 2011; Hartsuyker, 2007).

The sort of reform that is advocated in the present study is in its infancy in the higher education sector, with little attention being given to the evolution of course content or the way it can transform and renew an institution, although this situation is slowly changing (Burgess, 2004; Oliver & Hyun, 2011; Posner & Rudnitsky, 2005). Curriculum reform that goes beyond the regular institutional cycles of student evaluation, staff reflection, selection and design of new subject materials at the subject level is particularly challenging, as it requires time and dedicated participation that some researchers claim are not a natural part of higher education culture (Burgess, 2004; Oliver & Hyun, 2011). An integrated course design approach, a more rigorous theoretical base for course reform and tight coherence between course-work and practical work is required (Darling-Hammond, Hammerness, Grossman, Rust & Shulman, 2005; Darling-Hammond, 2006a).

2.4.6 Summary of areas of need in higher education

It is evident that higher education institutions are susceptible to internal and external pressures, such as particularly recent accountability measures introduced in Australia through performance standards (Gonski, 2011; TEQSA, 2011). Past reform efforts have had little broad-ranging impact. A number of smaller studies have demonstrated instances of improved quality, rigour and increased enrolments but these are rarely
evident at scale (Burgess, 2004; Kezar & Lester, 2009; Oliver & Hyun, 2011). Changes to organisational structures and university cultures that reward individualism are needed to move to a more collaborative model of course design.

2.4.7 Connecting higher education to teacher education

One of the resonant themes running through both higher education and teacher education literature is the lack of a theory of design or the absence of foundational frameworks to guide new initiatives in course planning (Clark, Dyson, Milward & Robson, 1999; Edwards, Gilroy & Hartley, 2002; Smith, Lynch & Mienczakowski, 2003). A key criticism of past reform efforts has been the lack of an adequate and coherent planning theory to make clear conceptual and procedural connections within courses and effectively address the process of change (Coppieters, 2005; Schalock et al., 2006).

A further consistent suggestion in the literature concerns the need for teacher educators to be active, visible participants in the reform process at both institutional and community level and to advocate strongly for what they consider are indicators of quality (Berry, 2005; Goodlad, 2002; Koster & Dengerink, 2008). Researchers have noted that what seems to work against such active involvement in the higher education context are promotion criteria that emphasise research and publication output rather than the quality of teaching, that consequently appear to deter tertiary educators from investing heavily in pedagogy (Dinkelman, 2011; Korthagen, Loughran & Lunenberg, 2005; Ramsey, 2000; Tudor, 2006).

A further challenge is that the status of teacher education is marginalised in the higher education context in Australia and internationally (Bradley et al., 2008; Levine, 2006;
Liston et al., 2008; Loughran, 2011). This is often doubly true for inclusive educators, as this marginalisation is felt in both the school and tertiary sector. The concept of inclusion needs to be infused across all aspects of teacher education, otherwise it will continue to be seen by teachers as something different, not their problem, and not part of typical classroom teaching (Forlin, 2010).

In the higher education sector, as in any ethical educational practice where fees are charged, there are set guidelines within which courses and subjects must be established and certain procedures that must to be followed. Ideally, teacher education courses should model and provide students with the opportunity to experience, observe and critique the teaching and learning approaches being advocated (Northfield & Gunstone, 1997; Reid, 2011). If an expectation of a particular course is that students learn how to work collaboratively, then this should be demonstrated by the educators involved in the delivery of the course. Fragmentation is almost guaranteed in the absence of collaborative cultures. Many of these needs and concerns are not new to the Australian context. In 1995, Gore noted in her Innovative Links Project report that there was a need for schools and universities to work collaboratively on a reform agenda that would reflect contemporary needs, and these particular educational contexts, with consideration of economic, political, cultural and technological change. This appears a sound suggestion, incorporating the needs of multiple stakeholders and multiple dimensions within a reform agenda.

Traditional teacher education courses have generally consisted of subjects where theory and practice have little connection and the process of knowledge acquisition is not systematically examined or placed in context (Lunenberg & Willemse, 2006, p. 82).
Part of the responsibility of higher education institutions is to ensure the development of courses as well as the use of pedagogies and inclusive language that link theory and practice (Darling-Hammond, 2006a; Dyson, 2005; Nes, 2000). Darling-Hammond (2006a) further emphasised that any initiative for connecting theory and practice cannot succeed without the real consideration and establishment of sound relationships between universities and schools, echoing a point made by Gore (1995) over 10 years earlier, and supporting the findings of Schalock et al. (2006).

Numerous researchers (Bain, Lancaster & Zundans, 2009; Bain, Lancaster, Zundans & Parkes, 2009; Darling-Hammond, 2006a; Marsh, 2004; Metzler & Blankenship, 2008) suggest that education systems, including institutions of higher education and schools, need to work together on a reform agenda using evidence-based practice, as many issues are similar across these interest groups. The argument is that focusing on shared problems would increase political power, develop the learning capacity of the “system” as a larger entity and that, ultimately, the needs of schools would directly impact and be addressed by teacher education practices within institutions. Teacher education requires a more integrated and dynamic approach to designing courses than is currently evident.

2.5 Teacher Education
Teacher education is heavily affected by political conditions at both state and federal level that creates additional accountability demands, constraints and possibilities (Cochran-Smith & Zeichner, 2005; Evans, 2010; Korthagen et al., 2005; Piccoli, 2012). Within this climate it is important not only that challenges are confronted but also that opportunities are embraced (Grossman & McDonald, 2008; McLeskey & Ross, 2004; Murray & Kosnik, 2011). The field of teacher education is just one within the wider university structure competing for attention and its share of funding and operational
dollars. Conversely, the profile of the field needs to be active in order to keep it in the mind of key decision makers and stakeholders (Loughran, Berry, Clemans, Lancaster & Long, 2008). Without a doubt, teacher education as an academic field has a distinctly vocationalist or service industry aspect (Ramsey, 2000). However “being a practitioner does not imply that practice is or should be disconnected from theory; quite the opposite” (Saltmarsh, Sumson & McMaugh, 2008, p. 73). This connection needs to be purposely planned, designed and implemented.

Daly, Pachler and Lambert (2004) have noted that past reform efforts in teacher education have actually incapacitated teacher educators, who have been positioned as the “delivery agents of government prescription” (p. 104). Articulating a conceptual framework is nothing new for most teacher education courses (McTamaney & Palmeri, 2011). A sound framework will reflect the beliefs currently held in the institution and provide a practical model of where the institution hopes to go, but it is limited by the users. Who designs the framework, implements the model, and assesses it will determine whether it becomes a powerful and useful tool or an irrelevant document (McTamaney & Palmeri, 2011).

2.5.1 Need for theory and purposeful course design

According to Gallagher and Bailey (2000), most criticisms focus on one of five areas: lower academic standards for students wanting to be teachers, structural deficiencies of preparation courses, duration of preparation courses, placement or sequence of teacher preparation coursework, and clinical training. These aspects have been further supported by the work of Darling-Hammond and her colleagues (2005, p. 391) who, 5 years later, found that many teacher education courses were criticised for similar aspects: “being overly theoretical, having little connection to practice, offering fragmented and
incoherent courses (subjects), and lacking in a clear, shared conception of teaching among faculty”. The lack of coherence and subsequent fragmentation and the need to rectify that lack through purposeful design has continued to resonate with many researchers examining teacher education reform (Grossman et al., 2009; Grossman, Hammerness et al., 2008; Korthagen et al., 2005; Rennert-Ariev, Frederick & Valli, 2005).

The failure of many teacher education courses to encompass robust evidence-based course design can be attributed to such factors as vague conceptions, minimal consideration of the structure and ideology behind the entire course, little thought given to movement in external relationships and little consideration of the knowledge and skill base required (Edwards et al., 2002; Fullan, 1993; Hatton & Smith, 1995; Koster & Dengerink, 2008; Tom, 1997). This lack of theory subsequently impacts other areas such as the need to address the theory-to-practice gap in teacher education, engagement with collaborative practice and the ability for the field to train and maintain quality educators. Explicit engagement with teacher education course design and evidence-based theory would allow areas that are overlooked or that need to be developed to come to the fore through purposeful design and an embedded structure.

As a response to criticism of teacher education courses, Schalock et al., (2006) conducted a 3-year longitudinal study, the Teacher Effectiveness Study, examining the effects of policy-driven features of teacher preparation courses, the thinking and classroom performance of beginning elementary (primary) teachers and the learning of their students. The authors looked specifically at research design and methodology in instructional design as teachers moved to connect their teaching to standards for
learning. The study followed a group of 45 teachers across the 3 years that data were collated. A mixed-methods approach was used, with structured interviews, focus group interviews, attitudinal surveys, questionnaires and observations.

As part of the study design, the researchers looked for literature that connected teaching, teacher preparation and standards with a strong theoretical base and found little in the literature. To their dismay, some of the stronger studies gave little methodological detail so had limited utility in guiding policy, practice or research (p. 110). Working with what was found, the researchers clarified terms, built a rationale for theory building and clearly articulated the knowledge and skills that were considered critical to the process of theory building.

Schalock et al. (2006) found that theory development, testing and refinement were central to teacher education and research, and that these elements needed to be incorporated in a systematic way through application to practice. They proposed four conditions that need to exist for this situation to become a reality: faculty that are actively involved in the preparation of courses that reflect theory development and the connections between teaching, teacher preparation and curriculum standards; strong theory-related constructs in course design and research; a data collection method that supports data-driven decisions about the course including research, evaluation and theory development; and policy and resource commitments that support the three previous points.

The findings of this component of a larger piece of research were particularly relevant to the present study as they emphasised the need for clarity in definitions, the need to
report any process in a level of detail that made the concepts accessible for others to use and replicate, as well as to further contribute to the research dimension in the field of teacher education that had been criticised as under-theorised.

2.5.2 Theory-to-practice gap in teacher education

The use of the term *theory* in relation to the theory-to-practice gap is distinct from its application in the previous section when applied to design. The theory-to-practice gap focus is on whether the theory of the field is being translated into practice by educators. Korthagen et al. (2005) cited many research reports demonstrating that traditional teacher education courses typically consisted of a collection of separate subjects in which theory was presented with little connection to practice. Due to this disconnect, students become sceptical about the more theoretical aspects of their course and are unable to see the practical connections and relationships between subjects (Hobson, Malderez, Tracey, Giannakaki, Pell & Tomlinson, 2008). This separation between methods and foundations contributes to the fragmentation that continues to permeate through teacher preparation, particularly in relation to theoretical knowledge and practical work in classrooms (Gallagher & Bailey, 2000; Grossman, Hammerness & McDonald, 2009; Korthagen et al., 2005; World Bank, 2012). The theory-to-practice gap is especially challenging as it links closely with addressing children’s diverse needs and characteristics (Gore, Griffiths & Ladwig, 2004; Queensland College of Teachers, 2012).

Korthagen (2010) highlighted that many studies have revealed a gap between theory and practice in teacher education and that this affects how teacher education is perceived more broadly. In Australia, the *Top of the Class* report (Hartsuyker, 2007) suggested that persistent problems in teacher education could be attributed to a lack of investment
in building the partnerships that would help bridge the gap between theory and practice. Loughran (2011) stated that one of the reasons that the theory-to-practice gap persisted is that economic imperatives did not consider the maintenance of teaching for optimum learning on a large scale.

Considering the reasons suggested for the theory-to-practice gap, the dilemma in teacher education remains how to integrate the theoretical knowledge, that has traditionally been taught in university classrooms in an often disconnected mode, with the practical knowledge located in classrooms and schools (Berry, 2005; Darling-Hammond, 2006a). The theory-to-practice gap is an area where some empirical case study research exists. These particular examples have been selected due to the methodological parallels to the present study and the focus of the original research. As can be seen through the following pieces of research, the need to integrate theory and practice is not a new concern. The three studies span a period of 7 years and cover both national and international studies.

Kunzman (2003) reported on a course designed for in-service teachers with theory and practice explicitly informing each other. There were numerous positive findings that clearly indicated the benefit of a theory-based and purposely designed course. Twenty-three teachers were interviewed and audio-taped. The semi-structured interviews focused on professional practice, motivation and the learning experiences of the participants while completing the course. Kunzman found that the participants enrolled in the course to boost their skills, develop their pedagogical content knowledge as well as wanting to learn, reflect and gain feedback on their practice.
Three of the themes that emerged through Kunzman’s (2003) research and that also resonate strongly with the present study are the importance of collaboration, the value of feedback as part of the learning process and the need to develop theoretical frameworks of education. Although a common criticism of teacher education is that there is little practical connection between what is taught and what actually occurs in a classroom, the teachers involved in Kunzman’s study found two particular benefits from developing a conceptual framework for their practice. The exposure to various concepts and theories helped clarify and confirm past practice or challenged them to revise their pedagogy. Additionally, these teachers felt that their previous practical experience served as an advantage when it came to encountering educational theory (p. 249).

Maaranen and Krofkors (2008) were also concerned by the disconnect between theory and practice. Using case-study-based research, they surveyed and interviewed a group of recently graduated teachers who had worked as unqualified teachers during the time of their formal teacher education course. The focus of the case study was on the participants’ experiences of Master’s thesis research as well as the integration of theory and practice throughout their course.

A mixed-methods study was implemented. A survey consisting of Likert scale variables as well as open-ended questions and interviews aimed at deepening the knowledge gained from the surveys conducted. The survey was distributed to 57 participants with 35 responses (61%), and interviews were conducted with 23 of the participants – 7 male, 16 female. The key finding with relevance to the present study was the benefit of integrating theory and practice that was emphasised throughout the different response
modes. The importance of making this connection explicit was touched on by participants over and over again.

Cheng, Cheng and Tang (2010) examined the gap between theory and practice in teacher education due to their observation that it was consistently identified as an issue of concern, not only in Hong Kong where they were based but in international literature as well. A total of 228 fourth year students completed questionnaires, with 31 of these students participating in in-depth interviews. Examination of the data revealed to the researchers that the quantitative results were unable to explain which factors of the teaching course contributed to positive experiences in the field, so for this particular perspective, the paper focused mainly on the analysis and reporting of the qualitative data in order to reflect on closure of the gap between theory and practice. One critical way students found of closing the gap was to meet individual needs through their ability to call on a repertoire of teaching strategies learned about in their academic preparation. Although some schools did not encourage student-centred teaching methods, students overcame this gap between theory and practice by adapting their practice to suit the particular context in which they were teaching.

Final analysis suggested that teacher educators needed to make students explicitly aware of various teaching contexts; they needed to position themselves as role models; and an emphasis on self-learning was needed, with students required to connect theory with practice. The need for linking theory to practice and ensuring that this connection is explicitly made was central to the course development process undertaken within the present study. By working systematically through assessment tasks as smaller
components building to a major task, students were able to reflect and draw on personal experience as well as incorporate current research to create their final assessment piece.

The findings of the three studies consistently emphasised the benefit of purposefully integrating theory and practice, regardless of whether students were recent graduates or in-service teachers (Cheng et al., 2010; Kunzman, 2003; Maaranen & Krokfors, 2008). Additional aspects highlighted were the benefits of collaborative practice, the need to make the connection between theory and practice explicit (regardless of level of expertise), the benefits of a repertoire of teaching and learning strategies and the importance of feedback.

2.5.3 Collaboration in teacher education

The value of working collaboratively has been recognised by many researchers and has been linked with courses of high quality (Cochran-Smith, 2004c; Coronel, Carrasco, Fernandez & Gonzalez, 2003; Sumson & Patterson, 2004). Research suggests that students who have had the opportunity to engage with professional communities that actively collaborate have been influenced positively in their own teaching practices and learning (Vescio, Ross, & Adams, 2008).

Although there are many different definitions of collaboration in the literature, all reflect the notion of working together in a positive manner, in an on-going basis and with a common goal (Angelides, 2004; Campos, Freitas & Gabrovschi, 2013; Friend & Cook, 2013). Not only must those involved be supportive, structures and procedures also need to demonstrate a positive investment through aspects such as the allocation of time and resources to facilitate collaboration (Friend & Cook, 2010).
Regrettably, collaborative practice is still often undertaken in a tokenistic manner or viewed as a laborious process (Chiang, Chapman & Elder, 2011; McHatton & Parker, 2013). Failure to work in a collaborative manner ensures the persistence of one of the key points of criticism of teacher education courses, the theory-to-practice divide (Grima-Farrell, Bain & McDonagh, 2011; Hammerness, 2013; Loughran, 2011). The goal of a collaborative methodology in course design is to integrate different approaches in a way that recognises individual learning needs and styles (Palaskas & Muldoon, 2003). Collaboration requires professionals to leave personal prejudices and attachments outside of the process and to inject their professional expertise.

This level of sophistication in communication requires awareness building and training that is rarely innate or a mandatory part of professional development (Zundans & Hollitt, 2002). Many academics are unaware of how to work collaboratively and still see themselves as working in specialist areas with limited integration of knowledge and expertise across subjects. Tom (1997) found that significant faculty interaction about the substance and rationale for the total teacher education course was unlikely to occur among professionals in different areas of specialisation. Also affecting the potential for any change to an integrated approach to course planning and design were individual teacher educators’ beliefs, which significantly influenced their teaching practice (Tillema & Kremer-Hayon, 2005).

Coronel et al. (2003) examined how a group of teacher educators could utilise collaborative practice to deal with a large teaching load. The study took place in a Spanish higher education institution in a subject serving 3000 initial teacher training students in early childhood and primary education. The teacher educators were
significantly limited by large class sizes of 90 students: it was physically challenging not only to fit students into the teaching spaces but also to undertake practical activities that could be done en masse. Utilising collaboration was even more important to the research team as they felt they could learn from the each other’s experiences. Coronel and his colleagues found that teaching cultures were pivotal and were essential to cultivating collaboration. As in other research in higher education, they noted that the structure of educational organisations was critical to the creation of a professional context that allowed teacher educators to work in collaboration with their peers. They also noted the impact of giving greater recognition and prestige to research productivity than to teaching.

Coronel et al. (2003) noted a number of factors at both the individual and institutional level that impacted on the use of collaboration. At an individual level they identified the desire of educators to be autonomous professionals, often to the extent of doing what they liked without having to be answerable to anyone; individualism forming a substantial part of the teaching culture; isolation at work where educators carried out their work and made decisions about teaching without any input from others. At an institutional level they recognised the pressure and atmosphere of extreme competitiveness until individuals achieved stability in their position. This meant that teaching aspects were neglected in favour of research. Once, within a particular department, they identified what they called “opposing subcultures” where groups competed amongst themselves to have the most power within their organisational unit. Finally, staff felt that university policy interfered with their teaching.
In spite of these individual and institutional factors that impacted on the potential to work in a collaborative manner, Coronel et al. (2003) were interested in reflecting on how working in a collaborative manner improved teaching practice and potentially educational change more broadly. They found that university meetings were typically underpinned by hierarchical relations that worked contrary to the relationships needed to work collaboratively. Their experience, and discussions around their department, led to all the teaching staff looking at more flexible and effective management for the educators working on the core subjects. Working collaboratively led to improvement of communication among the large teaching groups in a way that benefitted students. Although the research team concluded by stating they believed aspects still needed to be worked on, overall the benefits of the collaborative experience eclipsed any potential personal and individual gain.

Just as Coronel et al. (2003) found in their research, the success of moving towards collaborative practice in teacher education is highly dependent on the investment of institutions of higher education and the willingness to focus on what educators have in common rather than their differences (Hardman, 2009). The traditionally isolating work of many teacher educators is unsustainable within an environment moving towards student-centred learning experiences where students are able to practice and learn about shared decision making, communication, and planning (Nevin, Thousand & Villa, 2009; Rennert-Ariev et al., 2005). Many levels of collaboration are evident in the present study, with the main focus on the collaborative practice of the design team. Peripherally, collaboration can also be seen at the wider institutional level when set processes are challenged and collaboration occurs with various stakeholders regarding
course content and their particular needs. With their high value in the field, collaboration skills need to be explicitly taught within teacher education courses.

2.5.4 Teacher quality
Despite growing evidence of the importance of quality teaching, the quality of teacher education is compromised by universities and colleges setting low admission standards (Levine, 2006) and admitting lower academically achieving students into courses. Ensuring high quality teacher education is a first and critical step in delivering high quality teaching in schools (Hartsuyker, 2007). However, articulating exactly what is meant by the term ‘high quality’ has been problematic (Liston, Borko & Whitcomb, 2008; McLesky & Ross, 2004): attempts to explain the concept have focused on content knowledge as a basis (Boe, Shin & Cook, 2007).

The issue of teacher quality has been identified in the literature both nationally and internationally, with a call for uniform standards and consistency across preparation and accreditation (Cochran-Smith, 2004b, p. 297; Hartsuyker, 2007; Ure et al., 2009) as well as the simultaneous agenda of improving teacher education through professionalisation (Cochran-Smith, 2004a; Evans, 2010; Phillips, 2008). To address the need to improve the quality of teacher education courses in Australia, in early 2010 an accreditation and standards governing body was introduced, the Australian Institute for Teaching and School Leadership (AITSL). Some groups within teacher education, however, advise some caution in moving towards a standards approach, due to a belief that their value for professional accountability and quality assurance might be over-emphasised due to the complexity and unpredictability of teaching and learning (Koster & Dengerink, 2008, p, 137; Loughran, 2011). To some degree this aspect has been
overcome by AITSL (2011) through the creation of standards that are broad and generally phrased to account for these complexities.

2.5.5 Resolving areas of need in teacher education

Teaching is a profession that requires a more integrated and dynamic approach to designing its teacher education courses than is currently evident in many institutional profiles (Hoban, 2004; Tom, 1997). More successful courses are defined as those that demonstrate coherence among the various course elements and emphasise processes such as collaborative practice (Adey, 1998; Russell, McPherson & Martin, 2001; Sullivan, 2002). Difficulties arise in the absence of an overall course design (Tom, 1997).

Although the numerous reports into teacher education highlight areas of need, other key aspects exist that demonstrate some movement in the field, including: a focus on improving partnerships between universities and schools, the creation of common standards to assess teacher education courses, and recognition of the need for on-going professional learning for students once they complete their initial degree. Purposeful curriculum reform and considered course design are critical to creating a quality teacher education course. With participants working strategically in the early stage of development, purposeful design allows for identified areas of need to be embedded within a course during the process of curriculum reform and development (Hyun, 2006; Posner & Rudnitsky, 2005).

Certain general course components and characteristics that are related to teacher and educational quality such as “a consistent vision, strong collaborations between
universities and schools, certain course work and school/community fieldwork, and
effective use of certain teacher education strategies” (Cochran-Smith, 2005b, p. 302).

As part of her research, Darling-Hammond (2006a) examined seven teacher education
courses that were considered exemplary due to their ability to produce graduates who
were extraordinarily well prepared from their first days in class. She noted that all seven
courses had similar features: a common, clear vision of good teaching that was evident
in all course-work; well-defined standards of professional practice and performance; a
strong core curriculum; extended clinical experience; extensive use of the application of
learning to real problems of practice; explicit strategies and strong relationships among
school and university staff (pp. 305-306).

Duke (2004, p.94) outlined six key factors that he believed constituted a good design for
educational change, that would be equally applicable to any higher education course.
These were: legitimate educational needs being addressed, a design that reflected an
understanding of how people learn, the design being supported by research and
professional judgment, the design considering local conditions, and the design not
adversely affecting any particular group of learners.

Encouragingly, Darling-Hammond et al. (2005) found that since the late 1980s, reforms
in teacher education had begun to produce designs resulting in more integrated and
coherent courses. These courses incorporated a consistent vision of good teaching and
aimed to create stronger links among subjects and between practical experiences and
formal coursework. The aspect that seemed to maintain the quality of these successful
courses was the commitment of long-term faculty members who worked on the initial
course plan together and had continued to revisit it frequently to maintain their coherence.

Darling-Hammond (2006a) suggested that schools of education need to design courses that assist students in a deep understanding of learning and of the social and cultural contexts in which learning takes place. They should design courses that enable students to teach a diverse range of children and engage with schools in a transformation agenda. Designing teacher education courses in a collaborative manner ensures that university regulations are met and also that the needs of the particular context and wider community are considered throughout the development process to create a course that ultimately appeals to a variety of stakeholders.

2.5.6 Summary of areas of need in teacher education

The issues identified in this section – the role of theory (Darling-Hammond et al., 2005; Koster & Dengerink, 2008; Schalock et al., 2006); the theory-to-practice gap (Cheng, Cheng & Tang, 2010; Grima-Farrell et al., 2014; Grossman et al., 2009; Maaranen & Kroffors, 2008); lack of collaborative practice (Hardman, 2009; McHatton & Parker, 2013); and maintaining and training quality educators (Hartsuyer, 2007; Levine, 2006; Ure et al., 2009) are not intended as a comprehensive list. Rather, these issues have consistently appeared in the literature over the past 20 years in all the educational contexts focused on in this study.

2.5.7 Connecting teacher education to inclusive education

Teaching is complex work that appears deceptively simple and is predominantly carried out in isolation from others (Grossman et al., 2009; Levine & Marcus, 2010). Debate continues among researchers and policy-makers about the value and impact of teacher education, because powerful, definitive studies about its impact are lacking (Brownell et
In both fields, teacher education and inclusive education, instruction should be carefully crafted, focused on connecting theory and practice, collaborative, and invested in creating teachers who can respond to the needs of children, particularly those with diverse needs (Brownell et al., 2005).

The preparation of teachers who will succeed with all children is a part of a commitment to reducing barriers and providing equitable access to learning for all students (Australian Institute of Health and Welfare, 2004; Booth et al., 2003; Jordan, Schwartz & McGhie-Richmond, 2009; Rouse & McLaughlin, 2007). The knowledge acquired by students enrolled in teacher education courses will have a bearing on their eventual inclusive practices within their classroom and the wider school community (Tilstone & Rose, 2003; Hansen, 2012), so what is taught at this level is critical. A demand for more skilled educators is closely aligned with the discussion about the way teachers are prepared (Mitchell, 2010). Konza (2008) noted that teacher education courses that address the skills and attitudes of teachers towards children with disabilities are deemed insufficient by many teachers. The inclusion of children with disabilities in general education is a particularly complex and demanding reform that is sometimes misunderstood and resisted by teachers (Berry, 2011; deBoer, Pijl & Minneart, 2011; Sindelar, Shearer, Yendol-Hoppey & Liebert, 2006).

Collaboration is not a new process in the field of inclusive education; it has been a key component of special education teacher education for some time and seen as an essential process to support inclusion (Brownell et al., 2005; Ware, 2003). It is challenging, however, to incorporate important aspects of general teacher education and inclusive education in a relatively seamless way. Teacher education courses need to
incorporate attention to leadership, public relations, the role of the change agent, collaboration, communication, and time management skills if future special and mainstream educators are to be prepared and capable of meeting the demands of their jobs (Turner, 2001). Within the higher education context, students rarely see educators modelling collaborative practice between general education and inclusive education or the manner in which these fields might be integrated (Carroll, Forlin & Jobling, 2003; Ware, 2003).

Understanding and developing the skills in the practice of inclusive education is an important facet in the preparation of teachers. Historically, teacher education courses have tended to focus on and have been organised around the differences between general education and inclusive education rather than incorporating a thorough examination of course structures, teaching and learning and assessment (Rock, Thead, Gable, Hardman, & Van Acker, 2006). Under a more holistic approach, previous styles and methodologies that have worked well could be re-evaluated and adjusted to cater more broadly for changes within education (Finn, Rotherham & Hokanson, 2001; Hegarty, 2007). The additional challenge for inclusive education is that it is just one subcomponent of the broader general education field (Rock et al., 2006).

Forlin (2007) suggested that reforms to teacher education have rarely kept pace with changes in the inclusive education field. This has resulted in preparation for inclusion being either ad hoc or “add on”. Although such a suggestion seems quite dire, moves to incorporate aspects of inclusion have not been totally lacking. It has been noted that a number of academics and interested stakeholders who are invested in the design of teacher education have examined ways of implementing in-service training for inclusion
as a way to support pre-service teacher education (Symeonidou & Phtiaka, 2009). Further, a unified teacher education course, incorporating both regular and inclusive education would address some of the areas of need, as such a reform would draw on the strengths of the separate paths of teacher education. Strengths would be determined by feedback provided by students reflecting on how well their courses were preparing them for inclusion in the mainstream classroom by explicitly considering content and course delivery (Hsien, 2007).

### 2.6 Inclusive Education

Successful inclusion is reliant on a commitment to inclusion through the leadership in organisations, including institutions of higher education (Ainscow & Sandill, 2010; Taylor, 2006). From an inclusive perspective, barriers to learning should be seen in relation to the organisation in which they exist. Nunan, George and McCausland (2000) suggested that inclusive education and the principles that support its practice need to be central to curriculum formation, and that educators need to be challenged to reshape their curricula, teaching, learning and assessment processes with the values and principles that embody inclusive education. They contend that “being inclusive is one measure of educational excellence” (p. 70). Excellence could be judged by the ways a teacher responds to difference through the curriculum and teaching and how learning and assessment convey values of inclusivity, and these aspects of practice could be further incorporated in the debate about what constitutes teacher quality. As mentioned previously, these issues need to be treated as an integrated holistic understanding of teaching rather than in isolation.

The key issues identified in relation to teacher preparation are magnified in the inclusive environment, possibly due to the multidimensional nature of this particular field and the
various stakeholders involved, along with the demands associated with successfully
meeting the needs of children with diverse learning needs. Inclusive education is
concerned with overcoming barriers to learning and participation, the development of
appropriate policies and practices, and about improving educational systems and
educational institutions for educators as well as children (Angelides, 2008; Booth,
Ainscow, Black-Hawkins, Vaughan & Shaw, 2000; Nes, 2000). It has emerged that
many classroom teachers have been expressing concern and resentment about the fact
that they are now more fully responsible for catering for the needs of all children in their
classes, including differentiating and adjusting the curriculum, without easily accessible
specialist support (Bourke, 2010).

2.6.1 Impact of legislation and policy

The Australian political context also makes any educational change challenging at both
the macro and micro level. In Australia there is general legislation that relates to
educating children with disabilities, namely the Disability Discrimination Act 1992
(Australasian Legal Information Institute, n.d.) and the Disability Standards for
Education (Attorney-General’s Department, 2005). These are supplemented by more
specific policy statements in different education systems. All inclusive education
policies of states and territories of Australia recognise “the ability of every child to
learn, the need to focus on a student’s strengths and needs, and that instruction must be
individualised (Dempsey, 2011, p. 52). Having state governments directing any changes
regarding inclusive education and education more broadly means that there are six state
and two territory governments legislating what they believe to be appropriate inclusive
education and establishing their own agendas regarding the education of children with
special needs. Further, their respective bureaucracies develop and administer their own
state or territory Education Act, related policies and practices based on individual
interpretations of the federal perspective (Forbes, 2007; Forlin, 2006; Wu et al., 2008). Differences across states and territories are due to a combination of dissimilar definitions of disability, different policies on resourcing and supporting additional needs, and because characteristics and needs of children vary across jurisdictions. The diversity seen among states in their inclusion policies is also seen in practice.

Although the general shift in policy has moved from special education and exclusionary educational practices to one of inclusion that celebrates differences and values diversity (Berry, 2011; Zhang, 2011), numerous Australian researchers caution that what is observed in educational settings does not reflect this policy shift. Ashman (2010) has indicated that although policies and rhetoric suggest that not only is inclusive education common but universal, the reality is quite different. Bourke (2010) noted that enthusiasm for inclusive education in Queensland (a state in Australia) has seemed to wane because of altered categorisation processes of children with disabilities, changes to the roles of teachers and support staff, and rapid educational reforms, that have led to confusion, frustration and exhaustion among supporters of inclusion.

Boe et al. (2007) found that almost one in five extensively prepared special education teachers had majored in general education, whereas very few general education teachers had majored in special education. This clearly suggests a shortage of beginning teachers prepared in special education to address the need in the field. Undergraduate training in Australia, and more specifically in New South Wales, has focused on academic teaching of the foundation subjects as directed by the Department of Education and Communities (DEC); any special needs matters are meant to permeate each element of the course. Additionally, there is a mandated requirement to complete at least one unit in special
education in New South Wales (Furlonger et al., 2010) although there is no such requirement nationally (AITSL, 2011). In effect, then, the state of New South Wales will continue to have a requirement for all beginning teachers to have had special education preparation, while this requirement is absent in national standards.

2.6.2 Curriculum and course design in inclusive education

The need to realign inclusive education to include content areas such as addressing individual needs through differentiation, working with families, collaboration skills including interdisciplinary collaboration, increased content knowledge, and leadership skills has been reiterated throughout the literature (Ashman, 2010; Chang, Early & Winton, 2005; Jorgensen, Nisbet & Schuh, 2005; Kaff, 2004). In this type of reform process there is also a need to consider contextual variables, personal theories and assumptions about disability and schooling, as well as historic tensions and contradictions (Bourke, 2010; Carrington & Robinson, 2006; Loreman, 2008; Ware, 2003). Furthermore, Slee (2006) explicitly challenged reformers to deal openly with power play and questions of who is in and who is out in the delicate relationship between regular and inclusive education. This is important because it articulates the state of play and provides a framework for engagement.

The expectations and demands on inclusive educators have increased, given that they need to be capable in the application of new technologies and instructional strategies. They also need to provide detailed and timely feedback, deal with conflict and counsel children, employ knowledge about curriculum and interventions that exceed the competencies required of generalist educators in order to cater for the needs of children across age levels and disability groups (Brownell, Hirsch & Seo, 2004; Smith, 2006; York-Barr, Sommerness, Duke & Ghere, 2005; Forlin & Lian, 2008). The impact of
haphazard reform has been stressful for many in the field of inclusive education, as the build-up of insufficient time to teach, meet and collaborate with colleagues and the need to manage the time available takes their toll (Bourke, 2010; Kaff, 2004). Kaff (2004) suggested that it is time to stop expecting inclusive educators to be all things to all people.

Sayeski and Higgins (2013) reported on the redesign of a special education (inclusive education) teacher preparation program (course) in the United States. A key driver for this redesign was the need for inclusive educators to meet the federal standards of a “highly qualified teacher” as well as changes to legislation and accountability expectations. In focusing on outcomes, the faculty team referred throughout the process to the key question “Upon graduation, what should our graduates know and be able to do?” Ten inclusive education faculty members participated in the redesign process. A q-sort process, a scaling technique, was used to identify the degree of significance to the participants of particular items, phrases and beliefs. The scales used ranged from “high priority” to “low priority” or “strongly agree” to “strongly disagree”. Participants were only permitted to assign a predetermined number of items that forced them to prioritise the items in each category.

The more than 200 broad standards used an initial list of topics developed by one of the researchers. The q-sort technique was then used to narrow these down after the participants had rated the various items. After participants had completed their sorts, the researchers looked at existing syllabi for areas of congruence and incongruence. They then moved to a process of collaborative meetings to distil these big ideas into smaller, more manageable parts. This entailed a process of negotiation about what was meant by
the topics, texts to be used and assessment that best reflected each topic. Through the collaborative meeting process, 9 topics were sorted into a “high priority” group with a further 16 topics in the “essential” category. The previous q-sort, meant that discussions were less personalised and were focused on developing the high priority topics. Backward mapping was used, looking at a specific outcome and then deciding what subjects and experiences within those subjects would help the participants reach those goals. They were very mindful of the idea that “what gets measured, gets addressed.”

The final summary of the process identified three key changes that had been made – subject offering changes, subject content changes and faculty engagement changes. The main change made to subject offerings was the development of two new subjects. In subject content, the most significant changes were the creation of keystone assessments and the embedding of evidence-based practices throughout all subjects. The process also changed faculty engagement with a shift to using a collaborative process that they all found more productive and ensured course ownership by all faculty members. The greatest obstruction to the process was institutional habit, with faculty clinging to notions of the status quo being the best approach and using an “additive” model of teacher preparation where more content was simply added to the existing courses. By working in a collaborative manner, the faculty team was able to avoid these typical habits.

As stated earlier, if the higher education sector is to respond to the inclusive reform agenda adequately then high quality research in both teacher education and inclusive education needs to be available and easily accessible (Allday et al., 2013; McLeskey & Ross, 2004). However, the literature in inclusive education teacher education is largely
descriptive, with no real conceptual or research based history (Brownell et al., 2005; McLeskey & Ross, 2004).

Education faculties have moved slowly to adjust their courses to prepare students for the inclusive environment (Allday, Neilsen-Gatti & Hudson, 2013; Forlin, 2008). Some of the work done in inclusive education, and education more broadly, is challenging, as the move towards the integration of new technologies has encouraged the basic moving of courses designed for face-to-face learning to the online environment, with little consideration of the organisational and learning changes required or the application of instructional design principles (Johnson, 2004).

2.6.3 Inclusive education and the theory-to-practice gap

Inclusive education is viewed in different ways depending on the political and social context (Paul, French & Cranston-Gingras, 2001). This has created issues in the wider educational field as those with influence have failed to apply theoretical analysis to the foundations of special education practices and this has been detrimental to the field more broadly (Slee, 1997). Inclusive education reform in the school context has also benefited from the debates taking place in higher education and other fields. Inclusive education reform in Australia has challenged educators at all levels and in a broad range of contexts to rethink traditional perspectives of inclusive education and, in conjunction with this, to develop policies and practices that provide effective, equitable education for all in a manner that is responsive to the individual needs of all children (Deppeler, 2006; Koh & Robertson, 2003).

Several researchers have lamented the existence of a gap between research findings, school practice and the actual working conditions in inclusive education (Konza, 2008;
Lancaster & Bain, 2007; Paulsen, 2005). Angelides (2004) suggested that current teacher education practices often promoted individual theoretical learning without explicit connections being made to practice, although Brownell et al. (2005) noted through their research that creating links between theory and practice appeared to be a high priority for many faculties, with the recognition that teachers being prepared for inclusion require both theoretical and practical knowledge (Forlin, 2010).

The Index for Inclusion (Booth & Ainscow, 2002), developed in the United Kingdom, was the first comprehensive instrument by which schools could measure their level of inclusivity and identify dimensions that need to be in place for schools to function in an inclusive manner. It focused on building collaborative relationships and improvements required in learning and teaching to sustain inclusion. The Index for Inclusion contained four key elements to support schools in a move to the creation of a more inclusive environment: key concepts (beliefs) that a school needed to determine prior to development, a structured approach to evaluation and development, a review of all aspects of a school to help identify and implement priorities, and the use of an inclusive process by ensuring that the three prior points were practised in an inclusive manner (Booth & Ainscow, 2002, p. 2). This work has implications for what is taught in higher education inclusive education courses and subjects, as many of the relevant skills are not innate.

In Australia, Grima-Farrell, Long, Bentley-Williams and Laws (2014) responded to the theory-to-practice gap by establishing a project for fourth year undergraduate teaching students to engage with children with a range of disabilities for a full school year while concurrently completing their university studies. The project involved close
collaboration between university staff and educators from the schools involved, who were committed to aligning the work done in both contexts. Interested students were required to participate in a competitive selection process and were interviewed by panel members from the schools and university. Ten undergraduate students met the selection criteria and were allocated to the five participating schools.

Grima-Farrell et al. (2014) collected data to determine the factors that influenced the success of, or identify challenges to the collaborative, inclusive education teacher education experience. They conducted a qualitative case study with an interpretative approach used to examine the data collected. Data gathered included individual surveys, semi-structured interviews and reflexive journal entries. Three key themes emerged – the effectiveness of teacher education, support and communication among all stakeholders, and the building of responsibility and positive relationships between students, school staff and university staff.

Internationally, various courses have begun to incorporate reforms in their coursework to highlight the research-to-theory connections. In Scotland the university-based element of the post graduate diploma in education not only incorporates inclusive practice but is explicitly theoretically driven by research (Florian et al., 2010). Three practical inclusive practice elements are central to this successful course: taking differences into account as simply part of the spectrum of development; convincing mainstream teachers that they are qualified and able to teach all children; and developing new ways to work collaboratively with others (Florian et al., 2010).
Reform in inclusive education will inevitably lead to changes in the expectations and roles of inclusive educators in both special and mainstream schools (Forlin & Lian, 2008; Sayeski & Higgins, 2013). Positive attitude change towards any reform will not be long-term if, after their teacher training, teachers are placed in settings that are resistant to the idea and practice of inclusion. However the reality is that regardless of the definition used for inclusion, teachers are responsible for its implementation in their daily practice (Anderson, Klassen & Georgiou, 2007; Florian, 2009; Loreman, 2008).

2.6.4 Collaboration and inclusive education
Within the field of inclusive education, the challenge for inclusive educators is that not only are they expected to teach children in their care but they also need to coordinate collaborative efforts with parents, other teachers and external professionals (Brownell et al., 2004). This makes collaboration an even more important skill to master. The role of an inclusive educator has evolved from simply being a classroom teacher or expert who provides specialised instruction to children with disabilities, to being a facilitator and taking a consultative role, all of which require specific expertise (Turner, 2001). For this inclusive and collaborative structure to be maintained, all educators need to be fully involved in the organisation, to participate in shared decision making and be actively involved and contribute to the collaborative structure (Furlonger et al., 2010; Sindelar et al., 2006). Longer-term investments in collaborative partnerships have been valuable in terms of both collaboration and inquiry as well as of demonstrable higher quality (Deppeler, 2006).

Deppeler and Huggins (2010) highlighted a number of issues they identified through their experiences of university – school and school – system collaboration. It was evident that although collaboration is built on mutual trust, that was not an easy thing to
establish. They found that mutual trust was dependent on respect for professional knowledge, experience, concerns and their context. The authors found that transcriptions of early conversations highlighted the different conceptions of teaching and the learning of diverse children. Teachers placed higher value on “normative understandings and action-based solutions focused on short-term outcomes” (2010, p. 129) whereas university staff applied a wider research lens, analysed and critically reflected in order to understand long-term processes. Although non-hierarchical decision making had been emphasised, teachers expected that university staff would be responsible for any decisions regarding research. University staff provided access and exposed teachers to research evidence to build analysis and inquiry skills into their practice.

Although protocols were used to enhance collaborative discussion, at least one teacher withdrew from each team due to their discomfort with collaborative processes. It was noted that in some case working in this way was very different from the usual operating style of the schools involved. As Deppeler and Huggins (2010) noted, it was “sometimes easier to maintain the status quo than to critically examine evidence about effectiveness and then to change practices” (p. 129). This discomfort with collaboration was also evident in the present study, although not among design team members but students. Just as in the work of Deppeler and Huggins, the students the design team members engaged with in this study were practising teachers.

Teachers need to experience collaboration in order to feel comfortable in using it in their professional interaction and as a tool for teaching in the classroom. The lack of this opportunity has been identified by a number of researchers (Cheminais, 2009; Coronel
et al., 2003; Friend, Cook, Hurley-Chamberlain & Shamberger, 2010). It has also been
noted that various instructional approaches are introduced in higher education but rarely
modelled in university contexts (Jones, Lefoe, Harvey & Ryland, 2012). Ideally,
educators preparing future teachers should model and expose students to the
collaborative practices they are expected to acquire (Angelides, 2008; Nevin et al.,
2009).

2.6.5 Quality inclusive educators
Considerable controversy surrounds what constitutes a quality teacher, what this looks
like in the field and what skills would need to be taught to meet such a benchmark
(McLeskey & Billingsley, 2008; McLeskey & Ross, 2004; Paulsen, 2005). The need for
high quality teachers is especially important in the inclusive education field, where it is
essential that teachers are able to cater for what are often highly specialised needs
(McLeskey & Billingsley, 2008). Providing a high quality education for all children is
a priority, but personnel shortages and a more specific chronic shortage of inclusive
education specialists has at times led to poor quality programs for the children who need
quality programs the most (Acedo, Ferrer & Pamies, 2009; Kaff, 2004; McLeskey,
Tyler & Flippin, 2004). As indicated by the research completed by Sayeski and Higgins
(2013), mandated notions of quality educators could be used as a driver for change in
inclusive education.

2.6.6 Summary of areas of need in inclusive education
Inclusive education is a challenging field for any educator, but in recent years there
have been moves both internationally and in Australia to shift inclusion from being
positioned as the responsibility of a specialist in inclusive (special) education to the
responsibility of all educators (Berry, 2011; Zhang, 2011). The success of this shift has
been varied, with educators often supporting the notion of inclusion but being unsure of
what it means and what to do in practice. The field of inclusive education incorporates complex skills including curriculum differentiation, collaboration and catering for individual, varied needs (Deppeler, 2006; Deppeler & Huggins, 2010; Friend et al., 2010). Although the present study is focused on a graduate inclusive education course where these skills were actively embedded, the skills also need to be embedded in generalist education courses to ensure that all students have been exposed to them (Jones et al., 2012; Forlin & Lian, 2008; Nevin et al., 2009; Sayeski & Higgins, 2013).

2.6.7 Connecting inclusive education to higher education

Forlin and Chambers (2011) noted that the effectiveness of teacher education courses in catering for diversity has been a focus in recent Australian reports such as those of the Department of Education, Science and Training (DEST), 2006 and the House of Representatives Standing Committee on Education and Vocational Training, 2007. Through these and other similar reports (Bradley et al., 2008) it is apparent that more needs to be done to ensure continued focus and investment in this area. Developments in the field need to take into account not only cultural and political issues but also the specifics of educational reform and, within the university context, issues of who will provide the funding for new courses or development, who will be responsible for the design, and how to ensure the faithful implementation of these courses (Artiles, 2003; Symeonidou & Phtiaka, 2009).

The work of Ainscow, Booth and Dyson (2004) involving teams from higher education institutions in partnership with schools has demonstrated the potential power of academic collaboration. Other researchers working in the inclusive education field have examined collaboration in these particular education contexts and found that those involved have emphasised the value of collegiality and the benefits of membership of
authentic teams (Kunzman, 2003; York-Barr et al., 2005). Although Forlin (2008) focused particularly on discussion of the Asia-Pacific context, the same considerations regarding inclusion were raised concerning the importance of using a collaborative process to develop a framework and accountability process.

In many cases, higher education institutions have been slow to incorporate reform in the area of inclusive education. Some institutions have utilised the introduction of professional teaching standards and licensing requirements as the catalyst to redesign inclusive education courses (Fuchs et al., 2014; Sayeski & Higgins, 2013). However, inconsistencies of approach have led to instruction about inclusion invariably positioned as an add-on within the broader umbrella of teacher education (Forlin, 2008; Forlin, 2010). The move in a number of institutions towards an inclusive education model has meant that new forms of teacher preparation courses have evolved, although the manifestation of the inclusion philosophy within these courses has not been uniform, with differing levels of content quality and quantity (Kim, 2011). Further compounding some of these challenges is that research in special education teacher education (inclusive education) is almost non-existent (Brownell et al., 2005, p. 7). A theoretical basis of engagement is important regardless of context – teacher education more broadly or inclusive education specifically.

2.7 Intersection of Areas of Need

Many researchers have noted the need for research-validated practices and/or theory-based reform in inclusive education and in course and subject development more broadly across the higher education sector (Blanton, Sindelar, Correa, Hardman, McDonnell & Kuhel, 2003; Johnson, 2004; Lancaster & Bain, 2007; McLesky & Ross, 2004; Taylor, 2006). While there was evidence of good practice in the research
literature that could be taken as a starting point for my inquiry, there was little evidence
to suggest that practices that have worked have been systematically implemented (Koh
& Robertson, 2003) at scale.

The literature points to four key areas of need in educational reform in relation to
curriculum and course design: the need for a theoretical basis for reform, the need to
address the theory-to-practice gap, the need to utilise collaborative practice and the need
to consider the role of institutional practice. These areas of need resonate across all
three focus educational contexts – higher education, teacher education and inclusive
education. The interconnected nature of these needs has been illustrated in Figure 2.1.

Figure 2.1 Areas of Need in Higher Education, Teacher Education and
Inclusive Education
Of note are the similarities among these areas of need in higher education, teacher education and inclusive education. These areas include aspects most commonly identified: the need for a theoretical base for course and subject design (Biesta, Allan & Edwards, 2011; DeArment, Reed & Wetzel, 2013; Hodson, Smith & Brown, 2012; Norton et al., 2013; Zundans-Fraser & Lancaster, 2012), the need to close the theory-to-practice gap (Berry, 2005; Darling-Hammond, 2006a; Forlin, 2010; Kretlow & Helf, 2013; Korthagen, 2010), the limited use of collaborative practice (Nagel, 2008; Nevin et al., 2009; Oliver & Hyun, 2011; van Swet, Brown & Tedla, 2013) and the impact of institutional practice (Darling-Hammond, 2006b; Hyder & Tissot, 2013; McNicholl, Ellis & Blake, 2013; Metzler & Blankenship, 2008; Norton, 2012). These researchers advocated a range of course design and review aspects that could be addressed through the development of a process that is theoretically informed, utilises collaborative practice, reduces the theory-to-practice gap, and is invested in at an institutional level.

2.8 Theory as the central area of need

It would be unwieldy to attempt to examine all four areas of need simultaneously. For this reason a methodological approach for addressing these areas of need was developed for this study. With these factors in mind, the researcher determined to use the need for theory as the primary area of focus. The intention was that, through purposeful design, a course would be designed in a manner that responded to and addressed the need for a theoretical basis for reform, the theory-to-practice gap, the utilisation of collaborative practice, and challenged institutional practice. By focusing on the creation of a theoretical process for course design, it would be possible to embed collaborative practice and the reduction of the theory-to-practice gap. Institutional practice would be addressed by examining how it supports and/or inhibits the three other identified areas of need. Also, evidence at institutional level would be required to support change that a
theoretical process would provide. Using this rationale it would be equally feasible to focus on institutional practice but to embed the other areas of need would require wide-ranging organisational change beyond the scope of this type of study. Designing teacher education courses in an inclusive manner ensured that the university regulations were met and that the needs of the particular context and wider community were considered throughout the development process. The final product was a course that ultimately appealed to a variety of stakeholders.

2.9 Conclusion

In this chapter a case was made for the focus of the present study in four areas of need that recurred across three educational contexts: higher education, teacher education and inclusive education. These were the need for a theoretical basis for course design and reform, the need to reduce the theory-to-practice gap, the need to utilise collaborative practice and the need to examine the impact of institutional practice. The need for a theoretical basis for course design was identified by the researcher as the driver in which all other needs could potentially be addressed. With this in mind, Chapter 3 provides a rationale for the use of complexity theory in the present study to enact a process and theory structure that is collaborative, inclusive and responds to previous criticisms and the identified areas of need.
CHAPTER 3. THEORETICAL BACKGROUND

3.1 Introduction
In Chapter 1 an overview of the study was provided, including the goals of the study, the key questions and a brief introduction to the theory informing the study (complexity theory) and the theoretical basis used for the process (design-based research). In Chapter 2 the higher education, teacher education and inclusive education literatures were reviewed with deeper analysis undertaken in four key areas - the need for a theoretical basis for reform, the need to reduce the theory-to-practice gap, the need to utilise collaborative practice, and the need to address the impact of institutional practice. It was suggested that these areas of need could be effectively addressed through the application of a theoretically driven design process.

In this chapter the field of complexity theory is discussed as a precursor to demonstrating how it might be used as a design framework in higher education. Key concepts and terms are explained, as are the function and structure of complex systems. This is followed by more detailed discussion of how complexity has been seen as a design metaphor and how complexity can be utilised as a design tool and applied in educational contexts. The latter half of the chapter focuses on explaining why complexity theory was used for this study, the six principles used in the design of the self-organising school, how these principles respond to the needs presented in the previous chapter, and their use in this study.

3.1.1 Theoretical background
Complexity is a relatively new science that has emerged over the last four decades from the study of the chaotic, nonlinear and dynamic behaviour of systems. It focuses on how systems adapt, what happens when they are plunged into chaos, how they emerge and how they self-organise (Bain, 2007). Complexity theory complements and extends
notions of traditional science and linear causality by explaining the behaviour of systems that are emergent and constantly changing through a process of self-organisation. The theory of these nonlinear systems has spread throughout the physical sciences, accounting for newly discovered phenomena that could not be explained or predicted with linear models that relied on the reversibility of phenomenon to test their theoretical assumptions (Waldrop, 1992; Brodnick & Krafft, 1997, p. 3).

Over the last decade, the learning derived from the study of these physical systems has increasingly been applied to systems that involve human activity and organisations such as the stock market, businesses and schools. It has been used broadly as an explanatory metaphor for the study of social systems and change in complex human environments (Boje, 2000; Burnes, 2005; Davis & Sumara, 2006; Gough, 1999; Hayles, 2000; MacIntosh & MacLean, 1999, 2001, 2006; Reason & Goodwin, 1999; Styhre, 2002). Johnson (2001) used the example of the development of cities to illustrate complexity in action. He highlighted that patterns could be seen in urban landscapes as repeated structures become apparent. These patterns are noticed by communities and small shifts in behaviour can eventually have a rather large impact. One shop with bright, neat, upscale products can entice other similar shops to an area creating an upmarket shopping strip. This impacts on the environment around, as other types of shops move into side alleys or back streets.

Communities often have pockets or regions that attract particular labels based purely on the increasing number of a particular cluster type or system, such as the artists’ region, the hipsters, the café crowd. City planners do not deliberately create these systems. They occur through the interactions of thousands of individuals and a few simple rules.
As Johnson (2001) noted, patterns of human movement and decision-making are “etched into the texture of city blocks, patterns that are then fed back to the residents themselves, altering their subsequent decisions” (p. 40). Complexity theory is well applied in that instance as urban landscapes are continually emergent, adapting and self-organising. As a community responds to the needs of many it is never stagnant, although this is not to suggest that particular decisions within this system will not result in disequilibrium or chaos. How these phenomena are responded to is critical and ensures the continuation and life of the system.

### 3.2 Complex Adaptive Systems Defined

A complex adaptive system is one in which agents act in parallel in order to develop a schema for how things work in their environment and then continue to refine this schema through experience and adaptation (Morrison, 2002; Pascale, Millemann & Gioja, 2000). In practice fields, a schema refers to a commonly held set of professional understandings, beliefs and actions that define how a professional should respond to a given situation (Bain, 2007; Bain & Weston, 2012). Each complex adaptive system gains knowledge about the environment within which it is positioned and examines its interaction with and within that environment. Consistencies will be noted in order to formulate and establish a schema with simple rules for sustainability and then feedback is used to continually evolve the schema.

#### 3.2.1 The behaviour of complex adaptive systems

Complex adaptive systems focus on features such as similarity, complexity and self-organisation. Critically in a complex adaptive system, the agents as well as the system are adaptive. This capacity to adapt to change gives the system a high degree of resilience in the face of change. Key to this adaptive ability is communication and collaboration at agent and system level. Complex systems share structural
characteristics and order that permit them to behave in adaptive ways. As Robinson (2013) noted “education is not a mechanical system, it is a human system. It’s about people”. The adaptive quality of complex adaptive systems makes them particularly appealing to use in the education context.

3.2.1.1 How complex systems operate

Agents are the individuals that constitute the formation of a particular complex system. Complex systems are characterised by the multiple interactions of agents within systems that are operating simultaneously. These systems are both ordered and complex (Brodnick & Krafft, 1997, p. 8; Stacey, 1995). The interactive nature of systems leads to complex behaviour that can be difficult to understand, predict and manage. Although it may be assumed that systems would be disorganised and in disarray because of the variances possible, once control is dispersed, self-organised, open, evolving and adaptable, the opposite is in fact the case. Waldrop (1992) concluded through his discussions with a complexity scientist, John Holland, that “control of a complex adaptive system tends to be highly dispersed” (p. 145). Kauffman (1995) suggested that “profound order is being discovered in large, complex, and apparently random systems” (p.8).

Complexity theorists use the term *complex adaptive systems* to describe “a world in which many players are all adapting to each other and where the emerging future is very hard to predict” (O’Day, 2002). A complex adaptive systems approach aims to understand the behaviour of the individual elements of systems and populations (Burnes, 2005). This knowledge can then be used to understand the working of the whole. According to Brodnick and Krafft (1997, p. 7), a system is defined as “a group interacting, interdependent elements that form a complex whole.” Pigliucci (2000, p.
64) further specified that the development of complexity theory is an attempt to study systems that satisfy two particular conditions: first, the system is made of many interacting parts, and second, that the interactions result in emergent properties that are unique to the whole and are not immediately reducible to a simple sum of the properties of the individual components.

Davis and Sumara (2006, p. 19) highlighted the research of Deborah Gordon who studied the life cycle of ants and realised that the routines and life in the anthills could not be reduced to the characters or the life cycle of particular ants. It became apparent to her that it was the interactions of many ants that established and maintained the anthills that lasted much longer than any individual ant. This feature makes the study of complex systems in the natural world compelling for the study of human systems, particularly the way those systems can be sustained over time and beyond the dependence on the individuals who constitute them at any given point. Gell-Mann (1994) believed that it is human nature to see patterns, to identify inconsistencies and to construct schemas in our minds because human beings are complex adaptive systems themselves.

3.2.1.2 Human systems within complex systems

Complex systems are dynamic, unpredictable, spontaneous, adaptive and alive (Davis & Sumara, 1997; Fels, 2004; Urry, 2005; Waldrop, 1992). These evolving qualities are particularly important for the increased use of complexity theory as an appropriate methodological framework in the examination of human relationships. Complexity theorists have identified the need to develop a rigorous alternative to what they view as “the divisive, reductionist, and linear thinking that has dominated academic inquiry throughout the modern era” (Davis & Sumara, 1997, p. 117). Every complex, self-
organising and adaptive system possesses a kind of dynamism that makes it qualitatively different from a static object (Waldrop, 1992, p. 11).

In any social system, all the individual agents must abide by some reasonably coherent set of rules in order to remain viable. As most discover, “the rules of interaction are neither stable nor universal” (Davis & Sumara, 2006, p. 11). An agent is rarely provided with a guide book to become part of a particular social system. Through observation and interaction, the code of conduct evolves and acceptable behaviours are noted, although what may be acceptable in one context might not be acceptable in another. Agents learn to become adaptable.

A contemporary example in human systems can be seen in the working of eBay. eBay has very simple rules for engagement but is in fact a complex system. This complex adaptive system involves millions of agents being engaged in an exchange with simple rules regarding posting, buying and selling. The interactions among individual agents impact the wider system and the system itself is continually evolving. The reputation of buyers and sellers relies on feedback as agents involve themselves in more transactions. There is no formal structure or physical site for eBay as it is entirely web-based, yet the daily transactions and nuances involved for the success of the system are great. For it to continue, eBay relies on the various agents engaging in transaction being equally committed to its success.

Complex adaptive systems incorporate relationships as well as the rules that govern the system. Examples of complex adaptive systems provided by Gell-Mann (1994) include a child learning its native language, a strain of bacteria becoming resistant to an
antibiotic, the scientific community testing out new theories and a computer programmed to evolve new strategies for winning a game of chess (p.9).

The intention of complexity theory is not to provide answers or explanations for all issues. Rather, the concept is an umbrella notion that incorporates the “human tendency to notice similarities among seemingly disparate phenomena” (Davis & Sumara, 2006, p. 7). The concept resonates well in human systems as we naturally function as agents within a complex adaptive system. Miller and Page (2007) further emphasise that once agents become part of a system they alter its behaviour. There is not necessarily any intent to do so, it is purely through the act of engagement that an agent can and will alter the dynamic that already exists.

3.2.1.3 Creating order in complex systems

Complex adaptive systems possess general laws and conditions for order that are governed by seemingly simple rules. These basic rules become more complex through interactions. Waldrop (1992, p. 241) provided an example of this through his explanation of Craig Reynolds’ computer program simulating the flocking behaviour of birds. Reynolds’ idea was to place bird-like objects (which he called “boids”) into an onscreen environment that contained walls and obstacles. The boids followed three simple rules of behaviour: they aimed to keep a minimum distance from other objects (including other boids); they tried to keep the same speed as other boids; and each boid aimed to move towards the centre of the flock. Reynolds believed this attempt not only captured the essence of flocking behaviour in birds but also replicated the herding behaviour seen in sheep or the schooling behaviour of fish. This simulation demonstrated that the flock was self-organising (nothing was pre-determined about how the boids should fly) and that the emergence of order was not imposed from an external
force. There was no leader established or a central control – rather there was distributed control. From three seemingly simple rules order was created.

The study of these systems and the way they develop has great utility for human systems. Examples of human systems such as the internet and eBay have been purposefully designed, even though they grow and develop in a self-organising way. These systems are guided by shared assumptions and by basic features to create a shared operational schema.

3.2.1.4 Non-linear

Traditionally, linear models of management have been used in human systems. This has meant the establishment and continued support of systems that are hierarchical, often mechanical and depersonalised, inflexible and passive. Complexity theory challenges the traditional notions of linear causality by focusing on dynamic, nonlinear systems (Burnes, 2005; Doolittle, 2000; Houchin & MacLean, 2005; Miller & Page, 2007; O’Day, 2002; Phelps, 2002; Rosenhead, 1998). For complexity theorists, organisations are nonlinear as all interactions between individuals or groups of individuals become a type of feedback system (Coppieters, 2005; Rosenhead, 1998; Stacey, 2006). This nonlinear relationship between cause and effect is evident within systems where seemingly small and inconsequential changes can result in a large, systemic effect, whereas large and dramatic changes might make only very slight differences and have minimal effect (Brodnick & Krafft, 1997; Buell & Cassidy, 2001; Lewin, 1993). As all properties within a system are not weighted equally it is impossible to know prior to implementation what changes will have a great impact and what may have less impact in relation to change.
3.2.2 Self-organisation

Complex adaptive systems are self-organising. The richness of interactions amongst agents allows the system to undergo spontaneous self-organisation. Waldrop (1992, p. 11) noted that when agents try to satisfy their own needs they unconsciously organise themselves through a range of individual acts that occur naturally. As Burns (2005) suggested, “there is no overall blueprint or external determinant of how the system develops; instead, the pattern of behaviour of the system evolves or emerges from the local interaction of the agents within it” (p. 79). It is this self-organising ability that allows systems to adapt to their environment or particular context in order to survive and to maintain coherence throughout changing circumstances (Davis & Sumara, 2005b, p. 455). Self-organisation appears as “a process of spontaneous emergence of new complex order out of seemingly chaotic realms” (Laroche, Nicol & Mayer-Smith, 2007, p. 71).

Griffin, Shaw and Stacey (2006) highlighted the work of Kauffman, whom they viewed as a theorist modelling the work of complex systems with a focus on their self-organising, emergent and unpredictable aspects. Particularly attractive in Kauffman’s work is his simultaneous examination of individual agents and how they act in a way to enhance their self-interest in order to survive (p. 168). Not only are self-organising systems emergent, they are also adaptive as all responses to an event are active – there is no passivity within the system (Waldrop, 1992). For example, in educational contexts knowledge is actively constructed and self-organised by the individual and prior knowledge is self-organised into schemas (Doolittle, 2000). Teachers construct their knowledge of education and the classroom environment in an autonomous manner based on their field experiences over time. Gare (2000) used Kauffman’s work as a basis to consider the continual evolution within a system where better adaptations can
be selected, where self-organisation is evident and leads to further selection as well as improvement, and where new conditions for future developments are subsequently created.

3.2.2.1 Agents

The importance of attention to the interactions of agents with each other, rather than the individual agents themselves is continually highlighted throughout the literature (Doolittle, 2000; Phelps, 2002). The complex systems within which agents operate mean that at any particular time multiple independent agents are interacting with each other in various ways (Waldrop, 1992). Order eventually arises from these interactions quite “naturally” and is not imposed on agents from some external force (Doolittle, 2000). Waldrop (1992) noted that as agents try to satisfy their own needs they unconsciously organise themselves through a range of individual acts which “happen without anyone being in charge or consciously planning it” (p.11). Agents use simple rules to create parameters for their work.

Complexity science focuses on how autonomous agents can come together in more sophisticated, efficient and capable ways and then how these interactions affect the actions and characters of the agents that comprise them (Davis & Sumara, 2005b). Stacey (2006) used the analogy of the number of connections between cells in a network, the changeability of the behaviour that the network produces and how this can be linked to strong and weak ties in the wider network systems of organisations. Similarly strong ties exist when agents spend time together, are emotionally invested in the work they are doing, feel connected and provide mutually beneficial services. “The effect of strong ties is to bind people together making it likely that behaviour will be repetitive and uniform” (Stacey, 2006, p. 91).
Every agent within a system functions through the use of individual internal models or schemas (Doolittle, 2000; Phelps, 2002). In most cases, an agent recognises relatively quickly when behaviour is counter-productive and then alters, modifies or discards that particular internal model or schema. Alternatively, if an agent repeatedly exhibits a behaviour that is productive, then the internal model or schema that is responsible will be retained (Doolittle, 2000). Unfortunately, there are numerous examples in education where behaviour that is dysfunctional persists for numerous reasons including reluctance to change and move to the unknown, and protection of the status quo. For example, in situations where higher education institutions restructure their executive level of management, individuals may be moved out of the newly created system for a variety of reasons but a “parallel” system is created so that they are not offended or feel as though they have been demoted. New positions are created that are not actually part of the new system but need to be maintained in some way. This demonstrates that the executive are not entirely committed to the new structure and are hedging their bets.

Miller and Page (2007) emphasised that much theory based in the social sciences ignores the communication dimension of social interaction when in fact “communication among agents can have a profound effect on the behaviour of a complex system” (p. 242). The role of individual agents is extremely important in the operation of eBay. Without engagement in the system it would not survive. Within that system, agents quickly adapt their behaviour to be successful. In order to receive positive feedback agents learn to be prompt and considerate of others within the system, otherwise their engagement in the system can be affected.
Throughout the present study, agents are either the design team members directly involved in the design process or stakeholders identified either as externally interested parties or as students providing feedback.

3.2.2.2 Collective intelligence

Collective intelligence is created through the interactions and collaborative work of a group of individuals or agents. These agents come to a shared understanding through this process of discussion, listening and reflection. What evolves is a better understanding of the ideas of the agents involved and a product that reflects the input of all agents rather than individuals. Collective intelligence uses the power of self-organisation and the belief that distributed intelligence can emerge (Bower, 2006). As Miller and Page (2007) highlighted, many features of social systems are the result of self-organisation. Doolittle (2000) mentioned that agents organise themselves according to their interests and locally established parameters and from this self-organisation a more global or higher structure emerges. Within these networks, agents self-organise to produce emergent order or disorder, so that what is exhibited is either highly stable patterns of behaviour or chaotic ones close to the “edge of chaos” (Griffin et al., 2006, p. 165). Within this entire process it is important to recognise that individuals support what they create and this is what sustains reform (Bower, 2006).

The notion of collective intelligence resonates particularly strongly with the aims of this study as the experiences, strengths and knowledge of each design team member are recognised along with the simultaneous need to design an inclusive education course within the higher education context. The value of collective intelligence lies in its recognition that ultimately the greater good is more pressing than individual need. In the acknowledgement that each individual has something to offer, there is greater strength
in pooling this collective intelligence and recognising that the whole is greater than the sum of any individual parts (Fenwick, 2012).

3.2.2.3 Emergence
Emergence is a product of self-organisation and is central to complexity (Urry, 2005, p. 5). Complex systems have the capacity to undergo spontaneous change from which new emergent behaviour and order is produced (Cohen, Manion & Morrison, 2011). Emergence in complex systems is a nonlinear process with limited predictability that arises from self-organisation (Goldstein, 2006; Laroche et al., 2007). The spontaneous emergence of new and more complex patterns in the system forces a system into a state far from equilibrium. Within human systems, complexity theory challenges many assumptions by noting that human activity naturally allows for the possibility of emergent behaviour (Lissack, 1999, p. 110). As indicated earlier, Johnson’s work (2001) on cities showed that they exhibited emergent behaviour as they developed. Like-minded people often set up businesses in the same area. This can be seen in particular districts across Sydney with Chinatown in the south-west corner of Sydney’s CBD, the outdoor and adventure strip on Kent Street, high-end fashion on Elizabeth Street and in Melbourne’s Lygon Street food strip. These businesses have established themselves from the bottom up, regardless of top down forces such as councils and planning and development regulators. While in any city there are always significant structural influences of location and property values that draw particular groups to areas that are attractive to them in terms of economic and social benefit at particular times, these specialist “communities-within-the-community” emerge on their own and give parts of the city distinctive identities. Cycles of “gentrification” often emerge after periods of relative stability in city systems, as they continue to change over time.
3.2.2.4 Levels and self-similarity

The nature of a complex adaptive system means that the components at one level of the system act as building blocks for components at another (Waldrop, 1992, p. 145; Morrison, 2002). Complex adaptive systems are constantly revising and adapting these building blocks as they gain experience. According to Holland (1998) adaptation is central to the revision and restructuring of these building blocks. These building blocks may be seen as metaphors for all kinds of systems such as large organisations, countries involved in trade negotiations, and world economies. Through the consideration of feedback and modification where necessary, the system is able to develop into a more refined and streamlined entity by this process.

3.3 Chaos

Numerous researchers have identified chaos theory in its various iterations as the study of complex, nonlinear systems (Buell & Cassidy, 2001; Houchin & MacLean, 2005; Levy, 2006; Lewin, 1993; Lorenz, 1993; Phelps, 2002). Buell and Cassidy (2001) additionally emphasised that chaos theory is perhaps less a unified theory and more a collection of tenets concerning the behaviour of the systems being studied (p. 211). This perspective aligns well with the aims of the present study which applied six tenets to examine the behaviour of the system being created and studied. Chaos is at times utilised to explain the behaviour of complex systems. An example in the higher education context where needs in a particular context shift over time and adaptation is required for the system to remain sustainable. The chaos that is created by these changes needs to be carefully negotiated, and additional complexity is created by the fact that if the status quo is upheld instead, chaos could also be created by not doing anything. Levy (2006) viewed chaos theory as an extension of systems theory, as originally developed by Katz and Kahn (1966), to incorporate consideration of the nonlinear
dimension of the theory rather than a total paradigm shift. The key tenet of chaos theory is that complex systems are unpredictable (Iannone, 1995). Commonly the 1963 work of Lorenz is cited, where he positioned chaos as analogous to a situation in which the flapping of a butterfly’s wings in Brazil ends up starting a ripple of events that results in a tornado in Texas (Pigliucci, 2000). According to Levy (2006), chaos theory provides a useful theoretical framework for understanding the complex interactions among agents. Complex systems are dynamic, but they exhibit a degree of order that facilitates short-term forecasting, providing time for strategies to adapt and for underlying patterns to be discerned (Levy, 2006, p. 16). Levy (2006) developed these concepts further and considered the implications of chaos for complexity stating, “chaos theory also points to the importance of developing guidelines and decision rules to cope with complexity, and of searching for non-obvious and indirect means to achieving goals” (p. 22). Miller and Page (2007, p. 222) explained that the model of complex adaptive systems allows researchers to explore the space between equilibrium and chaos.

Many systems seek to find this ideal mid-point – a stable and calm environment. This is in fact unrealistic; environments are constantly changing, so a system searching for equilibrium is looking for something that no longer exists. Bain (2007) used the example of a particular school to illustrate this phenomenon effectively. The school had been associated with a particular type of student population, but in recent times had begun to enrol an increasing number of students with various learning and behavioural problems – yet the teachers continued to teach in ways that did not reflect this change. Teaching was targeted to a student population that no longer existed, and in the pursuit of, and desire for, equilibrium the teachers did not adapt. Chaos was created through the lack of adaptation.
3.3.1 Edge of chaos

The term ‘edge of chaos’ refers to an active dynamic state that is simultaneously stable and unstable. This dynamic is generated by agent interaction rather than by predetermined situations or events (Coppieters, 2005; Stacey, 2006). Due to this shifting dynamic, the “edge of chaos” is considered the one place where a complex system can be “spontaneous, adaptive, and alive” (Waldrop, 1992, p. 12) and where agents cannot accurately predict the consequences of their actions (Kauffman, 1995). Interestingly, complex systems seem to have acquired the ability to narrow the space between stability and disorder into a particular kind of balance. This balance point, often called the edge of chaos, is where “the components of a system never quite lock into place, and yet never quite dissolve into turbulence, either” (Waldrop, 1992, p. 12). The edge of chaos is where new ideas and innovations are challenging the status quo and when some individuals realise that an institution is ready for change to occur. At this time even a small change can create the future possibility of more significant change (Brodnick & Krafft, 1997, p. 12). It is thought that systems that are too simple become static while those that are too active are chaotic, so it is at the edge or intersection of these two extremes of behaviour that a system can be productive (Miller & Page, 2007, p. 129).

3.4 Complexity as Metaphor

Stacey (2006) highlighted the historical positioning of chaos theory and the fact that the term “chaos” has a precise mathematical meaning. It is used to express a particular dynamic, the strange attractor. Stacey’s interpretation would suggest that “as chaos is a property of deterministic rather than evolving relationships it cannot have anything to do with learning” (p. 239) and, as any type of human action or interaction is not deterministic, it evolves. With this position in mind, it is logical then to assume that what is deterministic cannot learn. As Stacey concluded, “chaos theory can, therefore,
only ever be used as a loose metaphor for anything in the human domain” (2006, p. 240). This interpretation has great ramifications for the process of learning and is in fact the opposite of what is evident in practice. Miller and Page (2007, p. 222) asserted that “the rise of complex adaptive systems and its core ideas stem partly from the intrinsic power of the metaphor”. To support this claim they used examples such as stock markets and political parties rising and then falling.

One of the key criticisms of the use of complexity theory in this manner is that there appears to be a lack of explicitness regarding how writers are using the theory (Burnes, 2005, p. 86; Pigliucci, 2000). Doolittle (2000) noted the opportunities within the educational context and saw the potential of complexity theory as a new metaphor where learning can be viewed as self-organised adaptation. Equally, Brodnick and Krafft (1997, p. 9) suggested that if researchers are able to recognise the capacity of contending metaphors and to consciously select from them in a particular circumstance, then the capacity to deal adaptively and creatively in these situations has been increased.

In Lissack’s (1999) view, complexity science has only contributed metaphors and models in the field of organisation science. This was explained further in the work of Brodnick and Krafft (1997) who again noted that although the complexity paradigm has been used predominantly in the social and organisational sciences, the major barriers to its use have been “due to inadequate common language and deficient metaphors as well as limitations of ideology and education” (p. 3).

In the education context, self-organisation can be applied and utilised in the design of a system that encourages change and adaptation through feedback by ensuring bottom-up
solutions to needs and problems (Bain, 2007). Solutions are determined collaboratively through the pooling of collective intelligence, or the input and knowledge of individuals, to provide bottom-up solutions that reflect the capacities of the group rather than an individual. Creating a system with the ability to adapt to change provides the capacity for adaptation as changes occur. The effective operation of this system is supported by six theoretical principles – simple rules, embedded design, feedback, dispersed control, similarity at scale, and common schema.

3.5 Theoretical Principles of Self-organisation
This overview of six theoretical principles for course design is informed by the application of theory and research in self-organisation and complex adaptive systems to design (Bain, 2007; Bain, Walker & Chan, 2011; Bain & Weston, 2012; Pascale, Millemann & Gioja, 2000; Stacey, 1995; Waldrop, 1992).

3.5.1 Simple rules
Simple rules provide a basis for successful collaboration and the establishment of groups within human systems. They make it possible for agents to work together successfully to build capacity and enact a common schema. These simple rules are not mission statements; rather they are what drive the form and function of a system. It is also important to note that in successful systems these rules are not extensive and cumbersome. They are easily understood by all agents within the system and become a powerful force for self-organisation.

By identifying and formulating simple rules within the planning process, all agents involved determine which concepts are relevant in an open and transparent manner. Agents can also emphasise particular areas of need or weakness as a focus; the literature clearly demonstrates that collaboration is one such area (Murray, 2000; White, Pearson,
Ratliff, Hillsman & Miller, 2001). Collaborative practice can be easily incorporated as a simple rule to ensure that all agents are mindful of that requirement throughout a course design process. It has been noted in numerous pieces of research (Burke, 2002; Coronel et al., 2003; Vavrus, 2001) that the use of a collaborative methodology increases the quality of a course, and improving quality should be a key goal with any reform process undertaken.

Specific teaching and learning competencies can also be incorporated. As inclusive education is a particular field within teacher education, there are also specific elements within this area that can be targeted through a course design process. The ultimate benefit is that, through the establishment of simple rules, the course design process is grounded in a common set of educational purposes, themes and assumptions (Tom, 1997). This study capitalised on the evidence base on the effectiveness of collaborative practice and incorporated it throughout the design process in both the practices of the design team and the design of course content.

3.5.2 Embedded design
Embedded design creates self-repeating patterns (Waldrop, 1992) by expressing simple rules in design and by embedding these design features in all others. “It allows the beliefs and ideas of a theory to be connected to its essential systems and practices” (Bain, 2007, p. 50). The principle of embedded design also creates a level of predictability between the various components within a system. In an educational context this would ensure a sound relationship between learning and teaching (Zundans-Fraser & Lancaster, 2012). For example, embedded design allows the system to express its simple rules by ensuring that they are embedded at all levels of a group’s activity. When these simple rules are evident at all levels of the design and used in some way
through day-to-day activities, capacity and familiarity are built that ensure self-reinforcement.

3.5.3 Feedback

Feedback is the way a complex system talks to itself (Pascale, Millemann & Gioja, 2000). It refers to the capacity of a design to “monitor and manage its implementation and effects and to work out its success and problems as they occur” (p. 23). Any complex system entails feedback mechanisms, as the results of one interaction are fed back into the system as input for subsequent interactions through iterative feedback loops (Andrews et al., 2012; Buell & Cassidy, 2001; O’Day, 2002). Organisations are examples of feedback systems: every time two humans interact, the actions of one person have consequences for the other. The way an individual reacts will have consequences, which will require another response and so on (Stacey, 2006, p. 80). Feedback can have major positive or negative effects on a system. Any time new rules are introduced, a system relies on feedback so that the effects may be amplified and implemented with the longer-term aim of becoming a permanent fixture (Brodnick & Krafft, 1997; MacIntosh & MacLean, 2006). Obviously feedback would be particularly critical during this time. The disequilibrium that is created through feedback processes interacts to produce unique forms of order (Houchin & MacLean, 2005). Feedback among agents can alter system rules.

Human organisations are considered nonlinear feedback systems that contain certain rules and multiple relationships. Stacey (2006) suggested that there are particular laws within organisations that take the form of “decision rules and scripted relationships between people within an organization and with people across organizational boundaries” (p. 81). Again, the example of eBay illustrates the concept of feedback and
its impact perfectly. After a transaction has occurred via eBay, both the purchaser and the seller are asked to provide feedback regarding their experience. The comments made and the rating provided impact on each agent’s “position” within the system. If negative feedback is provided this affects the percentage rating given to the agent, which can affect future interactions as potential purchasers may be wary about engaging in an interaction with an agent who is not seen as reliable. Conversely, positive feedback impacts well on an agent’s rating and encourages future interactions.

3.5.4 Dispersed control
The benefits of dispersed control are that ownership and innovation are shared, collective intelligence is highly valued and the whole system is viewed as a professional body, rather than all “ownership” being directed towards the upper management or executive levels. The system is bottom-up in structure and relies on the interaction of all agents, so effective communication systems are essential. As collective intelligence is so highly valued within this process, dispersed control appears as a natural progression of this respect and acknowledgement of each agent’s professionalism. One of the most challenging aspects associated with the principle of dispersed control is the need to build “the organisational structures, network and pathways required for genuine collaboration to occur” (Bain, 2007, p. 55). In an educational context, dispersed control of an activity allows feedback at all levels and allows educators to be engaged in continual formal and informal professional communication.

3.5.5 Similarity at scale
Similarity at scale is what happens when the key features of a system are embedded at all levels, making a system similar to itself (Gleick, 1987; Merry, 1995). These self-repeating patterns are evident at different levels or scales regardless of the manner in which control is dispersed. Davis and Sumara (2006) saw the movement across these
levels of organisation as the vehicle for addressing prominent questions in education. In this context, self-similarity exhibits itself through the similarity in the roles of agents and groups at different levels of a school or higher education institution. For example, there are certain understandings of how different committees should be run. The purpose of each may be quite different but the basic operation, procedures and constitution of each committee will be standard across the institution, with fairly similar committee roles embedded. In this instance similarity is demonstrated through the way agents use similar methods as they execute their respective roles.

3.5.6 Common schema
The five principles just identified are designed to function interactively to create a common schema. A schema is a conceptual framework that defines one’s interaction with the world (Marshall, 1995) and helps agents to work together to execute their particular roles within the system (Gell-Mann, 1994). For example, most people have a schema for driving a car. A car schema allows people to deal automatically with the sameness in the process and to focus on any subtle changes that may occur within an individual driving experience such as poor weather, additional passengers or an unfamiliar route. People use a meta-perspective combined with a specific understanding of the regular features of this system to avoid cognitive overload, creating the potential for adaptation according to each particular circumstance. This schema is based on simple rules which ensure that agents within this system are clear about their roles and able to participate actively within the system.

The use of a schema addresses common criticism of teacher education courses that there are often serious disjunctures within programs (Cochran-Smith, 2001; Fullan, 1999; Pring, 1996; Russell et al., 2001; Tom, 1997). A process based on these six principles is
highly scaffolded to limit the possibility of any disjuncture occurring. This schema and its associated professional language result from a common design metaphor and from structuring and being responsive to a variety of feedback processes. A schema for practice evolves from repeated engagement with a complex system.

3.6 Complexity and Education

Educational research oriented by complexity science attends to the dynamic elements and conditions that enable the emergence of certain sorts of engagement and insight that can lead to generalisable findings. These do not necessarily come with the promise of replicability, however, as “complex systems and events cannot be duplicated” (Davis & Sumara, 2005a, p. 318). Advances in the study of complex systems have identified a need to revise and further examine approaches to, and understanding of, the way in which human systems function, particularly in connection to educational programs (Buell & Cassidy, 2001; Burgess, 2004).

The practice of education occurs within a complex system that includes individual agents, collectives of individuals, communities and larger cultural contexts (Davis & Sumara, 1997). A higher education institution can be considered a natural system with multiple subsystems where managers and researchers are engaged in the process of organisation that will formalise the natural system into a formal system comprising data, policies and procedures (Brodnick & Krafft, 1997, p. 6).

Many researchers examining the nature of complex systems have emphasised the shifting focus from parts to the whole (Brodnick & Krafft, 1997; Davis & Sumara, 1997; Kauffman, 1995). It is necessary to consider how the parts of a system inform the collective, but the collective is much greater than the sum of its parts (Kauffman, 1995;
The benefit of this type of continuing shift in education is that complexity “aims to understand the whole by understanding the interaction of its parts” (Phelps, 2002, p. 168). This resonates well in the education context for a number of reasons: the often collaborative nature of planning, the interactions required at various levels – with students, with colleagues, with executive, with external stakeholders and community. Davis and Sumara (1997) highlighted that within an organisation or complex system, each individual is positioned in numerous ways – as part of a collective of numerous wholes, a whole and as part of a whole. These perspectives consider the positive nature of working in a collaborative manner, but the reality is that in teacher education this coherence, unity and intentional design are still lacking and little evidence of sustained improvement is available (Grossman et al., 2009; Grossman, Hammerness et al., 2008; Levin, 2010; Rennert-Ariev et al., 2005).

Complexity theory suggests that any minute change in a dynamic system has an impact on a multiplicity of inter-related locations and relationships (Fels, 2004, p. 76), yet within what appear to be quite complex, dynamic patterns there may be underlying simplicity (Lissack, 1999). Emergent, dynamic and self-organising systems interact in a way that heavily influences the probabilities of later events (Urry, 2005, p. 3). Davis and Sumara (1997, p. 119) emphasised that emergent phenomena must be studied in all their complexity, incorporating examination not only of the subsystems within a system but also of the larger system within which the focus of the investigation is embedded.

In education, complexity theorists such as Gough (1999) and Reason and Goodwin (1999) have suggested that the value of complexity lies in its “capacity to encourage new forms of social imagination, new ways of seeing and new language to describe such relationships and structures” (Phelps, 2002, p. 172). According to Fels (2004)
“complexity theory permits educators and researchers to acknowledge and engage in the multiplicity of complex relationships and interactions that simultaneously embrace and disturb conventional expectations” (p. 77). Brodnick and Krafft (1997) highlighted aspects of complex systems: the nested nature of interrelated systems, the need to consider the particular context, network thinking and a shift in focus on relationships, and the impact of these aspects on systems. They recognised that anyone who observes a system is interactive with rather than independent of that system. These elements can all be seen in the earlier example concerning the development of cities. It is a system created for a particular need that definitely relies on networks at a human level, requiring agents to be interactive and connected through a relationship established by engagement with the system. Researchers are recognising that past school improvement and reform efforts have been too narrowly conceived and that schools need to be viewed from a perspective where they are seen as “dynamic, unpredictable and complex social organisms” (Coppieters, 2005, p. 129). Complexity theory “offers a different conceptual framework for the study of conceptual change” (Houchin & MacLean, 2005, p. 164) by providing the theoretical framework for combining alternative viewpoints into a coherent perspective on process (Stacey, 2006).

3.6.1 The self-organising school

The self-organising school (Bain, 2007) was a longitudinal field-based experience with principles and practices derived from an 11-year secondary-school reform project. The enactment of this project created a school design based on the six principles described in this chapter and used as a basis for the present study in the higher education context. When the project began, the student body consisted of 353 students and 68 full-time teachers. The main intent of the project was to create a reform process and model that embedded innovative practices and processes that influenced student learning within
and across the school system (Bain, 2007, p. 5). From a student perspective, the project was designed to improve current levels of performance through a program that combined best practice in teaching, curriculum, and resources. Criticism of previous reform attempts had questioned whether it was possible to embed and sustain effective teaching and learning practices in schools. The self-organising school responded to this by sustaining a design that offered theory, practice and evidence demonstrating the comprehensive nature of the design and implementation approach. The theory and methodology used for this project were deeply embedded in complexity theory, complex adaptive systems and self-organisation.

Within the self-organising school (Bain, 2007) the mechanisms for sharing feedback were embedded within the design and were central to its implementation and ongoing success. Individual performance was noted over the whole time this system operated, as the natural cycle of communication set up within the system ensured that feedback was provided continually rather than just at critical times when decisions needed to be made. This feedback was emergent and formative rather than summative. The school’s design and schema created the opportunity for all members of the team (teachers and students) to set goals and to regularly share their growth towards these goals. In this manner the agents involved within that system embedded the feedback process in a way that supported and developed the broader purposes not only of the team but of the school as well.

These findings demonstrate the value of building a complete foundation for reform based on a deeper articulation of theory, systems and practice (Bain, 2007, p. 247). These principles have been subject to additional validation in the higher education
context through studies examining many of these principles through the use of evidence-based practice in pre-service teacher preparation (Bain, Lancaster, Zundans & Parkes, 2009; Zundans-Fraser & Lancaster, 2012) and in examining pattern language development in pre-service education (Bain, Lancaster & Zundans, 2009).

3.6.1.1 Applying the design principles

The six design features of self-organisation were utilised as a framework for the self-organising school and represented the first longitudinal study and scaling up of complexity theory as a design metaphor into practice.

In the self-organising school project (Bain, 2007) simple rules incorporated concepts regarding student achievement, learning goals, cooperation and collaboration that were established in the pilot and early phases. The simple rules were used to focus the school on its professional commitments, as a filter to prioritise the key activities of the school and to serve as the basis for a design process. These simple rules were established through an extensive community consultative process that involved teachers, parents and other interested stakeholders. It was an emergent process that required these stakeholders to reflect on their existing practice and consider what they particularly valued. Foundational research on collaboration, assessment, cooperation and effective teaching was used by the teaching faculty to build a set of commitments that ultimately framed the design and curriculum. The schema building process began with the development of a common set of professional understandings, beliefs and processes around teaching and learning. These understandings and beliefs were held by all agents and at all levels. The schema developed was used as a way to explain professional development, organisational support, curriculum and pedagogy, and evaluation, and the way they aligned to coherently explain teaching and learning and guide practice.
An example of this process pertains to collaboration and cooperation. In the self-organising school project, the school identified collaboration and cooperation as a simple rule. The school came to a consensus view on this and then used the rule to drive a design process. That process resulted in the adoption of cooperative and collaborative practices and their widespread use across the school that emerged over time as a dimension of the school’s schema.

These simple rules were adapted and refined through these early stages with permanent change consistently noted 4 years later when the use of cooperative learning by all teachers and teams (consisting of both teachers and students) was observed within the school and the capacity of all agents to use the language of cooperative learning was evident through feedback provided.

Embedded design involved explicitly repeating the content of cooperative learning (or any other practice selected) in all parts of the reform model. This meant that professional development, the roles and structure created and the feedback were all embedded within each design element. In practice, this could be seen through a teacher learning how to design cooperative learning lessons, being provided with peer feedback, and then further incorporating the software tools that had been part of the professional development program. As the teacher continued day-to-day use of cooperative learning, the professional development was reinforced every time the tools were used. As this tool had been designed specifically with cooperative learning as a basis, the goals of the professional development program were reinforced and any feedback provided supported the teacher’s capacity both to use the tools and to incorporate cooperative learning in their lesson and program design. The principle of embedded design allowed
teachers to look at the commitments and curriculum and consider what would be needed to embed these in the life of the school. This led to the creation of position descriptions, team processes, policies and so on to reflect the simple rules of the school in practice at all levels and embedded throughout the daily activities.

Dispersed control was created through a network of teams at three levels: teaching and learning, management and leadership (Bain, 2007). The teaching and learning teams at the base level of the network were made up of the teachers whose core activity was classroom teaching and learning and who worked directly with students. As teachers worked together in teams, rather than alone, they were continually engaged in professional communication. The leader of each of these teams was then able to make links with other team leaders to share innovations, resolve issues in a timely manner and build capacity. The second level of the network consisted of the management team who needed to provide the support so that the work of the teaching and learning teams could be scaled up (Bain, 2007). This group comprised of the leaders of each teaching and learning team along with specialist groups required within the specific network such as technology and learning support. The third level in the network was the leadership team comprised of representation from the management team and the school executive.

Within the self-organising school, similarity at scale was seen in the roles of agents and groups at different levels within the school. In a system working effectively, a team of students would function in the same way as a team of teachers in charge of a particular grade level. Students working in a cooperative classroom would use a particular collaborative problem solving approach to provide a solution to a problem (Bain, 2007, p. 52). This same approach would also be used during staff or executive meetings. Although the content and discussions would be different in each case the principle
remained the same as comparable methods and tools were used in each case to ensure that each agent within the group executed their role.

For teachers, a schema incorporated a common set of professional understandings, beliefs and actions about teaching and learning that were valued and shared by all agents (Bain, 2007, p. 45). This schema informed areas such as professional development, curriculum and pedagogy, feedback and support systems, and came together in an explicit and coherent manner to explain teaching, learning and guide practice. This common understanding by all agents led to the establishment of pattern language that was used by all agents within the system. Pattern language refers to the professional language that is used to describe the dimensions of practice (Bain, 2007, p. 46). This could be seen in practice through the use of common terms associated with cooperative learning such as “guided practice”, “task structure” and so on. These terms would not be used in every day discussions, but to students and teachers fluent in the knowledge and application of cooperative learning, they would be a natural part of their conversation. This evolved as a result of working in a context where design features that encouraged this type of engagement and interaction were in place.

3.6.1.2 Results from the self-organising school

The self-organising school project had numerous findings that resonate for the present study and support the validity of principles of self-organisation as a basis for research-based reform. The self-organising schools project demonstrated that “research-based practice can be sustained over time; that a school can build a common schema and utilize pattern language in a manner that exists in other professions; that emergent feedback is possible when feedback is conceptualized as part of the design; and that theory can make a practical connection between ideas, systems and practice” (Bain, 2007, p. 248).
The feedback provided by students, teachers, teams and leaders about the design of the reform project supported the conclusion that the model was comprehensive in its design and implementation. Five years and 1,614 pieces of classroom observation data were collated with a similar number of peer, self, and team surveys completed during this period. Overall, 12,560 student evaluations were gathered along with corresponding observations and teacher surveys. In total, over 15,000 pieces of feedback were gathered examining areas such as student learning, implementation of design (including simple rules), teamwork, collaboration, teaching practices and professional growth. The high levels of implementation integrity indicated by the data show that a school can articulate a set of beliefs and values, express these as simple rules for design and then translate those rules into practice. The convergence of feedback from multiple sources further indicates how deeply embedded the principles of self-organisation were in the school system.

The larger outcomes included higher levels of professionalism, improved student SAT performance (Bain & Ross, 1999), the creation of a community of practice (Bain & Hess, 2000), embedded use of the technology tools by both teachers and students (Bain, Huss & Kwong, 2000; Bain & Parkes, 2006), and the prominence of feedback. The findings of the self-organising school project “demonstrate the value of building a complete foundation for reform based on a deeper articulation of theory, systems, and practices” (Bain, 2007, p. 247). This process was utilised as a basis for the present study in the higher education context as a way to respond to the needs identified in the previous chapter: a theoretically based process of course reform and design; closing the theory-to-practice gap; utilising collaborative practice and the need to understand the impact of institutional practice.
3.6.1.3 Further traction

Beyond the investigation of the application of principles of self-organisation in the self-organising school project, additional traction for this design has been found through the Hong Kong school project (Bain et al., 2011). That project used a design built around the six principles of self-organisation and targeted capacity-building in a Hong Kong co-educational secondary school, begun in 2009 and ongoing. There were four strategic goals for the project: to integrate the principles of the self-organising school with the school’s vision and goals; to apply the principles to building school capacity in mastery teaching, cooperative learning, differentiated instruction, and the use of technology; to develop and use a lesson plan database to help build a school repository; and to build a system within the school for recognising and rewarding teachers, including promotional opportunities and promotion criteria that aligned with the school goals. At the time of publication (2011) the project was travelling well towards these goals, with explicit acknowledgement of the importance of leadership, clear vision and goals and the need to create conditions where this type of innovation can occur.

The design used in these studies formed a basis for the present study and has since received additional traction in the institution by now being scaled up and employed in a comprehensive organisational change process at university level.

3.6.2 Application of self-organisation in higher education

The design approach for the self-organising school (Bain, 2007) was used as a model for the present study situated in the higher education context. This meant that the course used as the basis of the study, just like the self-organising school, was purposefully designed with beliefs, values and practices at its forefront and feedback continually sought throughout the process to ensure the “capacity to change, grow and evolve”
(Bain, 2007, p. 15; Bain et al., 2009; Lancaster & Auhl, 2013). As a key dimension of the process was the notion of similarity at scale and the use of iterative cycles, the feedback throughout needed to be robust to ensure that the evolving process was sound (Lancaster & Bain, 2007, 2010; Zundans-Fraser & Lancaster, 2012). With that in mind, the self-organising school was used as the exemplar that was transferred into the higher education context.

3.7 Complexity and This Study

The common application of complexity to education demonstrates a clear preference for the metaphorical positioning of this theory over its potential as a design tool (Bain, 2007, p. 43). Stacey (2006) highlighted that a complexity theory framework has an impact on the balance between content and process research. When considering that the future is unknowable and therefore it is impossible to select content that will be relevant for more than a short period of time, Stacey noted that “the really fundamental questions and long-lasting ‘answers’ will relate to process” (2006, p. 95). That belief linked well to the goals of this study.

To date, most applications of complexity to education and other human systems have been metaphorical in nature and have been used as a device to gain new insights into organisations and the way they function. For example, large companies have been likened to anthills as both contain many workers (Johnson, 2001; Merry, 1995). Researchers such as Davis and Sumara (2006) have contributed to the further discussions of the use of complexity theory in the educational context by examining the nature of learning, teaching, school environments and educational research more broadly, but these contributions have been predominantly at the descriptive level.
The present study captured and extended the metaphorical potential of complexity and the study of complex systems by demonstrating the application of this knowledge through the use of complexity as a design tool (Bain, 2007).

3.7.1 Self organisation within this study

This study sought to apply the six principles of self-organisation – simple rules, embedded design, emergent feedback, similarity at scale, dispersed control, common schema – described in this chapter to a higher education context as a way to create a system of course design that was self-organising. The study investigated the applicability and utility of this framework as a response to the areas of need identified earlier in the literature, impediments to course development in higher education settings and more specifically in the field of inclusive education.

The general framework for this study and the precedent for applying principles from self-organising systems to an educational endeavour were derived from the work of Bain (2007) who applied the six principles to the process of school reform and design. They were used to create the design for a self-organising school (Kauffman, 1995; Merry, 1995; Prigogine & Stengers, 1984; Waldrop, 1992).

The design process studied was a change initiative within an institution (RU) with the intention of testing and refining a methodology and producing a theory of self-organisation as it related to the design and development of course structures. This included studying the nature of the interaction among members of a design team, the collaboration and feedback process, and the ways courses and subjects were designed to provide a coherent and interrelated experience for students. Also examined were the role of feedback and collaboration in the design process, and whether the approach
addressed issues in course design, including the way in which the methodology evolved and adapted over time.

This study used the characteristics, structures and behaviour of complex systems theory including simple rules, self-organisation and feedback as a framework for the design and development of an inclusive education course in teacher education. This cycle of reflection and action sat comfortably within the broader methodological framework of design-based research used in this study and further supported the complementary nature of complexity and design-based research (Sharma & McShane, 2008).

While these efforts represented a pilot within the researcher’s faculty and institution, focusing on the design process as well as the course product increased the likelihood that the design had scalable potential within the institution and beyond.

3.8 Conclusion
This study sought to address identified areas of need in higher education, teacher education and inclusive education through a theory of design and the implementation of a design process in inclusive education. The theoretical aspect of the course design utilised the six principles of self-organisation: simple rules, embedded design, emergent feedback, common schema, similarity at scale and dispersed control. The intention was that through purposeful design, the course would be implemented in a manner that responded to and addressed the need for a theoretical basis for reform, the theory-to-practice gap and the utilisation of collaborative practice, and that challenged institutional practice. Complexity and self-organisation informed the content of the course design while design-based research addressed in Chapter 4 was used to inform the methodological approach to the study. The process of course design became the
final product and critically informed the creation of the design principles and design model that resulted from this study.
CHAPTER 4. METHODOLOGY

4.1 Introduction

In Chapter 1, an overview of the study was provided including the goals of the study, the key research questions, and a brief introduction to complexity theory and to design-based research that were used as the theoretical framework. In Chapter 2, literature in higher education, teacher education and inclusive education was reviewed and four areas of need were identified: the need for a theoretical basis for reform, the need to address the theory-to-practice gap, the need to utilise collaborative practice, and the need to understand the impact of institutional practice. In Chapter 3, the literature on complexity theory was reviewed and critiqued and its application was demonstrated to the tertiary context through this study.

This chapter includes a more detailed discussion of design-based research and the use of a case study approach, along with an overview of the participants and an elaboration of the researcher’s role in the study. Within the study, design-based research is used as a research metaphor, and case study is used as the strategy of inquiry. The purpose of the study is reiterated and detail is provided regarding the methodological approach chosen to address the research questions; the methods of data collection and analysis are justified; and the triangulation processes and ethical considerations of the research design are addressed.

The methodology was employed to address the goals of the study as well as answer the research questions derived from the teacher education, higher education and inclusive education literature. The design process was used to study a change initiative within an institution, RU, with a view to testing and refining the methodology and applying the theory of self-organisation as it relates to the design and development of course
structures and the existing reform literature. Complexity theory, and specifically the self-organising schools theoretical design principles, was used as the theoretical basis for the design of the course process, while design-based research was used as the theoretical basis for the design of the study. The process explored throughout this study informed the creation of the design principles and a course design model.

4.2 The Research Paradigm
The design for this study was positioned within a qualitative paradigm (Denzin & Lincoln, 2011). This study involved a small number of participants with the aim of the research being to discover the reality and understandings of the participants rather than to find a universal truth. Punch (2009) suggested that one of the most significant features of qualitative research is its diversity and richness within which multiple methodologies and research practices may be used. Merriam (2009) detailed a number of characteristics of qualitative research, namely that the focus is on understanding a process, rather than outcomes or products; there is interest in meaning; the researcher is the primary instrument for data collection and analysis; data are gathered to build concepts or theories because there is a lack of theory; the product of a qualitative inquiry is richly descriptive; the researcher often spends a substantial amount of time physically in the natural setting, often in intense contact with participants; the research is descriptive and the process is inductive in that concepts and theories are built from details (pp. 14-17).

The primary focus of this study was to create and examine a process of course design that was theoretically-based and responded to four areas of need identified through the higher education, teacher education and inclusive education literature. As researcher, I was based physically at the site under investigation and took on the role of participant
researcher. Behaviour and actions of the design team were observed and recorded, documents were collected throughout the process, and as much detail as possible regarding the process undertaken was recorded. The intended result was the creation of a set of design principles and a course design model to inform future course design processes.

The application of complexity theory in education is relatively new (Davis & Sumara, 2006; Mason, 2009; Morrison, 2002). This study examined a given situation, with a true account of a particular experience within a specific context. The design process was a constant that could be applied in different settings, although the responses and experiences of participants were unique to this setting. For the purposes of this study, complexity theory was used as a design metaphor articulated in a set of principles to be applied in the design. Using a qualitative approach allowed study of the utility of the design principles in a higher education setting and interrogation of the process, not only from a research perspective but also incorporating the thoughts and experiences of the design team through interviews, meeting minutes and the final product – the new inclusive education course.

4.3 Strategy of Inquiry
The study used a case study approach. The case study is used frequently when in-depth investigation of an issue is required and therefore sits well with design-based research. A case study focuses on the unique attributes of an individual case or cases, investigates a contemporary phenomenon within its real-life context and uses multiple methods of data collection and evidence sources (Liampuutong, 2009; Richards & Morse, 2013; Yin, 2011). Case studies provide a rich, detailed, in-depth, and holistic description of a phenomenon being studied, often using recognisable and non-technical language when
the focus is on description of processes and the analysis of meaning as well as the uniqueness of each case and the researcher’s subjective experience of that case (Flyvberg, 2011; Freebody, 2003; Hamilton & Corbett-Whittier, 2013).

When conducting a case study, the researcher considers the voices and perspectives not only of the participants but also of other relevant stakeholders, and the interaction between them (Hamilton & Corbett-Whittier, 2013; Luck, Jackson & Usher, 2006). A case study approach allowed the researcher to explore the dynamics of relationships, interactions and decisions made. That approach resonated with a key aim of design-based research where the intent is to provide rich descriptions of the context and the process of design (Anderson & Shattuck, 2012) is situated in an authentic educational setting (Thein, Barbas, Carnevali, Fox, Mahoney & Vensel, 2012). This particular case study was positioned within the higher education context. As suggested by Gerring (2007), at times “an in-depth knowledge of an individual example is more helpful than fleeting knowledge about a large number of examples” (p. 1).

Case studies typically involve fieldwork in which the researcher interacts with the research participants in their natural settings (Gall, Gall & Borg, 1999, p. 293). When selecting cases for study, researchers must select cases that maximise what can be learned in the period of time available for the study. The use of a case study method facilitates refinement of theory, the targeting of areas for further investigation and the establishment of the limits of generalisability (Punch, 2009; Stake, 2008). This study made connections between issues in the field and the creation of a theoretically informed course by using this knowledge through the design process.
This case study utilised purposive sampling as it took place in a particular context with a design team selected for their expertise in inclusive education and educational design. The design team members were also interested in addressing the needs described in the literature, in building a response to these needs, and in enhancing their own professional development. Purposive sampling is useful when information is being collected from small numbers of individuals and participants are selected on the basis of their ability to provide in-depth understanding of the issue (Fitzpatrick, Sanders & Worthen, 2012).

In this study the intention to design a course in inclusive education for graduate students exposed a different and tacit set of theoretical and course development structures that led to the development of a framework for course design that was theoretically consistent, practical and “useable”. Given the characteristics of design-based research that are detailed in the following section, and the uses of case study in the literature explored above, a case study approach seemed particularly appropriate for this study.

4.4 Design-based Research Explained

Barab and Squire (2004) define design-based research as “a series of approaches, with the intent of producing new theories, artefacts, and practices that account for and potentially impact learning and teaching in naturalistic settings” (p. 2). It allows researchers to carefully study interventions in specific settings, to construct effective interventions and to articulate the principles that underpin their impact (Collins, Joseph & Bielaczyc, 2004; van den Akker, Gravemeijer, McKenney & Nieveen, 2006). This process makes the findings from a study particularly relevant and useful as they are situated in an authentic setting. It involves “flexible design revision, multiple dependent variables and capturing social interactions” (Barab & Squire, 2004, p. 3) and “stresses the need for theory building and the development of design principles that guide,
inform, and improve both practice and research in educational contexts” (Anderson & Shattuck, 2012, p. 16). These concepts further support the broader framing of this study, where the development of clearly articulated course designs is a necessary prerequisite to any study of their efficacy and the identification of specific features to which a determination of efficacy can be attributed.

Design-based research addresses the methodological tension between making adjustments to an intervention as it progresses, reflecting the dynamic nature of education (Morrison, 2002; Sandoval & Bell, 2004), and the need for the researcher to have empirical control that works against the concept of in situ change and adaptation. Design-based researchers recognise that all elements of their initial design might not go to plan and that flexibility is required (Hoadley, 2004). Design-based research refines both theory and practice. In many other educational research approaches, theory is not identified as fundamental, whereas in design-based research it plays a central role in shaping the innovations created to address the issues identified (Reeves, McKenney & Herrington, 2011). The value of theory is appraised by the extent to which principles inform and improve practice.

A similar approach has been used previously in studies analysed by Collins et al., (2004). They noted the work of Brown and Campione in 1994 and 1996 that used design-based research as a basis for fostering a community of learners at different levels in an elementary school through a research cycle of designing, implementing and revising classroom interventions in the curriculum areas of biology and ecology. This process of revision and refinement then fed into a new cycle of design and implementation. The second study, led by Joseph, demonstrated a research process that
had been through numerous cycles since the initial implementation phase which had begun in 1996. Joseph (2000, 2002) proposed the development of a “passion school model” that allowed learning objectives and learning environments to be shaped by the interests of students in classrooms arranged in communities of common interest rather than age-based settings. The research focused on the development of design principles, curricular structures and strategies for activity design. Over the years, as the model progressed through various phases, the data collated led to refinement and modification of the model. These studies were completed in educational contexts and utilised design-based research as reflected in this study. Additionally, both these studies incorporated case studies, further resonating with this work.

4.4.1 Terminology

The term design-based research has been used throughout this study to align with the work of key researchers in the field (Anderson & Shattuck, 2012; Barab & Squires, 2004; Hoadley, 2004; Joseph, 2004; Sandoval & Bell, 2004; Wang & Hannafin, 2005). It is acknowledged that some researchers working with this approach have now moved to using the term educational design research (Kelly, Lesh & Baek, 2008; Reeves et al., 2011; van den Akker et al., 2006), but as this study has drawn heavily on the design-based research and design research (Collins et al., 2004; Reeves et al., 2005) literature, the term design-based research is used throughout. This term was selected based on the delineation of Juuti and Lavonen (2006) “design research emphasises the process, the features of an artefact and educational knowledge (theory) development (Edelson, 2002), and...in addition (design-based research) emphasises the long time projects in single settings and compelling comparisons of innovations and collaboration between teachers and researchers” (p. 54).
4.4.2 Characteristics of design-based research

The five characteristics of design-based research (The Design-Based Research Collective, 2003, p. 5) are detailed here along with their application to this study.

4.4.2.1 Characteristic 1

The central goals of designing an environment and developing theories of learning are intertwined

For a study that sought to create a theoretically driven course design process, a characteristic that emphasised the intertwined nature of theory and learning was particularly appealing. As identified in the literature review in Chapter 2, key needs in the field were the need for a theoretically-informed course design process, the need to minimise the theory-to-practice gap, the need to utilise collaborative practice, and the need to examine the impact of institutional practice on innovative design. A focus of this study was the creation of an environment within which the developing theory would resonate and be sustainable.

4.4.2.2 Characteristic 2

Development and research take place through continuous cycles of design, enactment, analysis and redesign

The ability to design, enact, discuss and analyse feedback, and then redesign, was particularly important for this study. The reality was that in work with a team of specialists in the inclusive education field, incorporating the needs of multiple stakeholders, no design developed would be perfect from the beginning. The iterative cycles of development allowed evolution of the course and continual revision of the design.
4.4.2.3 Characteristic 3

*Research on design must lead to sharable theories that help communicate relevant implications to practitioners and other educational designers*

The practicality afforded through this research design was appealing due to the development of theory and the explicit mention of consideration of the implications for multiple stakeholders. This study simultaneously used and built theory. Complexity theory was used as a basis for the content and initial design principles; design-based research informed the process; and the experiences and knowledge of the design team informed the creation of a set of principles for course design in higher education. Findings were targeted towards specific aspects of the process, allowing focused reflection on the experiences of the design team and examination of institutional practices.

4.4.2.4 Characteristic 4

*Research must account for how designs function in authentic settings (documenting success and failure) and focusing, too, on interactions that refine our understanding of the learning issues involved*

This study took place in an authentic setting: a regional university where a design team was undertaking a course review process in a Faculty of Education. The four issues that the study was designed to respond to, in conjunction with the creation of design principles and a course design model, were produced through a synthesis of research in three contexts. This study documented the successes and challenges that further linked to this point. By using collaborative practice purposefully throughout the design process an authentic experience was created and recorded where theory and practice blurred.
4.4.2.5 Characteristic 5

Methods here should document and connect the processes of enactment and the outcomes of interest

Various methods were used in this study that incorporated the perspectives and experiences of the participant researcher, design team members and stakeholders. The process was documented through observational notes, a researcher log, minutes of meetings, survey feedback and interviews. The use of case study as the strategy of inquiry provided the avenue through which the process could be documented.

4.4.2.6 Links to this study

In this context the benefit of design-based research was the practical application of a process that had relevance to the specific situation in which the research took place. The course design process examined was theoretically driven and grounded in relevant research, theory and practice. Further, the design was conducted in a real-world setting where the design process was embedded in, and studied through, design-based research.

4.5 Design Features to Inform a Conceptual Framework

The conceptual framework outlined in Figure 4.1 was utilised after careful consideration of the research questions and intent of the study. This figure is a visual representation of the main design features suggested by Reeves (2006), and provided a framework for the study.
As Reeves suggested (2006), the appeal of design-based research was that researchers and practitioners work together to identify issues that need to be resolved. Sample solutions are suggested using existing design principles that are then refined through cyclical testing and refinement of both the solutions and design principles until a satisfactory outcome has been reached.

4.5.1 The conceptual framework and this study
The stages of the process suggested by Reeves’ (2006) design-based research framework were used, with adaptations for the particular context and particular needs of this study. The original framework was modified to illustrate how the stages were used in this study.
The first stage remained true to the original intent, with a focus on collaboration between the design team and stakeholders regarding the specific needs in the field of inclusive education as evident in current literature and situation analysis. The researcher’s additional analysis of the literature in higher education and teacher education allowed triangulation between the three contexts. As a key purpose was the design of a course, this focused the needs to some degree.

The following stage was driven by the need to create a course design process, and subsequently a course that responded to the various needs indicated in the previous stage. As there was no explicit articulation of existing principles to use as a baseline, existing general beliefs about inclusive education were used to provide a loose scaffold and baseline upon which to build. The third stage utilised Reeves’ (2006) iterative cycles concept to guide the design of the course and focused on the incorporation of feedback from the design team and stakeholders that linked closely to the theory that informed the process. The final stage was used to create a set of course design principles and design model informed by the process and reflections of the design team members, as a means to validate the process. The cyclic nature of design-based research allowed active involvement and continual collaboration of all stakeholders (Cohen et al., 2011).

Complexity theory was interwoven through these stages, in particular stages 2 and 3, with the development of the course design process being heavily informed by the six principles of self-organisation outlined in Chapter 3: simple rules, embedded design, feedback, dispersed control, similarity and schema. Throughout the iterative cycles the design became embedded in the system through a process of feedback and a schema developed through the refinement of the course. As is demonstrated in Chapter 7, the
reflection in the final stage was framed by consideration of whether these six principles were evident in the final course product and how they had informed the process. In this manner complexity theory was used as the theoretical basis for the content of the course and as a design metaphor and a set of guiding principles throughout.

This conceptual framework allowed the four areas of need identified in the literature to be targeted throughout the process in an integrated and seamless manner. The iterative cycles allowed changes and refinements to be made so that the final outcome was a refined course design process informed by active feedback and analysis. This framework was considered particularly appropriate for this study as it clearly articulated a process of problem refinement, potential solutions, testing, solution generation, methods and design. It also created an avenue through which the course development process could be shared.

4.5.2 Restatement of the research purpose
As indicated in Chapter 1, the goal of this study was to build a responsive model of course design employing complexity and design theories. This goal was achieved by:

- employing the context of inclusive education, teacher education and specifically the development of a graduate course in higher education for the development of a course design model;
- using design-based research to describe and account for the design process from the perspective of the design team;
- investigating the application of a theory and practice of course design to an inclusive education graduate teacher education course;
- recording the emergent behaviour that was exhibited as the process developed;
employing design theory and the investigation of the course design process to develop a set of empirically derived design principles and design model to be used in course design efforts in the researcher’s own institution and other contexts.

The research goal involved building the application of a theory and practice of course design and development to an inclusive education graduate teacher education course. Issues, challenges and opportunities described in the literature on inclusion, teacher preparation and higher education were used to inform the application of the theory and practice as well as course design. Moreover, the process of course design and development was described in detail so that it could be used as a term of reference and as a framework for similar efforts in the researcher’s own institution and others.

4.6 Method

A key aspect that sets design-based research apart from other approaches is the formulation of design principles that provide a research-based framework to inform future development and implementation decisions. The product of the design, the course, was seen as a major output. As collaboration was integral to the creation of design principles, the sustainability of the process of design-based research had the further benefit of enhancing the professional development of all involved. With this consideration, this study utilised a three-phased approach, within the parameters of the conceptual framework, to focus on these aspects. Phase 1 investigated existing design and review processes and how they responded to the identified areas of need; Phase 2 incorporated the creation of a theoretically derived course design process and investigated how this responded to the areas of need; Phase 3 examined the capacity-building nature of the design process and application of the theoretical principles.
through the perspectives of the design team. This structure provided the framework for this study and set limits that allowed freedom within established conceptual boundaries.

Figure 4.3 Research Design

![Research Design Diagram]

Figure 4.3 presents the three phases used to guide the research activity throughout the study and also indicates the final product of the process – the creation of a set of design principles and model for course design. This figure indicates the focus of each phase and shows the connected nature of the research design through the three-phased approach. Each of the phases picked up on the design-based research approach outlined in the conceptual framework (Figure 4.1), the theoretical underpinnings of the course design process and the qualitative nature of the entire process.

The first phase (conceptualisation) involved the identification of areas of need within the research literature relating to course design and review in inclusive education, teacher education and higher education. Further reflection on the literature review was undertaken after input from the design team and stakeholders regarding needs in the field. To support the need for a process of design and review, current design and review
processes in the researcher’s institution were investigated and triangulated against the areas of need.

The second phase (development) explored the use of complexity theory and six key principles of self-organisation as a theoretical basis for course design. The concept of iterative cycles in design-based research was used to guide the design of the course and focus on the incorporation of feedback from the design team and stakeholders. These cycles and reflection points meant that theory strongly informed the process, the design became embedded and a schema was developed as the course design progressed through this phase.

The third phase (capacity building) examined the experiences of design team members using the process of design and of students experiencing the course created through this design. The capacity building of design team members was further supported through connections made with numerous publications based on the principles used in this study. Key process aspects were also examined and then discussed in light of the areas of need identified in Phase 1. The original contributions to the field of this research were the creation of course design principles and a design model informed by feedback from the design team, stakeholders and students gathered throughout the process.

Through emergent feedback in the various phases the schema could be refined and adapted, the design was embedded throughout the phases and, as the process continued, the similar base structures were evident. With design-based research as the over-arching procedural structure, the three phases ensured that there was initial output (conceptualisation), there was a practical output (development) and there were societal outputs (capacity building of design team members). Complexity theory was used as a
starting point from which to generate the research questions and as a design tool for the
course. It provided a theory base for the content that formed the course. A theory basis
for the process was provided through the use of design-based research. The study was
completed in three phases that incorporated principles from both complexity theory and
design-based research.

All members of the design team were involved in all phases of the design process and
worked together as design team members. In keeping with the principles of design-
based research, the initial course design model was insufficiently detailed so that team
members could make changes throughout the iterative cycles and by reflecting on
feedback. Methods varied during the different phases as new needs and issues emerged
and the focus of the research evolved (Wang & Hannifan, 2005). The conceptual
framework stages and research design phases were used to answer the research
questions outlined in the following section.

4.6.1 Research questions
The goals of the study were examined through a key question within each design-based
research phase. Each key question within the phase was derived from the research and
aligned with the phases of design-based research. They were also explicitly mapped to
the three phases of the study shown in Figure 4.3.

4.6.1.1 Phase 1: Conceptualisation of institutional context
Phase 1 identified areas of need and explored the way they were conceptualised and
represented in the fields of higher education, teacher education and inclusive education.
These were then examined in light of current course review and design practices in the
institution, in order to describe extant practice within the study institution and validate
the issues identified in the literature within the institutional context.
- Do the design and review processes at RU address the areas of need identified in the higher education, teacher education and inclusive education literature?

This phase examined the drivers and issues identified and described in the literature review (Chapter 2). Four areas of need were common across the three fields of higher education, teacher education and inclusive education – the need for a theoretical basis informing course reform and design, the need to address the theory-to-practice gap, the need to utilise collaborative practice, and the need to examine the impact of institutional practice. This phase also determined the extent to which the areas of need existed in the study institution by examining its policy, process and practices of course design.

4.6.1.2 Phase 2: Development

This phase focused on the application of an existing theoretical framework to the design process.

- How did the theoretical principles of self-organisation inform the course design process and the work of the design team, and what was produced as a result?

In order to begin a theoretically informed course design process, some design principles needed to be established, along with the opportunity to refine them throughout the process. Moreover, a major intention of the study was to generate a set of design principles and a design model for future course design processes in higher education. This phase responded directly to claims that an evidence base was lacking in design and review undertaken in teacher education and higher education.

4.6.1.3 Phase 3: Capacity building

This phase was utilised explicitly to link the process of course design and the four areas of need as identified in the literature – the need for a theoretical base to inform an
effective course design process, the need to address the theory-to-practice gap, the need to utilise collaborative practice and the need to examine the impact of institutional practice on design and review. With this in mind, the key question for this phase was:

- What were design team members’ experiences of the course design process and how did this work respond to the areas of need in higher education, teacher education and inclusive education?

This phase of the research design focused on the product of the study – the course. As the goal of the study was to design a course that responded to the needs identified through the literature, the final product was explicitly informed by this goal. The phase also looked at the capacity building of design team members and the institution, and how the course met stakeholder needs. The focus was to consider the areas of need and how the course design process responded to them. Undertaking the process informed the creation of a set of design principles and a design model that could inform course design in ways that addressed the areas of need in a consistent and empirically-informed manner.

4.7 Researcher’s Role
This research originates from an ethnographic theoretical orientation (Atkinson, 1992; Cohen, Manion & Morrison, 2011; Hammersley & Atkinson, 1993; Walford, 2001) in which, as the researcher, I was immersed in the course design process and adopted the stance of participant researcher (Truman, Mertens & Humphries, 2000; Zou & Trueba, 2002). The participatory nature of the role assumed that through my collaboration with colleagues in the field and through my immersion within the field as a team or group, a more authentic examination of the phenomenon would be undertaken (Cresswell, 2012; Ghesquiere, Maes & Vandenberghe, 2004).
As an active design team member, I began by investigating the literature in the three educational contexts that were focused on in this study – higher education, teacher education and inclusive education. Four broad areas of need were identified and refined a little as data were collected and thematically analysed. Miles and Huberman (1994) discussed the nature of a researcher’s work and asserted that background knowledge will have some type of impact on the nature of researchers’ work, regardless of how explicit they are about this. It is because of this background knowledge that researchers can make sense of situations, issues, details and the complex nature of the site under investigation. To some extent this limitation could be extended to all participants as they were heavily invested in the outcome of the research, their role in the process and their relationship with other design team members. Their position in the institution could potentially influence the particular views expressed. The intention in this study was to examine the behaviour, language and interactions of design team members (Corbin & Strauss, 2008; Tuckman & Harper, 2012). This approach most suited the context under investigation, as a key focus of the study was the collaborative nature of the process.

Adopting the participant researcher stance within the context of a design-based research approach allowed me to be flexible in the interpretation of data and situations and provided the opportunity to modify leading questions in interviews (Kvale & Brinkmann, 2009). The phased framework for this study set the conceptual boundaries but allowed a high degree of freedom and flexibility by virtue of the iterative nature of the feedback process. The use of case study as the strategy of inquiry provided an avenue through which the process could be documented. The coupling of these
approaches provided a valid and reliable framework on which to base the design of the study.

Ethical considerations are at the forefront of any qualitative based research. As Punch (2005) indicated “while all social research intrudes to some extent into people’s lives, qualitative research often intrudes more…as it deals with most sensitive, intimate and innermost matters in people’s lives” (p. 276). Due to my role in the study, these considerations were particularly important and are explored later in this chapter (see 4.8.4).

4.8 Data Collection
Throughout the case study, data were collected using qualitative methods. Flick (2006) indicated that qualitative research is inherently multi-focused, in order to secure in-depth understanding. Often, multiple measures are required to address a particular issue, to observe the phenomenon from different perspectives, to improve the validity of the measurement and to counteract possible limitations and biases. Cohen et al. (2011) suggested that there are many variables operating in a single case, so the use of more than one tool for data collection and multiple sources of evidence are encouraged. The use of multiple data collection methods to measure validity is an example of triangulation (Fitzpatrick et al., 2012), which enhances the rigour of the study by contributing to the “completeness” of data, with each method adding a different piece to the jigsaw. The experiences of design team members and their views and understandings of the collaborative design process and inclusive practice were examined, and these perspectives were triangulated with permanent product evidence of the design process including meeting minutes, field notes and subject and course
materials. At other points in the process, institutional documents were analysed and student feedback utilised to provide additional validity to the conclusions drawn.

The need to demonstrate validity and reliability through the use of multiple sources of evidence and multiple methods of data collection was met by using a case study approach. The accounts of different participants drew upon their various perspectives. This was another form of triangulation, enabling the development of a more complete, holistic and contextual portrayal of real-life situations and experiences. Through the triangulation process, where feedback was synthesised from the various interest groups including course design team, subject writers, teaching team and external stakeholders, the final aim was to have a design process that was explicitly theoretically-informed and sophisticated. Furthermore, data were triangulated within each of the three phases and across the whole study. For example, in Phase 1 the design team members discussed their beliefs and values, considered what informed these and discussed their previous course design experiences to inform their ideas of what was essential in the creation of a new course. The design team moved through various cycles of discussion and feedback before consolidating their ideas. These ideas were then presented to key stakeholders in Phase 2 for their feedback. This feedback then informed the next cycle of revision and discussion. Once these ideas were agreed upon, they informed the creation of course standards and made the first externally explicit link to a theoretically-informed course design process. The design team moved on to look at key areas of need in the field and how they might be addressed through the course design process. A similar iterative cycle then began for this component of the design phase. This level of depth in the process was seen in all three phases of the research design through conceptualisation, development and capacity building.
Throughout the process I needed also to consider how I was operating as an agent in the complex system that was being built through the theoretical model. For my research purposes this was principally reflected through observational notes and my researcher log. The intent was to establish and document the extent to which the mutual interdependence and self-consistency required of a complex adaptive system and the capacity to build a schema and produce the kind of design and feedback necessary for successful self-organisation were present. This became evident through document analysis, participant reflections and ultimately the final product of a theoretically-based course design in inclusive education. As researcher I examined the experiences of individual design team members and their views and understandings of the institutional course design process. Again, participant reflections and researcher observations were utilised as well as stakeholder feedback. In all cases these experiences were referenced to the theoretical framework and its expected influence on the research.

4.8.1 Participants in the research
The data emerged predominantly from the collaborative interactions of design team members. The participants in this study were six members of the Inclusive Education Team (of which I was a member) and an educational designer, who together comprised the design team.

Table 4.1 provides participant details, their number of years’ experience in various educational settings and their tertiary teaching experiences. Additional relevant details are provided in narrative form following the table. Pseudonyms are provided for each participant except for me as participant researcher (identified as ‘Lucie’).
### Table 4.1 Research Participant Information

<table>
<thead>
<tr>
<th>Participant</th>
<th>Years of School Teaching Experience</th>
<th>Setting</th>
<th>Role</th>
<th>Years in Tertiary Education</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eve</td>
<td>6 years</td>
<td>5-12</td>
<td>ESL language centre; English skills advisor</td>
<td>15 years</td>
<td>Educational designer</td>
</tr>
<tr>
<td>Nick</td>
<td>16 years</td>
<td>7-12</td>
<td>Classroom teacher; educational administrator</td>
<td>17 years</td>
<td>Professor; course coordinator in inclusive education</td>
</tr>
<tr>
<td>Lucie</td>
<td>9 years</td>
<td>K-12</td>
<td>Special needs coordinator K-12; special education teacher 7-12; classroom teacher K-12</td>
<td>14 years</td>
<td>Lecturer in inclusive education and educational psychology</td>
</tr>
<tr>
<td>Ali</td>
<td>6 years</td>
<td>K – 6</td>
<td>Classroom teacher</td>
<td>16 years</td>
<td>Lecturer in special education; course coordinator</td>
</tr>
<tr>
<td>Jo</td>
<td>19 years</td>
<td>K-6</td>
<td>Classroom teacher; special needs teacher; executive teacher of unit</td>
<td>15 years</td>
<td>Lecturer in inclusive education</td>
</tr>
<tr>
<td>Dan</td>
<td>25 years</td>
<td>7-10; 7-12</td>
<td>Classroom teacher; head teacher science and learning support</td>
<td>8 years</td>
<td>Lecturer in inclusive education</td>
</tr>
<tr>
<td>Pam</td>
<td>15 years</td>
<td>7-12</td>
<td>Special education teacher</td>
<td>3 years</td>
<td>Lecturer in special education</td>
</tr>
</tbody>
</table>
All inclusive education specialists within the team were former practising classroom teachers, with different amounts of experience. They had all worked in the tertiary context for a number of years by the time this study was completed. All team members taught in a range of inclusive education graduate degrees as well as in various undergraduate subjects. Nick, the most senior member of our design team, was instrumental to the development of the process. He had previously implemented the design principles in a K-12 school setting and had proposed the possibility of applying them in a higher education context to the design team. We had subsequent discussions about this work being the basis of my doctoral study and he was also my principal supervisor. The educational designer working in the team had 15 years’ experience in this particular role and had previously worked as an educator teaching students who had English as an additional language in a variety of contexts.

Further data were collected during the implementation of the degree through institutional and design team feedback processes as well as from external stakeholders while the course was being developed. This information was included to support some of the conclusions drawn about the value of the process. The main focus of the study was the establishment of a theoretically- based course design process. Stakeholder feedback was used to inform the design principles and process developed, specifically during the design process when looking at content and then again to comment on the outcome of the process and how well it reflected the design principles developed.

4.8.2 Data sources

Creswell (2009) identified various data collection approaches used in qualitative research. Those used for this particular study were observational notes taken as a participant and as an observer; meeting notes taken during the course design process;
participant comments made during this process; unstructured, open-ended interviews (Part A and Part B) that were audio-taped and then transcribed; personal reflections in a researcher log during the course design process; and analysis of public documents (e.g., minutes, previous course information, course data, institutional policies). Each research question was addressed in terms of likely sources of data and possible sample strategies. The approaches to data collection were iterative in that each method provided different or additional insights and understanding. The several phases aimed to allow each stage to inform and direct the next.

The data were triangulated with evidence obtained through meeting transcripts, course reports, course review documents, participant observations and researcher reflections. These sources were utilised to add to the depth of data on the design process.
<table>
<thead>
<tr>
<th>Data Collection Type</th>
<th>Specifics for this study</th>
<th>Value</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Analysis</td>
<td>Minutes of meetings; participant comments; design team member publications</td>
<td>Evidence of theory in data sources; enabling researcher to obtain the language and words of participants; an unobtrusive source of data; “hard” evidence of the process</td>
<td>Not all participants were equally reflected; the documents might not be an entirely accurate record or fully reflect the process</td>
</tr>
<tr>
<td>Semi-Structured Interviews</td>
<td>Semi-structured interviews with participants to elicit views and opinions regarding the process</td>
<td>Opportunity to provide details taken through other data methods; allowing participant commonalities and differences to be mapped; additional data source to demonstrate evidence of theory; allowing the pattern language used in interviews to be directly targeted; researcher focused and directed discussion</td>
<td>Participants were removed from the process at the point of interview; researcher as a participant-observer and then interviewer might bias responses</td>
</tr>
<tr>
<td>Observational Notes</td>
<td>“Field” notes taken during team meetings by the researcher recording the behaviour and activities of individuals</td>
<td>Researcher had first-hand experience as a participant; could record events as they occur; an unobtrusive source of data; atypical events could be noted; demonstrated the development of pattern language among the participants as the process progressed</td>
<td>Researcher might not have accurate and/or highly developed observation and recording skills; due to multiple participants and one researcher certain behaviours or activities might be overlooked while focused elsewhere</td>
</tr>
</tbody>
</table>

Table 4.2 Data Collection, Specifics, Value and Limitations
| Researcher Log | Researcher’s personal log recording observations, impressions and opinions of the process | Researcher had first-hand experience as a participant; an unobtrusive source of data; demonstrated the development of pattern language as the process progressed | Information recorded was filtered through the perspective of the researcher, with the process recorded from a particular perspective. The impact of this was minimised as no generalisability was claimed |
| Stakeholder Feedback | Recording of comments made during stakeholder meetings; emails; teleconferences; student feedback | Demonstrated stakeholder interest in the process; provided an additional perspective on the process | Feedback might be constrained due to professional relationship; different level of engagement/status |
There were close links between the multiple data sources identified in Table 4.2. The data sources were used to examine themes, consider whether they addressed the areas of need identified in the literature and then triangulated to demonstrate these connections.

4.8.2.1 Document analysis

Public documents and observational notes were the main data sources, as one of the key aims of the study was to reflect the course design process as accurately as possible. These sources most accurately reflected the work which was done by team members week to week. Throughout the process any documents recording what was being done or what was submitted at faculty and university level as part of the process were collected as data.

Merriam’s (2009) process for using documents in qualitative research was used as an organiser. Initially, relevant materials were sourced, their authenticity was assessed, and a system for coding was devised. The documents needed to be located in the context of their time, with consideration of authorship, process of creation, audience and influence (Cohen et al., 2011). With the collection of other material, after some preliminary collecting as suggested by Yin (2011), I considered how each item would fit with my study. The study began with some particular research questions and points of interest, determined after careful consideration and in this case a review of literature in the fields of higher education, teacher education and inclusive education and their intersection. This then meant that specific points were prioritised “by giving more attention to those actions and verbatim words that appear[ed] to be related to [my] research questions” (Yin, 2011, p. 159). Thus a very focused thematic analysis was made possible through conceptual mapping as themes were more specifically examined and linked explicitly to the research questions as evidence (Gribich, 2007; McCulloch, 2011). With interview
transcriptions, words were captured verbatim so that meaning was not paraphrased or inferred by the researcher. The same thematic linking to the research questions was used in their analysis.

4.8.2.2 Semi-structured interviews
Audio-taped interviews with each of the participants were semi-structured and the research participants’ explanations and interpretations were used to further elicit their views (Kvale & Brinkmann, 2009) about the course design process. Interview questions were derived from key areas of need in the literature, the three study questions and issues that evolved throughout the design process. They focused on the six principles of self-organisation used in the design, the personal experiences of design team members, how the design responded to needs in the field, and the sustainability of the process (see Appendix 4A). The same series of questions was used with participants in relation to their previous course review and design experiences and then used again specifically in relation to the design of the course in this study. All participants selected the location for interviews, their work office, and these were conducted face-to-face.

4.8.2.3 Observational notes
Whenever possible, notes were taken verbatim. When notes could not be taken (particularly where accuracy could be compromised), key comments and details were recorded as soon after the event as possible as suggested by Henstrand (2006) in her case study work in the field of school reform. This information was included as part of the researcher log and notes taken by the researcher throughout the process. The notes were frequently reviewed to fill in gaps where necessary. Moreover, when final interviews with participants took place, particular points were raised to clarify aspects that had been recorded in the log and meeting notes.
4.8.2.4 Researcher log
I kept a log as a parallel document to events that were recorded during the meeting process. The log was more focused on my personal impressions of what was happening throughout the course design process. Other participants were discussed in terms of their involvement or discussions with me at particular points, but the focus was on how the process was progressing and what aspects arose or challenged particular goals.

4.8.3 Recording and organisation of data
Data required to answer the research questions were gathered through three phases of the research process. These data sources were then mapped to key questions of the study and phases to demonstrate the sources to be used in each phase.
### Table 4.3 Phases and Data Sources Matrix

<table>
<thead>
<tr>
<th>Phase</th>
<th>Question</th>
<th>Meeting minutes</th>
<th>Subject packages</th>
<th>Institutional documentation</th>
<th>Observational notes</th>
<th>Researcher log</th>
<th>Semi-structured interviews</th>
<th>Stakeholder feedback</th>
<th>Other (personal communication, email, teleconference, jottings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Do the design and review processes at RU address the areas of need identified in the higher education, teacher education and inclusive education literature?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Phase 2</td>
<td>How did the theoretical principles of self-organisation inform the course design process and the work of the design team, and what was produced as a result?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Phase 3</td>
<td>What were design team members’ experiences of the course design process and how did this work respond to the areas of need in higher education, teacher education and inclusive education?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
As seen in Table 4.3, particular data sources such as the observational notes and researcher log crossed all three phases. Each of these data sources is discussed in more detail in the following section.

Phase 1 focused on the documentation related to the process of establishing the design principles and what occurred prior to implementation of the design phase. It incorporated the information gathered during the weekly design team meetings, the establishment of course aims and project tasks to be accomplished, meeting notes taken from discussions and planning, reflections of team members and stakeholder meetings. This phase took up the first key question of the study that examined how the principles of self-organisation informed the design process and the work of the design team. Field-notes were taken at each design team workshop and meeting and collated to analyse the outcomes of each meeting. The data were used to document the design schema as it developed and established the extent to which the participants felt that the schema functioned as an effective framework for a self-organising course design process.

Phase 2 of the data collection involved studying the application of the design principles to the design process. It incorporated the data and products gathered as the design team meetings continued. As the researcher, I analysed notes taken after a team meeting or stakeholder consultation and examined my feelings or impressions about the work that emerged. Records were kept of any informal interactions with professional colleagues (such as conversations or e-mail exchanges) and any other available documentation was collected (i.e., institutional documents). This phase focused on the second key research question that examined the application of theory to the design process and the work of the design team.
Phase 3 included individual interviews with design team members, looked at the products of the design process and reflected on the data gathered throughout the process. The key question for this phase of the study focused on the design team members (study participants) and their experiences throughout the design process. I also considered how the study responded to the needs in the field of inclusive education and the sustainability of the process in the higher education context. This was the point at which triangulation took place. Data from external stakeholders were also collated to further validate the process, although this was not a focal point of the study.

4.8.4 Ethical considerations
As noted earlier, ethical considerations are pivotal to qualitative research and are particularly important in the type of study being completed. As Punch (2005) noted, there is an intrusive element to qualitative research and, although this study did not delve into particularly intimate or sensitive elements, the nature of my existing relationships with all the participants as colleague and friend added a different dimension to my work.

With consideration of these factors, the following section focuses on the values and benefits of the study, the possible risks to participants and how they were addressed, and details the processes of participant consent and ensuring confidentiality.

4.8.4.1 Value and benefits
The aim of this study was to create a theoretically driven course design process. Although this study took place in a particular tertiary institution (and faculty within this institution), the hope is that others may see the applicability of the design process for their institutions. Educational leaders may be able to utilise the six organizing principles to provide a framework for their own contexts.
4.8.4.2 Risks to participants

To some degree the risk was minimised due to the fact that participants were simply providing their input about a process while it took place and during reflections after the fact. The comments made by the participants had little bearing on whether the process would continue. Rather, at the time it influenced the ongoing direction of the design process, and reflections after completing the course design process directed subsequent revisions. The biggest consideration from the risk perspective was the fact that I was a participant researcher and actively engaged in the process as a fellow team member, colleague and friend. Moreover, there was the potential risk of identification as the work undertaken was in the specialised field of inclusive education and in a particular tertiary context. As this was a process in which all design team members were involved as part of their work, it was a topic that team members naturally tended to discuss. Participants were reminded many times that their participation was voluntary, that they could choose to withdraw from the research at any time and that they could indicate that particular material (such as meeting notes, meeting comments) were not to be used in the research.

4.8.4.3 Participant consent

All participants consented to the data collection and the recording of notes during the course design process, in full knowledge that it would be used for this study. At the beginning of the study, each participant was approached to ask if she or he would be willing to participate in the study. Participants were provided with a copy of the research Information Sheet and Consent Form (see Appendix 4B & 4C). The purpose of the study was clearly detailed in these documents. Participants who signed the Consent Form were interviewed and had their data included in the analysis.
4.8.4.4 Ethical approval

Ethical approval for this study was granted by the Charles Sturt University Ethics in Human Research Committee CSU-2004/254 (see Appendix 4D). All participants gave informed consent in writing and were aware that they were free to withdraw at any time. External stakeholder feedback collected had no identifying features and no names were attached. It was originally collected by the team members as part of a feedback process while teaching residential schools. As mentioned previously, the stakeholder feedback was not a primary data source for the study. It was simply used as an additional means of validating conclusions made during the study.

4.8.4.5 Confidentiality

To ensure confidentiality, only the researcher had access to original data, and participants were provided with the transcripts and interpretations derived from their own interviews only.

With such a small number of participants, all of whom were known to each other, had worked closely together over many years, and were working on the course design process together, confidentiality could not be maintained within the group. Beyond the group, however, confidentiality was assured through the use of pseudonyms for all participants when necessary. As much as possible, participants were discussed as a group rather than individually, due to the focus of the study. As the process of course design was the focal point, a detailed profile of individual participants was not essential to the study, thus reducing the level of intrusiveness.

All documents used in the analysis were coded and catalogued, with any identifying features not essential removed. These documents were stored on a laptop in my personal
space in the university network that was password protected. When not in use, the laptop was stored in my office in a locked filing cabinet. Interviews were audio-taped and transcribed. These transcriptions and the audio-files were stored on my laptop in the manner described above.

4.9 Analysis of Data

Initial qualitative analysis involved the development of categories or themes to represent recurring patterns in the data (Creswell, 2003). The coding scheme was informed by the conceptual framework, research phases, research goals, and preliminary analyses of observations taken in Phase 1 and Phase 2, and subsequently developed and linked to the research questions by the researcher. The interview data used in Phase 1 and Phase 3 was coded and analysed in order to identify common patterns and trends (Sarantakos, 1993). Responses to the interview questions were also subjected to a content analysis so that themes and common points could be identified. The findings from the three phases of the study were then incorporated throughout the discussion (Chapter 8) to draw together common ideas.

The development of coding categories was iterative, in line with the process described by Punch (2009) as the relevant literature was continuously considered alongside exploration of the interview data and other sources. Informed by the research literature, the interview and additional data sources were coded with a tentatively predefined set of codes. During data analysis these codes were refined in light of insights generated from further reading and coding the data.

The audio-tapes of the interviews and critical conversations were fully transcribed and then analysed for emerging themes and patterns. Successive readings of the data
allowed the generation of categories that were expanded or collapsed as the data set was re-read. A content analysis approach was used to identify the transactions in interviews and meeting transcripts that were seen as supporting the theoretical attributes consistent with self-organising and emergent behaviour. The data sources were then examined to consider whether they addressed the concerns articulated in the literature and triangulated to demonstrate the connections between the theory, literature and design process. The use of pattern language, incorporation of the six principles of self-organisation, understanding and use of the collaborative process, and depth of responses were analysed, along with themes that emerged throughout the course design process. This process clarified connections between the theory and the way it was articulated in the course design process (Johnson & Christensen, 2012), informing the design principles produced through the study.

These perceptions were cross-referenced with the data derived from design meetings in Phases 1 and 2, in order to establish consistency and credibility as well as to reflect divergent perspectives. Issues of validity were addressed by all interviews being recorded and transcribed, with the transcriptions presented to the participants for verification. Further, the use of member-checking to ensure the accuracy of the findings was used, as strongly suggested by Creswell (2003). The meeting minutes taken in Phase 2 were as detailed as possible, as were the researcher notes taken at all team meetings and then distributed to all participants via e-mail as preparation for the subsequent meeting. Findings were sent to interested participants for their comments. Additional insights were provided as participants reflected on the findings in light of their own experiences and suggested reasons for the findings in their interviews. This procedure was built into the study as part of the design feedback process, providing
further validity for interpretation of the study questions, particularly the third key question related to the experiences of design team members.

4.9.1 Trustworthiness, validity and reliability of the data

Creswell (1994, p. 159) emphasised that each study completed is unique to its specific context, which mitigates against exact replication within another context. However, by providing details about where the researcher is positioned in relation to assumptions made, selection of participants, researcher bias and values, replicability of the study in another setting is increased. The reliability of a research study can be further supported through the willingness of stakeholders to act on the results or recommendations made through the research (Greenwood & Levin, 2005, p.54).

The value of qualitative research turns on the researcher's ability to keep the data, the interpretations, the reductions and the resulting conclusions closely linked to the reality from which they came. Validity and reliability are notions of quantitative research, but internal validity may be established in this qualitative piece through analysis, interpretations, and conclusions that are truthful. Qualitative research does not look for universals that exist free of context. In fact, it is just the opposite. Qualitative research seeks results that not only are context-bound but also describe the context. Due to human variations in both researcher and subjects, replication of a qualitative study may not be possible (Collins et al., 2004).

This study incorporated a number of methodological standards from the qualitative research field with particular consideration of validity, reliability and generalisation. In Hoadley’s view (2004, p. 204), educational researchers can ensure systemic validity by ensuring that the research done informs theory and that this then informs practice. This
study employed six principles of an existing theory (Bain, 2007) along with needs identified in the literature to inform the research questions and general design principles. The findings can be used to inform both the theory and practice of higher education course design.

One of the key threats that could potentially affect the validity of this piece of research would be the production of either inaccurate or incomplete data (Maxwell, 1996). The participant ethnographer role can be viewed as a potential threat to validity, although numerous researchers have suggested that this positioning can actually be used in a positive way if thought through carefully (Guba & Lincoln, 2005; Hammersley & Atkinson, 1993; Hoadley, 2004; Maxwell, 1996). While clearly indicating the potential criticism of this bias upfront, I have attempted to create an open and honest narrative throughout this work (Creswell, 2003). Two of the design team members have also used the design principles for their own doctoral work. The key is to communicate and present the data honestly and rather than eliminate the influence of this positioning, to understand it and use it productively (Maxwell, 1996, p. 91). Creswell (1994 citing Merriam, 1988) reiterated that “the intent of qualitative research is not to generalize findings but to form a unique interpretation of events.” Further, the use of triangulation by examining evidence from a variety of sources and using it to build a coherent justification for themes is seen as an effective process to ensure validity (Creswell, 2003; Greenwood & Levin, 2005).

Within the current state of teaching inclusive practices in higher education, inclusive course design allowed the shaping of the learning experiences, the introduction of flexible teaching methods and the creation of new assessment mechanisms. The
opportunity to be involved in inclusive course development as well as to model what was taught was very appealing to all participants. With the creation of a course that was flexible and academically rigorous, a variety of potential stakeholders and interested parties were catered for.

Reform in schools, inclusive education and teacher education should be reflected in the way teacher preparation courses are designed and delivered (Bain, Zundans, Lancaster & Hollitt, 2004). The design team was faced with the challenge of creating a course that could work within current university structures and be equally innovative and progressive. With further consideration of stakeholders and awareness of current teaching practices, there was a strong emphasis throughout the process on catering for individual needs and learning styles.

4.9.2 Limitations
The fact that this study was limited to a single case could be seen as a limitation, but, as noted above, there was no intention to present this case as representative (Yin, 2009). Rather, one of the main goals of the study was to implement a theoretically driven course design process and to reflect on what was produced as a result. Due to the nature of the study, the research participants were highly invested in the process, so their interest was a reality. The need for the participants to be actively involved was a strength. Design-based research was used as a mechanism for deep interrogation of a process in a given context. There was no intention for the exact process to be repeated, rather that the theoretical principles and the process as a whole could be replicated elsewhere with the specific needs of the context as a key variable.
4.10 Conclusion

Design-based research provided a general methodological framework for this study. As a research method, design-based research supported investigation of a theoretically driven design and innovation in an authentic setting (Hung, 2011; Thein et al., 2012). The appeal of design-based research was that it allowed rich descriptions of the context, the challenges of implementation, the development process involved and the design principles that emerged (Anderson & Shattuck, 2012) which aligned well with qualitative research as the strategy of inquiry and mirrored the intent and structure of this study.

This research method allowed incorporation of both design and empirical research to develop models, produce change and understand factors that supported and hindered reform in educational settings (Bell, 2004; Cobb, Confrey, diSessa, Lehrer & Schauble, 2003; Sandoval, 2004; Sandoval & Bell, 2004). It also provided a direct link between research and practice, which had been identified as a key area of need in this study. Design principles were drawn from theory, literature in the field and prior research (Tabak, 2004, p. 226). Participants were treated as co-participants and collaborators rather than subjects, in both design and process (Barab & Squire, 2004; Design-Based Research Collective, 2003; Thein et al., 2012).
CHAPTER 5. RESULTS (Phase 1)

5.1 Phase 1 Introduction

In Chapter 1, an overview of the study was provided that included the goals of the study, the key questions and a brief introduction to complexity theory and design-based research that were used as theoretical frames for the study. In Chapter 2, literature was reviewed and analysed around four key issues – the need for a theoretical basis for course design and reform, the need to address the theory-to-practice gap, the need to utilise collaborative practice, and the need to examine the impact institutional practice. In Chapter 3, the literature on complexity theory was reviewed and critiqued and its application to the tertiary context through this study was demonstrated. Chapter 4 focused on the methodological aspects framing this study with detailed discussion of design-based research, the use of case study and the research approaches used.

The results of the study are presented in Chapters 5 to 7 reflecting the three phases of the educational design research framework. The structure used throughout this study followed the evolution of a course design process by beginning with issues in the field, validating that those issues existed in the setting where the research was conducted, then moving into the logistics of the process and the use of iterative cycles to create a course in inclusive education. The major goal was to create a set of design principles for course design in higher education that have been informed by the design, approach and the results of this study.

5.1.1 Structure of the results

In this chapter, the results of the first phase of the study are presented. These are organised around the conceptual framework of the study and then drilled down through document analysis, observational notes, the researcher log and semi-structured
interviews. The focus question was addressed through the presentation of results related to the identification of a need for a process of design:

Do the design and review processes at RU address the areas of need identified in the higher education, teacher education and inclusive education literature?

The examination of RU documentation was mapped against the four identified areas of need in the field that formed the basis of this study. Phase 1 examined the way the issues were conceptualised and represented in the fields of higher education, teacher education and inclusive education. These were then examined in light of current course review and design practices in the institution in order to describe extant practice within the study institution and to validate the issues identified in the literature within the institutional context.

5.2 Phase 1: Conceptualisation of Institutional Context

This phase examined the drivers and issues identified and described in the literature review (Chapter 2). Four areas of need were common across the three fields of higher education, teacher education and inclusive education: the need for a theoretical basis informing course reform and design, the need to address the theory-to-practice gap, the need to utilise collaborative practice, and the need to examine the impact of institutional practice.

The various documents and tools involved in course review and design were analysed, along with related findings. This phase also determined the existence of the areas of need and whether they were addressed in the extant process of design and review at the institution. To do this, the extent to which the areas of need and issues existed in policy,
process and practices of course design in the study institution was examined. This involved a process that incorporated Merriam’s (2009) suggestions for looking at and analysing data that included consideration of relevance and authenticity.

5.3 Summary of Literature

A summary of the findings from the literature review in higher education, teacher education and inclusive education is presented in Tables 5.1 to 5.4, each issue identified within a separate table and across the three contexts. For an issue to be considered relevant to this study it needed to appear across all three contexts. The major issue identified in the piece of literature and the respective author/s are identified, along with a brief summary of each article/report. This was done to establish the issues that underpinned the first research question. The summaries following each table clarify the table’s contents and make connections with the scope of the literature in the area, rather than reiterate the review completed in Chapter 2.
Table 5.1 Need for a Process of Course Design and Reform Across the Focus Contexts

<table>
<thead>
<tr>
<th>Higher Education</th>
<th>Teacher Education</th>
<th>Inclusive Education</th>
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<tbody>
<tr>
<td><strong>Need for theory</strong></td>
<td><strong>Need for theory</strong></td>
<td><strong>Need for theory</strong></td>
</tr>
<tr>
<td>Programs need to be designed and implemented (Norton et al., 2013)</td>
<td>Teacher positioning in the context of reform (Luttenberg, Imants &amp; van Veen, 2013)</td>
<td>Theoretical frameworks to guide study in the field (De Arment, Reed &amp; Wetzel, 2013)</td>
</tr>
<tr>
<td>Importance of course design and technology to successful collaboration (Campos et al., 2013)</td>
<td>Capacity to put reforms into action (Fullan, 2009)</td>
<td>Evidence-based practices in special education (Cook &amp; Cook, 2011)</td>
</tr>
<tr>
<td>The continuing myth of educational reform (Rafferty, 2007)</td>
<td>Theory-based approach to support capacity building (Bain, Walker &amp; Chan, 2011)</td>
<td>Promoting research-based practices through inclusion (Volonino &amp; Zigmond, 2007)</td>
</tr>
<tr>
<td>Designing courses for higher education (Toohey, 1999)</td>
<td>Capacity building in relation to theory (Biesta et al., 2011)</td>
<td>Theoretical justification of inclusive practice (Hansen, 2012)</td>
</tr>
<tr>
<td>The lack of methodologies for pedagogical research in higher education (Stierer &amp; Antoniou, 2004)</td>
<td>Building new theories of teacher education practice (Reid, 2011)</td>
<td>Origins of inclusive education as a field (Slee, 2008)</td>
</tr>
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<td></td>
<td>Role of theory in teacher education (Hodson et al., 2012)</td>
<td>Reform of teacher education for inclusive education (Florian et al., 2010)</td>
</tr>
<tr>
<td></td>
<td>Evidence-based practice in teacher education (Bain, Lancaster, Zundans &amp; Parkes, 2009; Hempenstall, 2006; Low, Hui, Taylor &amp; Ng, 2012; Zundans-Fraser &amp; Lancaster, 2012)</td>
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</table>
Overall, the research articles that identified the need for theory in higher education, teacher education and inclusive education focused on the impact of lack of an evidence base or research base for work being done in these contexts. Most suggested the use of theoretical frameworks, evidence-based and research-based practice to guide work. The need for capacity building in order to do this work was also recognised as an issue, as most people were unfamiliar with purposefully working with a theoretical base. The need for theory as identified in early literature (Cohen, 1998; Colbeck, 2000; Murray, 2000; Pring, 1996; Slee, 1997; Tilstone & Rose, 2003) was still identified as an issue in more recent work (Dyson, 2005; Levine, 2006; Moran, 2007; Schalock et al., 2006), as well as in the research cited in Table 5.1.
<table>
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<tr>
<th>Higher Education</th>
<th>Teacher Education</th>
<th>Inclusive Education</th>
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<tbody>
<tr>
<td><strong>Theory-to-practice gap</strong></td>
<td><strong>Theory-to-practice gap</strong></td>
<td><strong>Theory-to-practice gap</strong></td>
</tr>
<tr>
<td>An understanding of theory as well as practice is needed (Norton et al., 2013)</td>
<td>Need for evidence-based practice to resolve the research to practice gap (Kretlow &amp; Helf, 2013)</td>
<td>Lack of consistency between coursework and field experiences that contribute to inclusion (Gehrke &amp; Cocchiarella, 2013)</td>
</tr>
<tr>
<td>The impact of organisational structures on teaching practices (Hora, 2012)</td>
<td>Teacher education that is grounded in teaching practice (Hammerness, 2013)</td>
<td>Research-to-practice gap in inclusive education (Grima-Farrell et al., 2011)</td>
</tr>
<tr>
<td>Modifying delivery approaches for varying needs (Song-Turner &amp; Willis, 2011)</td>
<td>Need for universities to prepare students for the reality of teaching (Cochran-Smith, 2004b, 2005b; Ruys, Defruyt, Rots &amp; Aelterman, 2013)</td>
<td>Teacher preparation in special education and their practice in classrooms (Goe, 2006)</td>
</tr>
<tr>
<td></td>
<td>Teaching as complex work (Grossman et al., 2009; Grossman &amp; McDonald, 2008; Loughran, 2011)</td>
<td>Modelling inclusive practices in course design (Ashman, 2010)</td>
</tr>
<tr>
<td></td>
<td>Closing the gap between theory and practice (Cheng et al., 2010; Korthagen, 2010)</td>
<td>Need for theoretical and practical knowledge (Forlin, 2010)</td>
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</tbody>
</table>
The need to address the theory-to-practice gap or research-to-practice divide has been a constant theme in the literature in particular focusing on the transition between what occurs at institutional level through teacher preparation and what occurs in practice (Bereiter, 2002; Berry, 2005; Carroll et al., 2003; Hoban, 2004; Korthagen, 2001; Tillema & Kremer-Hayon, 2005; Lunenberg & Willemse, 2006; Metzler & Blankenship, 2008), with more recent recognition of the complexities of teaching and the need to model best practice to reduce this gap, as demonstrated in Table 5.2 in the work of Forlin (2010), Grossman et al., (2009), Korthagen (2010) and Loughran (2011). There has been increasing recognition of the potential of teacher education, and the considered design of courses and subjects, as the space where this gap could be addressed.
<table>
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<tr>
<th>Higher Education</th>
<th>Teacher Education</th>
<th>Inclusive Education</th>
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<tr>
<td>Collaborative practice</td>
<td>Collaborative practice</td>
<td>Collaborative practice</td>
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<tr>
<td>Collaborative practice can develop teaching skills (Norton et al., 2013)</td>
<td>Collaborative decision making and trust (Supovitz &amp; Tognatta, 2013)</td>
<td>Challenge of collaborating in inclusive classrooms (McHatton &amp; Parker, 2013)</td>
</tr>
<tr>
<td>Distributive leadership approach emphasising collective collaboration in</td>
<td>Enhance collaboration and boost morale (Marsh et al., 2011)</td>
<td>Proposed model of an inclusive educator highlighting collaboration (Carlson,</td>
</tr>
<tr>
<td>Australian universities (Jones et al., 2012)</td>
<td></td>
<td>Hemmings, Wurf &amp; Reupert, 2012)</td>
</tr>
<tr>
<td>Collaborative engagement for reform in higher education (Oliver &amp; Hyun, 2011)</td>
<td>Collaborative practice core for teachers and teacher educators</td>
<td>Building capacity for collaboration in inclusive education (van Swet et al., 2013)</td>
</tr>
<tr>
<td>Curriculum design in higher education through collaboration (Burgess, 2004)</td>
<td>Collaboration as a reform in teacher education practices (Nevin et al., 2009)</td>
<td>The skill of collaboration (Friend &amp; Cook, 2010)</td>
</tr>
<tr>
<td>Collaborative course design (Bain et al., 2004)</td>
<td>Working collaboratively on program design (Nagel, 2008)</td>
<td>Programs need to focus on collaboration and differentiation (Allday et al., 2013)</td>
</tr>
</tbody>
</table>
Collaborative practice was universally recognised as a practice suitable in all three contexts (Table 5.3), rarely undertaken but very successful when engaged with (Burke, 2002; Cochran-Smith, 2005b; Moran, 2007; Otero, Peressini, Meymaris, Ford, Gavin et al., 2005; Potter, 2001; Ravitch, 2007; Sprague & Pennell, 2000; York-Barr et al., 2005; Ware, 2003; Welch, 2000; Zellermayer & Margolin, 2005). This was the area of need that stood out strongly because there was such a keen recognition of the effectiveness of collaborative practice yet still a great reluctance to engage with the practice at scale. There was a call for collaborative practice to be undertaken at the higher education level and within teacher education courses. It appears to have been a longer-standing core practice in inclusive education, possibly due to the nature of the role and the constant need to work with a variety of professionals.
<table>
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<tr>
<th>Higher Education</th>
<th>Teacher Education</th>
<th>Inclusive Education</th>
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<tbody>
<tr>
<td>Institutional practice</td>
<td>Institutional practice</td>
<td>Institutional practice</td>
</tr>
<tr>
<td>Student-centred teaching (Norton et al., 2013)</td>
<td>Impact of an environment preoccupied with recruitment and retention on teacher education (Ball &amp; Forzani, 2009)</td>
<td>Promoting inclusivity through and within teacher education programmes (DeLuca, 2012)</td>
</tr>
<tr>
<td>Institutional support vital for teaching (Henard, 2009)</td>
<td>Policy changes and their impact on institutional structures and roles (Ellis, Glackin, Heighes et al., 2013)</td>
<td>Organisational agenda, policy and preparedness for inclusion (Hyder &amp; Tissot, 2013)</td>
</tr>
<tr>
<td>Criteria of effective teaching in higher education (Devlin &amp; Samarawickrema, 2010)</td>
<td>How teacher education within universities is organised (Loomis, Rodriguez, Tillman &amp; Gunderson, 2008; McNicholl &amp; Blake, 2013)</td>
<td>Understanding the demand for special education faculty (Robb, Smith &amp; Montrosse, 2012)</td>
</tr>
<tr>
<td>Issues of staff engagement and time needed for innovation (Oliver, 2013)</td>
<td>Gaps in the knowledge base of pre-service teachers (National Research Council, 2010)</td>
<td>Institutions slow to reform programs (Forlin, 2010)</td>
</tr>
<tr>
<td>Mapping Australian higher education (Norton, 2012)</td>
<td>Positioning of teacher educators in higher education (Murray, 2008)</td>
<td>Reconceptualising inclusion in higher education (Outhred, 2012)</td>
</tr>
<tr>
<td>Institutional transformation and sustaining change (Cohen, Fetters &amp; Fleischmann, 2005)</td>
<td>The rationale for change in teacher education (Townsend, 2011)</td>
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</tbody>
</table>
Recent literature (Table 5.4) in the area of institutional practice and its impact on reform considered how teaching and learning were positioned, the definition of quality teaching, the cost of innovation and how change could be sustained. Earlier literature looked at the impact of the political landscape on institutional practice, funding and reform, policy changes, and the research/teaching dynamic (Bereiter, 2002; Bower, 2006; Cochran-Smith, 2003; Goodlad, 2002; Jacobs & van der Ploeg, 2006; Kempcke, 2002; Lunenberg & Willemse, 2006; Marsh, 2004; Ravitch, 2007; Rose, 2003; Slee, 1997). More recently the focus moved toward an examination of how teaching is positioned in institutions, what defines quality teaching and learning and how this can be embedded in everyday practice (Norton, 2012; Norton et al., 2013; Townsend, 2011).

In summary, the literature summarised here could be categorised into four key issues and areas of need across the three contexts – the need for a theoretical basis for reform and course design, the need to address the theory-to-practice gap, the need to utilise collaborative practice and the need to examine the impact of institutional practice on reform. In some cases, and in particular with a number of the reports, the literature crossed across a number of these areas simultaneously.

Given these needs, the focus of the study moved to establish whether the extant terms of reference for course design and development at RU addressed these foci. To do this the current process of review and design was examined, including an analysis of the three key documents currently used in the process and the minutes of an approving committee as an exemplar of it in operation.
Regional University (RU) delivers nearly 500 courses to around 35,000 students on campus and through distance education mode across Australia and internationally. It is considered a leading provider of distance education in Australia, with over 20,000 students enrolled both nationally and internationally through this mode. In Australia, large campuses are located in large regional centres, with growing campuses in smaller regional sites, smaller satellite campuses, and one international campus.

Promotional material emphasises that RU graduates get jobs, that RU has a hands-on approach, collaborates with industry and is academically focused. The *University Strategy 2013-2015* identifies six core values for the institution: collaborative – showing strength in working together with others to achieve mutual goals; student-centred – delivering an excellent student experience and catering for individual needs; agile – refining and adapting for the changing needs of students, staff, professions and communities; agents of change – thinking differently and striving for new ways to make things happen; reliable – “we are consistent, trustworthy and dependable”, and inclusive – embracing and respecting difference (Regional University, 2012, p.4). Regional University has authority to accredit its own courses. The *Australian Qualifications Framework* (AQF) provides guidelines which each university must follow if the course is to be recognised outside the university, although ultimately responsibility for accrediting courses rests with the institution.

The following section focuses on the current process of design and review, roles and responsibilities, the institutional *Course and Subject Information Management System* (CASIMS) and the Faculty Courses Committee (FCC) design and review process. The
University’s data management system and the work and role of the FCC were also examined to determine whether the key areas of need identified in the literature were being addressed through the current process of course design and review.

5.5.1 Overview
In this section, the institutional structure for course design and review is presented. The roles of particular committees, the approval process and current review timelines are highlighted, and an explanation of the institutional course and subject documentation system (CASIMS) are provided.

5.5.1.1 Academic Governance
The course design and review process is managed by the University’s Office of Academic Governance in the institution with the role of “oversee[ing] the academic activities of the University” (Appendix 5A, p. 521). This office also provides executive assistance and administrative support to a number of senior academic committees across the University, particularly committees where the University is required to meet national guidelines. This means that they are heavily involved in the course review and design processes across the university due to the need to meet AQF regulations.

5.5.1.2 The Role of Committees
The committee structures through which subject and course documents need to pass are identified by the institution as the committees of Senate including School Boards, FCCs, Faculty Boards, the Academic Courses Committee and the Board of Graduate Studies. The committee that is ultimately accountable and responsible is the FCC which all courses view as the “gatekeeper” regardless of Faculty. For this reason it was the key committee that was examined.
5.5.1.3 Faculty Courses Committee

As indicated in the Course Accreditation Policy (CAP) (see Appendix 5A), the FCCs have delegated authority from Academic Senate to approve all course documentation “except master by research programs and research doctoral programs” (Appendix 5A, p. 522). The FCCs can also approve revisions or modifications to existing courses.

The FCC has a number of points that must be considered when approving a course. The nine key points which the FCC must agree that a course meets before allowing it to be approved are:

- “The course is consistent with University Policy on standard course structures or the reasons advanced for departure from the standard are appropriate;
- The course is consistent with the Academic Regulations and other University Policy;
- The Faculty or Faculties involved in teaching the course have the academic depth to offer the course at the level of award proposed;
- The disciplines included in the course will be taught by the appropriate Faculties;
- The Faculty and Divisions involved in the delivery of the course have the necessary resources to support the course;
- The Course Approval document is consistent with the proposal approved by the UCPC (University Course Planning Committee);
- The course structure is consistent with those described in this policy, or the reasons advanced for departure from the requirements of this policy are appropriate;
- The Faculty has the academic depth to offer the course at the level of award proposed; and
- The course structure and content will meet the objectives of the course.”

(Appendix 5A, pp. 542-543)

The FCC is chaired by the Executive Dean of the faculty, composed of the professoriate of the faculty, includes a representative from another faculty and a representative from each of the schools within the faculty, as well as a committee secretary from the Office of Academic Governance and the faculty quality assurance officer. The committee secretary enters the deliberations of the committee to be stored as a permanent record.
As the course design process recounted in this study was approved in the Faculty of Education, this was the particular FCC that was focused on.

5.5.1.4 Approval process
The course approval process is a two-stage process. Initial approval needs to be given by the University Course Planning Committee (UCPC) for the inclusion of a course in the University’s course profile. For courses undergoing a review process this step is not necessary, although the documentation submitted in the following stage of the process incorporates a rationale for the continuation of the course. The second stage of course approval involves the approval of the academic components of the course by the relevant FCC. Relevant documentation must be completed and submitted for this approval to occur.

5.5.1.5 Documentation system – CASIMS
The documentation system used by the university is called CASIMS – Courses and Subject Information Management System. This system must be used by staff when writing or revising a subject or course and is intended to guide staff through the process. To assist in the completion of this task, notes are provided to explain what information is to go in each field. The intention is for the document writing and editing to take place on-line along with the automation of documentation being forwarded to the correct people at the time they are required to see it. CASIMS also provides all staff access to the latest approved information about each subject and course in the University as well as those currently undergoing the design and review process.

As indicated earlier, the deadlines determined by the institution are predominantly directed by external requirements. CASIMS also considers these and the system is positioned as “the authoritative source of information” for the University Handbook,
Student Administration, the production of advertising material and reporting for government authorities. CASIMS is the manner by which the institution documents the process of course design, review and approval to meet the quality assurance processes required under AQF guidelines. CASIMS also stores the deliberations and information entered by various committee secretaries in relation a specific course.

Once a course is formally approved through CASIMS, two separate sets of information are stored within the system – process information and profile information. Process information stores any of the work relating to the process of having the course documentation approved. The profile information is similar to the Handbook entry and looks at the overall structure of a course and its characteristics.

5.5.1.6 Course review rules and responsibilities

It is the responsibility of the Executive Dean of the relevant faculty to arrange for the course design, review and approval documentation to be completed for courses. This is typically done through the establishment of a working party. In instances where courses are shared across faculties more specific directions are provided (Appendix 5A, pp. 536, 540-541) but there is no guideline for the composition of the working party for courses that are faculty-specific or minimum requirements regarding membership.

The Course Director who coordinates the relevant course leads the design and review process. Course Directors are appointed to this role by the Executive Dean of the Faculty and have delegated authority over their course(s). The responsibilities of Course Directors in relation to the course(s) under their guidance include leadership of curriculum development for course(s) for which they are responsible; course quality
assurance and accreditation processes; application of RU’s regulations and policies; marketing and professional liaison; and a student advisory role.

The key role required by CASIMS is that of “Document Administrator”. This is the main author of a subject or course document and so is typically the person nominated as the leader of the review process. As noted above, in most instances this would be the Course Director. The Document Administrator enters information into all the required fields and can submit documentation to committees and make amendments as suggested by these committees. The Faculty Dean has authority within CASIMS to bypass a committee and give executive approval, with the expectation that the document would then be ratified at a subsequent meeting.

5.5.1.7 Timelines
The timelines for course design and review are governed by a number of external factors impacting on the institution. As a general rule, courses need to be approved by the relevant FCC by May of the year prior to their introduction. This deadline has to do with government body reporting and advertising requirements as detailed in the Course Accreditation Policy (Appendix 5A, pp.552-553). There is no suggested timeline for the course review process in the documentation, which means that it is quite variable. Table 5.5 provides an example of a recent course design and review timeline.
Table 5.5 Course Review Planning and Development Timeline Example

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Participants</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 12</td>
<td>1:00 – 2:30</td>
<td>Planning Group</td>
<td>Teleconference (or SKYPE) to further determine the conceptual framework of the review, to discuss the membership of the review team</td>
</tr>
<tr>
<td>April 26</td>
<td>12:00 – 2:00</td>
<td>Planning Group</td>
<td>Discuss the conceptual scope of the review, clarify process, and review timeline</td>
</tr>
<tr>
<td>May 1</td>
<td>9:00 – 12:00</td>
<td>Whole Team</td>
<td>Discuss the conceptual scope of the review process and to become familiar with the review timeline</td>
</tr>
<tr>
<td>May 2</td>
<td>10:00 – 12:00</td>
<td>Planning Group</td>
<td>Feedback from the previous session, further planning towards writing day</td>
</tr>
<tr>
<td>May 14</td>
<td>10:00 – 12:00</td>
<td>Planning Group</td>
<td>Planning for June 3 meeting</td>
</tr>
<tr>
<td>June 3</td>
<td>10:00 – 12:00</td>
<td>Whole Group</td>
<td>Further discussion on concept, subjects to be utilised</td>
</tr>
<tr>
<td>June 27/28</td>
<td>9:00 – 15:00 (the following day)</td>
<td>Whole Group</td>
<td>Review of the subjects within both courses with the possible exception of assessment</td>
</tr>
<tr>
<td>July 10</td>
<td>13:00 – 15:00</td>
<td>Whole Group</td>
<td>Online pedagogies (PD)</td>
</tr>
<tr>
<td>July 11</td>
<td>10:00 – 11:00</td>
<td>Whole Group</td>
<td>Finish the assessment review</td>
</tr>
<tr>
<td>Jul/Aug</td>
<td>Two days</td>
<td>Advisory Members</td>
<td>Panel Video-conference peer review and affirmation of the course re-design concept and structure</td>
</tr>
<tr>
<td>Aug 9</td>
<td>Whole day</td>
<td>Whole Group</td>
<td>Using video-conference facilities the groups have the whole day to work finalising the subject outlines (lunch provided)</td>
</tr>
<tr>
<td>September 6</td>
<td>Whole day</td>
<td>Group</td>
<td>All groups present their outlines for the last feedback opportunity</td>
</tr>
<tr>
<td>September 24</td>
<td>Whole day</td>
<td>Group</td>
<td>Courses submitted to Courses Committee</td>
</tr>
</tbody>
</table>
A 5-month process is mapped out from initial identification of a course to undergo the process of review to submission of documentation at the FCC. The review process is heavily reliant on the work of a planning or leadership team that includes the Course Director who leads the process. The timeline embeds a number of information sessions that include the wider group of participants to let them know about the process to be undertaken, discuss roles and notify key deadlines. Advisory panel members are asked to view the documentation prior to submission to the FCC for their feedback. The process is typically mapped to the documentation submission point requiring subject profiles. Subject development and writing are not incorporated or expected to be completed in this part of the process even though the documentation submitted is what constitutes approval of the entire course by the FCC.

5.5.1.8 Summary of review and design approval
The current 6 to 12-month course review and design process is governed by particular institutional requirements and processes. The two most influential factors are the FCC that ultimately approves courses and the requirements of the documentation system used within the institution, CASIMS. Completion of the documentation required for approval primarily falls to the Course Director responsible for the course. To investigate the synergies between the approval process and the documents informing the process in greater depth, analysis was performed of the three documents that drive and support the process of course review and design, the Course Accreditation Policy, the Draft (Interim) Course Approval process document and the Course Review Checklist. This was undertaken to see whether the areas of need identified in the literature were addressed in the current process of course design and review.
5.6 Institutional Design and Review Documents

The RU course review process is currently driven by three documents and a final approval committee where course documentation is presented:

- the Course Accreditation Policy (CAP; Appendix 5A),
- the Draft (Interim) Course Approval process (ICP; Appendix 5B),
- the Course Review Checklist (CRC; Appendix 5C), and
- the FCC.

The policy, supporting documents, committee and CASIMS support the current design and review process. The development of these documents has created a greater level of consistency in relation to the data entered into the system. Four documents, the CAP, the Draft ICP document, the CRC, and the FCC minutes of May, 2013 were analysed. Using the process suggested by Merriam (2009), the relevance of the material was considered, authenticity assessed, conditions under which the documents were produced was determined, and a system of coding was created. The data sources were analysed in relation to the research question for Phase 1. The intention in this section was to determine whether the needs identified in the literature were addressed in terms of reference and processes for the reviews of courses at the study institution.

5.6.1 Overview

All four documents, The CAP, the Draft ICP document, the CRC, and the FCC minutes were considered particularly relevant for different reasons. The CAP was the institution-wide “process for the approval and review of awards, courses and fields of research within the University” (Appendix 5A, p. 520). This is the document approved by Academic Senate of the University that drives the course design and review process, so underpins the whole process. The Draft ICP document and the CRC were selected for a different, but no less important, reason. These two documents are used in practice by the teams completing course reviews to meet the requirements of the CAP. Both these
documents were created by staff in the Office of Academic Governance to support academics in the practice of course design and review. They were both viewed as the “how to” documents. The FCC minutes provided insight into the “end point” of work put into course design and review. It is at the meetings of this committee that courses are approved. The coding of these documents focused on thematic analysis relating to the research questions and the four areas of need identified in the literature.

5.6.1.1 Review of relevant data collection tools

To establish the extent to which the guidance provided through policy and documentation supported the process of course design and review, an analysis of these data sources was undertaken. An initial link to the literature was undertaken through a word search, identifying the context within which keywords commonly described in the keyword description of the articles described in the review of literature appeared in the documents. This was followed by a narrative considering the relationship between the various documents involved in course design and review. Content and themes were noted and then triangulated through additional sources such as the researcher log and Part A of the interviews completed by design team members. Part A focused on design team members’ previous course review experiences at RU and elsewhere. Through the interview structure, design team members were asked the same sequence of questions regarding their previous design and review experiences as they were asked about the Master of Inclusive Education (MIE) experience that was the subject of the present study. To ensure clarity regarding these experiences, the questions about previous experiences were asked first (Part A) followed by the same sequence of questions in relation to the MIE (Part B).
5.6.2 Course Accreditation Policy (CAP)
The institutional document that guides the course design and review process is the CAP (2013). The current form of the document had last been approved by Senate and issued on 30 April, 2013. The major components as suggested by the headers in the document included information about academic governance and the design and review of courses and their associated approval. CASIMS was used as the documentation and recording system with final approval given by the FCC. The various components of the policy and the roles and responsibilities within the process are discussed in the following section.

5.6.2.1 CAP roles and responsibilities
The CAP focuses predominantly on the various institutional committees that approve a course rather than specific roles in the completion of the documentation to meet approval requirements. Much of the document focuses on the components of a course and what constitutes a particular type of course in terms of subject level, duration, and entry points.

5.6.2.2 Key components of CAP
The entire CAP (2013) is highly terminology and definition focused. The first part of the document (Appendix 5A, pp. 520-524) outlines the various institutional committees. Further, minimum requirements are outlined indicating that for every course there must be “an independent advisory process in place; independent external experts included in that process; and records of all aspects of the process” (Appendix 5A, p. 523). The following part of the document (Appendix 5A, pp. 524-530) identifies what constitutes a course structure, standard courses, standard subjects and duration. The following section touches on higher degree programs and again moves into various relationships and articulation within and across degrees (Appendix 5A, pp. 531-535). Shell courses are examined in some detail as are the implications for combined courses (Appendix
5A, pp. 536-539). The course approval and documentation process is then addressed (Appendix 5A, pp. 539-545), although a significant part of this is again taken up with identification of various committees within this process. This then leads into courses that undertake review, modification or phase-out processes (Appendix 5A, pp. 546-552) with the final section covering advertising of courses (Appendix 5A, pp. 552-553) and approval fields required by the government (Appendix 5A, pp. 553-555).

5.6.3 Interim course approval process document (ICP)

The Draft ICP (2011) document is four pages long and has been developed to meet the requirements of the Academic Courses Committee (now part of the Curriculum Learning and Teaching Committee) as an interim measure for courses to indicate progress towards alignment to the university graduate outcomes called the RU Degree.

5.6.3.1 ICP Roles and responsibilities

It is clearly the responsibility of Course Directors to complete the work and demonstrate the alignment of their degree. No other roles and responsibilities are mentioned in the document.

5.6.3.2 Key components of ICP

The Draft ICP document is at first glance relatively brief but most of the information is actually stored elsewhere, as indicated by multiple web links to supporting documents. The main focus of the document is consideration of how courses will meet the RU Degree and this is the lens through which courses are examined.

The first page of the ICP (Appendix 5B, p. 557) provides a summary of what the RU Degree is and its purpose. The following three pages (Appendix 5B, pp. 558-560) are a template where course alignment can be demonstrated. The first of these pages requires that the Course Director prioritises the eight degree principles and provides a rationale
for their thinking. The following two pages then require a brief statement in relation to each degree principle where the Course Director must indicate how the principle is currently being met in the course and the plan for how the principle will be met through the course in the future. It is apparent that Indigenous Education has been given the highest priority due to the extensive detail required about this principle, with a footnote indicating that “Indigenization of the Curriculum must be achieved by 2015” (Appendix 5B, p. 559). A statement within the document reiterates that this is an interim process and that a more detailed process will be established in the future.

5.6.4 Course review checklist (CRC)
The CRC is a four-page document that assists staff in the completion of the CASIMS data. As stated on the institutional website, “CASIMS is a combined database and workflow system, which manages the flow and approval of course and subject documentation through the committees of the Academic Senate” (RU, 2012).

5.6.4.1 CRC roles and responsibilities
The document does not mention specific roles and responsibilities, although they can be extrapolated though additional details provided. In the “continued offering” section, a statement must be included that the faculty has determined that continued offering of the course is appropriate. This suggests that the document has passed through a faculty-level committee, namely the FCC. The “advisory process” section requires that a “list of names, titles and positions of RU staff is provided” (Appendix 5C, p. 562), including support staff such as educational designers, learning skills advisors and library staff. This would suggest that the people listed have been involved in the process in some way. A “high quality account of the advisory process” (Appendix 5C, p. 563) is also required. This is the point at which representatives of professional bodies are asked for their feedback on a course. Faculty decisions also need to be included. This ensures that
a mix of perspectives about a course is included in the documentation and formal design, review and approval process.

5.6.4.2 Key components of the CRC
The major components of the document have been broken down into sections, with detail provided regarding the content requirements for each part. The key components identified are: rationale, changes in the course, advisory process, course performance and teaching quality, resources, graduate attributes, aims and objectives, course structure and content, admission, implications for current students, proposed dates for introduction of changes, current course structure and new course structure. These components require different amounts of detail, with aspects such as the advisory process, course performance and teaching quality and graduate attributes requiring significantly more information. Some components would be irrelevant, depending on the type of course for which approval is sought.

5.6.5 Faculty Courses Committee (FCC) minutes
The FCC minutes include detail of courses that require approval, courses that have undertaken a design and review process, matters that have arisen from other committees and the related deliberations by the group. The committee’s role is to examine the associated documentation supplied in relation to each course. Most of the documentation relating to each course consists of an overview of the course, CASIMS-required detail and each subject profile that contributes to the overall course.

5.6.5.1 FCC roles and responsibilities
The two key roles and responsibilities relating to the FCC are those of the Executive Dean who is the presiding officer of the committee and therefore chairs the meeting and signs the minutes, and the committee secretary who records the minutes of the meeting.
and notes actions to be taken. As part of this process, responsibility for the completion of a particular action is determined by the committee members in their deliberations.

The Faculty of Education FCC has 19 members with other non-committee persons permitted the right of audience. The four faculties of RU have different courses committee structures, with the only consistent roles being those of presiding officer and committee secretary. Committee membership varies from 7 permanent members in one faculty to 22 in another.

5.6.5.2 Key components of the FCC minutes

The components of the FCC minutes are standard across the institution, regardless of faculty. The sequence of agenda items highlights minutes of the previous meeting, business arising, a report from the presiding officer, matters referred from other committees, approval of subject profiles, approval of course documents and related subject profiles, approval of credit packages, Indigenous board of studies approval, other items submitted as agenda items, and finally any urgent business. A semester-long student experience is called a subject. Individual subject profiles and those contained within courses that have undergone the revision process are tabled at the meeting in the format shown in Figure 5.1, extrapolated from the CASIMS data:
**Figure 5.1 Subject Profile Proforma**

1. **Subject Code:**
2. **Subject Title:**
3. **Subject Title Abbreviation:**
4. **RU Discipline Code/Name:**
5. **Administration tag[s]:**

6. **Standard Subject Data:**
   - **What principles of curriculum and learning have informed the development of this subject?**
   - **Is this subject compliant with Senate Standard Hours policy?**
   - **Details on non-compliance with the Senate Standard Hours policy**
   - **Are any specialised resources required for this subject?**
   - **Please provide details regarding specialised resources/travel required for this subject.**

7. **Workplace Learning:**
   - **Does this subject contain Workplace Learning?**
   - **Is the subject Workplace Learning content more than 75%?**
   - **Is Workplace Learning a required component of this subject?**
   - **The duration of the Workplace Learning is:**
   - **Description of Workplace Learning**

8. **Abstract:**
9. **Objectives:**
10. **Syllabus:**
11. **Residential School:**
   - **Is there a residential school for this subject?**
12. **Grading System:**
13. **Point Value:**
14. **Duration of Subject:**
15. **Courses Served:**
16. **Enrolment Restrictions:**
17. **Prerequisites[s]:**
18. **Assumed Knowledge:**
19. **Relationship to Existing Subjects:**
20. **Incompatible Subjects[s]:**
21. **Subject[s] made obsolete by this subject:**
22. **Year and Session of First Offering:**
23. **Subject Offering[s]:**
24. **Convening School:**
25. **Faculty:**
26. **Development Panel:**
27. **Document Contact:**
28. **ASCED Field of Education [FOE] Code:**
29. **DEST Work Experience in Industry:**
30. **Faculty Board Approval:**
The subject profile shown in Figure 5.1 constitutes the data cells that require information for entry in CASIMS, the university data base currently used for course design and review.

5.7 Analysis and Links to Areas of Need
The documents were analysed to consider how they responded to the four key areas of need with a summary to pull together key findings for each. The four documents used in this analysis were the CAP (2013), the Draft ICP document (2011), the CRC (2012) and the May, 2013 FCC minutes from the Faculty of Education.

The May, 2013 minutes were selected for analysis because they were the largest submission over the past 3 years, had a selection of courses from numerous Schools in the faculty submitted for review and were the most recent minutes available at the time this analysis was undertaken. At this particular meeting, 65 subjects were either new or had been revised with 18 of them not included as part of a course submitted for approval. A word search of each document was completed related to the four areas of need identified in the literature with the number of occurrences recorded after each word. A context for the occurrences was also included. These words were compiled from those identified as keywords in the meta-analysis of the literature. Keywords that were common to all four areas of need were not examined due to repetition and the understanding that they would naturally be included due to the three contexts incorporated in this study. This included words such as higher education, teacher education, teacher educator, teacher preparation, inclusive education and special education. Supporting evidence for the analysis of these documents was used from the semi-structured interviews completed with design team members, researcher observational notes and the researcher log.
5.7.1 Theoretical basis informing course reform and design

The word search for this area of need used *capacity building, design, educational change, evidence-base, framework, theory* and *theory-to-practice* as keywords identified in the thematic analysis of literature.
<table>
<thead>
<tr>
<th>Document</th>
<th>Keywords</th>
<th>Tally</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Accreditation Policy</td>
<td>capacity building</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>design</td>
<td>4</td>
<td>relating to cohort, specialisations, shell-courses, degree design, role of school board</td>
</tr>
<tr>
<td></td>
<td>educational</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>change</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>evidence-base</td>
<td>0</td>
<td></td>
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<tr>
<td></td>
<td>framework</td>
<td>5</td>
<td>student induction, AQF (Australian Qualifications Framework)</td>
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<tr>
<td></td>
<td>theory</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>theory-to-practice</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(Draft) Interim Course Approval Process</td>
<td>capacity building</td>
<td>0</td>
<td></td>
</tr>
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<td></td>
<td>design</td>
<td>2</td>
<td>in relation to RU degree principles</td>
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<td></td>
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<td>Course Review Checklist</td>
<td>capacity building</td>
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<td></td>
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<td>2</td>
<td>subject objective, assessment</td>
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</table>
5.7.1.1 Thematic analysis in course reform and design

Terms such as *capacity building*, *educational change* and *theory-to-practice* did not appear at all in the CAP, the Draft ICP document or the CRC. Although these terms were evident in the FCC minutes, they had very low frequency counts. Capacity building appeared in the minutes in the title of suggested literature (FCC, 2013, p. 876) and in documents attached as supporting evidence (FCC, pp. 342, 386, 408). Reference was made to educational change within a subject objective (FCC, p. 569) and again in a document attached as supporting evidence (FCC, p. 389). Theory-to-practice was mentioned in a subject objective (FCC, p. 116) and noted in an assessment item (FCC, p. 300) and subject abstract (FCC, p. 609).

*Design* appeared in the CAP in connection to a number of aspects including specialisations (Appendix 5A, pp. 537-538), shell-courses and degree design (Appendix 5A, p. 536), and the role of school board (Appendix 5A, p.542). The Draft ICP document mentioned design twice in regards to particular degree principles (Appendix 5B, pp. 557, 558) and the CRC made no mention of design.

Design was heavily targeted in the FCC minutes in the subject profile standard subject data section as required by CASIMS (cell 6) due to the lead question regarding principles of curriculum and learning that informed development of the subject. *Learning design* was commonly referred to in this section, with 16 individual occurrences (FCC, 2013, pp. 65, 243, 302, 855). There were lower frequencies of design appearing in subject abstracts (FCC, 2013, pp. 120, 218, 620, 621, 623, 768, 828, 829, 830), two instances in subject objectives (FCC, 2013, pp.116, 244); no reference to design in the syllabus but four mentions in relation to teaching strategies (FCC, 2013, pp. 247, 271, 306, 313).
Evidence-base was not a consideration in the CAP (2013), the Draft ICP document (2011) or the CRC (2012). Evidence-base in the FCC minutes was primarily linked with assessment and the manner in which student understanding could be assessed. The term appeared in 12 subject abstracts (FCC, 2013, pp. 219, 265, 318, 326, 612, 619, 628, 636, 637, 640, 656, 670); five subject objectives (FCC, pp. 78, 110, 309, 569, 856) and in as part of the syllabus for one subject (FCC, p. 569). It was quite often mentioned as a practice (FCC, pp. 335, 345, 348, 356, 366, 389, 780) but not clearly aligned with the subject objectives or syllabus in any way. There was no evidence to demonstrate that evidence-based practice was being used to design any of the courses.

Framework featured in five instances in the CAP. In four out of five instances, framework appeared purely because the national accrediting standards in higher education, the AQF had the term in its title (Appendix 5A, pp. 517, 520, 521, 529). It appeared in another instance in relation to student induction (Appendix 5A, p. 520). The Draft ICP document had one instance of the term framework in connection to another document title (Appendix 5B, p. 559) and the CRC made no mention of framework.

In the FCC minutes, framework commonly appeared in relation to processes whether pedagogical (FCC, 2013, pp. 13, 32, 384, 924), organisational (FCC, pp. 469, 831), or conceptual (FCC, pp. 30, 874, 876, 878, 897). Another feature was in connection to the AQF as an accrediting requirement to be met (FCC, pp. 34, 146, 185, 188, 319, 324, 339, 714, 715). The term framework appeared in the body of literature eight times with titles such as “Defining cultural competence: A practical framework for addressing racial/ethnic disparities in health and health care” and “The school as an information ecology: A framework for studying changes in information use” (FCC, pp. 87, 557).
There were 37 instances of framework being used in an abstract (e.g.: FCC, pp. 589, 641, 767, 883) but as in the previous analysis, many of these were recurring instances due to automatic systems importation of information rather than unique instances. Although there was a high number of instances of the term framework used in subject abstracts, this was rarely followed through into the subject objectives (FCC, pp. 110, 704) or syllabus (FCC, pp. 110, 569, 704, 752). It was noted that alignment between subject objectives and syllabus occurred in two instances. Supporting and additional documentation submitted to the committee also added to the high frequency of the term with 12 instances, all of which related to the one suite of courses – Teacher Librarianship (FCC, pp. 336, 403, 426, 445, 446, 449, 451-453, 459, 469, 477).

The term theory was absent from all three documents, the CAP, the Draft ICP document and the CRC. An overwhelming number of subject abstracts in the FCC minutes mentioned theory and it was also commonly identified as a strategy in cell 6 of the standard subject profile document (see p. 175) that required identification of “the principles of curriculum and learning that have informed the development of this subject as a teaching strategy” (FCC, 2013, p. 37). For example, that section encompassed numerous mentions of requiring reflection on theory (FCC, pp. 65, 71, 77, 83, 96, 867, 924), constructivist theory (FCC, p. 62) and simply general mentions of theory (FCC, pp. 102, 243, 294, 302, 861).

Many subject abstracts (cell 8) mentioned the use of theory to inform subjects (FCC, pp. 115, 125, 219, 265, 326, 590, 609, 611, 621, 656, 679, 826, 829, 830, 861). The frequency is rather deceptive as the abstract information that appeared in this cell was also imported into course information data. Five subjects incorporated theory into
subject objectives (FCC, pp. 116, 265, 561, 568, 729), four subjects identified theory as part of the syllabus through aspects such as learning theory (FCC, p. 116), assessment theory (FCC, p. 121) and design theory (FCC, p. 561, 789). Two subjects followed through with theory explicitly linked to assessment requirements (FCC, pp. 271, 543).

The four instances where theory was aligned with a research base for course design and best practice in the field related to an inclusive education course submitted for approval (FCC, pp. 876-877).

Eleven instances of the term theory appeared in the FCC minutes due to suggested literature or a subject title containing the word. For example in the additional information provided as the body of literature in subjects, texts were identified such as “Cultural studies: Theory and practice” and “Digital visual literacy – theory into practice” (FCC, pp. 94, 549). Subject title instances included “Graphic Design Theory and Practice” and “Theory & Musicianship” (FCC, pp. 798, 806). The combination of the two words – theoretical and framework – appeared six times. There was one reference to the role or use of a theoretical framework for the design of a course in the documentation:

The development of a theoretical framework and instructional design metaphor for the course (FCC, 2013, p. 874)

In three other instances, the term appeared in the subject abstract but not in the objectives or content.

A comparison of the tally for each document highlights the lack of synergies between the policy and supporting documents, even though they were meant to support and inform one another. Theory, evidence-base, capacity building, educational change and theory-to-practice were absent from all three documents, the CAP, the Draft ICP
document and the CRC. Conversely concepts such as theory, design and framework were highly evident in the FCC minutes but in most instances either did not appear or had very low frequency counts (0, 4, 6) in the documents developed to support the design and review process.

5.7.1.2 Summary of document analysis relating to course reform and design

The most obvious finding was that the highest occurrence of all words was in the FCC minutes. Alignment between the various documents appeared strongly skewed towards the final accreditation point of the FCC. Language and terms not used within the CAP, Draft ICP document and the CRC, such as theory, design and framework, occurred with higher frequency at FCC level, although for the most part they were embedded in the text describing specific subjects and did not refer to guidance or feedback about the actual process of course design and review. To this extent the references in the minutes were consistent with the lack of information in the policy and supporting document. Much of this was due to the information requirements of particular cells within the CASIMS documentation.

In the key concept word search relating to course reform and design, there were nine references in the CAP; three references in the Draft ICP document; and none in the CRC. There were significantly more references in the FCC minutes with 444 in total; however, thematic analysis revealed that the context within which these occurred had little to do with course design. Tending to skew these data were required information cells in the CASIMS documentation and the repetition of concepts as CASIMS pulled information from one cell into another, increasing the tally of occurrences.
The use of a theoretical base for course design has been demonstrated as an area of need through the literature and was central to this study. In examination of the various documents currently used by RU in the course design and review process, theory appeared explicitly in only one instance in relation to course design. In the three documents informing the process of course review, there was no mention of theory. In the FCC minutes it was mentioned in 15 subject abstracts (with 6 instances of double-up due to subject abstract information appearing in the subject profile and then being exported into the course details as well). There was minimal alignment of tracking of concepts such as *theory* through a subject – from abstract, to objectives, to syllabus – as people were not required to design subjects and/or courses with these considerations in mind. It was apparent that there is no expectation of theory for the design of courses.

The terms *design* and *framework* were highly represented in the FCC minutes, with high frequencies of 191 and 158 respectively, and low frequencies of 6 instances in total for the three support documents. In the case of design, the high occurrences in the minutes could be correlated with required cell data and a high number of subject titles containing the word (18). As indicated earlier, the frequency of representation was boosted by the fact that the same information was imported into various sections of the documentation presented. Most of the occurrences in the three supporting documents had to do with alignment to other documents that happened to have the word *framework* in it or referred to the structural design of particular courses such as “shell course structure” (Appendix 5A, p. 536). Specific reference was made for the need to design specialisations with the needs of the particular cohort in mind, e.g. “each specialisation will be designed by the Faculty for an identified cohort of students with specific needs” (Appendix 5A, pp. 537, 538), although considered design of all other types of courses
was not mentioned. The other terms examined, such as capacity building, educational change, theory-to-practice were not evident in the supporting documents and had low representation in the minutes with four, two and two instances respectively. Interestingly, capacity building appeared only due to a reference title and supporting evidence submitted by a Course Director that contained the term.

In summary, the analysis of the policy, supporting documents and minutes indicated that there were no requirements that would cause Course Directors to take up course design and the use of a theoretical base or incorporate a design framework. Equally evident through the FCC minutes was that the creation of cells with directives to incorporate elements within a subject boosted consideration of particular aspects.

5.7.2 Theory-to-practice gap

The word search for this area of need used program coherence, practice, preparation, alignment, professional learning, theory-to-practice gap, instructional practices and differentiation.
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5.7.2.1 Thematic analysis of the theory-to-practice gap

Alignment was not at all touched on in the policy and supporting documents, although it featured in 42 instances in the FCC minutes. A significant proportion of these occurrences had to do with the term “constructive alignment” being used in subjects. Two subjects had incorporated constructive alignment in the standard subject data cell (FCC, 2013, pp. 264, 308) with the same subjects also including constructive alignment in the teaching strategies (FCC, pp. 271, 313). Additional subjects within a course had a standard response in the standard subject cell regarding constructive alignment (FCC, pp. 529, 537, 545, 552, 560, 568, 574), as did two connected subjects in another course (FCC, pp. 849, 855).

For the Master of Education (Knowledge networks and digital innovation) that was submitted for approval by the FCC, the Course Director explicitly discussed the need for constructive alignment in the development of the course. Most of the detail regarding this work was included as additional documentation and appended to the main course document. A document section was created titled “Course review and curriculum alignment in action” (FCC, p. 332). From this, constructive alignment was identified as an area of need (FCC, p. 336), with alignment of the subjects throughout the course paramount (FCC, pp. 337-340) and ensuring that this curriculum alignment met various accreditation and professional standards (FCC, p. 355).

There were numerous single instances of the term alignment throughout the minutes, in the body of literature (FCC, p. 571), as a teaching strategy (FCC, p. 306), in reference to body alignment in physical development subjects (FCC, pp. 251, 844), in relation to advisory action (FCC, p. 215), and course structure alignment with Key Learning Areas (FCC, p. 606). A review panel noted alignment issues in some subjects. This was
rectified by the course team and noted as an area of focus for the same course later in the document submitted (FCC, pp. 814, 819).

There was minimal use of the term differentiation, with only four instances in the FCC minutes and no reference made in the policy or supporting documents. It was used in relation to syllabus (FCC, p. 125) and in two courses as part of their background, aims and objectives narrative (FCC, pp. 317, 875, 877). There was no mention of instructional practices across any of the documents or minutes, but many of the terms used in the FCC minutes would be considered instructional practices even though they were not identified by the particular term. Similarly, program coherence and theory-to-practice gap did not appear in the policy, supporting documents or minutes.

The term that appeared across all four data sources was practice. In the CAP, practice was referred to in relation to professional doctorates and the need for critical reflection on professional practice (Appendix 5A, pp. 532, 535); an explanation of what constitutes Teaching Practice subjects and the related parameters (Appendix 5A, p. 538); and the practice and purpose of the review process (Appendix 5A, p. 547). In the (Draft) ICP document the term appeared in the title of a RU degree principle in relation to education in practice and education for practice (Appendix 5B, pp. 557, 559); as well there were numerous references to the good practice guidelines created to support the process (Appendix 5B, pp. 557, 559, 560). In the CRC two instances occurred in one graduate attribute cell, relating to values and ethical practice (Appendix 5C, p. 564).

Practice was strongly represented in the FCC minutes with 810 instances. The term was contained in 63 subject titles throughout the documentation (FCC, 2013, pp. 5, 7, 9, 10,
but, as indicated earlier, the high number of occurrences was due to the same data being exported into various sections of the documentation. Reference was also made to a particular subject six times on one page as particular deliberations regarding the subject were recorded (FCC, p. 14). The standard subject data cell made reference to practice in relation to practice in a teaching environment (FCC, pp. 37, 43); in relation to both best practice and the practice of skills, with the same narrative used for a number of subjects (FCC, pp. 65, 71, 77, 83, 90, 96, 102); and relating to practice in a variety of ways (FCC, pp. 156, 162, 243, 294, 302, 914, 924).

Reference to professional practice featured in a number of sections across the courses presented in the FCC minutes. It was contained in the course background, objectives and aims narrative (FCC, pp. 214, 219); subject objectives (FCC, pp. 72, 91) and a number of abstracts where professional practice, teaching practice, and theory and practice featured heavily in the over 80 occurrences (FCC, pp. 66, 72, 78, 609-617, 623-632, 637-640, 655-675, 766-769). Eight subject rationales contained reference to practice (FCC, pp. 70, 176, 528, 536, 551, 559, 567, 573); a number of subject objectives incorporated notions of practice (FCC, pp. 57, 109, 116, 120, 125, 157, 163, 170, 179, 258, 553, 561, 687, 693, 729, 743); it appeared in the syllabus cell (FCC, pp. 91, 109, 120, 125, 164, 546, 687, 693, 729, 736, 744); was incorporated as an assessment strategy (FCC, pp. 62, 183, 292, 300, 690) and highlighted as a teaching strategy (FCC, pp. 61, 243, 284, 543, 550, 558, 572).

Practice featured heavily in the literature lists submitted in both texts and journal articles (FCC, pp. 94, 100, 174, 254, 261, 270, 271, 277, 371, 394, 533, 549, 557, 565,

The only reference to the term *preparation* in the CAP was in regards to the preparation of learning materials (Appendix 5A, p. 545). It did not appear in either the Draft ICP document or CRC, but there were 45 instances in the FCC minutes. These occurrences were in relation to the preparation of course review (FCC, 2013, pp. 320, 332, 335), contained in subject abstracts (FCC, pp. 219, 265, 620, 670, 769); assessment details (FCC, p. 241); syllabus (FCC, p. 266, 274); literature (FCC, pp. 277, 876); a proposed research project submission (FCC, pp. 213, 214, 223, 224); preparation for accreditation (FCC, pp. 338, 343); teacher preparation programs and proposed changes to admission requirements (FCC, pp. 22, 317, 583, 585, 603, 604); and workplace learning (FCC, p. 157).

*Professional learning* did not appear in the policy or supporting documents. It was evident in the FCC minutes with 24 instances. These were predominantly associated with attached documentation (FCC, 2013, pp. 334, 342, 364, 370, 379, 380, 389, 466, 476, 477, 483, 509, 892). In all but the final instance, the occurrences were related to a
particular course and reference was made to an accrediting body that had professional learning in the heading and content of one of its key documents. References to professional learning were also made in a subject rationale (FCC, p. 528); abstracts (FCC, pp. 109, 611, 617); syllabus (FCC, p. 111); objectives (FCC, pp. 57, 110); teaching strategy (FCC, p. 160) and body of literature (FCC, pp. 542, 922). An advisory panel recommendation also touched on professional learning (FCC, p. 875).

5.7.2.2 Summary of document thematic analysis relating to the theory-to-practice gap
Alignment appeared in 42 instances in the FCC minutes predominantly linked to constructive alignment, related research and to issues identified by advisory panels questioning the alignment of content in some of the courses presented. It was also apparent that a number of staff writing particular subject profiles were putting theory into practice by demonstrating constructive alignment through the limited parameters of the subject profiles by following the concept through from the abstract into the subject objectives and teaching the principles of constructive alignment part of the subject syllabus (FCC, 2013, pp. 115-117). Other subject profiles demonstrated this alignment in two out of three of these sections (FCC, p. 109, 120, 538, 569, 788).

It was apparent, however, that space within which to present information regarding constructive alignment and other theory-based concepts was inadequate in the formal documentation space. That led to the need for attaching detailed additional documents as appendices. In one instance, information contained in appendices explicitly highlighted the value of the demonstration of this alignment by external professionals:

The course review and curriculum alignment process was confirmed as providing the most responsive framework for the course review, development and implementation process (FCC, 2013, p. 339).
This significant type of information could easily be lost in the process as it was not obviously positioned in the main documentation.

*Practice* appeared in the CAP, Draft ICP document or CRC, most often with no real sense of context. The term was brought up in the policy and supporting documents due to its use in graduate attributes and program requirements. There was no link to what this meant in a practical sense. The use was quite different in the FCC minutes, possibly due to the nature of the field of education and the focus on practice through practicums. The term was used in a variety of ways but predominantly linked to application.

Again, due to the practical nature of the field, preparation and professional learning were terms frequently represented in the FCC minutes. Conversely they did not appear at all in the other three documents analysed, possibly as these documents were institution-wide and needed to be more generic to inform courses in other faculties that might have different requirements. Half of the references (two of four) to differentiation in the FCC minutes were in the inclusive education course that had been submitted for review and approval (FCC, 2013, pp. 875, 877).

Within the CRC, the only space where there was any type of interrogation of the learning experiences, the content and relevance to the profession was in the advisory process section. This space allowed comment from the staff involved in the review process, advisers and representatives from professional bodies. In one of the eight areas of focus, those involved were asked to consider the “relevance to the profession/industry, the community, reputations and trends” (Appendix 5C, p. 562) of
the course being reviewed. It would be possible for theory and practice to be examined in that space.

5.7.3 Collaborative practice

The word search for this area of need used collaboration, cooperation, practice and teamwork.
<table>
<thead>
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<th>Word search</th>
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<th>Themes</th>
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</tr>
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<tr>
<td></td>
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</tr>
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5.7.3.1 Thematic analysis of collaborative practice

Collaboration was not mentioned at all in either the policy or supporting documents. There were 92 instances in the FCC minutes. It featured in 11 subject titles, some of which were repeats due to the same data being imported into several sections (FCC, 2013, pp. 601, 605, 637, 797, 798, 878, 879, 881, 882, 894, 896). Only one mention was made in a subject rationale and this was linked to collaboration with peers (FCC, p. 528). Twelve subjects used the term in the subject abstract (FCC, pp. 220, 325-327, 529, 568, 590, 613, 636, 637, 656, 883), although follow through into objectives (FCC, pp. 57, 546, 561), the syllabus (FCC, pp. 704, 752, 910) and as a teaching strategy (FCC, pp. 61, 565) decreased.

Collaboration was highlighted in three course background, aims and objectives (FCC, pp. 317, 320, 878). As seen in previous word searches, the additional documentation contained a high number of keywords. Collaboration was no different with 38 instances (FCC, pp. 342, 345, 346, 348, 405, 407, 408, 420, 427, 445, 451, 457, 460, 463-465, 487, 488, 490, 492, 494, 501, 504-508, 518, 899, 904, 930). Eight of these referred explicitly to online and virtual collaboration (FCC, pp. 376, 380, 381, 382, 384-386). Literature that contained the term collaboration revealed three instances (FCC, pp. 533, 534, 565) while advisory panel feedback highlighted the strength of collaboration within a course (FCC, pp. 889, 894).

Cooperation did not appear in either the policy or supporting documents. Two instances in the FCC minutes linked to course details indicated the need to cooperate with particular a particular centre (FCC, 2013, p. 147) and in additional documentation provided by a Course Director detailing key elements of teaching and learning (FCC, p. 445). As in the analysis of keywords for the theory-to-practice gap, practice was key to
collaboration as well. As would be expected, the same frequencies appeared in the analysis for this area of need as in the prior analysis, with the term evident in all four data sources.

*Teamwork* (team work) appeared in the Draft ICP document in relation to the RU degree (Appendix 5B, p. 557) as an aim for graduates capabilities. The FCC minutes contained 22 references to teamwork. Ten were in subject titles (FCC, 2013, pp. 601, 605, 637, 797, 798, 878, 879, 881, 882, 896); three in subject abstracts (FCC, p. 637, 657, 831); and seven in additional information attached to courses (FCC, pp. 367, 378, 403, 445, 502, 505, 894).

5.7.3.2 Summary of thematic analysis in collaborative practice

As mentioned earlier, the more practical use of the term collaboration in the FCC minutes may be attributed to the nature of the courses appearing before this particular committee. Teamwork appeared most often in supporting documentation in the form of research with eight instances related to a subject title and related content. The reference to teamwork in the Draft ICP document was in relation to the RU degree and ways of working.

In the Draft ICP document, collaborative practice was not at all evident or required. The first section of information to be entered clearly indicated that it was a solo effort, with reference to the “Good Practice Guidelines” having been developed to assist Course Directors in embedding these principles in their courses. No reference was made to anyone else being involved, or to the course design and review process being a team effort. This could be countered by the understanding that it was a draft/interim document.
In summary, a number of the keyword terms appeared throughout data sources in sections such as subject profiles, supporting documentation and general course overviews. This meant that these terms were appearing as potential content within subjects and courses rather than supporting feedback or providing guidance about the course design and review process.

5.7.4 Institutional practice
As a number of terms associated with institutional practice crossed into the other three identified areas of need, those focused on here were unique to this area. The word search for this area of need used *curriculum reform, major change, organisational development, quality, strategic planning* and *systems*. 
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<td>systems</td>
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students, of education, references, teaching practices

subject titles, information systems, course content and title, management systems, process, development, systems analysis, record keeping, information retrieval system, organisational, structural, classification
5.7.4.1 Thematic analysis in institutional practice

*Curriculum reform, organisational development* and *strategic planning* were not identified in the policy, supporting documents or minutes. The one mention of *major change* occurred in the FCC minutes (2013, p. 495), but it appeared in a supporting document rather than the formal institutional documentation.


The term that appeared in all four data sources was *quality*. In the CAP, the one instance of quality was in association with the quality and performance of a course (Appendix 5A, p. 547). The Draft ICP document incorporated one reference to quality, which was in relation to blended and flexible learning (Appendix 5B, p. 560). The CRC had nine instances of quality, predominantly related to teaching quality (which appeared in five instances on the one page), course quality, consideration of industry demand, and the
need for high quality accounts of the advisory process and resources required (Appendix 5C, p. 563).

The FCC minutes had the most instances of reference to quality with 137. The position title of a committee member accounted for 18 of these instances (FCC, 2013, pp. 17, 22, 33, 146, 319, 339, 584, 598, 599, 651, 663, 711, 760, 774, 792, 809, 812, 873). The standard subject data cell accounted for seven uses of the same piece of text in this cell that made links to quality teaching (FCC, pp. 65, 71, 77, 83, 90, 96, 102) and two that made links to quality research (FCC, pp. 243, 257). Two subject rationales made reference to quality (FCC, pp. 559, 567); abstracts accounted for 14 instances (FCC, pp. 44, 124, 590, 612, 613, 617, 627, 629, 630, 632, 634, 635, 655, 657); objectives for two (FCC, pp. 110, 125); and the syllabi of three subjects made connections to quality (FCC, pp. 125, 126, 919). Teaching strategies mentioned made frequent references to quality online delivery and quality research (FCC, pp. 233, 240, 247, 254, 291, 300, 306, 261).

Course background, aims and objectives had 10 references to quality (FCC, pp. 147, 152, 213, 317, 320, 674, 770, 815, 874, 876); nine pieces of literature had quality in the title (FCC, pp. 181, 319, 358, 392, 556, 564, 565, 876, 922); and in the additional information provided by Course Directors, that in most instances had to do with quality teaching, there were 22 instances (FCC, pp. 224, 226, 333-335, 342, 345, 346, 354, 361, 365, 375, 377, 380-382, 388, 418, 424, 468, 519, 892).
5.7.4.2 Summary of document analysis in institutional practice

A major focus in both the CRC and FCC minutes was teaching quality. The focus on this in the minutes was driven to some degree by teaching quality appearing as required data in CASIMS which was then replicated in a number of spaces within the document. The word count for \textit{systems} was interesting: it appeared only in the FCC minutes but with a very high count of 191 instances. On closer analysis this could be attributed to the focus of the particular courses that had been included for approval at this meeting. A number of them were from the School of Information Studies seeking approval for courses focused on library and information studies. This included a high number of subjects with titles, abstracts, content and references on systems analysis, record keeping, information systems and organisational systems. The replication of data throughout each document automated by CASIMS meant that the term systems appeared continually throughout these particular documents.

The CRC is very much driven by institutional practice, simply by the fact that this document was created to help facilitate a course review process that had historically been administratively focused. Much of the document focused on demonstrating course quality, demand for the course and resources required, based on data available from various sections of the institution including Communications, and Planning & Audit. The document then required the review process to examine implications of changes in terms of impact on current students, proposed dates for changes, and a comparison of the old course structure with the proposed changes/new structure. From an administrative perspective, the checklist was extremely thorough and supported the work required for CASIMS. In terms of an actual review process, however, it was written with a purely administrative lens – primarily because the office in which it was created, Academic Governance, was positioned in this manner in the institution. At first
glance it would appear that the CRC did not address three of the four issues identified in the literature – theory base of course reform and design, theory-to-practice gap and collaborative practice. The issue of institutional practice was most obviously targeted.

The Draft ICP document notes indicated that it would be used from 2011 to report alignment to the RU Degree. This suggested that the key purpose of this document was to represent the alignment of degree principles within a course. Interestingly, this was the only directive provided. Course Directors were then required to prioritise the degree principles within their course and provide a rationale for this. There was no scope for adding principles beyond those established, regardless of the focus of the course. There also appeared to be uneven weighting given to particular principles without any explicit rationalisation. An excerpt is provided in Figure 5.2 to demonstrate the uneven emphasis on the principles.
Figure 5.2 Excerpt from (Draft) Interim Course Approval Process document

2.1 Indigenous Education Strategy

Does this Course contain Indigenous content?

If there is Indigenous content, please answer the following questions:

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| 1. | Provide a **detailed** summary of Indigenous content.  
| Summary: |   |
| 2. | Does the Indigenous content fulfill the requirements of the Indigenous Curriculum Guidelines and in particular the Cultural Competence Pedagogical Framework?  
| (Weblink) | Answer: |
| 3. | Is the Indigenous content linked to assessment requirements?  
| (Weblink) | Answer: |
| 4. | Has the Indigenous content been approved by the Indigenous Board of Studies  
| (Weblink) | Answer: |

If there is no Indigenous content, please answer the following questions:

Outline the plans that are in place to fulfill the requirements of the Indigenous Curriculum Guidelines by 2015?

This resource may be useful in your considerations:-  
(Weblink)

Outline your plans:

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| **2.2 Ethics and Global Citizenship**  
What would you say to a student about Ethics and Global Citizenship in this course now? | **This is what we plan to do to make further progress embedding Ethics and Global Citizenship in this course during the next few years.** |
| **2.3 Internationalisation**  
What would you say to a student about Internationalisation in this course now? | **This is what we plan to do to make further progress embedding Internationalisation in this course during the next few years.** |

In-depth information was required about the Indigenous content in a course, including an attempt to align content with assessment, where if all of these principles were equally
valued this type of critique would be useful for all design principles. All other principles simply required a statement about what was currently being done in the course and future plans to incorporate that principle in the course.

The Draft ICP document has a strong emphasis on the university RU Degree and graduate commitments throughout the document – in fact, they are central to it. From that perspective it is very clear that there is a commitment from the university to embed these perspectives. However, there is little opportunity to present any detail beyond these parameters. There is nothing on teaching and learning design, design of the course, teaching and learning strategies, alignment of content, authentic assessment, building on prior learning, and so on.

5.8 Existing Course Review Process and Design Team Members’ Experiences

Several course review processes have been utilised in the institution in the past 10 years, with a noticeable increase in the level of consultation with staff teaching in the particular course and the establishment of course teams leading the process. The review time allowances have been variable, with reviews allocated between 6 months to a year irrespective of course durations ranging from 1 to 4 years.

5.8.1 Earlier course design and review experiences

During their time at the institution, design team members have been involved in course reviews outside the Inclusive Education field, including reviews of the Early Childhood & Primary course, Early Childhood course, Primary course, various secondary courses, and our own Inclusive Education courses. There has been an interesting mix of experiences with course review processes amongst the design team members involved in this study beginning with my own:

Beyond our team process [that makes up this study] out of the 12 course reviews I have been involved in, two other course reviews I thought had potential as
exemplars of a design process. The leaders of both of these reviews worked at the collaborative aspect that really enhanced the process. They were very collaborative at the beginning with enough time designated for meetings between staff across the various campuses, lots of robust discussions and so on. However, the latter half of the process was markedly different from the first half, in both cases. My sense was that institutional course documentation deadlines were looming, subjects needed to be written or re-written, and it seemed that the stress of these deadlines for the leaders then rubbed off onto the participants. Due to my status in these processes as a general participant I am not sure what was going on “behind the scenes” – whether momentum was lost, it all became too hard and as the leaders were ultimately accountable it was necessary to just get something done…I just don’t know. (Lucie, 2013, p. 1)

Ali has also been at the institution for over 10 years and has been involved in a number of course review processes. Along with two other team members, her experiences have generally been poor:

In terms of those processes in the other course reviews I found that they were not well structured, they didn’t have a clear process articulated within those reviews. (Ali, 2013, p. 1)

This seems to be fairly representative of at least one of the experiences of all team members, with a number of reviews beginning really positively and then appearing to lose momentum.

5.8.1.1 Process and experiences of course reform and design

When asked specifically about this area of need, three team members mentioned the lack of theory informing the design and review processes in which they had been explicitly involved, and it was also something that I had noted in my researcher’s log:

In the past few years there has been an effort in some of the course reviews I have been involved in to disseminate seminal works to inform preliminary thinking but discussion around these has generally been around content aspects rather than process. (Lucie, researcher log, Year 1)

I think at some stages they, in relation specifically to the xx course review I remember them bringing out discussion of some particular theories…but no specific theory underpinning the courses. (Ali, 2013, p.1)

No documentation presented at institutional level contains space within which to report on the theoretical basis for the work done within a course. This was one of the biggest
problems encountered when entering the data for our own course (Master of Inclusive Education) into CASIMS. Through the recounting of previous experiences in Part A of the final interviews completed with design team members, Nick recalled the process he went through in order to include this information, which meant putting it into the appendices:

I remember writing that document where it went into the appendix of CASIMS and putting at the top “Really important stuff what you should pay attention to”. That was my way of commenting that the software actually was focusing on the wrong things. It wasn’t focusing on things that were going to make a difference it was focusing on whether we were going to be compliant with some regulations. (Nick, 2013, pp. 6-7)

Jo had started thinking about this issue early in our course design process. She had previously been in the course coordinator role and had experienced frustration when completing the documentation for a previous course review:

This whole process focuses purely on admin stuff. Where are we meant to put all the additional information that we do during our course review? We can’t talk about our course design, our theoretical influences, our design process. Nobody could care less about what we do – I suppose that is a positive for a lot of people. (Jo, researcher log, Year 1)

There was also a perception that members on the FCC did not operate with or value a theory-based framework and this influenced the feedback about a course:

I don’t know if you would call courses committee a barrier but you have some [people] there who don’t read what they’re supposed to read and don’t understand course design processes trying to make comments on course design processes and sometimes suggesting things that are just wrong. (Dan, 2013, p. 5)

All the interview data with design team members supported the view that there was no theoretical base informing previous experiences:

In terms of there being any theoretical base, everyone had their own ideas, there was no cohesion, it was really hard to rally people to be cohesive and on the same plate, so no there was no theoretical base that was consistent ever used. (Jo, 2013, p. 1)
There was no set format or structure to ensure continuity, staff went back to their offices and worked alone, no discussion about subject design or clear theory informing the course – or if there was, I was unaware of it. (Lucie, 2013, p. 1)

A course design methodology and things? Not particularly...after I had the Master of Inclusive Education experience, I was really conscious of what a method could do and what that method could particularly do. (Eve, 2013, p. 3)

No, I wasn’t really. People didn’t really spend a lot of time working on the concept of a course. You know, it was much more courses were aggregations of subjects. (Nick, 2013, p. 1)

No [emphatic]. There was no articulated theoretical base for any of these course reviews. (Ali, 2013, p. 1)

Dan seemed to suggest the possibility of theory being used in one of his previous experiences by contrasting that with one where he was adamant that theory was not a consideration:

Certainly not the first one...it didn’t seem to be based in any sort of coherent design methodology at all. (Dan, 2013, p. 1)

The biggest shift in more recent reviews has been the input of all participants into the creation of some type of key principles but most of the reviews still appeared to be subject focused. There was consequent variability in terms of how “open” the process was, with many review leaders presenting a course structure with subjects that seemed to work well, subjects available from existing courses that might be considered, content that needed to remain (generally based on regulatory requirements), and slots that were open for discussion. Institutional standards, graduate standards and other regulatory standards were then mapped to subject objectives and content. Eve summarised this best when asked about her previous course design experiences:

None of it was actually about the method of design, about course design, it was about meeting accreditation standards and then looking at individual subjects and by the time we looked at them all as a team, laying them all out in front of us we actually looked at the course as a whole but we didn’t begin with that process. (Eve, 2013, p. 2)
Some more recent course reviews have utilised the mapping process used in this study, due to the input of our educational designer into those processes. The value of this was observed by others, primarily driven by external requirements that were now working to our advantage:

External drivers being largely the NSWIT standards coming in in 2006, so by the beginning of 2007 I came up with a mapping method and shared that with John Blogs and Rita Sands and Olivia Rice who was playing a role, a big role in the process, and they went “Wow! You know we want to do this”.(Eve, 2013, p. 1)

Use of a theoretical base for course design and review was lacking in the experiences of all team members when discussing prior reviews. The documentation required in relation to the design and review process did not direct or support the use of theory. The inability to record and submit information about the course design process diminished much of the other work that was done in course development and review.

There was nothing to indicate that a theoretical base for the course review and design process has been considered as a whole. For example, in the Draft ICP document competing theoretical frameworks were indicated through the web links. Research-informed concepts could be seen in some of these linked documents.

In many cases, even though information regarding theoretical basis was not present, it did not mean that no discussions occurred around such a framework but rather that this work was silenced. Although there had definitely been a move towards utilising research to focus particular course discussions, research and theory had been absent as ways to drive the design and review process.
5.8.1.2 Process and experiences addressing the theory-to-practice gap

The theory-to-practice gap is the one area of need that would appear at first glance to be naturally addressed through the fact that the degrees in which we are involved are education-focused and most have a practicum requirement embedded within the degree. Again, however, team members gave a range of responses, ranging from agreement that theory and practice were considered to doubt that they were.

Dan and Eve had the most positive experience of this:

I think it was partially in the xx course, again, because we were encouraged to try and use the practicums to either, you know, set assessment tasks that were based around them or to say “look for these particular things when you’re on prac”. So I think we tried pretty hard to bridge that gap as much as possible or as much as was possible at the time. There’s still a long way to go but yeah in the xx one there was a recognition of the problem and some attempt to address it. (Dan, 2013, p. 4)

I think there was always a conversation about how the relationship between subjects that students were studying and the time that they had on professional experience and there were different flavours of approach...embedded in an academic subject, not in a total subject or on its own... So we actually had this cyclical view of the course as it went through that the students would have that introductory stuff in their first session and then go out on prac and get their first experience, then build on that, go out on their next prac, build on that go out on their next prac and then capstone bringing it all together. For me, it was the only course that really took that up, or tried to take that up apart from the MIE. (Eve, 2013, p. 7)

The theory-to-practice gap became most prominent for design team members when they were unaware of a broader course perspective and where their subject work fitted. This meant that staff were aware of what happened in their own subject but had little idea of the relationships beyond that and what was being taught elsewhere. There was also obvious frustration where the theory-to-practice link was still being attempted but knowledge of what was occurring elsewhere in the course was not clear:

I don’t think so. I don’t think it was because, well, I can’t speak for other subjects, the special ed mandatory subject, inclusive ed mandatory at some points we did have kids going, students going into settings so that was an attempt to bridge the theory/practice divide. We don’t even know if across the subjects research-based practices were used...or being taught. We had no
evidence of it. It was, the most general staff saw of the whole course overview were headings, no detail, so we don’t actually know what was going on and nor did people care, which is probably more serious. (Jo, 2013, pp. 2-3)

No not really, I think, I don’t think that, that was really probably seen as an issue [laughter]. (Nick, 2013, p. 2)

To further emphasise how the reviews could be done to incorporate theory and practice in a more authentic manner, Ali compared her other course review experiences directly to that of the MIE experience:

*No* [emphatic]. No [laughter]. I don’t, in terms of the other courses there was no shared understanding of things, and there were no shared ideas in relation to course development, course design and how courses should be delivered. So in relation to those courses people came in with their own isolated views and opinions about how things should be done and that’s how they were done. (Ali, 2013, p. 3)

Considering theory-to-practice alignment became much more difficult once it was decided that practicums would no longer have any academic content, as well as in courses where students could alter their pathway to completion and the alignment between the practicum and particular subjects was lost:

I wasn’t part of the leadership team and I didn’t see a big picture and I tried to make a big picture for myself...all I saw were the to-ings and fro-ings about whether you had standalone prac subjects or embedded prac subjects and how that should be done and also the development I think and valuing of professional experience over that time. (Eve, 2013, p. 7)

In the experiences of design team members there was variability in how the theory-to-practice gap was addressed. Four of the five team members who had been at the institution for over 10 years, mentioned that theory and assessment had traditionally been embedded in practicums but this was affected by the shift to not allowing academic contact in practicums. This shift also meant that there was little understanding of how theory and practice were being connected across courses. The two positive experiences recounted by team members were in relation to the same course, which was one where theory and assessment were being built back into the course.
5.8.1.3 Process and experience of collaborative practice

Collaborative practice was not explicitly suggested or necessarily supported. Within the CRC there was a section that allowed for comment from “RU staff involved in the review process” which seemed to suggest that more than one person was involved. However, the level of involvement and how this might be interpreted was obviously variable as nothing explicitly stated that the process of review needed to be undertaken collaboratively. The prior experiences of various design team members supported this interpretation:

I don’t think we had one full team meeting that I can recall in the first one that I was involved in. It was all just subject, subject, subject and one person trying to pull everything together from disparate people, disparate areas. (Dan, 2013, p. 1)

It was also difficult for design team members who wanted to work in a collaborative manner. In two cases team members had been actively discouraged from doing so:

Often there was certainly no collaborative process designated. There was certainly no benefit to the collaborative manner because it wasn’t encouraged and it didn’t happen. It was all about inefficient time management, it wasn’t well managed. It wasn’t, it was not collaboratively working together. It was working in isolation with someone guiding the process, so there was not collaboration. (Jo, 2013, p. 1)

One of my worst experiences was with a leader in our school explicitly berating me for wanting to work with others, as “it was an ineffective use of my time”. Conversely, this same individual then told me that I needed to demonstrate that I could work with others in my research outputs. When I indicated that as a team we had published a number of articles, I was told that that wasn’t collaboration because it was with people I liked and worked with all the time. I realised the discussion was going nowhere and just ended up listening to this person slander our process and work. (Lucie, 2013, p. 2)

Dan and Eve were the only two team members who had experienced a recent review process that they thought was fairly strong from beginning to end and truly collaborative. Interestingly, they each provided an account of the same review process:

About 12 months later I worked on the x course that was being reviewed...and it was a totally different experience. We had regular, whole team meetings, we looked at making sure that assessments, assessment styles and so on were mapped across the course rather than just within individual subjects. The regular
team meetings via video conference were really, really good and then when we
prepared subjects, we had to present the profiles and the outline of our subjects
and where they were headed to the whole team on regular Friday morning
meetings and then you know we also had to talk about how we were linking
subjects into previous and later-on subjects. (Dan, 2013, p. 1)

[We] formed a course leadership team, we called it a course management team
at the time, and we sat down and we actually plotted out how we wanted the
process to go, how we wanted to work with the teams because they’re on
multiple campuses and we set up a process where we had five video conferences
once a week and everybody, we talked big picture course but then we went
down and we looked at the structure that they were suggesting and how, how it
should be and we spoke to each part of that. So I started right at the very
beginning with maps of subjects and the course for assessment, technology and
pedagogy that were visible to the course team. It was still me that was filling
them in...people did subject level ones but I did the whole course ones and it was
really x and I that drove the course level aspects and making the connections
between things. But we got good feedback, we actually interviewed like sent out
a survey to everyone, it was sent out to students and we got good feedback from
staff around their experiences doing that together and being a course team
working on it. (Eve, 2013, p. 2)

Collaborative practice as experienced by design team members was extremely variable
and highly reliant on the individual leading the design and review process. The two
accounts of positive experiences by team members in relation to the use of collaborative
practice referred to the same course in which the theory-to-practice gap was also
addressed. There was a high level of involvement from all individuals in discussions
about the course and team generation of solutions when required. In contrast, a number
of experiences recounted by design team members demonstrated active and at times
explicit discouragement of collaborative practice.

5.8.1.4 Institutional course design and review process and experiences
As mentioned earlier, from an institutional perspective the course review and design
process has been very varied and open to interpretation, although there has been an
obvious shift in creating some type of process. Recent course reviews have had tight
schedules.
Figure 5.3 Example of Course Review Workshop Day

Introduction
- Outline roles and responsibilities, and teams
- Clerical assistance for data entry into CASIMS
- Funds for buyout
- NSW Institute of Teachers requirements

Consideration of Key Principles
Discuss Draft Structure
   - Working groups
     - Discuss content of sequence of subjects
     - (a) KLAs and Inclusive Education
     - (b) Professional Studies, Education Studies

Refining the Structure
   - Names of subjects

Future Planning
   - Subject teams, subject profiles for all subjects

Issues
   - Representation of education professionals on Planning Committee
   - Need for external advisory panel?
   - Timeline

As can be seen by the schedule in Figure 5.3, the discussion points for course design teams are many and varied but predominantly administratively focused and without any particular focus on course design.

Among all the design team members who were academics there was a consistent response prior and during our MIE course process about institutional practices relating to other course review and design experiences. All roads pointed to CASIMS – the university’s course documentation system – as the biggest barrier to process. The frustration could be seen in comments such as:

So CASIMS drove the train in terms of everything that had to be put into documentation, in terms of feedback, in terms of advisory processes that all came through what was required through CASIMS. It’s not something that, it wasn’t a particular process or theory that was driving that course review process, it was CASIMS that was driving the process. (Ali, 2013, p. 3)

CASIMS was certainly a very big one because it was so limiting and nothing talked to CASIMS so it had to be entered, it was really disjointed. (Jo, 2013, p. 3)
Every time there was a time pressure in any of these previous reviews more likely than not it was due to CASIMS data entry and related institutional deadlines. People only had to utter the word “CASIMS” and everyone would immediately start with the sympathetic noises. (Lucie, 2013, p. 3)

The other key institutional barrier was the lack of resourcing and more immediately the time allocated to completing course reviews. The time aspect had an interesting genesis, as historically course reviews were something individual staff saw as a professional obligation if their subject/s were involved. As Pam mentioned early in our process:

I didn’t think we even had a choice whether to be involved. Isn’t it our professional obligation? We should want to do it. Anyway, who else has any idea about inclusive ed? (Pam, researcher log, Year 1)

With the institutional move to allocating set workload hours for teaching, research, and administration, the time allocated to course teams for course reviews was very variable and appeared more aligned with the funding and budgetary situation in the school or faculty at the time, rather than being a process requirement. Perhaps the lack of an explicit process complicated matters, as it meant the terms of reference for a course review were open to personal interpretation beyond the completion of the CASIMS documentation:

Ohh, lack of time. Yeah, lack of resourcing was a barrier...I think the lack of resourcing was the real institutional barrier. (Dan, 2013, p. 5)

Another thing would be the difficulties in relation to workload and staffing within schools and then that creates real limitations around what you can do and what can be achieved and being directed by individuals whether you can or cannot be involved and if you are involved to what level you can be involved. I think that really has an impact on the process itself as well (Ali, 2013, p. 3)

When asked to extend on his earlier comment about needing to place important information in the appendices of the documentation, Nick noted:

The really important design things we had gone through were relegated to the appendix of the documents and I still remember the course going through FCC and people really kind of going “Well, what’s all this stuff?” when in fact “all this stuff” was the really important stuff but because the organisation had chosen
to prioritise a load of administrative things over actual design considerations that were going to be proximal to success. (Nick, 2013, p. 7)

Even when reading the documentation with a “CASIMS lens”, committee members at times overlooked important details because CASIMS automatically imported and replicated information in sections and it was generally assumed that because of this, the information presented to the committee was correct:

> I know I keep coming back to that [FCC] but I actually went to the courses committee meeting where this course was being approved and we had to tell the courses committee a whole lot of stuff that had to come out of the old course to allow for the new stuff to go in because nobody else had picked it up. And if we hadn’t have gone to the meeting, and if Jo hadn’t said “OK, page 35, get rid of this, get rid of this, get rid of this”, those things would have been left in there and would have really compromised everything about the new course structure that resulted from the review process that happened. (Dan, 2013, p. 9)

Overall the interviews highlighted some issues with the FCC and institutional practice where existing systems prioritised documentation over process.

I had a slightly different view to some of the other design team members as I had served on the FCC as a school representative for a number of years. From a committee members’ perspective the documentation that was required to be read was demanding. Particular meetings had documents that were over 800 pages to read and they happened to occur immediately prior to the yearly deadline for course approval in May. The minutes used for analysis in this study were from the May 2013 meeting and had 930 pages. This created a disjointed meeting schedule of a meeting basically every 6 weeks in the first half of the year and one meeting in the second half of the year (see Table 5.10).
Table 5.10 Faculty Courses Committee Minutes Date and Document Length

<table>
<thead>
<tr>
<th>Date of meeting</th>
<th>Document length</th>
<th>Date of meeting</th>
<th>Document length</th>
</tr>
</thead>
<tbody>
<tr>
<td>21st May, 2013</td>
<td>930 pages</td>
<td>31st May, 2011</td>
<td>601 pages</td>
</tr>
<tr>
<td>16th April, 2013</td>
<td>874 pages</td>
<td>3rd May, 2011</td>
<td>584 pages</td>
</tr>
<tr>
<td>5th March, 2013</td>
<td>462 pages</td>
<td>15th March, 2011</td>
<td>541 pages</td>
</tr>
<tr>
<td>25th September, 2012</td>
<td>86 pages</td>
<td>19th October, 2010</td>
<td>241 pages</td>
</tr>
<tr>
<td>22nd May, 2012</td>
<td>739 pages</td>
<td>1st June, 2010</td>
<td>818 pages</td>
</tr>
<tr>
<td>17th April, 2012</td>
<td>184 pages</td>
<td>4th May, 2010</td>
<td>423 pages</td>
</tr>
<tr>
<td>28th February, 2012</td>
<td>375 pages</td>
<td>16th March, 2010</td>
<td>242 pages</td>
</tr>
<tr>
<td>18th October, 2011</td>
<td>195 pages</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen purely from the documentation length in the information presented in Table 5.10, the meetings held each Sep/Oct had significantly less documentation involved than those held in May/June at the time of the institutional course design, review and approval deadline. It was also assumed that the course documentation had passed through at least one other lower level committee prior to being presented at FCC, but it became apparent over a period of time that this was not always the case.

The institutional process of design and review was very variable, with no design team member experiencing the same process twice. This meant that the actual process was open to interpretation as long as the documentation required for approval was completed. It was evident through the continual references to CASIMS by all design team members, that this documentation point directed course design and review.
5.8.2 Summary of existing review processes and design team members’ experiences

The structure and format of review processes were highly variable and particularly reliant on the interests and skill of the person charged with leading the review. There was no evidence of use of a theoretical framework in any course design or review process, although some effort was being made to engage with literature in the area. The theory-to-practice gap was discussed in all the review processes, possibly because it was a natural step as the degrees all had an education focus and in most instances a practicum requirement. There had also been attempts to actively include more staff in review processes but the continuity of this throughout the whole process had been varied. Institutional processes were heavily skewed towards the administrative side of course review and design, with no standard process in place. If the institutional documentation was completed, there was little imperative to do much else.

In summary, the previous experiences of design team members were not particularly positive. As Jo stated:

They were horrible processes that couldn’t be over quick enough. (Jo, 2013, p. 3)

It could be said that more recent review processes seemed to be moving towards a more collaborative approach. Interestingly, the two experiences mentioned most positively by design team members at different points were a recount of the same review. What made that experience so positive was the collaborative approach encouraged by the leadership team of the particular review. Two additional review processes in which the researcher had been involved in also showed promise because of the collaborative approach used at the beginning of the processes, although unfortunately it was not followed through.
5.9 Triangulation of Data
From triangulating the various data sources, the CAP, the Draft ICP document, the CRC, FCC minutes, researcher log and Part A interview data, a number of conclusions could be drawn. The four areas of need identified in the literature – the need for a theoretically informed process of course design and review, the need to minimise the theory-to-practice gap, the need to utilise collaborative practice, and the need to examine the impact of institutional practice – were not being addressed by the current process of course design and review used in the institution. From the keyword search of recent literature in the areas as a starting point, there was little consistency through the policy and supporting documents with what was prioritised in the FCC minutes as the final approval point. This could be seen through terms that had very high frequencies in the FCC documentation such as *practice* and *quality* but barely rated a mention or did not appear in the policy and supporting documents meant to support the course design and review process.

This observation is further supported by the data provided that reflected practical experiences of design team members who had collectively been involved in over 30 reviews. They noted that theory was absent, the theory-to-practice gap and collaborative practice had been explicitly addressed and used in one course review, and institutional practice directed reviewers to a documentation system rather than a critique of the quality and process used for course design and review.

5.10 Conclusion
Analysis of RU policy (CAP), supporting documents: the Draft ICP document and the CRC, FCC minutes as well as the experiences of design team members, demonstrated a chasm between the documents supporting the process of course design and review, the
requirements of CASIMS for information submitted to FCC for the approval of a course, and the work that occurred in the process of course design and review. As indicated earlier, the policy document, supporting document and minutes did not direct a Course Director to use a theoretical base or incorporate a design framework. Conversely, however, as demonstrated by the experiences of design team members in this study, even if there was an attempt to do so it was difficult to represent such work within the current institutional structures.
CHAPTER 6. RESULTS (Phase 2)

6.1 Phase 2 Introduction

The development phase was the second of three phases of this study. Phase 2 sought to address the findings of Phase 1 by undertaking a theoretically informed course design process to respond to areas of need such as the lack of theory, the theory-to-practice gap, the need to utilise collaborative practice, and the need to examine the impact of institutional practice. Phase 2 focused on the application of an existing theoretical framework to the design process. This phase responded directly to the claims that an evidence base was lacking in course design and reform undertaken in higher education contexts.

The research question for this phase was:

How did the theoretical principles of self-organisation inform the course design process and the work of the design team, and what was produced as a result?

This phase examined the development of the theoretical model and the design principles that anchored the process and the course created. As with Phase 1, this phase incorporated a validation effort by using the six principles of self-organisation as a scaffold for examining the design process. The various summaries developed throughout this process produced an account of the extent to which the design process responded to the areas of need identified through the literature in Phase 1.

6.1.1 Background and Context for the Design and Review

The RU review cycle is set at 3 years for all courses. Regardless of how the course is progressing this review must be undertaken; and the continuation of the course must be approved by the FCC and ultimately University Senate. The course that was the focus of this study was a 2-year graduate (Masters) course that traditionally attracted teachers who wished to move into the inclusive education field.
There were numerous catalysts for the creation of a new graduate Inclusive Education course. The first was that, in accordance with the schedule at RU, the existing course was due for another course review. The second was an approach made by an external educational stakeholder to the Inclusive Education team about the possibility of creating a course that met its particular needs. The third was the appointment within the Faculty of a senior academic in the inclusive education field who took a prominent mentoring role and guided the existing team in a more focused way towards a research trajectory.

6.1.2 Review of data collection tools
As described in Chapter 4, various data sources were utilised throughout the study. Minutes of meetings, participant comments, observational notes, Part B of the design team interviews, and the researcher log were used to analyse this phase of the study. Interview questions were designed to encourage design team members to provide a comprehensive and relevant explanation of the various points of the design process and their experiences. This was supported by the additional data sources detailed above. The purpose of employing these techniques was to provide a clear account of the process, including triangulation among sources. Triangulation helped to build a deeper understanding of the key events and the process, building an account of the course design.

6.2 Design Approach
Six theoretical principles of self-organisation informed the design of this course. The senior academic in the team, Nick, used one of the design principles of the theory (simple rules) to initiate the process, after which the team worked collaboratively to employ the design principles. The six principles – simple rules, embedded design, feedback, dispersed control, similarity at scale, and common schema (described in detail
in Chapter 3) – underpinned the design process. These theoretical principles framed the process and the specific design steps.

To prepare for the detailed work required using the process, design team members read about self-organisation (Kauffman, 1995; Waldrop, 1992). To provide a level of understanding about how self-organisation could be applied in an educational context we read Bain (2007), where it had been used as a theoretical basis for design within a school context. This design work was used as proof of concept within an educational context, with our intent for it to be scaled up for the higher education context.

Simple rules became a structural framework for our process of design. In essence, the design team used a process of backward mapping from big-picture course ideas right down to individual tasks to be completed by students within a unit. The design team established a baseline from which to work, that included the development of standards, examining strengths, needs and drivers, incorporating stakeholder needs and collaboratively establishing a subject design model to be used across the course. In line with the use of design-based research, feedback was used to inform the iterative cycles of our design. The feedback used was from design team members during the design process and the various points at which interactions occurred with our stakeholders. Embedded design was also prominently represented in this phase, as the design team worked on the course design and then considered how key concepts could be embedded through the design process as we moved to subject design.

6.3 Getting Started
The first design team meetings took place when four inclusive education team members and an educational designer, henceforth referred to as the design team, met to discuss
their interest in creating a new course and considered what that meant in practice. The design team members involved from the initial stage included Nick, Jo, Pam, Eve and Lucie (the researcher). This was the first of our design meetings (see Appendix 6A for full schedule). The “getting started” component of this phase encompassed agreement by the design team to adopt the theory of self-organisation as a framework and the use of collaboration.

We began by establishing that the five design team members were all interested in exploring the practicalities of creating a new course. As Nick indicated:

> We need to have a vision of the way we would like inclusive education to be developed within the School as well as an understanding of the implications for changes in current practice that this entails. (Nick, Researcher log, January, Year 1)

> We do some really interesting and innovative things in our field. This would be a way we could raise our profile. (Jo, Researcher log, January, Year 1)

Whereas Nick’s initial framing suggested that the design team needed to think about the implications for our practice and Jo picked up the aspect relating to positioning within our School, other team members focused on the opportunities provided through engagement with a design process and the theory of self-organisation:

> I think this gives us a fantastic opportunity to design a course that incorporates all the things we value and is really reflective of us...the use of theory will give it some further credibility...this always seems to go down well with others. (Pam, Researcher log, January, Year 1)

> In the various review processes I have been involved in I have never had the opportunity to work from a truly blank slate and with a focus in my specialist area, so this sounds really interesting. Reflecting on my chat with Jo earlier, I agree that the use of theory will be good but I hope nobody will want to quiz me about it until I understand it better. I think I get the general principles but [I’m] not sure how they will play out in practice. (Lucie, Researcher log, January, Year 1)

> I’m so excited that you asked me to be involved. It sounds great...and honestly it all sounds a bit daunting. (Eve, Researcher log, January, Year 1)
With all the design team interested in creating a new course we discussed the way in which the team would work and how decisions would be made.

6.3.1 Team collaborative process

Four of the five design team members were aware of collaborative problem solving processes to some degree, as most of the team had used them in their teaching practice. In preparation for proposing the use of the process, we had all undertaken some pre-reading in the area and determined that we could see the value in the process and were willing to try it out. The Phase 1 findings regarding the effectiveness of collaborative practice (Allday et al., 2013; Friend & Cook, 2013; Nagel, 2008; Nevin et al., 2009; Oliver & Hyun, 2011) further supported its use in this phase.

The design team adopted the six steps of the collaborative process (Idol, Nevin & Paolucci-Whitcomb, 2000) – goal setting and roles, problem identification and description, solution generation, action planning, evaluation, follow-up/re-design – which became a structural framework for our design team meetings. We used a “whipping” discussion process that ensured all team members had equal opportunity to contribute and no one person could dominate discussion. This meant that conversation travelled in a circle around the team, although at times we moved to more of a free flowing conversational structure when discussion was not focused on decision making. The approach was well established in inclusive education as a methodology for collaboration among interdisciplinary professionals (Friend & Cook, 2010).

The team also developed a protocol within our process whereby I offered to take a permanent role of recorder of our meetings as I was investigating the process for my doctoral research. The design team reached consensus on this decision:
Seems pretty sensible considering Lucie’s interest (Pam)
I hate taking notes, so I am more than happy to support this decision! (Jo)
Yep, fine by me (Nick)
I have no issue with Lucie being our permanent recorder (Eve)
Well I’m not going to disagree am I? (Lucie)

(Researcher log, January, Year 1)

These quotes provided evidence of the collaborative approach more broadly, where the team reached consensus not just on the content of decisions but also the way those decisions would be made (whipping). Our overarching reason for meeting was obviously the design of a new course in inclusive education and we established a process of having an agenda for each meeting that was informed by the action plan and issues that had arisen in the previous meeting. This was circulated by me to the team a week before each meeting (see example Appendix 6B).

6.4 Design Process
After determining and reaching consensus on a theoretical basis for our work and our process for working together, the design team moved on to the work of the design process. This incorporated use of collaboration in our design team meetings and application of the theoretical principles through our design process and course content. The following section presents the process and discusses the ways the principles were enacted.

6.4.1 Collaboration in practice
The team agreed to start using the collaborative process in our own practice and used it to tackle our next discussion. To help guide our initial brainstorming, Nick posed some questions for the team to have in the back of their mind as we worked through the process:

1. How do we build a design metaphor for a course focused on building skills and knowledge?
2. What is the best design approach?
3. How will content in subjects be scaffolded to ensure students are continually building their skills and knowledge?
4. Are particular delivery approaches necessary to implement this kind of scaffolded course?
5. What is the mentoring and management model required to implement the course?
6. What kind of budget does this kind of course require? What support costs are necessary?
7. What is the implementation plan for the course – when and how will it be designed?

(Meeting minutes, January, Year 1)

We brainstormed what we each saw as needs and expectations of students enrolled in an inclusive education course. When the minutes from this section of the data were collated, the information could be categorised into five fields:

- demonstration of professional skills,
- the ability to contextualise knowledge suitable to their particular setting and children’s needs,
- knowledge and skills to lead a project intervention,
- ability to implement a project, and
- the ability to write results and evaluate a project

(Meeting minutes, January, Year 1)

The observational notes taken by the researcher in relation to this conversation further detailed the intent of these points. Design team members were adamant that there were particular skills in our field that needed to be demonstrated through the course we were designing. This included:

- the ability to collaborate with colleagues, families and other professionals;
- to differentiate content for children;
- the ability to read and interpret data in reports provided;
- and the ability to design, implement and evaluate intervention programs.

(Observational notes, January, Year 1)

The final point was then further refined to the ability of students to break aspects of learning down into discrete parts and adapt them to cater for the individual needs of the children with whom they were working with.
Once the design team had determined the types of skills and knowledge we wanted the students to have, we talked about the best design approach to meet these needs. Nick had to deal with a barrage of questions such as:

   Didn’t we just talk about this when we went through what students need to be able to do? (Lucie, researcher log, January, Year 1)

   We just determined the content didn’t we? (Pam, researcher log, January, Year 1)

   Can you just ask us this bit again because now I’m lost! (Jo, researcher log, January, Year 1)

It became apparent that most of the team were conflating course content with a course design process. With further grappling, the discussion moved to the “how” rather than the “what” that had been focused on so far. The team discussed what we knew from the literature and what constituted best practice in our field. We had to shift our thinking from what was done currently and think in more of a “blue-sky” manner.

The team came up with five design principles that we believed should be evident across the course:

   - focus on professional practice
   - participant modelling
   - scaffolding design
   - product outcomes
   - guided practice and feedback

   (Meeting minutes, January, Year 1)

After considering what the design team wanted students to know and do in the previous focus question, and with the knowledge that we would design some type of capstone product for the course that encompassed a project, the most practical design approach seemed to be to backward map from the project. We conceptualised this by comparing a generalist education course and what would be unique about our course:
Compare the specialisation stream with the non-specialisation regarding student comfort and confidence in teaching children with special needs. What is, or will be, unique about our course? (Nick, researcher log, January, Year 1)

With this in mind, the design team refocused the discussion to consider what we wanted the project to include and which skills we expected students to be able to demonstrate by the end of a 2-year part-time course. This led naturally into our discussion of the third question, “Given the course design, what might the course content and assessment look like?” In light of our decision to have a capstone product, we considered how other products would be met through multiple assessments that led to the project. Aspects mentioned included:

- rich tasks,
- authentic assessment,
- scaffolding,
- case studies, and
- portfolios

(meeting minutes, January, Year 1)

By the end of our discussion the design team were both energised and overwhelmed, with Pam best touching on the mood of the team:

Well this is all a bit different to what we have had before – who would have thought theory informing practice? Makes the others look a little lightweight to me now and I can see what has been missing...but I think it’s going to be a lot of work. (Pam, researcher log, January, Year 1)

6.4.2 Simple rules
For the design team to function effectively, a product was created detailing the way the design team would like to see inclusive practice within our context and what elements each person believed were critical to the course to meet the needs of various stakeholders. Those were our simple rules. The final simple rules created were the culmination of the previous discussions described above and the synthesis of various
conversations design team members had with one another outside of our formal meeting times.

The informal discussions and thinking that took place provided some perspective on where the team members were personally and identified some contradictory points of view. One of these was my own that highlighted a conceptual and terminology issue:

   The term authentic assessment grates on me a bit. Not sure why really but perhaps because the flipside of this seems to suggest that an assessment being designed can be inauthentic and I sort of think why would anyone be designing assessments like that? ...I think I also dislike buzz words and everyone seems to be throwing the term authentic assessment around. (Lucie, personal log, January, Year 1)

Although the possibilities afforded by designing a course from scratch were exciting, there was also a sense in discussions with team members that it was quite daunting:

   The idea that we can create our own standards seems overwhelming and a huge task. I can’t even imagine where we would start...although then again I suppose we all know the sorts of things we would like and what we believe is good practice anyway. Whether that matches with research may be a different story. (Pam, personal conversation, January, Year 1)

   This is really exciting from my perspective [educational designer] but I’m not sure how helpful I can be...it isn’t my specialist area like it is for the rest of you...but it is interesting. (Eve, researcher log, January, Year 1)

As the only educational designer working with the team and as a non-inclusive education specialist, Eve was feeling a little concerned and potentially out of her depth. Her concerns were not unique. Members of the design team who were specialists in the area were also thinking that the scope of the course design was large:

   The idea for a capstone product is a good one – not sure how we will be able to supervise them all though. I like the idea of working on the design together because that side of things seems a bit...[gesticulated “huge” with hands]. (Jo, personal conversation, January, Year 1)
At the beginning of the next design team discussion we attempted to collate a list of the aspects that were critical to each of us. Through this process, a number of synergies appeared and some natural collapsing of concepts. For example, the team initially had two separate points:

- decision making is done by the team; and
- design is collaborative

(meeting minutes, January, Year 1)

However, by the time we were creating our final list it became apparent to team members that both these points were encompassed by the collaborative process we were using, and they were combined to create the first simple rule. The compilation of simple rules emerged from the multiple discussions and thinking captured above. For our course, the final simple rules established were:

1. Decision making and design is collaborative
2. Map to standards
3. Theory-to-practice link
4. Contextual referencing
5. Common subject development framework
6. Assessment is authentic
7. Stakeholder linkage
8. Less is more
9. Research is embedded

(Meeting minutes, January, Year 1)

Each of the points contained some further detail to ensure that the way in which the simple rules were interpreted was consistent and accurately reflected the discussions that occurred at the time of their creation. With this in mind, it was acknowledged that the simple rules needed meaning if they were to be expressed in the course design (see first design principle). The following is a detailed account of each of the simple rules determined by the design team. The information provided about each simple rule is a synthesis of data recorded in the relevant meeting minutes and researcher log.
6.4.2.1 Decision making and design is collaborative

The design team found this a natural simple rule as it covered the essence of the way in which the team operated. An additional caveat was that all decisions would be made by the team members present at the meeting. An agenda was distributed prior to each meeting, and it was determined that a team member could respond to an agenda item in writing if unable to attend; this option was never taken up by team members unable to attend. For example, one of our early meetings led to a discussion about the terminology to be used in our subject design work, as we recognised the paramount need to be consistent with our language. Through our investigation of best practice nationally and internationally, it had become apparent that various terms were used in the area of inclusive education when talking about the particular children that were being focused upon. The design team listed the key terms being used:

- Children with exceptional needs
- Children with special needs
- Children with diverse needs
- Children with varying needs
- Children with learning difficulties/disabilities

(meeting minutes, March, Year 1)

In the creation of the list we had unintentionally modelled the need to put the child first, so we determined that “child first” language was critical to our work and would be used regardless of the term chosen. We used the collaborative process of whipping around the group, allowing all team members to voice their opinions, and kept whipping around the team until all views had been exhausted. We reached consensus on the term *diverse needs*, as the design team believed that this gave us room to incorporate the needs of children on the developmental spectrum and more options when creating case studies or scenarios (researcher log, March, Year 1).
6.4.2.2 Map to standards
As there were no existing national standards or accrediting bodies in the field of Inclusive Education, the design team recognised the need to develop standards that we expected the course to meet and use them as a design scaffold. To do this, the team looked at national, international standards and University requirements to direct development of these standards (meeting minutes, March – June, Year 1). The development of standards was central to the design work, as they became the alignment point for the process. This process is examined in more detail in the following section when detailing the specifics of the approach taken by the design team.

6.4.2.3 Theory-to-practice link
The theory-to-practice link was highly valued by the design team. Moreover, the external stakeholders who initially approached the Faculty about the course highlighted the need for students to be able to demonstrate theory-to-practice connections through the completion of a project. Recognising the need to make explicit connections between theory and practice, and with the project as an end point, the design team endeavoured to ensure that all subjects made connections between theoretical constructs, concepts and practical application in inclusive settings (researcher log, February, Year 1 and meeting minutes, March, Year 1).

6.4.2.4 Contextual referencing
All the initial student cohort were practising educators, wishing either to move into the area of Inclusive Education or to upgrade their skills. With the knowledge that all students had a teaching context within which they were already working and with the expectation that they would complete a research project in this setting, the design team wanted the need for subjects to be situated in the learning contexts of students to be a key consideration and design principle (meeting minutes, March, Year 1).
6.4.2.5 Common subject development framework
When the design team discussed what we considered best practice, this led to discussion of some of the teaching and learning design aspects that created frustration. Every team member could contribute an anecdote relating to the lack of consistency across a course (researcher log, March, Year 1). Bearing this in mind, the design team sought to build subjects around a common design metaphor (meeting minutes, May, Year 1). We also looked at how to model and embed processes for one aspect that could be transferable to multiple situations (meeting minutes, April, Year 1).

6.4.2.6 Assessment is authentic
The design team discussed the notion of authentic assessment and how it aligned with other simple rules in particular contextual referencing and the need to ensure links between theory and practice. By ensuring that assessment was authentic, we could address multiple principles and further ensure that assessments completed by students were relevant to their day-to-day work (personal log, January, Year 1; researcher log, February, Year 1 and meeting minutes, March-April, Year 1).

6.4.2.7 Stakeholder linkage
The design team determined that the high level of stakeholder interest in the design of the course should be utilised. Our aim was to ensure that explicit and implicit links were built with key stakeholders with whom students would engage in inclusive learning communities – children, colleagues, leaders – with the hope of building capacity in our students to become agents of change in their settings (meeting minutes, February & May, Year 1).
6.4.2.8 Less is more

When the design team considered prior course feedback, the amount of content that students were required to work through was raised (researcher log, February, Year 1). We discussed what a reasonable amount of time dedicated to a subject would be, how long it would take students to complete certain tasks, and how we could better scaffold student engagement and work through a subject (meeting minutes, March & May, Year 1). We decided to take a “less is more” approach and drill down into what we thought were critical skills for inclusive educators (meeting minutes, February, Year 1).

6.4.2.9 Research is embedded

With the knowledge that the final product would be a project, the development of research capacity needed to be embedded throughout the course. Further, the development, refinement, and formative and summative evaluation of the course design process were embedded in a process of research and self-study (meeting minutes, February & June, Year 1).

Implicit in the agreement to work with these simple rules was a commitment to meeting regularly in order to meet these principles. The development of the new course continued to be an ongoing collaborative process, with meetings occurring either weekly or fortnightly for a concentrated hour and specific tasks and outcomes established at the end of each meeting in preparation for the following one.

6.4.2.10 Simple rules as course commitments

Once the design team had a clear idea of the simple rules and a preliminary discussion about content, we moved into discussing what the team was committed to, both for the course and as a design team. The commitments encompassed our shared understandings
of practice and our vision for learning and teaching in the course (Bain, 2007, p. 49). In a number of cases the commitments mirrored the simple rules.

The Master of Inclusive Education is committed to:
- capacity building of students
- the collaborative practice of both staff and students
- linking theory-to-practice throughout the course
- using research-based and evidence-based practices
- modelling effective practice through the design of subjects
- using a theoretical base for process and design

(meeting minutes, January, Year 1)

As a team we also considered the implications of changes to current practice as well as what these changes would mean to the future practice of the team. It was emphasised that this discussion would take place without judgement or comment, so that all team members felt comfortable about sharing their ideas. By working in this manner the design team began to engage with the theoretical principle of embedded design. We were starting to ensure that the simple rules we had agreed upon were reflected in the actual design process.

6.4.3 Stakeholder input into initial design process

As one of the catalysts for the creation of a new course had been a stakeholder request, the design team was committed to actively involving stakeholders as much as possible in our design process. At this early point only a brief initial conversation had taken place, when interest in a particular type of inclusive education course had been expressed. After the design team had determined that we were interested in undertaking the creation of a new course, another teleconference was set up with the stakeholders to ensure that their needs were represented prior to continuing the design process. The involvement of key stakeholders throughout Phase 2 consolidated the iterative design and reflection process through the subsequent re-design as the product (the course) and theory were refined in line with principles of design-based research (Kennedy-Clark, 2013).
Two of our design team members, one of whom was the researcher, met with the director representing the stakeholders. Three key aspects were highlighted in the discussion:

- the course needed to be of interest to current teachers wishing to up-grade their qualifications in inclusive education or move into the field from mainstream education;
- the course needed to include a practical project that would be relevant to the school setting from which the teachers (students) came;
- a range of delivery options needed to be on the table at this point (with a firm decision at a later date)

(stakeholder teleconference, January, Year 1)

This discussion supported much of the work already completed by the design team and provided some additional focus points for the continuing work, including consideration of delivery alternatives. Stakeholder emphasis on the need for practical links throughout the course and the concept of a final project supported the design team’s discussions about the possibility and appeal of a capstone product.

6.4.4 Content

The team then considered, “What do we want students to know and be able to do?” In the compilation of notes from this session it became apparent that this question had been responded to in three fields. The first field covered were the personal skills and knowledge we expected students to gain, incorporating the general areas of curriculum and pedagogy, assessment and planning, designing inclusive environments and adaptation/technology for inclusion.

How are we going to select what is going to be taught? (Pam, researcher log, January, Year 1)

Pam’s remark focused on the need for the design process to filter what was critical to our course and what was a lower priority. This thinking is critical in design-based research, as it marks the point at which a more robust understanding of the learning environment is undertaken (Kennedy-Clark, 2013).
Even before we think about that we need to map and decide what should our students learn and how they should learn. (Eve, researcher log, January, Year 1)

Eve’s response was reflective of both earlier casual discussions about what the team thought was critical knowledge in our field and her personal interest in constructive alignment. It also built upon the consideration of the learning environment that the design team was creating.

The second field covered the capacity-building skills that might be embedded within the course, considering that graduating students might be positioned as leaders in the field within their schools, with the capability to build capacity within the children they taught, teaching peers and school administration in the skills identified above. Nick’s comment at this point reflected a level of need regarding the focus of the course, with an attempt to re-focus the discussion:

We need to use the “less is more” idea. What is the most important and what will provide the best foundation or base from which to begin? (Nick, researcher log, January, Year 1)

My comment here complemented Nick’s issue and further drew on the need to focus:

I know I like things to have practical application. We need to link to the lives and experiences of our students. Their enrolment has to serve a purpose. (Lucie, researcher log, January, Year 1)

The third field covered the process skills or methods to be used in order to accomplish the previous two fields. The concept of, and need for, training in collaborative skills was highly evident as central to the discussion, as various ideas were put forward and mentioned by all design team members at various points in the discussion. Jo’s point was representative of these discussions:

We need to tap into the areas of need as seen by our current students and stakeholders. Isn’t that one of the main reasons we are thinking about this? Reflecting on my experiences and conversations, the areas of need seem to be
working with others…not only in the school but externally, differentiating instruction, programming, behaviour management, and advocacy…oh and funding as well. What are the right things to write? (Jo, researcher log, January, Year 1)

Jo’s comment here echoed the need expressed by the external stakeholders and the view held by the design team that the course should express the perceived needs of the students in their professional settings.

This perspective reflected a need to position students as change agents within their schools, and consideration of how this might actually play out in practice.

The reality is that often the inclusive educator in schools is the one advocate for kids with disabilities and needs to try and get other staff on board with them. (Pam, personal conversation, January, Year 1)

This had also been briefly noted as a challenge in our conversation with the stakeholders, although they recognised the challenge in positioning inclusive educators in this manner and their capacity to take on this role:

It might be a tough ask with some of them [the students] just because of how they are seen in the school. They do a lot of advocating [but] it can be tough… how successful this is depends on their relationship with their school leaders. (stakeholder teleconference, January, Year 1)

Overall, the design team felt that a course that built capacity for students to be change agents in their various settings was a desirable way to provide an end point for the course, conceptually enabling us to map backward from this point.

6.4.5 Theory

The meetings that took place among design team members generated the simple rules that were further extrapolated to develop course commitments and an overview of content. The convergence of these discussions into simple rules, in particular embedded
design, created the cornerstone for the rest of the process and ultimately for the development of a shared schema.

The design team worked through the process described, using collaborative practice for simple rules to emerge including the consideration of a design approach, principles, content and stakeholder input to build the foundation commitments. The establishment of the simple rules enabled the team to create a point of reference for the course design process. The simple rules also provided the team with a design framework as they translated well into principles of practice for our work.

The first part of the design process saw the design team actively use collaboration. Through the collaborative discussions, simple rules for the course were determined that informed the course commitments and initial discussions about course content. Theory was used as a design tool to drive the design process, with the first part of the design having a strong emphasis on the establishment of simple rules to provide a framework for the course involving the design team and stakeholders. The process helped a shared schema emerge, in turn creating the conditions for self-similarity and dispersed control as well as powerful individual agency.

6.4.6 Standards development
To progress our simple rules into a truly embedded design, the design team undertook discussion about the standards that would inform the course. The simple rules needed to find a place in the design to contribute in pragmatic ways if they were to serve as a cornerstone of the schema. The development of standards facilitated the application of our simple rules and laid the framework for embedded design. As mentioned earlier, there were no Australian professional standards in the field of inclusive education. The
design team determined that it would be necessary to look at best practice in the field nationally and internationally and use that as our benchmark. We also recognised the need to consider institutional requirements that might impact on the standards developed.

To facilitate the collection of data, the researcher created a common folder on the university network where information could be stored and viewed by all design team members. The task set for all design team members to complete in a fortnight was to find information about existing courses, similar courses offered at other institutions, policy frameworks, national and international standards, contemporary research, best practice and current issues in the field of inclusive education. To make the task more manageable, team members identified particular geographic regions, higher education institutions, other educational institutions and/or an area of interest/specialisation/knowledge that they would be interested in investigating.

Once the deadline for completing the task had passed, 21 pages of data had been created by design team members in the sharedrive file (see Appendix 6C). Table 6.1. provides a snapshot of this data.
Table 6.1 Snapshot of Standards Data

<table>
<thead>
<tr>
<th>Sample Sources</th>
<th>Key fields</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEC</td>
<td>- Personal skills&lt;br&gt;-Characteristics/knowledge of human development&lt;br&gt;-Individual learning differences</td>
<td>Ability to introduce strategies and adaptations that can be implemented within classroom and school environments to promote the inclusion of students</td>
</tr>
<tr>
<td>National Joint Committee on Learning Disabilities (NJCLD)</td>
<td>-instruction adapted for diverse learners&lt;br&gt;-instructional strategies and resources&lt;br&gt;-student evaluation&lt;br&gt;-instruction&lt;br&gt;-social/emotional development</td>
<td>Identifies and prioritises areas of the general education curriculum and develops accommodations for individuals with exceptional learning needs</td>
</tr>
<tr>
<td>New Mexico</td>
<td>-definitions and characteristics&lt;br&gt;-rights and procedures</td>
<td>Develop and implement lesson plans to meet students’ unique needs as identified in Individual Education Plans (IEPs)</td>
</tr>
<tr>
<td>Mass DOE leadership</td>
<td>-foundations&lt;br&gt;-plan and implement effective programs&lt;br&gt;-human growth and development</td>
<td>The teacher demonstrates knowledge of data-based approaches to instruction, including assessment, assistive technology, direct instruction, monitoring and evaluation</td>
</tr>
<tr>
<td>Davidson general teacher education competencies</td>
<td>-assessment/evaluation&lt;br&gt;-curriculum and development&lt;br&gt;-technology</td>
<td>Belief that all decisions should be made from the perspective of putting children’s needs first</td>
</tr>
<tr>
<td>Ontario</td>
<td>-core educator competencies&lt;br&gt;-data-based decision making&lt;br&gt;-content knowledge&lt;br&gt;-pedagogical skills&lt;br&gt;- behaviour and environment&lt;br&gt;-parent/professional skills&lt;br&gt;-relationships with families and colleagues&lt;br&gt;-leadership&lt;br&gt;-professional dispositions</td>
<td>Teachers know the ways in which learning takes place, and they know the appropriate levels of intellectual, physical, social, and emotional development of the students they teach</td>
</tr>
<tr>
<td>Australian institutions with inclusive education specialisations</td>
<td></td>
<td>Belief that all children can learn</td>
</tr>
</tbody>
</table>
It became apparent that a number of themes crossed all data sources, with international sources demonstrating a much more research- and evidence-focused base than Australian sources.

6.4.6.1 Sorting the data
As the process was the focus of my research, I offered to examine these data for commonalities and data duplications and reduce them to a manageable size for our future discussions on standards development. Before our subsequent meeting, these data were reduced to a “competencies” document of four pages which was circulated to the team (see Appendix 6D).

In the team meeting, discussion focused on how the information on these four pages could be thematically grouped. The themes were identified as:

- general skills,
- identification,
- instructional (capacity building),
- education/environment (contextual),
- IEPs,
- assessment,
- communication,
- technology, and
- research

(meeting minutes, March, Year 1)

Through a process of whipping using the collaborative process the document was further reduced to two pages. Various team members had expressed the need during the whipping process for the document created to be realistic and manageable:

We don’t want to be in the situation where we can’t cover everything and it [having too much content] just causes us and the students stress. (Jo, researcher log, March, Year 1)

Unless we strongly believe something should be covered we need to think carefully about it. (Lucie, researcher log, March, Year 1)

Agreed – we need to be mindful of linking to what the research and best practice is telling us. (Nick, researcher log, March, Year 1)
These comments also aligned with our simple rule of “less is more”, although that was not explicitly noted at the time.

The design team recognised that some aspects were targeting the same competencies and that dominant themes were evident. The themes were further reclassified into:

- philosophical base,
- IEPs,
- attitudes,
- assessment,
- developmental perspective,
- research and ethics,
- collaborative practice,
- technology, and
- teaching and learning

(Researcher log, March, Year 1)

With this reorganisation, the final competencies to be used as course standards were compiled into four domains by the design team:

- Personal skills;
- Contextual skills;
- Capacity building skills; and
- Process skills

(Meeting minutes, March, Year 1)

These became an organisational framework for our design process and were used to map content and ensure alignment throughout the course.

This second part of the design process focused on the development of the course standards. The design team were in the position of designing the standards from scratch and with stakeholders’ in mind. This constituted the first step in embedding the simple rules in the initial framework for the design of the course. It also created the conditions for schema development on a collaborative basis and the beginning of expressing what simple rules meant in practice.
6.4.7 Strengths, Needs and Drivers

For the establishment of a course baseline, the team undertook a purposeful process of identifying drivers, what works, strengths and needs. The determination of strengths, needs and drivers continued the conversation among the design team about the way in which the team would work in order to be faithful to the simple rules and commitments determined.

6.4.7.1 Drivers

This session began with a discussion focused on the drivers for course design and review, and consideration of the forces or events that were causing us to take a different course of action (Gribi, 1995 in Bain, 2007, p. 86). It took a little while for the team to focus, with the initial response being:

We have been told we have to

by three of the design team members (meeting minutes, February, Year 1). This referred to the course having reached the 3-year cycle of review as determined by RU. Once the design team focused on the drivers for review, beyond those directly imposed by the institution, a broader selection was determined:

- stakeholder interest,
- capacity building of teachers in the field in inclusive education,
- desire to improve the quality of our work,
- targeting the areas of strength and expertise in the team,
- the move to meeting course quality standards institutionally, and
- identification of areas of need in the literature informing the three fields that intersect our work – higher education, teacher education, and inclusive education

(researcher log, March, Year 1).

This discussion helped focus the work of the design team and position it as having relevance well beyond institutional requirements.

6.4.7.2 What works

To embed research-based practices in the process of course design, as determined essential as part of our simple rules, the design team discussed what we knew worked in
practice within our field. The “what works” aspect of the design team’s discussion was directed to a high degree by our earlier work when creating our course standards. This encompassed looking at national and international research and practice, and also gave the team a sense of best practice in our field. According to the researcher log, the practices the team discussed included:

- Direct instruction,
- Collaboration,
- Reflective practice,
- Using, and providing, feedback,
- Sound instructional strategies such as advance organisers and focus questions,
- Cooperative learning,
- Peer mediation, and
- Curriculum-based assessment

(researcher log, March, Year 1)

This knowledge informed what we believed worked, and very quickly the design team targeted research-based practices and approaches that would help to address the drivers for change.

6.4.7.3 Strengths

The strengths component was the quickest for the design team to complete. The discussion went straight to an examination of what we believed worked well and what was already being used in our work.

- Capacity and knowledge to deliver the course,
- Desire and willingness to use a theoretically derived course design process,
- Ability and capacity to work collaboratively,
- All design team members having teaching experience,
- Design team members having varied expertise that “completes the whole”,
- Respect for each other’s work,
- Strong and varied stakeholder connections

(researcher log, March, Year 1)
This conversation was quite difficult for the team members, as highlighting the strengths of our work did not come naturally. As Jo noted afterwards:

I don’t know whether that stuff we identified is necessarily better than what others do – it is just what we do. I kind of imagine most people would be across those things. (Jo, personal conversation, March, Year 1)

6.4.7.4 Needs

The needs discussion made the design team focus on what we felt we should have, and led us to consider resourcing implications for various components of our discussion. The team also considered whether we might need to work differently in order to achieve various aspects. As part of this discussion we considered:

- workload to support the design process,
- flexibility in the course structure to support innovation,
- subject design flexibility,
- training of our casual staff to understand and support our work, and
- technical design capabilities required for subject development

(researcher log, March, Year 1)

When reflecting on the list, the design team recognised that we could ensure that most of these considerations were covered as part of the design process.

6.4.8 Stakeholder input into design process

As the original request for the development of the course had come from a particular stakeholder, the work of the design team and ideas for progressing the course were presented to stakeholders. Before the meeting an agenda and documents regarding the schema and proposed content were circulated:

- Issues that have arisen since our last meeting
- Reactions to schema
- Discussion focused on the foundational skills required
- Vision of inclusive education
- Common core practice
- Delivery models
- Program customisation
- Any other business

(email to stakeholders, April, Year 1)
In relation to each of the agenda items there were particular aspects that were clear to the design team as service providers. At the time of this meeting it was made clear that the proposed schema was the totality of the design team ideas in response to the brief we had been provided by the stakeholders when they first approached us. It was definitely not set in stone at that point.

In the initial meeting foundational skills identified by the stakeholders included:

- skills to identify children with difficulties,
- how to cater for a range of disabilities,
- how to write an IEP,
- how to work collaboratively,
- school culture and how to fit in as a teacher,
- how to assess a program

(teleconference, January, Year 1)

As a design team we also needed a sense of what the vision was for the future of inclusive education, which directives might be in the pipeline from the executive that could affect the delivery of the course and what could realistically be funded to support students. To further our discussion and ensure that every person had the opportunity to comment, we used the same collaborative process strategy of whipping used by the design team as the meeting process with our key stakeholders. The researcher offered to take notes due to the use of this conversation as data for this study.
Table 6.2 Stakeholder Meeting Summary

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td></td>
</tr>
<tr>
<td>Capacity of students</td>
<td>“Start at the minimum and raise the bar” (A, May, Year 1)</td>
</tr>
<tr>
<td>Professional interchange</td>
<td>Professional interchange – joint teaching with staff from stakeholder institution</td>
</tr>
<tr>
<td>“Should the need for a qualification be placed as an employment condition?” (L, May, Year 1)</td>
<td></td>
</tr>
<tr>
<td>Foundation skills</td>
<td></td>
</tr>
<tr>
<td>Personal capacity building and knowledge</td>
<td>Transference of ideas from study to practice</td>
</tr>
<tr>
<td>Collaborative skills</td>
<td></td>
</tr>
<tr>
<td>Recognition of disability</td>
<td></td>
</tr>
<tr>
<td>Planning for inclusion</td>
<td></td>
</tr>
<tr>
<td>Differentiating curriculum</td>
<td></td>
</tr>
<tr>
<td>Instructional decision making</td>
<td></td>
</tr>
<tr>
<td>Appropriate service delivery</td>
<td></td>
</tr>
<tr>
<td>Monitoring and evaluating</td>
<td></td>
</tr>
<tr>
<td>Current research</td>
<td></td>
</tr>
<tr>
<td>Agents of change</td>
<td></td>
</tr>
<tr>
<td>Mentoring</td>
<td></td>
</tr>
<tr>
<td>Focus on literacy and numeracy throughout</td>
<td></td>
</tr>
<tr>
<td>Vision of inclusive education</td>
<td></td>
</tr>
<tr>
<td>Traditional view that there is no alternative which has held back from full inclusion</td>
<td>Change has been forced</td>
</tr>
<tr>
<td>Moving from a pastoral and caring idea</td>
<td>- Moving to “we actually provide a worthwhile learning environment for all” (V, May, Year 1)</td>
</tr>
<tr>
<td></td>
<td>- “How can we best support this child here?” not “Why is this child here?” (A, May, Year 1)</td>
</tr>
<tr>
<td>Practicalities versus vision statement</td>
<td>- clarification about policy</td>
</tr>
<tr>
<td></td>
<td>- reality and practice divide</td>
</tr>
<tr>
<td></td>
<td>- changes to schools/school culture</td>
</tr>
</tbody>
</table>
### Capacity for children with disabilities to achieve some of the same outcomes as other children

- recognise themselves as independent
- understand and know themselves
- a variety of opportunities once they leave school
- opportunities to be successful
- confidence within the school community
- all teachers need to be able to cater for the special needs children, not just the special needs teacher

### Potential delivery models

<table>
<thead>
<tr>
<th>models</th>
<th>Conference model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library model (used by the stakeholders previously)</td>
<td>First group – enthusiastic volunteers</td>
</tr>
<tr>
<td></td>
<td>Second group – mixed, with some students leaving or being asked to leave</td>
</tr>
<tr>
<td></td>
<td>Third group – any student interested</td>
</tr>
<tr>
<td>Friday/Saturday</td>
<td>Six days of study release a year + residential school model</td>
</tr>
<tr>
<td>Week of residential school</td>
<td></td>
</tr>
<tr>
<td>Consistent evening a week</td>
<td>Attendance for a certificate</td>
</tr>
<tr>
<td></td>
<td>Complete additional assessment for subject credit</td>
</tr>
</tbody>
</table>

### Customisation

- “Sharing our story”
  - relating tasks to various curriculum areas
  - collaboration/agents of change philosophy
  - work with principals and executive is very limited
  - research project to involve executive and other teachers
  - learning outcomes which are accessible
  - differentiation examined in multiple ways and not just as a strategy for children with disabilities
  - wider idea of “inclusion” – not just the responsibility of particular people
  - focus on literacy and numeracy
It was evident through the discussion that many of the aspects that the design team had grappled with were also issues for our stakeholders and, except for particular aspects that were unique to them as an institution, most of these issues had been considered by the design team, although admittedly from a different perspective. The work on strengths, needs and drivers along with related stakeholder input, further consolidated the design team’s development of the simple rules. No more explicit connection between these components was made during the meeting with stakeholders although it could have been.

When triangulating the design team work on strengths, needs, what works and drivers with the stakeholder meeting, most of the intersections occurred in the capacity building and knowledge sphere, where collaborative skills, differentiating curriculum, instructional approaches, monitoring and evaluating, and the concept of agents of change were aspects that the design team had also considered. Aspects such as collaboration, differentiation and feedback processes were also identified in the literature. The issue raised by the design team in regard to the capacity of students was also an aspect of concern for the stakeholders, although their concerns centred around the fact that many of the potential students had not studied for a number of years and having a challenging standard from the beginning might deter students from enrolling. Stakeholders also considered what standards could be set within their own organisation.

There was particular interest from the stakeholders in a research project, as they could see the potential to involve the school executive and others. The school culture and changing attitudes towards children with disabilities were emphasised at various points of the discussion. The stakeholders also wanted to ensure that students could use the
instructional approaches taught with all children. When summarising the discussion, Nick noted that “all visions were situated in terms of schools” (personal conversation, May, Year 1) and queried whether this was truly representative of all possibilities. There had been little consideration of relationships with parents, colleagues and other professionals beyond the consideration of school culture.

The stakeholders suggested that the requirement of a number of residential schools within the course should become a structural imperative and driver for the design of the course. This was seen as a real benefit by the design team, which would further enable the consolidation of collaborative practice in a face-to-face mode. This concept also enabled the design team to design a scaffolded orientation program at the beginning of the course that inducted students into the theoretical principles and the design approach used for the course and subjects. The concept of a capstone subject was also very appealing to the stakeholders as they wished to have some level of active engagement between the students, school executive and other teachers in their home schools. It was determined that this could be done through a capstone subject that encompassed all knowledge gained through the course and the implementation and evaluation of a project.

This process of adapting and refining the work through iterative discussions echoed the development of a self-organising system in which aspects that assisted and enhanced the development of the system were amplified by the agents (the design team and stakeholders) whereas interest in aspects that were considered less important or did not contribute to the overall intent of the design was dampened. The strengths, needs, drivers opportunity created the conditions to test the simple rules and was the initial step towards embedding the design of the course against a pragmatic reality where the
design team was able to consider why the course should be redesigned, what factors might be driving these changes, and the opportunities presented. The team had the opportunity to identify continuities and discontinuities between the design process and the current reality expressed through the strengths, needs and drivers work. This process further instantiated and progressed the schema development.

6.4.9 Summary of design process

This part of the design process focused on making connections between the previous process of creating the simple rules and anchoring them within a framework of strengths, needs and drivers that took account of existing and best practice. It was a point of triangulation where the strengths, needs and drivers as identified by the design team could be embedded throughout the design process, additionally cross-checked with the simple rules, standards and the stakeholder perspective. A shared schema was building among the design team members through this collaborative process.

6.5 Building the Course

The building of the course amplified the enactment of other design principles, specifically self-similarity, dispersed control and feedback. The principles were iterative and non-linear in their application but their role could be amplified when associated with specific activity. The schema building that emerged from the personal agency in – the simple rules, commitment development, standards building, strengths, needs and drivers, created the conditions for enacting the design in ways that maintained coherence and dispersed control to design team members.

Typically a course design process followed a structure that moved from a general overview of the course and high-level thinking, with the possible consideration of standards, straight to subjects and assessments. Through our design process there it was
recognised that the chasm between standards and subjects required some refinement and thinking at course level. With this in mind, the embedded design principle, as expressed from a theoretical perspective and as a part of our design team simple rules, was taken up more specifically. The simple rules were used to design and then embed a common educational design approach in all subjects. A broadly consistent subject design framework was embedded within all subjects, creating consistency and coherence across the course. This was the enactment of the embedded design principle and included employing the remaining key principles of the theory – feedback, dispersed control and self-similarity that are described in this section through the building of the course.

6.5.1 Product development

The design team then moved on to developing products for the course. The concept of a product was developed through design team discussions about the chasm between standards and assessment where no conceptual organiser existed between these points.

It is a massive cognitive leap to go from the standards to a specific assessment....we also need to look at the bigger picture and how things fit together. (Nick, researcher log, April, Year 1)

One of my biggest concerns has always been making sure that we aren’t always using the same assessment types. In the xx course the students have mentioned to me that all assessments in the first session are essays. (Pam, researcher log, April, Year 1)

I think the reality is that in most courses we have little idea of what the course standards we are working towards are. I can tell you what my inclusive ed subject is targeting but I don’t necessarily have a bigger picture than that. It is probably fortunate that our stuff [inclusive ed] is mandated, otherwise I think it could just as easily slide through the cracks. (Lucie, researcher notes after meeting, April, Year 1)

The creation of products was the process through which the design team could create a bridge between standards and assessment tasks and ensure that the simple rules and commitments found their way into the course in demonstrable ways. It led to a bigger-
picture sense of what we needed to assess, to consideration specifically of what type of assessment would be the best way to achieve a particular standard. In the team meeting we discussed:

What are the assessment possibilities?
Why do particular assessment tasks work? Why this one and not others?
How do the various assessments connect with other possibilities or inclusions?
How do these assessments take up course needs and the standards developed?

(meeting summary, April, Year 1)

In our design work, the product was positioned as what the course team decided was evidence that students had met the course standards. Each product designed was matched to criteria in the standard and was evidence of student achievement. The first attempt at this resulted in 14 major areas to which the design team believed graduates should be exposed and, in terms of associated skills, should be able to do. These were:

- building a curriculum model of differentiated instruction,
- writing an IEP (Individual Education Plan) that included objectives,
- analysis of legislation and practice,
- a reflective process throughout the course,
- strategic inclusive education plan for a school,
- ability to conduct a collaborative meeting,
- assessment process,
- evaluation of curriculum programs and policy,
- technology plan,
- screening plan,
- capstone/portfolio,
- classroom organisation design/plan,
- create an inclusive environment, and
- academic culture and skills

(meeting minutes, April, Year 1)

The design team members were then set the task of looking over these in preparation for the meeting the following week and determining whether any of these products could be merged and how critical they were to the course in light of our simple rule of “less is more”. Each design team member provided feedback regarding the potential products at the beginning of the meeting:
To my mind there is some double-up (Jo). Some of these are actually skills that we can embed, rather than products (Nick). I also thought a few could be consolidated (Lucie). Having a look after the meeting, I agree with what Nick has just said. We have mixed skills, knowledge and assessment types...although this may not be a problem? (Eve)

(researcher log, May, Year 1)

This brief reflection resulted in the re-working of our list into:

1. writing lessons/unit with differentiated instruction model
2. legislation and practice + survey re: attitudes
3. screening continuum
4. inclusive plan for school + funding
5. portfolio
6. collaborative meeting
7. inclusive classroom
8. capstone product

(meeting minutes, May, Year 1)

A number of clarifying points were made in relation to some of these listed items:

2 & 3 - need to screen before starting program, legislation needs to be understood/history (Lucie)
1 & 7 - classroom and lessons can mesh or be connected in some way (Jo)
4 & 6 - look broader (whole school). Collaborative meeting means that confidence is built (Nick)
8- capstone product can stand alone (Nick)

(researcher log, May, Year 1)

I drew a diagram (Figure 6.1) reflecting this discussion next to these notes in my researcher log.

Figure 6.1 Product to Content Alignment
The final synthesis of the initial work on products resulted in the creation of eight products. This higher level course overview was provided through the creation of products that gave the course focus areas where particular content could be matched and aligned back directly to the course standards. In no particular order these were:

1. Product X: 5-lesson unit of differentiated instruction
2. Product X: Needs analysis and policy development
3. Product X: Screening process
4. Product X: Strategic IE (Inclusive Education) plan
5. Product X: Portfolio/reflection
6. Product X: Collaboration and communication
7. Product X: Designing the inclusive classroom
8. Product X: Capstone/project

(meeting minutes, May, Year 1)

For each of the products, various skills and competencies that the design team wanted students to demonstrate were identified. For example the discussion regarding Product X: 5-lesson unit of differentiated instruction identified:

- Know the steps in the three types of pedagogy/instruction and use them in a differentiated setting – direct, cooperative learning and peer tutoring
- Break KLAs (Key Learning Areas) down into prerequisite skills
- Know how to place software in the software framework
- Research/know literature on control questions leading to deriving questions for the KLAs/differentiated strategies of the curriculum
- Know how to adapt instruction/cognitive strategies, curriculum materials/resources and materials
- Understand different ways to group students and the strengths and weaknesses of each option
- Know students’ abilities – curriculum based assessment
- Be able to re-sequence post differentiation
- Know potential uses/types of technology for differentiation
- Be able to conduct activity analysis leading to task analysis and short term objectives (where not KLA based)

(meeting minutes, May, Year 1)

All these lists were developed as a result of application of the collaborative process. This process was followed for each of the products, with a six-page scaffold designed for the course in regard to content (see Appendix 6E). In line with our simple rule of “less is more”, we looked at how many of the skills and knowledges identified were
critical to the practice of inclusive educators, and we also considered the academic skills that would also need to be embedded throughout the course. There was some concern among design team members that unless we placed particular aspects that we valued at the forefront through products they might be lost.

In light of the products discussion we had, we have to ensure that aspects such as academic skills and the reflective process are not lost as we design the subjects. Bit worried about we ensure this doesn’t happen except for the fact we wrote it down! (Eve, researcher log, May, Year 1)

This was countered by the researcher keeping a log that incorporated the general points of discussion and areas of need as we went through the process. Nevertheless, it led to further consideration of the scope of what was being addressed within a product and how reasonable this really was:

Looking at the product content scaffold now it seems massive in terms of the content that we need to cover. (Lucie, researcher log, May, Year 1)

We need to remember our simple rule of “less is more” and perhaps put that into play here. (Nick, researcher log, May, Year 1)

These suggestions meant that the design team revisited the skills and competencies for each product and reduced them. The first product Product X: 5-lesson unit of differentiated instruction was re-worked to:

- Know the steps in the three types of pedagogy/instruction and use them in a differentiated setting – direct, cooperative learning and peer tutoring
- Break KLAs down into prerequisite skills
- Know how to adapt instruction/cognitive strategies, curriculum materials/resources and materials
- Understand different ways to group students and the strengths and weaknesses of each
- Be able to re-sequence post differentiation
- Be able to conduct activity analysis leading to task analysis and short-term objectives (where not KLA based)

(meeting minutes, May, Year 1)

Software and technology aspects were removed as unique features because the design team saw the use of technology as a foundational requirement for the course. All
assessments were completed using technology and competency in these skills was embedded throughout the course, including training at the first residential school in RU-specific technologies. There were also skills that could be demonstrated without needing to be specific to a KLA. By providing a scaffold for each of the pedagogies through our design, we would be modelling the theory and then requiring the practice and practical application of the pedagogies through completion of assessments. Curriculum-based assessment was moved into another product with an assessment focus. We had also incorporated adaptive devices and assistive and augmentative technologies more explicitly in our original proposal to our key stakeholders, but this was not seen as a critical focus from their perspective. Due to the importance placed on this knowledge by the design team, it was embedded through the case studies used in some of the assessments.

Even after this re-working two design team members, including me, were unsure about whether being quite so specific about particular aspects was necessary:

I still don’t think we need to be so specific as to align the work with KLAs. (Lucie, researcher log, May, Year 1)

I agree. If we are providing an alternative when something is not KLA based, then we should be able to use that as a basis for the whole product. We don’t need to specify KLA versus non-KLA. (Jo, researcher log, May, Year 1)

To resolve this, the design team decided to reconsider whether this was an issue once we started writing the subject content.

In essence, the development of course products allowed the design team to demonstrate that standards were being met, were evidenced in student learning and showed the implementation of simple rules in practice. Through the creation of products and
mapping them to the course standards, the team could identify not only specific moments in the course when particular skills were explicitly shown but also places across the course where students would, in doing another activity, be able to provide further evidence of their ability to address the standards. The products also connected to multiple assessment tasks, as one piece of evidence could not necessarily demonstrate mastery of the standards. That feature gave students multiple chances to show evidence of their abilities.

6.5.1.1 Mapping products to standards

In a way, the design of products was predominantly for the team’s benefit only. It was a check point at which the team could demonstrate that the course was designed authentically to meet the standards, and that it provided authentic opportunities for students to demonstrate their achievements. At this point, each of the products was mapped to the standards and checked for alignment with the simple rules:

- Demonstrate an understanding of the major theories, contributors, history, and trends in the field of inclusive education (across all products)
- Model respect and acceptance of students with diverse learning needs (product 1, 4)
- Understand and be able to discuss current legal and ethical issues in inclusive education (Product 2)

(documents analysis, May, Year 1)

The intention was to have the design team think about how the various aspects of the process we had already covered fitted together and how we could track our ideas from one point in the process to another. I used the following example in our discussion:

- Commitment – linking theory-to-practice throughout the course
- Standard – modify teaching strategies and behaviour in relation to student success, modifying plans and instructional approaches accordingly
- Product – 5 lesson unit of differentiated instruction

(meeting recording, May, Year 1)

My personal conceptual model is shown in Figure 6.2.
The full matching of standards to products can be seen in the appendices (see Appendix 6F). Mapping to a product meant mapping to a real object that demonstrated the standard, rather than hoping this alignment would occur naturally as students passed through the course.

The establishment of products was a process of high-level assessment mapping that connected the simple rules and high-level intentions to the expected outcomes expressed in terms of what a student should be able to do on completion of the course. In this the process linked the beginning to the end of the design process – from the intentions to the expected outcomes. This left the team to use the design principles as a term of reference to build out the connections between intentions and outcomes.

6.5.2 Sub-products
In the process of designing the products we had also created the sub-products through consideration of the specific skills and mastery required to meet the intent of each product. The sub-products arose from the question, “What are the components of students being able to explain and understand in product X?”
In constructing the sub-products we began with a description that incorporated an object or action, for example:

students will build a curriculum module of differentiated instruction
(meeting minutes, May, Year 1)

In this instance the description aligned strongly with a particular assessment in Product X: 5-lesson unit of differentiated instruction but it was also evident in other places in the course:

- when students were designing the inclusive classroom,
- collecting evidence in their home school for their project, and
- the transfer of these skills into other subjects
(researcher log, May, Year 1)

This meant that the design team could make reference to specific examples of students achieving the objective but also that students would meet this expectation in multiple places across the course.

Sub-products were developed as design team members discussed the skills and competencies expected of students, the synthesis of previous discussions about content that came under the various definitions and consideration of stakeholder needs. For example, in Product X: 5-lesson unit of differentiated instruction a number of skills were identified:

Build a curriculum module of differentiated instruction – incorporate software?
Write an IEP with a sequence of short-term objectives and where the task is differentiated
Change the short-term objectives so the scaffolding for the task changes (across KLASs)
(participant comments, May, Year 1)

Conceptually, this meant that design team members were working with a framework (see Figure 6.3.), where the number of sub-products could vary depending on the needs identified by the team at product level.
The design team then moved to self-nomination by particular team members to take charge of the development of particular sub-products into assessments, due to their specialist knowledge and/or area of interest. Until this point the process had been primarily team-based, but the design team now began to move into the development of a framework to permit individual agency as part of our process. For example one of the sub-products I offered to develop was:

**Lucie** (collapsed 3 and 8)
- Discrepancy analysis of legislation and practice (scaffolding)
- Evaluation of policy
- Program evaluation/funding/resourcing
- Include legislation, tests, policy, curriculum

(meeting minutes, May, Year 1)

In two instances this resulted in team members taking on joint responsibility due to their interest and expertise in a particular area (see Appendix 6G).

As the design team progressed through this work, links to the simple rules became more explicit but the linking was also occurring naturally. With the sub-product that I had nominated to develop detailed above, there was an immediate theory-to-practice link because legislation drives much of the practice in the field, although educators are often unaware of the specifics. Contextual referencing was incorporated through the
assessment by asking students to complete a discrepancy analysis between legislation and what occurred in their setting. Thus the related assessments were authentic due to the contextual connection, research was embedded through the selection of contemporary readings in the area, and the sub-products had derived from the standards. The simple rule of “less is more” became evident as the volume of information was consolidated through subject design.

6.5.3 Assessment tasks

Once all the sub-products had been positioned in our scaffold the discussion moved to elements that we wanted to ensure were evident throughout the course and that were not necessarily unique to a particular subject. At this point the sub-products needed to be developed to become assessment tasks that encompassed assessment criteria, and met particular subject outcomes that aligned with the course standards.

An example is connected again to Product X: 5-lesson unit of differentiated instruction. Jo and Nick, who had nominated to take the lead on the related assessments from this product, presented their ideas as a starting point for the design team to build out a model. This was the way in which the design team was able to disperse control and apply the principle of self-similarity through a common design framework. We had designed a basic scaffold with the assessment components indicated:

1. A central question for the unit that is accessible for all students (albeit at different levels)
2. A unit product and rubric that answers the central question differentiated at three levels
3. A unit framework built in the framing tool describing the central question and the scaffolding of the lesson outcomes
4. Five lessons designed in the lesson tool to enable students to complete the unit product. Lessons should include:
   - A minimum of three outcomes per lesson (three levels)
   - An instructional routine and strategy description designed to fulfil the demands of all three outcomes of each lesson drawn from the pedagogies
and approaches taught in class (e.g.: direct instruction, cooperative learning or peer tutoring)

- A rotation plan showing what students and teacher will be doing in each 15 minute interval during the lesson
- A set of materials for each lesson differentiated by level

(document tabled at team meeting, June, Year 1)

The document presented built on the assessment components with general criteria ideas, teaching and learning strategies and suggestions of additional scaffolds required to support the content (see Appendix 6H). The design team spent some time looking at the assessment components detailed and the additional information and considered what was necessary:

Perhaps rather than a central question we could go with a central topic? This would cover the accessibility aspect. Just think a question may be more limiting. (Eve, researcher log, June, Year 1)

I think the scaffolding will work well and will help create some consistency regarding the presentation of work. I’m not sure whether we need a set of materials for each lesson though – maybe one would do. (Lucie, researcher jottings, June, Year 1)

My concern regarding the volume of supporting materials was due to my experiences with another subject where the online submission system did not cope with the attachment of materials with different file types, creating much frustration for students needing to convert materials.

This then led to consideration of the scaffolds the team would need to design to support completion of the assessments:

With the design we were looking at how to scaffold and support the work of students. This means that we will need to design a framing tool, a lesson tool and a rotational planner. (Nick, meeting minutes, June, Year 1)

Looking at the assessment scaffold tabled at the meeting, Pam then asked:

Do we need a scaffold for the instructional routine and strategy description as well? Would we be scaffolding too much then? (Pam, researcher jottings, June, Year 1)
Jo and Nick, who had tabled the document, spent some time clarifying the various aspects and indicated that they believed the instructional routine and strategy would be covered as part of the lesson tool scaffold rather than as an additional aspect to be covered.

The greatest concern was the time required to cover the associated content well enough for students to be able to complete the tasks: we considered how they might be segmented into manageable chunks:

We could teach a whole session on DI [Direct Instruction] alone...and we also need to be careful about the readings used as what DI means to one person is not necessarily consistent with another. (Lucie, researcher log, June, Year 1)

There seems to be a massive amount of content to be covered in order to complete the assessment. (Pam, researcher log, June, Year 1)

When we considered the specifics in detail and in light of earlier conversations, it was evident that a number of the design team were concerned about how much needed to be covered in one subject, wondering how realistic this was for students. In response to these concerns, Jo then asked:

Would any of these proposed aspects be better suited somewhere else, or align with the products the rest of you are working on? (Jo, meeting minutes, June, Year 1)

The design team were willing to consider this suggestion, but the process we used when considering each of the subsequent assessments was to rationalise the work we wanted covered rather than simply moving content elsewhere. This was driven by Nick’s comment:

Really think about how important the work is...how it fits with the standards and our course commitments. It may all fit and that’s fine, but it may not. What are each of these assessments contributing to our overall course design? (Nick, researcher log, June, Year 1)
For most of the design team members it was difficult at this point to envisage how it would all work: there seemed to be an overwhelming amount of content required to ensure that students had the capacity to complete the capstone project. Similar discussions as that detailed above took place for each of the assessment task scaffolds tabled at the meeting (see Appendix 6I).

As the design team progressed through the process the principles of self-organisation with which we were working became more and more embedded and naturally occurring. The collaborative work with which the design team had engaged from the beginning made it possible to build a common framework that dispersed control. This would not have been possible without the earlier collaborative activity in building the schema. Self-similarity was being embedded through the common design with which the team was engaging, that would be further evident as the team moved into the specifics of the subject design model.

6.5.4 Summary of building the course
This part of the design process focused on building the course as an entity, where the design team developed products, sub-products and assessment tasks. This work bridged the chasm between standards and assessment by looking at course-level assessment (products) and ensuring that they aligned with standards and simple rules. These were broken down into manageable chunks (sub-products) that considered the specific skills and mastery to meet the requirements of the product. The sub-products were then built out into assessment tasks that contained specific detail including assessment criteria and ensured alignment with course standards. This embodied the embedded design principle.
6.6 Building the Subject Design

The process undertaken by the design team at this point was to design a whole subject together. Through this task the conditions were created for dispersing control and self-similarity. The benefit was that the design team members all had input into the design to be used for all subjects in the course. This allowed the design team members to disperse control as the design process continued, with the knowledge that all team members were working from the same conceptual framework, which would allow all design team members to position changes in a practical context.

The design team decided to focus on the first subject to be offered, Teaching and Learning in the Differentiated Classroom. As this was the first subject to be offered, the design team also considered core competencies that needed to be taught at this point and then revisited throughout the course.

Looking at the products we have, I would say that writing learner outcomes and differentiation would be core. (Pam, researcher log, July, Year 1)

For me some pedagogical knowledge is also core as you need this in order to do the other well. (Lucie, researcher log, July, Year 1)

The combination of both works for me here, although we need to think carefully about which pedagogies we go with first and why. (Jo, researcher log, July, Year 1)

This subject aligned with the product incorporating lesson differentiation and assessment tasks that required students to be able to write learner outcomes, differentiate lessons and use various inclusive pedagogies in their instruction.

To assist in the level of self-similarity across the course, the design team developed a subject framework into which all team members had input and worked on, so that when we were subsequently required to disperse control and work on individual subjects, the embedded design would ensure a level of consistency.
The idea of discrete units of work works for me...kind of like the distance modules we have now but broken up into more detail. (Jo)

I think the structure needs to line up with the assessments. So maybe we use the current idea of a module as equivalent to an assessment? (Lucie)

Wouldn’t that depend though on how we break up the assessments? (Eve)

We need to take 440 and the detail we have and map our ideas against that to see how it works. (Nick)

(Design team discussion, meeting recording, July, Year 1)

This thinking was done through the team meetings and the collaborative process followed by the team. The final construction of the subject at this point led the team to map the subject from modules through to assessment so that the key components were clear to all design team members. The document (Figure 6.4) was tabled and discussed at a team meeting in July, Year 1.
Figure 6.4. Initial Subject Organisational and Assessment Structure

ESS 440: TEACHING AND LEARNING IN THE INCLUSIVE CLASSROOM
ORGANIZATIONAL STRUCTURE AND ASSESSMENT

MODULE 1
Perspectives on Inclusion

PRODUCT → JOURNAL ENTRY

MODULE 2
Serving Students

PRODUCT → SERVICE DELIVERY DECISION ASSESSMENT COMPONENT

+ 

MODULE 3
Curriculum Adaptation

PRODUCT → CURRICULUM DIFFERENTIATION ASSESSMENT COMPONENT
DIFFERENTIATION STRATEGY ASSESSMENT COMPONENT

MODULE 4
Pedagogy of Inclusion

PRODUCT → LESSON DESIGNS (3)
DIFFERENTIATION REFLECTIONS (3)
THEORY REFLECTIONS (3)

ASSessment Item 1

ASSessment Item 2
Another round of discussion followed, about the volume of content that needed to be covered to meet the assessments for the subject. Three out of five design team members could not see the relevance of including service delivery, which looked at the various models used by schools to cater for the needs of children with disabilities such as withdrawal, part-time integration, segregated settings and full inclusion.

I don’t think providing information about the various models is critical knowledge, particularly at the beginning [of the course]. (Jo)

The reality is that they wouldn’t have a context within which to operate beyond their own anyway, so the various service delivery models would be meaningless. (Lucie)

Aren’t this lot all coming from a context where inclusion is the dominant paradigm anyway? (Pam)

(researcher log, July, Year 1)

There was also some contention about the exact focus of the journal entry, but consensus was reached fairly quickly on requiring students to provide their current perspective on inclusion as a way to track their development through the course. The journal entry was seen as a component that would build towards the student portfolio of work. The final three components of the subject – curriculum differentiation, differentiation strategy, and lesson designs incorporating process and theory reflections – were agreed upon.

Nope, have no issue with any of that. It needs to be there. (Pam, researcher log, July, Year 1)

It’s our core work and we need to cover it early... still think there may be too much to cover there, particularly in the last product but am happy to be proven wrong once we build it all out. (Lucie, researcher log, July, Year 1)

The process of differentiation had been consistently evident as core knowledge from the beginning of our process, further identified and supported by our stakeholders and addressed in the literature.
The final organisational and assessment structure for the subject ESS440 (see Figure 6.5) would be used as a framework for all other subjects; thus the related discussion and the decisions made had an impact on the entire design of the course.

Figure 6.5. Final Subject Organisational and Assessment Structure with Modification Notes
By the time the organisational and assessment design of the subject was agreed upon, a number of changes had been made. The most significant was to the terminology used and ensuring that it was consistent. The original design had been proposed by Nick, whose recent work in an international context meant that a number of terms he used meant something different in our context. The design team decided to use the term *unit* for each discrete component of content and *module* for the container that combined related pieces of work that informed particular assessments. This was also consistent with the current practice within the institution. The service delivery assessment was removed after discussion of its relevance and consideration of the volume of content students were required to complete.

The design team also considered how residential school workshops could be best utilised as part of the subject design process. Residential schools were a face-to-face opportunity for students to meet the lecturers and fellow students, undertake practical work, discuss study topics in depth and clarify any problems, and become familiar with the University and its resources. The residential schools proposed were of 2-day duration and were compulsory. For the design team, the content was paramount:

> We need to think about what we value highly and whether there are particular skills or knowledge that would be best delivered in face-to-face mode and utilise the opportunity. (Nick, researcher log, July, Year 1)

> There are some fairly obvious ones for me already – orientation to study type of work, collaborative practice and that kind of thing. (Lucie, researcher log, July, Year 1)

> We should also be doing the research skills work face-to-face...that is a tough ask in distance mode without any experience. This would also improve the quality – hopefully. (Jo, researcher log, July, Year 1)
This topic engendered more extended and focused discussion within the design team about which capabilities and aspects of the design were non-negotiable and needed to be consistent throughout the course.

The look of each subject should be consistent. This will give an obvious flavour to the course but also provide consistency for students. I know with other courses many of the student complaints are around orientation and the “look” being different every time they start a subject. (Eve, researcher log, July, Year 1) These concepts were heavily directed through reference back to our original simple rules and consideration of whether these needed to be revisited in light of further design progress and stakeholder input.

I’m wondering about stakeholder linkage as an explicit simple rule as this is embedded in what we are doing. (Eve)
I can kind of see what you are getting at but the same could be said for most of our simple rules. In most instances they are just good practice but...(Lucie)
they serve as a reminder and a reference point. (Jo)
Yep, I think it’s more are there any that may not be relevant or we haven’t actually put into practice at this point? (Lucie)
Or anything we need to add that has become evident during the process? (Nick)
(recorded meeting transcript, July, Year 1)

After referencing back to the original simple rules, the design team felt that these still covered the work we were doing and accurately reflected our intentions.

The theoretical concepts were embedded in all aspects of the course structure including assessment, the conduct of workshops and the nature of the interaction among the students in the course. In this manner, the embedded design principle was enacted throughout the process of subject design. The goal was to build student capacity to act in a self-organising and emergent manner as inclusive educators by the end of the course. The course structure built these capabilities by:

- Creating an expectation that all students assumed membership of a self-organising collaborative group that worked together during workshops and interacted via the online subject forum throughout each semester.
- The workshops and assessment structure, with a focus on collaboration, required that students worked in a self-organising capacity in order to successfully complete various authentic assessment tasks.

- Students shared feedback on a formal and informal basis and pooled the expertise in the group, building collective capacity while also ensuring individual accountability. In this way the structure of the course modelled the pooling of collective intelligence for students in order that every learner could best fulfil their individual responsibilities to each other and the course.

- The structure of the workshops mirrored the challenges and opportunities that existed in an effective inclusive school and classroom. The students were immersed in an inclusive learning environment where the expected outcomes were nested in the actual organisation and conduct of workshops and the overall design of the course.

- The design of the course, including the teaching and learning methods employed to deliver it, utilised the same approaches employed by teaching professionals in inclusive settings. This nested similarity was designed to increase the generalisability of the experience to school settings and to reinforce the key ideas addressed in each subject within the course.

- Students used the collaborative approach to address problems and develop the solutions required to complete various assessment pieces that represented mastery and met graduation requirements for the course.

  (Meeting minutes, July, Year 1)

These concepts had implications for how the design team built the subjects and shaped the content and delivery. The design team also agreed that the simple rules originally established were still appropriate.

In the final step of the process, the assessment pieces and outcomes were used to build a general framework for each subject. This process involved matching the learner outcome or expectations with a specific focus topic or question, a pedagogy, and appropriate time allocation as part of an instructional framing activity that built the skeletal structure of each subject in the course sequence. By this point in the process the design team members in their everyday work were actively engaging with the
theoretical principles of embedded design, dispersed control, self-similarity and the creation of a shared schema for feedback.

6.6.1 Overview of subject design
This subject framework was built collaboratively by the design team to ensure maximum cohesion within and across subjects. All the work and decisions that would impact on the entire course were undertaken in a cooperative manner. The intended structure was that all design team members would collaborate on the development of all subjects. This was done through an exemplar model, with all design team members working on the first subject of the course and then distributing leadership once the design of subjects was agreed upon.

At this point in the process one of our initial design team members, Pam, left the institution due to illness. This coincided with the return of one of our other colleagues, Ali, from a period of leave from the institution, so fortunately the impact on the work of the team was minimal. During the following year, as the writing of the final subjects in the course was being completed and the delivery intensified, we were fortunate to gain another permanent team member, Dan, due to increased course enrolment numbers. These changes provided a challenge and an opportunity in terms of the uptake of the schema with new team members on board. The design team recognised that the design had to be robust and adaptable enough to deal with change.

6.6.2 Subject structure
Once the terminology being used throughout the course in relation to subject design had been settled on by the design team, a model of assessment design was discussed. Jo noted that a major barrier at this point was:

the directive from above of only having two assessments per subject. (researcher log, August, Year 1)
The general tenor of the discussion in response to this by the design team positioned this issue as fairly prohibitive. The eventual solution discussed focussed on how we could work with and around this constraint and still have the outcomes for students we would like. At this point, Nick made the suggestion:

Perhaps we could use a model where smaller components built towards the actual, complete assessment. (researcher log, August, Year 1)

He then drew a rough scaffold on a whiteboard to provide the team with a visual reference point. This was copied into the researcher log as Figure 6.6.

Figure 6.6. Assessment Component Relationship to Content and Assessment Item

= Assessment

This appealed to all design team members:

I like the idea of smaller bits (components) building to the assessment. (Ali)
I also think having the smaller chunks makes the tasks seem more doable. (Lucie)
I like it because everything the students work through is important as it all contributes to their assessment. (Jo)
Having students work on their assessments throughout the session is a good idea and might move them away from the “night before” rush. (Eve)
It had organisational appeal for me. (Nick)

(meeting transcript, July, Year 1)
This assessment structure resonated with all the design team for different reasons – the building from one task to another, the smaller useable structure, the necessity for students to work on an assessment throughout their enrolment because each part contributed, the lower likelihood of students being able to complete their assessment the night before it was due, and the organisational appeal.

To ensure consistency and further embed the simple rule of a common subject framework, each of the subjects in the course was divided into two modules comprised of a number of units. The number of units varied from subject to subject. There were two assessment items in every subject. This was determined by the Faculty regulation at the time specifying a maximum of two assessment items per subject. The assessment items were made up of parts or assessable components where the tasks required to complete the components were described in each unit. Figure 6.7 illustrates the final structure designed.

Figure 6.7 Assessment Item Structure

For example, in the second unit of Module 1 in *Teaching and Learning in the Differentiated Classroom* students were required to complete three parts of the Assessment Item (Components A, B & C) for that module. In the third unit students completed two additional parts (Components D & E). When completed, components A,
B, C, D and E made up the total Assessment Item to be submitted as one complete assignment on the due date indicated.

6.6.2.1 Advance organisers
In all subjects, each unit within the subject followed a particular organisational structure modelled on the concept of an advance organiser. All design team members were familiar with advance organisers through their various experiences working as educators, and we all associated them with good practice. The biggest contention concerned the form the advance organiser would take:

We do need some narrative though to frame the work. (Nick)
We need to have a consistent organisational narrative for all the subjects. (Ali)
I think a visual would be really helpful – I know they help me. (Eve)
Yep, I would support a visual as well as that always helps to make sense of text. (Lucie)

(researcher log, July, Year 1)

At this point Jo made an obvious suggestion to help direct our conversation:

Could we create a structure that combines the narrative and visual? (Jo)

The final framework contained a narrative to introduce the work followed by a graphic to support the detail and direct students to the specific content.

Each unit began with an overview of the unit content, the teaching and learning strategies in the unit and the assessment item to be completed relating to the unit. An example of this in our collaboratively built subject *Teaching and Learning in the Differentiated Classroom* was the transition to Unit 2 from our general introduction to inclusive practice in Unit 1, and the first of the inclusive pedagogies to be taught to students – Direct Instruction (DI). This work aligned with the earlier design discussions of using research-based practices and best practice in our field and supported the simple rule established by the design team of embedding research in the course-work.
In this unit you will build capacity with direct instruction as a pedagogy to create the conditions for curriculum and instruction to be differentiated. Direct instruction involves systematic teacher demonstration, modelling, and provision of feedback. It is particularly useful for students who have complex support needs and require many adaptations to both curriculum and instruction to enable learning.

As with other approaches addressed in the subject, direct instruction has structure and guidelines that allow teachers to function in inclusive ways. This unit will guide you through activities that will enable you to understand and apply direct instruction appropriately. You will read, create, reflect, read more deeply and reflect again.

The assessment item for this unit is to build a Direct Instruction Design (DI) that includes the following components:

1. Learner outcomes
2. A DI lesson that you will build using a research-based design template.
3. A 500 word reflection explaining your lesson from a theoretical perspective.

Each of these components is combined in what we are calling a DI Design which is submitted as a single assignment on the due date. However, in order to help you manage your time and to build your assignment in a logical sequence, we have treated them as separate parts in the study guide that follows. The concept map gives you an overview of the learning process employed in this and other units throughout the module.

(ESS440, Module 1, January, Year 2)

The two inclusive pedagogies focused on in the subject direct instruction and cooperative learning comprised the following units in the first module of the subject. To assist students in their understanding of the process, a graphic organiser was provided, as shown in Figure 6.8:
The graphic organiser moved students through the various tasks associated with the unit and made explicit connections between the tasks. In this example, the create and reflect tasks aligned with a specific component of the final assessment task. The intent of the design team was to use smaller components to build to the final assessment task, rather than have a large final assessment. Once the subjects moved to a fully online mode of delivery, students were able to click on the related box to take them to the particular task. The design team used this consistent scaffold in all subjects and as an advance organiser in all units. This was a practical way with which we could ensure a common subject development framework as determined by our simple rules.

6.6.2.2 Task structure
Within each unit, content was broken up into tasks that led to components that were pulled together to create an assessment submission. Creation of the tasks within each
unit was not difficult for the design team. In the previous version of the course we had segmented our content into discrete sections and believed that a similar principle would work well here. The team agreed upon a structure where each task would consist of:

- a brief introduction to the reading,
- a summary of the purpose of the reading,
- connections made between readings where there was more than one, and
- a series of guide questions to direct students to focus on particular aspects and key concepts.

(meeting minutes, August, Year 1)

Students did not need to submit answers to the questions as a subject requirement, but often they used these questions to direct their discussions on the forum. Task 3 from the advance organiser (Figure 6.8) demonstrates the task sequence:

Direct Instruction refers to a rigorously developed, highly scripted method for teaching that is fast-paced and provides constant interaction between students and the teacher. Considering this, read Using Direct Instruction as a teaching strategy (Killen, 2009) Reading 1.2.3.

This is an introductory overview of the strategy that outlines situations when direct instruction is an appropriate strategy to use to encourage learning amongst a wide variety of learners. Pay particular attention to the section of the chapter which looks at planning and implementing direct instruction.

This reading has various guide questions in grey text boxes throughout the chapter. Consider these questions as you read the chapter.

Reading 1.2.4 by Bechtol & Sorenson (1993) provides an overview of several “instructivist approaches” including Direct Instruction (which is referred to as the Direct Teach Model). Note particularly the explanation of the Hunter model which is described on page 107. This will link well to the reading that follows.

Also read about The Madeline Hunter Model of direct instruction Reading 1.2.5 for a clear outline of how to employ the direct instruction strategy.

Reading 1.2.6 is an example of a Direct Instruction lesson. Even though the examples focus is a primary comprehension lesson, the principles remain the same regardless of the age of students you are working with. Note especially the use of important features that may be used across subject areas.

Use the following to guide your reading:
What are the essential characteristics of Direct Instruction?  
Are the characteristics the same for the various “instructivist strategies”?  
What is the evidence to support the characteristics of Direct Instruction?  
What kinds of skills may be taught with these explicit teaching principles?  

Each of the learning tasks in the course required students to self-organise, based on the input and structure provided by the course and subject designs. The subjects built this capability over time as assessments completed in one subject served as a foundation for the next. This process culminated in the inclusive education project which required students to implement and evaluate an assessment completed in one of their earlier subjects in the course. This, together with the course portfolio, served as the capstone product for the course.

6.6.2.3 Assessable components  
Each task within a unit builds knowledge and capacity for students to be able to complete the related assessable component that contributed to the assessment task.  
Completion of the readings in the example above, Task 3, led to the knowledge to complete Task 4 that required students to build their own Direct Instruction lesson. As with the structure for the other tasks in the unit, the task began with a general overview and connections made to the previous tasks that were required knowledge for the completion of this one:

Use the planning guide that follows to build your own example of the direct instruction approach after reading about its structural characteristics and examining its application in the readings above. Imagine that another teacher will be required to teach your lesson. Write it in a way that another teacher could use. The description should stand alone.

This then led into a description of the task and the assessment criteria about the particular assessable component, which in this case was a direct instruction lesson design, shown in Table 6.3:
Table 6.3 ESS440 Module 1 Direct Instruction Assessment Information

<table>
<thead>
<tr>
<th>Title of assignment:</th>
<th>DI lesson plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length:</td>
<td>2 pages</td>
</tr>
<tr>
<td>Value:</td>
<td>10%</td>
</tr>
<tr>
<td>Rationale:</td>
<td>This task will help you apply the principles of direct instruction to your own lesson design and in doing so situate this pedagogy within your own practice and experience.</td>
</tr>
<tr>
<td>Task:</td>
<td>Use the planning guide that follows to build your own example of a direct instruction lesson after reading about its structural characteristics and examining its application in the readings. Select a classroom, level and topic of your choosing. Make this something you can use. Imagine that another teacher will be required to teach your lesson. Write it in a way that another teacher could use. The description should stand alone.</td>
</tr>
<tr>
<td>Content of your response:</td>
<td>The lesson should include the essential research-based characteristics of direct instruction and have outcomes that are clearly stated.</td>
</tr>
<tr>
<td>Submission:</td>
<td>EASTS with components A-E when completed. See Subject Outline for due dates.</td>
</tr>
</tbody>
</table>

In this instance, due to the specificity of the assessable component a planning guide was also included that was informed by the research-based characteristics explored through the readings set for the unit (see Table 6.4):

Table 6.4 ESS440 Module 1 Direct Instruction Planning Guide

<table>
<thead>
<tr>
<th>Expected learner outcome:</th>
<th>What do you expect the learners to know and be able to do at the conclusion of this lesson? State these outcomes in operational terms as per Howell &amp; Nolet using: Given...What...How well</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the lesson:</td>
<td>Describing the topic and what you intend to do.</td>
</tr>
<tr>
<td>Task structure:</td>
<td>How will you account for background knowledge?</td>
</tr>
<tr>
<td></td>
<td>How will you demonstrate/model the skill?</td>
</tr>
<tr>
<td></td>
<td>What activities will provide for guided and independent practice?</td>
</tr>
<tr>
<td></td>
<td>How will you monitor progress?</td>
</tr>
</tbody>
</table>
6.6.2.4 Assessment criteria

For each assessable component designed, discrete assessment criteria were created. As the value of each component was typically 10-20%, there were usually two to three criteria only, as the design team recognised that the accumulation of the various components into the final assessment meant that about 10-12 criteria contributed to the totality of the assessment. The following criteria were used to assess this component of the DI Design:

- Design elements of DI evident throughout;
- Clarity of DI lesson;
- Utility of the lesson in practice.

After the collaborative completion of this step focusing on subject structure, individual design team members assumed responsibility for the subject development process. This involved work on the complete subject structure incorporating advance organisers, tasks, assessable components and assessment criteria. The cooperative design metaphor was continued through subsequent team meetings when work undertaken on subjects was presented to the team for feedback and refinement. This level of involvement built the capacity of all design team members and allowed successful dispersed control as design team members took the lead in writing individual subjects.

6.6.3 Learning design elements

Course features that reflected the design team’s intent with development of the simple rules included the embedded nature of collaborative practice through the design team meeting process. There was also continual referencing back to standards and the embedding of this alignment through the creation of scaffolded steps in the design process with the development of products and sub-products. Content was considered in relation to practical value and consideration of how these links could be further enhanced through connections to theory and research. The authenticity of assessment
was ensured through the link to standards, practice in the field and contemporary research.

To further support all this design work in practice, the following learning design elements were employed in the design and implementation of the course: a reflective learning cycle, journal entries, course portfolio, collaborative practice and feedback processes. Use of these approaches in the design and delivery of the course provided students with the opportunity to experience, in their own learning, the approaches about which they were building knowledge and skill. The first residential school was utilised to introduce students to the notion of collaborative practice and the feedback processes with which they would be engaging throughout the course.

6.6.3.1 Reflective learning cycle

Each member of the design team had particular elements about which he or she felt strongly. The educational designer in the team, Eve, had strongly advocated for the use of reflection throughout the course when we began to consider elements to be embedded throughout. During personal discussions with Eve about her interest in reflection, it was apparent that it had been informed by various factors:

- Personal experience of being a student and the benefit of reflection,
- Professional experience and the benefits stated by students,
- Anecdotal comparison of student experiences in courses with and without reflective practice

(researcher summary of personal discussions, August, Year 1)

The course design positioned students as ongoing reflective- researchers of inclusion, best practice and their own practice. Students entered the course as teachers and progressed through the roles of practitioner in the field, advocate and system change agent. Students also built their reflective capabilities as their skills in collaboration and providing feedback developed.
When discussing the process of reflection with the design team Eve often drew spirals while explaining her ideas. Figure 6.9 is indicative of that work. Eve explained:

The spiral represents the learner’s field of experience and process of growth. We provide students with information and knowledge, ask them to describe the information in a manner that works for them, interpret the information and link it to their context, evaluate relevance and appropriateness, and finally act on this new knowledge. (Eve, meeting recording, August, Year 1)

I think linking to their context is important because that will impact what happens next. I’m sure there will be bits and pieces that may not be as relevant. (Pam, meeting recording, August Year 1)

That’s why I really like the evaluation component of this...we are asking students to make an informed decision and explain why something is or isn’t relevant through this process of reflection. (Nick, meeting recording, August, Year 1)

The reflective cycle concept resonated strongly with three of the design team members, with the other two relatively neutral:

I have no real issue with the process of reflection and think it can be valuable but I wonder about the content added and how you can give a personal reflection a mark. (Jo, personal communication, August, Year 1)

At the time I felt similarly to Jo and noted in my researcher log:

Have no particular issue with the reflective cycle and can see the benefits – worry about how student workload may be impacted and Jo’s point about marking it is a good one. Hate allocating a mark to someone’s personal opinion because then we are still saying that one particular opinion is of more value, or
more correct, than another…we’ll just have students telling us what they think we want to hear. (Lucie, researcher log, August, Year 1)

A number of weeks later when we were looking at the scaffolds for all subjects, Eve mentioned:

The cycles of the spiral could also be used to represent learning readiness. We aren’t all at the same point at the one time as learners. (Eve, researcher log, August, Year 1)

The multiplicity of ways that the reflective spiral could be interpreted and used was seen as a positive and team members felt comfortable with that as students could be asked to complete a self-reflection, reflection of the field, their particular context and so on.

In the final version of the reflective cycle presented to students in the course outline document, students were provided with the following (Figure 6.10):

Figure 6.10. Course Reflective Cycle

The initial spiral cycle on which the design team had focused evolved from the knowledge- and content-focused process to the practical reflection required through the design of the course as presented to students. The reflective learning cycle was embedded in the course through a series of interconnected and nested cycles of learning that progressed through technical, interpretive and critical levels of thinking.
6.6.3.2 Journal

Students were asked to write a reflective journal throughout the course. Some entries in the journal were a required component of a subject (accorded 5% of the assessment requirement in a subject). The required entries took the form of a compendium of word-processed documents each defined by the subject journal entry requirements.

Task: use your readings and experiences to develop a 500 word journal entry that describes your position on inclusion. The piece should be disciplined by your readings and provide support for strong claims and views. When you have completed your position piece, post it on the forum for your peers to review. Be prepared to read and comment on your peers’ contributions.

(ESS440, Module 1, January, Year 2)

The journal enabled students to reflect upon the roles, contexts and positions assumed in relation to both the input provided by the course and each other. This process further supported the feedback and reflective cycles in the subjects. The course was designed to help students understand and experience the different forces and forms of agency that influence the way inclusion happens in schools. This included, yet was not restricted to, an understanding of personal, community and system influences that positioned educators as both consumers and agents of change in larger complex systems. The intent of the journal was to assist students to see these forces as constructions, dynamic in nature, shaping their interactions with children, their school and the inclusive education field more broadly. It was hoped that, as a result, students would build a meta-perspective about the way change occurs and their collaborative and self-organising role in this process.
6.6.3.3 Course portfolio

The course portfolio (see Figure 6.11) served as an evolving record of each student’s experiences in the course and as a compendium of resources for the group.

Figure 6.11 Course Portfolio Container
The portfolio site also had a page from the primary portal connected to the journal and to individual subjects (see Appendix 6J). The portfolio was employed as a basis for reflection as students passed the waypoints in the course represented by subject completion. As such, it became a tangible record of a student's evolving schema of inclusive education. As part of the design process, the team ensured that adding an item was a relatively easy process. The tool finally utilised for the course portfolio meant that the process was similar to attaching a document to an email message. Ensuring that all items were deposited in the Course Portfolio was a course graduation prerequisite.

6.6.3.4 Student collaborative practice

Collaborative practice was embedded throughout the entire course. The collaborative process used by the design team as detailed earlier in this chapter (6.3.1) was modelled and used with students at the first residential school, when the underpinning of collaborative practice throughout the course was detailed. The use of forums for collaborative engagement and to provide feedback was also demonstrated at the first residential school. This was seen as a logical inclusion explicitly expressed by two members of the design team at different points in the design process:

If we are expecting students to collaborate we need to do the same ourselves and model it through the course. (Eve, researcher log, May, Year 1)

It is fairly obvious that collaboration is highly valued by not only our stakeholders but the sector more broadly – it is a bit of a buzz word. We need to make sure our students are trained in and exposed to it. (Jo, researcher log, July, Year 1)

Collaborative practice was also embedded in an assessment to be completed at a later residential school where students ran a collaborative meeting to develop an IEP for a child. This experience was then built on with the subsequent assessment requiring students to:
...employ the learning from Module 1 to examine professional development and to design a half-day professional development program in the area of collaborative problem-solving. The target audience for the program are the colleagues in your work setting. You will learn what to include in an effective professional development program and how to build those elements into your own program. We will use readings to identify the characteristics and skills required for effective professional development. You will revisit the key ideas and concepts about collaboration addressed in Module 1.

(ESS426, Module 2, 2013)

As for all subjects, prior learning was continually referred to and built on. Collaborative practice was required at various points throughout the course and as a support through the feedback process.

6.6.3.5 Student feedback processes

A focus on the feedback processes embedded in a number of assessments was discussed as a way to disperse control for the conduct of individual subjects and the development of the capstone product for students. The design team discussed that this could occur by:

- Ensuring that tasks were designed to build towards assessments that required students to formally evaluate the work of their peers;
- This model and process needed to be followed throughout the course;
- Ongoing exchange needed to be engaged with during residential schools and online forums.

(summary of meeting minutes, March and May, Year 1)

The goal was to employ dispersed control to build the meta-understanding of individual subject content throughout the course, positioning students to build a self-organised culture of professional practice within the group and subsequently within their own practice.

Multiple levels of feedback were employed. Students could be asked as part of an assignment to provide formal feedback to a peer via a forum, and evidence of consideration of this feedback would need to be clear in final assignment submission.

Now you have posted your rating scale to the forum, take the time to review the rating scales that have been posted by your peers. Identify the features you
consider to be effective or ineffective in the rating scales of your peers. Go back
and revise your rating scale in terms of the observations and ideas you derived
from the work of others. Provide a 300 word rationale for the changes you made
or did not make to your scale.

(ESS599, Module 1, Year 3)

Each student needed to rely on a peer to provide this feedback. Without it, the system
created could potentially fail. To ensure that all students were participating within the
system their final assignment needed to include the feedback they had provided to a
peer, a description of their original product and then the effect of that feedback on their
final product.

6.6.3.6 Linking the learning design elements

Elements of the portfolio and journal reflections required students to interpret and
reflect upon their own work and that of their peers. These reflections instantiated new
perspectives and ideas on their journey through the course and supported completion of
the reflective cycle. As journal entries were not restricted to assessment items in a
subject, students were also encouraged to describe and discuss their broader course and
subject involvement as it related to their experience as an inclusive educator and
student. Other stimuli could include critical work events that related to the course,
workshop and conference experiences beyond the course, reflections from online forum
discussions and other direct classroom or school experiences. The journal and portfolio
helped students enrolled in the course to build their schema for inclusive education and
reflect on their evolving roles as inclusive educators. The journal was an anchor or
beginning point for this reflection.

Throughout the course, connections within and between subjects were constantly
highlighted. By the time students were completing subjects in their final session, it was
an expectation that they would be making these connections in their assessment
submissions and actively scaling up their work within their contexts. This was evident in ESS599, a subject offered in the final session of the course:

This module provides you the opportunity to think about ways and approaches for scaling up inclusive practices in schools. This module encourages you to use knowledge from your coursework to date and reflect on your experience, observations, successes and challenges from the field in order to deepen your understanding of the role of law, policy, resourcing and scaling up practice in inclusive education.

This module is comprised of four units. The units are structured so as to provide a focus from the broader context, down to a specific focus on the learning environment. Unit One provides a focus on the historical context for inclusion. Unit Two focuses on current law in inclusive education. Unit Three emphasizes inclusive education policy. Unit Four focuses on scaling up policy and legislation into practice.

(ESS599, Subject introduction, Year 7)

6.6.4 Iterative cycle of stakeholder feedback

At this point in the design process, the subject design and related content were presented to our key stakeholders again for feedback. This was done for two key reasons: to ensure that we were meeting the requirements outlined in our previous meeting and to check that the subject design was responding to those needs.

This particular meeting was very positive in terms of the teaching and learning design. The stakeholders emphasised that more of the potential issues were related to university practices and support systems:

Some of the potential students have not been in a formal academic setting for over 20 years – what do they need to know? (A, June, Year 1)

Who can the students contact if they are having difficulties with technical aspects such as computers? (L, June, Year 1)

Just an understanding of how the university system works would probably be very helpful. (V, June, Year 1)
It was apparent that the academic and support skills had to be the bulk of our first residential school workshop, although it needed to be tempered by the skill development required for success with course content.

6.6.4.1 Residential school workshops

After our discussions with the stakeholders and practical consideration of the residential school workshop model that would best work for them, it was decided to work with a 2-day residential school model familiar to the design team. With the implications of cost for each of the students to be replaced in their home school for the period of the residential school, their travel and accommodation, four residential schools were negotiated for the duration of the 2-year course.

From a design team perspective it was important to position residential schools at critical points of the course. There were a few points the team had identified as pivot points – an introductory residential school to cover academic skills that the stakeholders had identified as a need and the design team had wanted to embed throughout the course design; a workshop linked to the assessment subject due to the challenging nature of some of the content; and an introduction to project development and the research skills required for the capstone project.

All these points were agreed upon by the stakeholders as they seemed to occur at evenly spread points throughout the course. With the opportunity to consider another residential school, we decided to utilise the time students were spending face-to-face and embed an assessment within one of the residential schools. Our final residential school structure looked like this:

Residential school 1: Introduction to study at RU; ESS440 – writing learner outcomes and pedagogies of inclusion
Except for an alternative structure used by the first cohort due to a single subject start, students were completing two subjects a semester. They were encouraged to ask questions about the other subject in which they were concurrently enrolled in that was not the focus of the residential school.

6.6.5 Role of theory in subject design
The simple rules, embedded design, self-similarity and common framework made it possible for the design team to disperse control. Schema building was evident as the first subject in the course was collaboratively designed and built. This design metaphor was similarly expressed in the design of all subsequent subjects in the course. A framework for collaborative practice and feedback was built to embed these elements in the learning design for students but these features were similarly expressed in action by the design team throughout the design process. The simple rules also provided the opportunity to embed reflection as a source of agency in the design.

6.6.6 Summary of subject design and learning design
The final aspect of the design process incorporated subject design and learning design. This included the development of task structure, assessable components and assessment criteria as part of the subject design, and a reflective learning cycle, journal, portfolio, collaborative practice, feedback and residential schools as learning design elements to be utilised. Careful consideration of all these elements supported the move to disperse control of the intense design process followed until this point with the knowledge that all design team members were using a common design framework and embedding team-determined simple rules. Collaborative work and engaging in the feedback process
continued as individual subjects were constructed over the following year, using ESS440 that had been created collaboratively as a practical framework.

6.7 Final Course Design Product

The purpose of the Master of Inclusive Education course was to graduate highly skilled inclusive educators capable of working in a collaborative capacity in a range of inclusive educational settings. The course addressed the interests and needs of school-aged children across the developmental spectrum. The specific goal of the course was to provide the cohort of students (who were upgrading or specialising their initial teacher qualifications) with the core knowledge and skills required to teach, consult, collaborate, advocate and evaluate in an inclusive service delivery model. The course also focused on the research, advocacy, evaluative knowledge and skills required to scale-up innovations in inclusive education to the level of the school.

The course was designed to cover international and Australian theory as well as best practice in the field of inclusion. The final course created consisted of seven subjects to be completed over 2 years, with two subjects completed per session and a year-long project completed in the second year. This sequence was slightly different for the first cohort, when it was designed for members of a unique stakeholder group who wished to begin with a single subject in the first session (cohort 1 in Table 6.5). In the following year the year-to-year sequence was utilised for additional stakeholders who were interested in participating in the course and other students interested in pursuing a degree in Inclusive Education (cohorts 2-5 in Table 6.5). These cohorts completed the subject sequence as designed where two subjects were completed per session.
<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb – cohort 1</td>
<td>Feb – cohort 1</td>
<td>Feb – cohort 1</td>
<td>Feb – cohort 4</td>
<td>Feb – cohort 5</td>
</tr>
<tr>
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<td>ESS406/ESS426</td>
<td>ESS540</td>
<td>ESS422</td>
<td>ESS440</td>
</tr>
<tr>
<td>April – cohort 1</td>
<td>April – cohort 2</td>
<td>April – cohort 2</td>
<td>April – cohort 3</td>
<td>April – cohort 4</td>
</tr>
<tr>
<td>ESS422</td>
<td>ESS422</td>
<td>ESS599</td>
<td>ESS527</td>
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<td>April – cohort 1</td>
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<td>April – cohort 2</td>
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<tr>
<td>ESS423</td>
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<td>April – cohort 1</td>
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<td>April – cohort 2</td>
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<td>ESS490/ESS599</td>
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<td>ESS422</td>
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<tr>
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<td>July – cohort 1</td>
<td>July – cohort 1</td>
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<td>July – cohort 2</td>
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<tr>
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<td>ESS406/426</td>
<td>ESS450</td>
<td>ESS527</td>
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<tr>
<td>July – cohort 1</td>
<td>July – cohort 1</td>
<td>July – cohort 1</td>
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<td>July – cohort 1</td>
<td>July – cohort 1</td>
<td>July – cohort 1</td>
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<tr>
<td>ESS426</td>
<td>ESS426</td>
<td>ESS527</td>
<td>ESS527</td>
<td>ESS527</td>
</tr>
</tbody>
</table>

A brief summary of each of the subjects included as the subject abstract for course approval (in italics) is provided here so that the key content of each and synergies between subjects can be seen. Connections to particular design features are highlighted after each subject abstract.

6.7.1 Teaching and Learning in the Differentiated Classroom (ESS440)

This subject builds skills and knowledge in the collaborative and cooperative practice that enables students to differentiate instruction in the inclusive classroom. This includes the design and delivery of approaches that actively engage students in the implementation and management of instruction, including mastery teaching, cooperative learning, peer mediation and strategies for adapting instruction to deal with individual difference. Knowledge and skills associated with these teaching and learning approaches are placed within the broader context of the design of a differentiated curriculum with a specific focus on literacy and numeracy. Technology to design, implement and evaluate instruction will be employed throughout the subject. This subject is the cornerstone of the Masters degree and Certificate programs. The portfolio product for this subject is a module of differentiated instruction.
Within each subject abstract, particular design features and the portfolio product were highlighted. This subject embedded the provision of feedback in both the content and as part of an assessment requirement when students were differentiating instruction. There was also a strong theory-to-practice link through the need for students to design, implement and evaluate a unit of instruction.

6.7.2 Assessment and Evaluation for Learning (ESS422)

This subject focuses on curriculum-based and authentic assessment and evaluation approaches that can be employed to differentiate the learning experience for all learners. Students build skills in the design of authentic assessment tasks, portfolio assessment, functional-based assessment, the use and contextualisation of standardised assessment tools, and in curriculum-based measurement across the curriculum. The subject will focus on how assessment and evaluation information can be employed for instructional decision-making in inclusive settings, and in organising and evaluating the differentiated classroom. The subject will place priority on the assessment of literacy and numeracy. The portfolio product for this subject is a classroom and school assessment plan.

This subject highlighted the simple rules of authentic assessment, contextual referencing and theory-to-practice. Students were required to use the particular assessment tools embedded through the subject and apply them in their contexts. Again, priority was placed on literacy and numeracy based on design team and stakeholder input.

6.7.3 Designing and Managing the Inclusive Learning Environment (ESS423)

This subject places the traditional focus on classroom and student behaviour management within the broader context of a comprehensive and integrated approach to the design of differentiated learning environments. This includes the development and management of instructional groups, the active and positive engagement of students in managing and implementing the instructional process and strategy for building positive student engagement with the learning environment. The portfolio product for this subject is a comprehensive classroom management plan.

This was the first subject to make explicit connections back to earlier subjects through reference to differentiation that had been covered in ESS440. Students were required to
implement their ideas in their contexts through the completion of a portfolio product that was classroom based.

6.7.4 Collaboration, Consultation and Teamwork in the Inclusive Classroom (ESS426)

Collaborative decision-making resides at the core of effective inclusion models. In this subject students learn effective practice in the processes of interpersonal, cross-disciplinary, and organisational collaboration and consultation. Practical application of skills in inclusive settings is required. Topics include building a repertoire of collaboration skills, collaborative problem solving, teamwork and teambuilding that involves working with multi-disciplinary teams in the inclusive school. Students will develop the skills required for collaboration and how to evaluate collaborative process. The portfolio product for this subject is a collaborative meeting record.

The core assessment in this subject was linked to the related residential school where collaborative scenarios were developed by students to demonstrate the ability to liaise with multiple stakeholders and to use collaborative process to generate solutions. This was how students could demonstrate the skills of collaboration in practice and reflect on common issues raised in practice. The simple rules of theory-to-practice, contextual referencing and authentic assessment were addressed.

6.7.5 Inclusive Education Legislation, Policy and Resourcing (ESS599)

The subject will examine the current legislative and policy basis for inclusion. Students will reference their work in this subject to their current practice identifying needs, strengths and opportunities in their classrooms and schools related to the delivery of inclusive education. The portfolio product for this subject will focus on the development of an inclusive education policy for school settings.

Research was strongly embedded in this subject and, as it was a second year subject, a higher level of integration of prior knowledge was expected. The subject structure and content explicitly picked up elements of the course design process by requiring students to consider strengths, needs and opportunities in relation to legislation and inclusion. The assessment product was scaled- up to a whole school focus.
6.7.6 Developing the Inclusive School (ESS540)

This subject addresses the way schools need to develop in order to become more responsive to individual difference. This includes the role of the inclusive educator as an agent and strategic planner for change and resourcing of the inclusive school. The subject will examine contemporary national and international literature on school reform, improvement and organisational change. The subject will focus on the way a school can self-organise and plan for learner diversity. The portfolio product for this subject is the development of a plan for the inclusive school.

This subject had a whole-school focus that enabled students to demonstrate their ability to scale-up their knowledge. There was also a strong and explicit focus on the student as a change agent in her or his context and on the use of research and evidence to inform practice. The assessment product was focused at a school level, with a school-wide plan for inclusion.

6.7.7 Inclusive Education Project (ESS527)

The Inclusive Education Project is the capstone experience in the Masters Degree course. Students will implement and evaluate one of four products developed previously in their course. The subject will draw heavily on contemporary research and practice in program evaluation. The evaluation can be employed to further the school’s capacity and commitment to the goals of inclusive education. This project can make a substantive contribution to furthering inclusive practice in schools. The portfolio product for this subject is a complete evaluation of a program plan implemented in the student’s school or classroom.

This year-long subject explicitly required students to go through their portfolio and choose a product to implement and evaluate through the application of research in program evaluation. This was seen as the capstone product wherein students could demonstrate their understanding of inclusive practice developed through the course and their own evolution into an agent of change.

6.7.8 Complete course design

This section summarises the role of the design elements described in this chapter by showing the process as applied to a single subject, ESS426 Collaboration, Consultation
and Teamwork in the Inclusive Classroom. Included is the way the application of the five key components – standards, product, sub-product, assessment and task structure – produced a subject focused upon collaboration. The subject was designed to enable students to use collaborative process and embed it within the organizations in which they worked.

6.7.8.1 Standards

The set of complete standards for the course is included in the appendices (see 6K). Standards included in the map that had a collaboration focus and were specifically mapped to ESS426 were:

- the teacher collaborates with regular education teachers and related services for support of students with diverse learning needs
- the teacher collaborates with general educators, administrators, related services personnel and parents in the development and implementation of the IEP
- the teacher, in collaboration with other stakeholders, develops appropriate annual goals and short term objectives/benchmarks
- the teacher understands the importance of non verbal and verbal communication
- the teacher develops collaboration and consultation techniques for working effectively with parents, teachers and other professionals
- the teacher collaborates with families and others in the assessment of students with diverse learning needs

(meeting minutes, May, Year 1)

The standards used to design the subject also included some of the more general course goals that focused on modelling respect and demonstrating positive attitudes toward children with diverse learning needs.

6.7.8.2 Product

The particular product developed that related to ESS426 had a collaboration and communication focus. As can be seen by the following extract from the product document, the scaffold at this early stage of the process contained quite a lot of content. Prior to the design team purposefully re-examining all the products with our simple rule of less is more at the forefront of our minds, a number of later products suffered from
content overload as content were moved from ESS440, the first subject that the design team were building together.

* Know
  - about relevant stakeholders – who they might be and their perspectives
  - communication
  - positioning
  - genre shifting
  - meetings – what is a meeting
    - roles – timekeeper, scribe etc
* Develop effective communication skills
  - reflective listening
  - open questions
  - equal voice
* Develop effective meeting skills
  - meeting planning and conduct
  - fulfilling roles
  - action planning, implementation and evaluation
  - transcribing
* Analysis of video model, content and group interaction analysis
* Participate in workshop – role plays, dilemma

(meeting minutes, May, Year 1)

6.7.8.3 Sub-product

The initial sub-products developed from the product were:

Conduct a collaborative meeting – record/evaluate
Analysis of collaborative meeting
Key stakeholders and families included
What difficulties may arise? Consider ‘worst case’ scenarios
Collective intelligences

(meeting minutes, May, Year 1)

By the time the design team was preparing to write the full version of this subject half a year later, there was a more accurate reflection in the sub-products of the original product along with assessment types to be considered at the next point in the process.

The design team broke the subject down into four distinct areas:

Collaborative culture
  - what is required for effective collaboration
  - culture and skills
  - communication skills
  - identifying characteristics in a meeting process
Collaborative skills
- attitudes, predispositions and interpersonal skills
- effective collaboration – what does this look like?

Collaborative processes
- examination of collaborative meeting process
- how do collaborative groups function?
- Participation and/or critique of a collaborative meeting

Developing capacity with collaboration
- Earlier learning put into practice
- Building an effective professional development program
- How to use this knowledge to build a collaborative problem-solving PD for a professional setting

(meeting minutes, November, Year 1)

A central feature continued to be the collaborative meeting, but the design team recognised that understanding of collaborative practice and certain skills in the process needed to be built prior to students being able to lead or critique a collaborative meeting. Moreover, this was a point in the course where we wanted students to begin thinking about how the inclusive concepts they were learning about could be scaled-up and applied beyond their classroom. Incorporation of a professional development activity meant that students needed to be clear about collaborative processes in order to teach their colleagues.

6.7.8.4 Assessment
In line with the simple rules, the design team was cognisant of the fact that the assessment tasks needed to be as authentic as possible. Thus we endeavoured to make the assessments useful and something that students could use in their settings. The design team used the four areas identified as sub-products and created four units in the subject that built capacity in order to complete the assessment components. In the end it was evident that the first three units were connected and these components would build towards the first assessment. The fourth unit was more distinct, requiring the knowledge built in the earlier three units completed and demonstrating the ability of students to
scale up the concepts addressed throughout the subject. This professional development task became the second assessment. The unit assessment breakdown became:

Unit 1 Collaborative culture - develop a readiness scale for collaboration. Complete the scale for your school or setting and write a 500 word rationale justifying the items included.

Unit 2 Collaborative skills - develop an attitude and dispositions scale and skills scale for collaboration. Complete the scale and write a 500 word rationale justifying the items included.

Unit 3 Collaborative processes - read about collaborative process and teams and then apply that knowledge to analyse two collaborative meetings. Use the readings and scales to analyse two provided scenarios.

Unit 4 Developing capacity with collaboration - employ the learning from Units 1-3 to design a half-day professional development program in the area of collaborative problem-solving. We will use readings to identify the characteristics and skills required for effective professional development. You will revisit the key ideas and concepts about collaboration addressed in earlier units. The target audience for the program is the colleagues in your work setting or in a hypothetical setting.

(meeting minutes, January, Year 2)

The assessments were designed to consider future student enrolments in the subject. As part of the initial stakeholder agreement a residential school was embedded in this subject so that students could participate in a collaborative meeting. As this would not always be possible for students wanting to enrol in a full distance offering, unit 3 utilised two scenarios constructed by the design team and placed on DVD as an alternative.

6.7.8.5 Tasks
The tasks in each unit built student capacity in various aspects of collaboration. By the time students were moving into unit 3 of the subject, they had already created a Collaborative Attitudes and Dispositions Scale and a Collaborative Skills Scale. The scales developed were focused on their settings and were informed by research due to the task scaffolds provided in the earlier units. Unit 3 moved into considering the
collaborative process and applying it to collaborative meetings. There were four tasks, with related focus questions, that students needed to work through to build capacity to complete task 5, the related assessable component:

**Task 1**
Read Friend & Cook (2013) Chapter 5 - *Interpersonal Problem Solving*, Chapter 6 - *Teams* and Chapter 9 - *Difficult Interactions*. Review Chapter 4 - *Integrating Skills in Interviews*, with a particular focus on using statements and asking questions. Your task is to consider those skills necessary for collaboration within teams to work.
- What are the steps in collaborative problem solving?
- How do teams develop and how is their effectiveness ensured?
- How can conflict and resistance be addressed?

**Task 2**
Read Salisbury, Evans & Palombaro (1997) and Hobbs & Westling (1998). Both of these articles describe successful examples of collaboration that can be used to compare and contrast with the meeting scenarios on the DVD. When looking at the reading, ask these self-questions in order to begin the planning process:
- What are the essential characteristics of interpersonal problem-solving?
- What makes a collaborative meeting work?
- What makes a team work? Link to the ideas about communities of practice.

**Task 3**
Select and watch two of the three video sequences on the DVD. The video will be included as a DVD with your subject materials.

**Task 4**
Use your two scales: *The Collaborative Attitudes and Dispositions Scale* and the *Collaborative Skills Scale* to rate the two video sequences.

**Task 5**
Use your scale items and responses to write a 500 word critique of each meeting. Then write an additional 500 words comparing the two meetings. In all cases use your scales as an organiser for your narratives. You may want to cluster similar items on your scales.

(ESS426, Module 1, 2013)

The reflective learning cycle was built into the assessment through the scale development tasks associated with units 1 and 2. Students were required to use their own setting to test the scales they had developed and to reflect on how effective they were. These scales were then tested again in unit 3 through the tasks outlined above.
6.7.8.6 Alignment with design principles and theory base

ESS426 was the third subject encountered by students and was the first place in the course where students needed to begin demonstrating their ability to scale up concepts. Collaboration was a design feature that was embedded across all subjects through the design, but this subject required students to explicitly engage with the key concepts in their own settings.

The simple rules were strongly evident in this subject as both design and content were collaborative. The subject was explicitly mapped to standards and there was a clear theory-to-practice link as lack of collaboration had been identified in the literature as an area of need. Students were continually referencing their own contexts through the tasks, which made the assessments authentic. Research was embedded as students required various readings and scaffolds in order to build the tools, such as the scales described, to complete the tasks.

6.7.9 Summary of final course design

Particular aspects were highlighted within each subject due to expressed stakeholder needs through the feedback process followed. For example, an issue raised in the stakeholder meeting was the need to embed literacy and numeracy throughout the course. This was something that came through strongly in the final abstracts of subjects and demonstrated the alignment between subjects, feedback and standards.

6.8 Theoretical Basis Informing Course Review and Design

For the course design process engaged with by the design team, simple rules were used as both a design cornerstone and a catalyst for the day-to-day collaboration that occurred. This ensured a team-based higher education course design process and unity in delivery. Simple rules ensured shared understanding which made it possible for
individuals to work as a team and to also be able to work on elements alone when necessary in the knowledge that the understanding of the design process was the same for all agents involved. The simple rules used were detailed in each of the subject modules so that students could see the rationale behind subject structure. This also served as an effective reminder to all the course design members. Students were also encouraged to engage in their understanding of the simple rules.

To establish coherence in the course design process, embedded design ensured that self-repeating patterns were established. The design integrated common aspects such as peer mediation, authentic assessment, advance organisers and concept mapping into the design framework. Important themes were highlighted within each subject to make the nature of the embedded design clear to all students. The embedded nature of the six principles of self-organisation meant that they were not seen only in discrete instances; rather they were interconnected throughout the process. The embedded design made the enactment of the other principles possible.

6.9 Theory-to-Practice gap
The design team engaged with the theory-to-practice gap at many points in the design process – creation and mapping of standards, the development of a course design schema that was shared by all design team members, a subject building methodology, and authentic assessment. With a scaled roll-out of the new course, whereby one subject was introduced in the first session of Year 1 and two subjects in every session after that (for a total of seven subjects), a staged transition to the full course was effected with continual reflection and consideration of feedback as the later subjects were written.
One of the key considerations throughout the process had been how to assess participant knowledge and understandings without compromising personal views, professional experience and academic rigour. Authentic assessment was seen as the appropriate vehicle, by virtue of the understanding that the processes of acquiring knowledge and applying knowledge are inextricably linked, as knowledge is temporary, developmental, socially and culturally constructed (Hamada & Scott, 2000). Through the production of authentic assessments students were required to apply their newly acquired knowledge to their particular contexts and experiences. Goals, outcomes and potential products were continually adjusted through extended discourse and negotiation.

In the design of the course, high-value teaching approaches were scaled up through the subjects, course and then implemented in the schools within which the students designed, implemented and evaluated a final project. By the time students were working on the project, they had completed all core subjects. The intention was for them to choose an element of a subject which they found of particular interest as well as helpful to their daily professional practice to scale up as part of their final project. The implementation of the project brought a sustainable research-based practice to their school – the impact of which would obviously extend beyond the participation of individuals within the time of their degree completion. In effect, a “new” system was created, within which this research-based course would have an impact. Similarity became self-reinforcing as students saw this process at many levels while they completed the various subjects within the course.
6.10 Collaborative Practice
Building a subject design framework around these principles provided a vehicle for dispersed control and for the agents within this complex human system to pool their collective intelligence. The simple rules were negotiated, the embedded design and the feedback system employed and guided the process of subject design and implementation to establish consistencies in the design approach using the common schema that was created. Agents shared the same meta-perspective of the course as a whole as well as their perspective of the role of individual subjects.

6.11 Institutional Practice
A sound framework can be a mirror of the beliefs currently held in an institution and indicate where the institution hopes to go. However, frameworks can be limited by aspects such as who designs it, implements it, and assesses it. Such aspects can determine whether a framework becomes a powerful tool or irrelevant. The existing RU framework served policy requirements but offered little guidance beyond accreditation. Unlike some courses, this time, the leadership of practising teacher educators, the support of our administration and the availability of time and resources combined to shift the review process from a required component of accreditation to the opportunity to create a theoretically based course design process.

6.12 Conclusion
This chapter recounted the design and formulation of a course design process using the self-organising school’s theoretical design principles to respond to the identified areas of need. This involved the establishment of a design team that worked collaboratively to determine a design approach that worked through the establishment of simple rules, standards development, and strengths, needs and drivers. The course was built through a process that moved from products to sub-products, into assessment and then subject
design. Through subject design the design team injected learning design elements such as collaborative practice, feedback and reflection to embed the theoretical work in the course content. This work was underpinned by design-based research as the theoretical basis for the design of the study that further explicitly engaged with the design principles through stakeholder input and iterative cycles of feedback.
CHAPTER 7. RESULTS (Phase 3)

7.1 Phase 3 Introduction

The final phase of the study focused on the experiences of design team members with the design process in practice. This phase explicitly linked the process of course design and the four areas of need as identified in the literature – the need for a theoretical base to inform an effective course design process, the need to address the theory-to-practice gap, the need to utilise collaborative practice, and the need to examine the impact of institutional practice on course design and reform. Given a key goal of the study was to design a course that responded to the needs identified throughout the literature, the final product (the course) was explicitly informed by this intent. The focus of this phase was to examine how the work done throughout the design process was reflective of the identified needs and evident in the final product – the course.

In line with the previous phases of the study, this phase also had a key research question:

What were design team members’ experiences of the course design process and how did this work respond to the areas of need in higher education, teacher education and inclusive education?

7.1.1 Structure of the results

Several sources of data were used in the final phase of the research. These were student survey data, student data from a doctoral thesis (Grima-Farrell, 2012), stakeholder feedback and studies of aspects of the design completed by design team members that led to subsequent publications completed over the last 5 years. The work completed during the design process was reflected upon with design team members through interviews focused on capacity building of both the design team and the institution. These interviews were examined for themes and ultimately categorised under two broad
dimensions: the process of course design undertaken and response to areas of need identified in the literature. The data were presented following the steps and sequence created by the design team while working through the design process. The impact of a theoretically based course design process on design team members’ experiences within the institution was then triangulated with key stakeholder data from the first cohort of students completing the course and their experiences of the course after the first subject, at the course mid-point and after the completion of the course. These data were further supported by the responses given as part of a doctoral thesis that focused on this same cohort of students after they had graduated from the course and some stakeholder feedback.

7.2 Team Members’ Prior Course Design and Review Experiences
During the interviews, time was spent discussing design team members’ previous course design experiences in order to establish a baseline of understanding and to determine what this experience was being compared to. The course design and review experiences of design team members were varied but extensive. Part of this interview was presented as data in Chapter 5 to validate the information provided about the processes at RU. Design team members had been involved in over 30 course reviews in all, ranging from a minimum of 3 to a maximum of 12.

For Nick, this incorporated experiences at both Australian and international higher education institutions.

one involved working on an accreditation program while I was a doctoral student in the US and then I did an internal review of a course at xx I believe while I was there. (Nick, 2013, p. 1)
He identified these processes as “quite different” (Nick, 2013, p. 1), but he was not asked to qualify whether this meant in relation to one another or to the process undertaken as part of this research.

The [International] one was much more about meeting accreditation requirements...so that was very much about a visiting panel that sort of thing, and making sure that all those instrumental requirements were addressed. The other [Australian] one wasn’t subject to that kind of thing so it was much more about an internal focus and more informal. (Nick, 2013, p. 1)

Including his international experience, Nick was also the only design team member to have had all his course design experiences in specialist courses in special education/inclusive education.

Jo had two course design and review experiences focused in the general primary education area. She was the least vocal of the design team members about prior experiences, but due to a high level of frustration, disappointment and anger that came through in her tone of voice and brevity of answers when any questions focused on previous course design and review experiences.

The two course reviews that I’ve been through [extended pause]. Shocking. Really embarrassing to be told that I was a part of it. (Jo, 2013, p. 1)

Ali and I had the most similar previous experiences in course review processes, with each of us representing the interests of the inclusive education team on the early childhood, primary and then combined early childhood/primary courses. This alternation had come about due to Ali taking leave from RU for a number of years to study overseas, and then returning to the institution once we had begun the course design and review process detailed in this study. I had also taken part in two secondary - focused course reviews due to no one in the team having expertise in that age group at the time. Ali recalled:
Initially when I started just because I was interested – so I’d sit in on the course review process but I didn’t actually have any kind of key role in that process...generally it was the course coordinator who took on the role of the review process in conjunction with some members of the team or a head of school for example and then they led and directed a process...some of that variability around the approach for the process created problems for individuals and groups of people involved. (Ali, 2013, p. 1)

Of the 12 course review and design processes of which I had been a part, three were in inclusive education with all others across disciplines for generalist education courses.

I have taken part in over 10 course review processes since I have been at the university. One of the reasons I have liked being involved is the opportunity to discuss issues in the education field with colleagues beyond my immediate discipline group. I also like to see how individuals operate in this environment. It has been an interesting time since the move to cross-campus offerings of courses and the impact this has had on review processes. If I had to summarise these reviews, the ones that I can recall outside of our field, two looked promising but dwindled and the others were just “heads-down” and complete documentation when required for subjects. (Lucie, 2013, p. 1)

Dan was one of two design team members who came into the course design process after we had begun. Due to his expertise covering both inclusive education and secondary education he was quickly drawn into the generalist secondary education reviews.

I was immediately involved in a course review for a...secondary degree and that was to get that course up to speed for New South Wales Institute of Teachers approval [accrediting body] and it was due for review anyway. It wasn’t a particularly positive experience in that I had no idea of how my subject, or the subject I was working on, had any connections into the rest of the course. There was very little done in terms of course mapping, scope and sequence, how to draw on the knowledge and experiences of previous subjects into my subject and likewise how to build student capacity to engage at a deeper level with subjects that followed the inclusive ed one that I was working on. (Dan, 2013, p. 1)

Dan and Eve were the two design team members who spoke explicitly about another course design experience in which they had been involved, that was very positive.

About 12 months later I worked on a Primary [course] that was being reviewed ...and it was a totally different experience. We had regular, whole team meetings, we looked at making sure that assessments, assessment styles and so on were mapped across the course rather than just within individual subjects. (Dan, 2013, p. 1)
Eve, in each of her course review experiences, had been positioned in a very different way from the rest of the design team. Eve was an educational designer rather than an academic, and it seemed that this distinction meant that even being included in the course design and review process was challenging. Whereas other design team members had become involved in review processes due to their academic expertise and a certain expectation of their involvement, the reverse was true for Eve:

The educational designers when I first joined the faculty and the School weren’t invited along to course committee meetings and course reviews so I invited myself along [chuckle]. So my experience in very broad terms over a period of years then, probably about 5 years, is that firstly I invited myself along and I just got to listen, then I would say things I’d give out there when they were having discussions and my ideas never got on the table more than people would listen when I was speaking but then no one ever took the idea up or recorded it or did any of those sorts of things. (Eve, 2013, p. 1)

For Eve, changing attitudes about the inclusion of educational designers in course design and review meant building relationships and shifting the mindset of staff about how educational designers could be utilised in the process:

And then progressively over time as I built relationships with the key people in the faculty...particular course coordinators who were willing then, that that started to change. So I was invited along to things, people heard what I had to say but didn’t necessarily act on it but I felt like I was actually heard and then it progressed from there I guess to where I started working closely with course coordinators and we started doing mapping...and I think there were key outside drivers that actually made that change for them, it wasn’t necessarily internal but it was also about relationships...There was this kind of graduated movement driven I think if there hadn’t been external need for the accreditation there wouldn’t have been that drive to map, to change and I had a solution and I was able to come in and to share that...people were not really prepared to start up at a whole course view and then separate themselves from the idea of subject initially. (Eve, 2013, p. 1)

Previous experiences had been mixed for design team members, with all having at least one experience towards the negative and less effective end of the spectrum. A few team members demonstrated extremes of opinion, with Jo having a strong emotional reaction when discussing her experiences to the point of physically becoming tense and responding in a very curt manner during this part of the interview. Eve and Dan each
recounted a very positive previous experience, with different levels of involvement, in the same course review.

7.2.1 Experience in this course
As mentioned in Chapter 5, the design process utilised in this research was initiated by Nick due to his prior experience of designing and using a theoretically-based approach in the school context. He came to RU, and more specifically the inclusive education team, as the senior ranking academic in our field and saw the opportunity to scale his earlier work in the higher education setting:

When I came here, coming off the self-organising school project, and knowing there was a group of people and that they were looking to do this kind of work, it struck me as a good opportunity to take the principles and the theory and see whether people were interested in working around those ideas, to have a genuine, theoretically derived approach and then to instantiate that with all of the, agency of all of the people and their expertise... I suppose being the ranking person I saw it as an expectation that people had for me, or of me, so it seemed to be something that didn’t require a lot of politicking or anything...the question was, “Well how do we want to do it?” and then coming off the project, the self-organising school project, I floated those ideas, we started to workshop around commitments and all the different pieces and also we saw the research trajectory potential as well. (Nick, 2013, p. 3)

The whole design and review process was quite different from what any of the design team members had experienced before. This difference was most evident in the experience recounted by Eve.

As an educational designer whenever there was a new academic that joined the school I would make an appointment to see them and do a little orientation with things. So when Nick joined, I did exactly that. After 5 minutes of talking to Nick, I just thought “Oh my God, here is the answer to everything”. It didn’t matter what...I, I, I only had to talk for a couple of minutes about what the current state of things were at RU, and even the fact that I was talking about the current state of things at RU with somebody who actually went “Ahh yes, that’s this, this and this, yeah”. At the end of an hour I just thought I want to join this team, I need to be a part of this process [laughter] and that’s exactly what happened. (Eve, 2013, p. 9)
Until undertaking the interviews with design team members, I had been unaware of the approach taken to include Eve, and it was striking how emotional it made Eve to recall this:

By the end of the hour Nick had invited me, the first course coordinator to 100% upfront invite an educational designer to be part of a design and review process ...yeah [emotional]. and so then to be invited to be part of that process and for that to actually happen and to be part of a team that actually saw my contribution as being equal and valued along, different but equal value was just so extraordinarily different to my experience. (Eve, 2013, p. 9)

For Eve, the design team’s way of working and design principles aligned with much of the work she had tried to embed in previous review experiences without much success:

I knew I wanted to work in the way that the Master of Inclusive Education team worked with that methodology because that just ticked all of the boxes for me about what quality was, what good practice was in course design. The underpinning of a methodology, that you had to have both theory and practice, that you had to have ways of working together not just about what you were working on. That you needed to look at the whole and then look, break that down into the parts and what happened on the ground in order to have a whole, which is the student when they walk out the door as a graduate. I wanted to work in that environment where people listened to each other and gave each other feedback and valued each other’s contribution. (Eve, 2013, p. 9)

When the design team first came together to undertake this process of design and review, Jo and I were the two academics who had been a part of the inclusive education team at RU for the longest period of time. For us, this design process allowed us to see how various aspects that we had always considered good practice could actually be implemented and followed through. For Jo:

It was very different because it was nice just working with people within our area. We didn’t have to have any of those basic arguments about theory, we were all on the same page about what was theoretically sound for the students to learn about and we worked together because we weren’t challenged by each other’s beliefs. Before we sort of thought of what might be a good idea, we had research-based practices in place but there was no real plan to follow them through. Feedback of course – there was always a really short time, in previous occasions, there was always a really brief time before between finishing a subject, getting the feedback and writing the next version...we were starting from the end product, looking at assessment, breaking it down quite intentionally and backward mapping it. ...having a structure also to follow that
was consistent across all subjects because even we as a group probably, in previous occasions, probably designated content areas to people who were experts and said just do it...this was very different. (Jo, 2013, p. 4)

At the beginning of this process I was probably the design team member most suffering from course design and review fatigue. I had been involved in a number of reviews by that point and had not had particularly positive experiences. Ironically, considering the process became the focus of my research, I was possibly the most ambivalent at the beginning:

I know when we began the process I was not in the best space. I was having a tricky time with my doctoral work that I was a year into at that stage...I had a chat with Nick very early on when he joined our team and his enthusiasm for the research potential made me see the opportunity of using the design process for my doctoral work. I wrote a concept paper as part of getting my head around the theory and how it could be connected to the process and just went from there. It just seemed a much better fit for me as it was part of my everyday work and I really liked the engagement level potential with the team by taking on a participant/researcher role. For me, the whole process was putting into practice a lot of the things that seemed to be talked about in other reviews but never actually done. I think that was always my greatest frustration – knowing through the chatter that people knew what should be done and then doing nothing...this was the opportunity to put aspects into practice. (Lucie, 2013, p. 5)

As stated, Dan and Ali came into the process mid-way through. Ali experienced the greater culture shock due to being a returning member of the team, having taken leave for a number of years and crossed over at the point when Pam was leaving the institution for personal reasons:

When I came back to RU I came back into a completely different group of colleagues. So the people that I worked with in inclusive ed prior to going...Jo was the only one left. So we had a new course coordinator, and a new colleague that...one colleague that I had taught previously with before and another one who was out on stress leave. She was there for a little bit I think early in the piece and then she was out on stress leave from that time. So I came back into a completely different environment and completely different team in terms of my work and I came back into a course that was completely different as well. (Ali, 2013, p. 4)

Ali came back at the point when the first subject had been fully developed by the design team and the subject structure had been determined. Her interview highlighted that the
design team members who had been part of the design team all along had a certain
cadence and were unaware of how perplexing the work and process was for anyone
joining later:

So when I came back into it...ESS440 had been written, and we were now
starting to look at 422 and maybe 423 at the same time. So um that was different
to me. I talked to our...previous course co-ordinator about the course and subject
and I asked specific information about how this is working and how this was
operating...So the goal within the process was that this would all evolve, that
because this is self-organising I should understand how this comes about and
how this all works and I actually didn’t find that the case – at all. I didn’t
understand anything. I came in and we were basically looking at our graduate
attributes and mapping how we were going to build our subjects around those
graduate attributes, and that was the point I came in. (Ali, 2013, p. 4)

Until the interviews I had been unaware of Ali’s less than positive initiation to the
design and her early experiences. Due to her competent nature none of the design team
members ever thought to ask her explicitly what she needed to know and to consider
what gaps in understanding there might be. To some degree the design principles of
embedded design and self-similarity worked to the advantage of the design team when
Ali created strategies to compensate for her lack of understanding:

So when it was time to develop the subjects, I actually looked at an example of
another subject. So I took what was done in ESS440 and I used that template or
that process to design my own subject but at no point did anyone walk me
through how this should look, how it should work, what I should be doing, what
was the theory behind it, nothing. (Ali, 2013, p. 5)

Prior to joining the team Dan had worked in a casual capacity and, although not actively
involved in the design team work, had a sense of what was being done. Dan’s major
comparison point was also the school sector, so it is possible that the design team’s way
of working amplified these differences:

It was totally different to any of the course reviews that I had been involved in....I mean the Masters there was a plan, there was a direction...the people who ran it knew where they were going, clearly had a process in place, we worked
together and it just, I mean, it was a lot of work but you know it all fell into
place and I think resulted in a really good, coherent course that represents
international best practice. (Dan, 2013, p. 6)
For five of the six design team members this design process was a positive departure from what had been done previously, although for different reasons. Design team members highlighted the collaborative nature of the design that allowed all voices to be heard, the opportunity to work together, to apply theory-to-practice, to genuinely utilise feedback and to be part of what was an organised process. The initiation to the design process was not positive for Ali, but as the interview continued, when she reflected on the work done and what was created it was apparent that the process itself had also resonated with her.

7.3 Need for a Theoretical Base

The need for a theoretical base for course design and review was a recurring theme in the literature. The design process as expressed in Chapter 6 responded to this need by using complexity theory and principles of self-organisation with design-based research. One of the drivers for undertaking this process was the need for theory to underpin such a process and, as detailed by the design team members in Chapter 5 when reflecting on their previous experiences, this was not a part of established practice. The effectiveness of using theory to inform the design undertaken as part of this study was considered by the design team members as they reflected on their experiences in this process.

7.3.1 Use of theory in this design process

In discussions with all design team members there was no doubt that theory informed this design process. Theory and the design process and the impact of institutional practice were the two areas covered in the interview which all design team members extensively elaborated upon beyond my base interview questions.

I noted in my interview transcriptions that Jo, Eve and Dan all responded with an emphatic “Yes” when asked whether there was a theory base to the design process used
by the team. In each instance they naturally provided additional detail about what this meant for the course, without my needing to lead them in any way through my questioning. Although Dan came into the process at a later point, he had a distinct advantage in theoretical understanding due to his own doctoral work:

Yes [laughter]. I knew that its basis was in complexity and self-organising systems theory and um by that stage I had started my PhD work which was based in that plus a couple of other, but mainly those theoretical frameworks so I had a pretty good understanding of the theory that was underpinning the course design. (Dan, 2013, p. 6)

In their responses, both Eve and Jo drew on their experiences of the actual process the design team followed to ensure a common understanding:

Yes and I was totally aware of it because when I joined the team I was folded into what that methodology would be and how it would work and what that meant for both design and our way of working together on that. So it was self-organising systems and I learnt about the key principles that related to that and what that meant for design. (Eve, 2013, p. 10)

Yes and that’s what we spent a lot of time understanding. Complexity theory and self-organising systems and they influenced how we worked...He [Nick] was the initiator of it, spent a lot of time with us helping us understand and having lots of meetings in lead-up time about how we should work together in a process. In fact I think we spent 6 months, maybe more, or even a year, I can’t remember now, but we spent a long, long time on developing, getting the process between the group of us and getting one subject to completion. From there, because we understood the process, the collaborative process that was needed, but we understood the pattern that was expected to be followed ...not expected but needed to be followed and were able to then work in teams or independently to develop the rest of the subjects. So it influenced the design process because we had a better understanding of how to proceed and how to look back on what we’d done. (Jo, 2013, p. 4)

Jo’s response specifically referred to the extended period of time the design team spent on ensuring the development of a common schema for our work. Nick was the person who had introduced the design team to the possibility of using complexity theory and principles of self-organisation in our work. His response when reflecting on the use of theory in the process was the most theoretically based of all team members:

It was derived from the application, design application, of complex theories of complex adaptive systems and self-organising systems to education and
obviously my own work in K-12...where after looking at that literature and the study of complex systems and particularly the principles that were derived from observing systems in the biological world, human and in the non-biological world, the characteristics ...and seeing whether those ideas could be applied to education organisations. (Nick, 2013, p. 3)

As I was utilising our design process for this study, I generally tried to ensure that I was a little further ahead of the rest of the design team where possible. I suspect that keeping the meeting minutes and researcher log actively kept me in a reflective space:

I was well aware that theory was informing this design process. As soon as I began to consider using the process as the focus of my research I was reading about the theory, looking at what other course design processes had been used, thinking about what was considered best practice and how we could use that to respond to the areas of need that kept cropping up in the literature. I remember very early on writing “Complexity theory sounds complex” in one of my researcher logs, then later sitting in one of our design team meetings just after we finished writing ESS440 together and just thinking, “Wow, listen to us all using the lingo as if it is nothing at all!” It happened to be a meeting where my notes had terms like embedded design, self-similarity, simple rules and feedback all over the place....and to clarify, they were being correctly applied! (Lucie, 2013, p. 6)

Ali’s lack of initiation into the process meant that she had little theoretical understanding during her involvement and instead her knowledge was built after we had completed our design work. When asked about her knowledge of theory in the design process she responded with:

Well I knew it was based on self-organising systems and complexity theory... I knew that Nick had done a lot of work in that area and that his work with schools was based around that area but in terms of the actual process itself, no...Not until I read documentation that had been put forward for the teaching awards and things like that did it all kind of come to me in relation to the theoretical basis behind the course. (Ali, 2013, p. 5)

7.3.1.1 Schema building

As with the earlier steps covered in the design process, Ali was the least confident about her awareness of the design schema. Interestingly, her response acknowledged the schema and the use of self-similarity and embedded design to construct a consistent schema among design team members:
I wasn’t privy to the shared schema but I know there was a shared schema... at the time I knew, particularly in relation to subjects and subject development, there was a particular way that we wanted our subjects to look and we wanted our subjects to work in a particular way and that this would be embedded in multiple, multiple if not all of our subjects. (Ali, 2013, p. 7)

Ali’s answer intrigued me because although she had begun her response indicating that she was not aware of a shared schema at the time, the detail in the explanation provided suggested otherwise. To delve further into this, I asked her whether she could provide an example of the embedding process she referred to:

For example at the start of each of our subjects we have advance organisers that give the students an overview of what’s going to come within each unit within a module. I mean the big thing if you think about our subjects we had consistent names and terminology for the materials, so we had modules, we generally had two modules within each subject, then the modules were broken down into a series of specific units and within each unit their broken down further into a series of specific tasks. (Ali, 2013, p. 7)

When analysing the interview data in totality, it was apparent that Ali used the subject design process terminology such as *advance organisers, modules, units* and *tasks* more than anyone else. In effect the design team member who expressed doubt about the extent of her understanding due to her later entry into the process demonstrated a very sophisticated understanding.

Eve also demonstrated some hesitation about the depth of her understanding of the broader schema but for her it was due to inclusive education not being her field of expertise. When she discussed schema in light of the design process she was confident about that schema:

If we’re talking about inclusive education and the design of the course, I think yes...my understanding of inclusive education obviously wasn’t the same as everyone else’s because that’s not my area of content but it, it certainly grew in the time that was there. Certainly when we had the set of graduate attributes that was really clear then to me as a basis of design and so, yes, I think that we all owned, owned and understood that. (Eve, 2013, p. 13)
Jo referred to the practical implications of schema building to illustrate how it worked for the design team in practice. Jo was very quick to respond that there was a design process and then took some more time when I asked her whether she could expand on this a bit further:

This was where it was really nice and easy to work on the MIE course review process compared to other courses because we did have the shared schema. We could ask questions to clarify our understandings about research base, so we didn’t necessarily have to be experts but because of the collaborative work we were able to check our understandings to make sure of it, that we were on the same page. Essentially we had the same schema to talk about things. [For example] we knew what explicit teaching was and what that meant was being done in a subject as opposed to other instances where the word’s just used. (Jo, 2013, p. 6)

I also took a practice perspective when thinking about schema building and the course design process:

For me, the common schema was particularly apparent in the design process once we started to work on subjects individually, or in pairs, and had decreased the number of team meetings. The design was really tested at this point because there was always the possibility that the process would collapse at this juncture but I can’t ever recall thinking that anyone was totally off track when we reported back at the team meetings. Time away from each other to work intensively on bits and pieces may have actually worked in our favour. Even our writing style and language began to have a consistent “voice” and I think it would be hard for anyone outside of our team to identify who wrote which subject. (Lucie, 2013, p. 8)

Nick discussed the notion of a common schema by comparing the beginning of the process, and what was captured as part of this study, with the sustainability of the process through a subsequent review:

So I think the schema builds over time so I would say in the first month of the process, no, but it was the nature of the collaboration that started to build out that schema. I think that that became very evident to me, actually, as a bit of an outsider looking into the course process when this course was reviewed again. Schema’s also a dynamic thing and I also saw when I observed the next iteration of this course...all that schema had evolved. (Nick, 2013, p. 5)

Dan used the subsequent review of the course referred to by Nick as his primary example of schema building, as he had not been part of the full process in the course
described in detail for this study. We used the same design process, in a condensed manner, for the latter review:

I know we had a shared schema because we developed our schema together. The fact that we were all pulling in the same direction and that we were, I’ve said it before, on the same page, we understood the language, we understood everything. You know one of the evidences of schema is the shared pattern language and that shared pattern language was really obvious in that group whereas it hadn’t been as I said before in the previous [experiences]. (Dan, 2013, p. 8)

Dan’s own doctoral work was in schema development and pattern language so these were the natural aspects for him to focus on when discussing schema building.

When reflecting on the concept of schema building and design team members’ experiences, even the two team members who believed their schema was lacking to some degree had a schema consistent with the rest of the design team when asked to elaborate on their perspectives. The focus on schema building was the first extended point where design team members demonstrated their understanding of the design principles and how they were evident in the process.

7.3.2 Design process and theory

Through the interviews and casual discussions it was apparent that a formal design process and the use of theory had generally been lacking in the design team members’ experiences of other courses. When reflecting on the design process used in the present study, all design team members emphasised the use of a design process underpinned by theory, the impact of this on their work as an individual and how it informed their work as part of a design team.

7.3.2.1 Impact of theoretically derived design on individual work

Although there was no explicit delineation between individual and group processes in my questioning, three of the six design team members discussed how the use of theory
in the design work influenced their individual process and then positioned this more broadly in the work of the team.

Eve positioned her response by looking at the impact of the process on her work practices:

Can I just say in the 18 months that we worked on that, the design of the course and the subjects in the course, I spent 75 hours, I kept a record, 75 hours working on that which was considerably less than what I would have spent on any other course and what we got out of it was just sooo much better in terms of the quality because of the processes that we used. (Eve, 2013, p. 10)

That led Eve to reflect on how this work had impacted her work practices more broadly as she realised what was possible:

For me, having had that experience, I walked away wanting that to be my working life, I then looked at what was happening within the school, within the faculty, you know, within my day-to-day job and my relationship with other course coordinators, other course teams and tried to see ways in which I could shift them to have that same “Aha!” moment and to become aware of the value of that process...the fact that you needed a methodology, that you needed to connect theory and practice, that you needed to have a whole-course approach, that you needed to look at the big picture first and then break it down. I tried to bring that into everything. (Eve, 2013, p. 10)

For Dan, the theoretical basis of the course and a deliberate process ensured his engagement, helped establish a tempo for his work and set up clear points of completion:

Well, because I knew the theory it allowed me to engage with the process appropriately, you know to not jump ahead and try and do things back to front, although a lot of people see the way we did design that course as back to front. ...It allowed review of literature, what is best practice and so on to be done. It allowed products to evolve from that, sub-products to evolve, assessments to evolve, subjects to evolve from the bottom up rather than from that top down approach that’s normally used. (Dan, 2013, p. 6)

Just like Dan and Eve, I found that because of the experience of having gone through this design process, possibly due to my depth of involvement, any time a subject I
coordinated came under review and required revision outside of this course, I used the subject design process recounted in this study as my personal benchmark:

It was never a conscious decision to use the subject design concept that we developed as part of this design process elsewhere, but thinking about it now I honestly could not have gone back and done what I did previously...I know I did worry about how the design would sit in other courses where it was the only subject with this look and unit and assessment design, but on the whole students would give very positive feedback. Most commonly this was around how clearly the tasks were structured, how assessment components built on one another and how the subject explicitly linked back to the subject outcomes. Conversely, the most common complaint was that there were too many bits and pieces – in effect students couldn’t do the assessment the night before. (Lucie, 2013, p. 8)

7.3.2.2 Impact of theoretically derived design on group process

In the group design process, theory underpinned everything. It provided a structure for the process as well as the content of the subjects. By the time we were working on the first subject as a design team, everything we did incorporated theory – our own process, task narratives, assessment components, and assessment criteria. For design team members theory was expressed in different ways:

It became a way of not only taking up the substance of the work of the things that we were doing, it actually became an organising framework. So one of things we did in the beginning...was we set out the commitments, saw whether people were committed to ideas of collaboration and particular understandings of what constituted best practice and those sorts of things. So it became a scaffold for the process, and also for the content of the design...we identified our own simple rules or commitments and they became our modus operandi for the way we worked. They started to drive design decisions, so when we made commitments to collaboration, we made commitments around the nature of practice. That started to shape what would be in the course and also the form of the course and the form of the process that we went through. (Nick, 2013, p. 3-4)

Well I think it actually just underpinned everything, everything. How we went about everything...I loved the thing that we had circles within circles. That right at the very core is what you are working on but around that is always [something else] ...So the course becomes the “what” but how you design it is the “how”...at every level there’s a different “what” and “how”, and “what” and “how”, and “what” and “how”, so the theory actually gives you the process for each one of those layers. How you work together as a team to design a course, how you actually design a course, how you teach, what you need to teach within a course so that it’s totally embedded the whole way through. (Eve, 2013, p. 11)
The use of theory also gave the design team a common schema and language to work with:

All of the people in the group were on the same page...I probably have the least understanding of anyone in the group but we all understood how the whole process and the course design was going to work and so we could all pull together and all work together toward that end. So that shared schema, that shared understanding of how the process worked and the shared language, the shared conceptual, the shared pattern language that we were using meant that I could say something and I knew that my colleagues in the course design process understood what I was talking about. (Dan, 2013, pp. 6-7)

I have to admit when we first began the process I never really thought that we would have such a clear common schema by the end of it. I think until you put those principles in practice, they are just good ideas. I was possibly a bit cynical about it all because of my personal interest in the theory-to-practice gap and finding that so many people just talk about it but never actually do anything. I would never have thought that terms such as embedded design, self-similarity, common schema would become second nature to me. (Lucie, 2013, p. 5)

Just as Nick had done earlier, Jo also referred back to the simple rules and commitments developed by the design team as a structural support. She particularly mentioned the simple rule focused on collaboration and how that was expressed throughout the course design process and in subject content:

Because one of our principles, one of our simple rules was that we would work collaboratively, so we did work collaboratively on that first subject and subsequent subjects but mainly on the first one. We also tried to embed it in the subjects as well where we could...so we understood what it was to work as a collaborative group and as a cooperative group. We had to practice it, some of us had to learn to hold our tongue [laughter] and let everyone have a turn, but it made it realistic to us so it made perfect sense that we should all be made to work on 426 [the collaboration subject] as well. (Jo, 2013, p. 4)

7.3.3 Group design process

Responses by all design team members in regard to the practices of the team focused on our use of collaborative meeting processes. This was tempered by examples of how collaboration worked in practice and what it produced. Jo reflected on how collaboration was used during our meetings and how it informed the design process:
We did everything very slowly for the initial four [subjects]...I was just thinking it was a year, the first year initially spending that amount of time on the process. It was really the process that we were having to learn and the rationale behind it and then coming together as a group to understand what the overarching principles were and trying to organise our work according to those principles allowed us to keep going. (Jo, 2013, p. 5)

Eve also referred back to the beginning of the process and how the group worked on the creation of the design metaphor and then took it up individually:

We worked through the process together and we each then had tasks to go away and do and then we would come back the following [meeting] with the results of those tasks. We might have shared them with somebody else or worked with somebody else if we had the time to do that. Then each stage we were building the design as we went through, we went through each of the phases at the time...We worked through the design of the course and then we actually worked through the development of the first subjects in the first semester using the same process. (Eve, 2013, p. 11)

As Dan had come into the design process at a later point, his response focused on the period of time when the number of collaborative team meetings had decreased and the move to disperse control and individual agency had occurred. Dan mentioned the process of coming together at design team meetings, working on pieces separately between these meeting times and bringing that back for feedback:

We did everything as a team. Like everything. You know, of course we all had bits and pieces of allocated work to take away and do between our collaborative meetings but then that work was distributed for comment, was tweaked and you know was brought back to the collaborative meetings. So everything that evolved from that was a team product...a lot of individual work went into it but it was all team developed. The team had input into everything. (Dan, 2013, p. 7)

Ali’s response was similar to Dan’s, possibly due to the fact that she too had become involved in the design process at a later stage. Ali entered the process at the time we were transitioning from weekly to fortnightly meetings as design team members took the lead in writing particular subjects, having worked collaboratively on the design of our first subject. She talked about how this collaborative process worked in the design team but also how it became embedded in the subjects for students:
So we are very much about collaboration and...actually within one of our subjects we work specifically on collaborative group processes and teaching that to our students and that was something that we started to embed within our work that we did together. We had regular scheduled meetings, I think they were every week or every second week, they might have dropped back to over time, and we actually talked about particular things. For example the graduate attributes and what ones go together in terms of the development of subjects and how we put those together and then we worked on particular components and pieces as we go along and bring those back to the group and share those with the group...so we had a lot of on-going communication, a lot of on-going dialogue, regular contact with one another to talk through how to move forward. (Ali, 2013, p. 5)

Like Eve and Ali, I had focused on the frequency of design team meetings when reflecting on our group process. For me, the sustainability of meeting so often was always in the back of my mind:

I suppose the theory really drove the way we worked but this was countered to some degree by the fact that the design team actually all valued collaboration and did like working together. I know that early on I had my doubts about whether we could sustain meeting so often but it was actually useful for us in different ways – those of us that worked well to deadlines had weekly or fortnightly goals, those of us that weren’t so good with time management had an organiser and each meeting actually produced something so we could all see the value of continuing in this manner. (Lucie, 2013, p. 8)

I had made a loose connection to the theoretical underpinnings in my response, whereas this was central to Nick’s. Nick talked more about the logistics of the design process and how the expertise of the design team informed it. Nick was also the first design team member to mention some of the challenges with working so intensely as a group:

It was a very good situation because...logistically it was a group that had extensive experience in the field, there was a range of perspectives but...we managed to find consensus around the commitments. That didn’t mean that it was always the easiest thing to do but I think what happened was that the process became less person-centric. We could put out there a broader picture of what it was we were going to do because we had a theoretical framework and a model which meant that the agency of the individuals who were involved became part of a genuine collaboration rather than opposed to “Who’s leading the course process?”...it was quite different. The roles that everybody took on board, the role you took on board around the development of standards and framing of the course, became a transparent part of everybody’s work. So, you did that but then it became a term of reference for feedback and for other people to participate. (Nick, 2013, p. 4)
7.4 Need to Utilise Collaborative Practice

The utilisation of collaborative practice in our design process was strongly highlighted by all design team members when discussing group processes. As collaboration underpinned our process and had been identified in the literature as a key area of need, it was one of the key areas delved into in the interviews. Design team members were asked about the use of collaborative process in the design of the course by reflecting on what they perceived as the strengths and challenges of collaborative process. As mentioned in Chapter 5, the design team had a history of working collaboratively, so to take this practice further and actively work with stakeholders was seen as a great opportunity.

7.4.1 Benefits of collaboration

All design team members incorporated notions of coherence, transparency and similarity at scale in their responses. Ali’s response focused on the value of embedded design and similarity at scale, and her belief that working in this collaborative manner increased the quality of the work produced:

I think a big part of the collaboration enabled us to increase the quality and the standard of our course, so not only in terms of the content, the research base for our course, the practical nature of our course but it’s that design of those specific subjects and the way that we embedded key ideas within our subjects. So we used those things like the embedded design across all of our subjects, we had that similarity at scale so that students can see repeating patterns across things over time. So all of those things came through that collaborative process and that being open think that was probably one of the real differences in our course review process...that openness and that transparency in terms of our subjects and how everything looks and works and that we all looked at each other’s stuff and we weren’t precious about it...I think that by having that collaboration, by having that openness and having a clear structure in terms of the way that we deliver subjects, enables our students to get a better learning experience as a consequence. (Ali, 2013, p. 6)

When Eve began to talk about the collaborative work of the design team she became very emotional about it:

I find this really hard to express because I, it’s actually really important and it’s so totally different to the way that other, my other experiences have been
Eve found working with the design team on this course so different from her prior experiences, and when she composed herself she emphasised how valued she had felt and how the process itself valued differences of opinion. Just like Ali, she talked about having a shared understanding and how the process led to a better quality product:

I think that “the whole is greater than the sum of the parts” is really true and that everybody coming to the team had something really valuable to contribute and in taking a collaborative approach that the value that they had to contribute was acknowledged and valued and engaged with in the process...and that everyone got to play a part and actually felt like what they contributed was appreciated and did make a difference in what was happening. I think it also means that you save time because you share the load with everyone else. I don’t think it is possible for us to produce a quality course design individually, that’s just impossible, so collaboration allowed us to come up with a quality course design...What we had was a shared understanding of how that would work. So a core part of the collaboration then is having that shared understanding so that we could disperse after our meeting, go away and do our work and know that we were on track. Come back together having been on track and come back with what was, what was needed, get more feedback, go away and do the next thing and be able to come back from that. (Eve, 2013, p. 12)

Jo’s and Dan’s responses focused on the interactive benefits of collaboration including multiple perspectives and the development of a common understanding. Jo took this common understanding further, highlighting how the collaborative subject design helped her understanding of the course and how that benefited students:

Well you didn’t feel like you had to do everything yourself! ...I’m not expert in a lot of these subjects, like assessment or the reading for example, but I can pick up the subject outline or the module notes and know how it’s going to be set out and know how to follow it and know how to guide students. I had a bit of time as course coordinator, on and off, and I was in that position. Having to explain how to guide students through work, through content areas that I certainly did not have expertise in and I was confident that what I was telling them was going to appear in the actual materials because we were on the same page. So it gave us a structure to work that was effective. (Jo, 2013, p. 5)

Well it’s not one person squirreled away in their room producing something that nobody else apart from the student ever looks at and so you get multiple perspectives as to the work that you’re doing on an individual subject or assessment task or whatever. So getting those multiple perspectives allows you
Just as Dan had in the previous response, Nick also considered the student perspective and experience:

Um, well I think there are a number. First of all, if the idea of a course perspective is coherence and is the notion that students have an experience that’s shared, what we were doing in fact was increasing the likelihood that that would occur because we had a shared process for designing the course and those commitments flowed through to the way the course itself looked in the final analysis. (Nick, 2013, p. 4)

As other design team members had expressed earlier, the use of collaboration always made me feel less isolated. The trust that the continual use of the process developed also assisted with this:

Using collaborative practice was really a support mechanism for me. As we were so embedded in this process and it came naturally to us, I never felt as though I was bothering any of the team if I went to see them outside of the meeting times. I suppose the feedback process supported this as well...Having our own practice so intertwined with collaborative practice meant that it came out easily in the subjects we wrote and in how we delivered residential schools, set assessments, engaged with students and so on...we also collaborated with our stakeholders and had a really active feedback process with them. (Lucie, 2013, p. 7)

When considering the benefits of collaboration, four of the six design team members made an explicit link to the experience of students, and all of us aligned the benefits to a conversation about the design process itself and what was created.

7.4.2 Challenges of collaboration
It would be remiss not to also ask design team members to consider some of the challenges of collaborative practice. I was aware through my investigation of the literature in the area of collaboration that it is not always an easy process, so I wanted design team members to think about what was challenging in our process.
Even when I explicitly requested the identification of challenges, some of the design team found this difficult. It took Dan a little while to respond, at which point he gave me an initial humorous response:

[silence]...nothing really...except getting told that you know you need to take this away and do it properly [laughter]. No, with that team I didn’t find anything particularly challenging...I think the collaboration and the collaborative nature of the team was a characteristic that allowed the course to evolve well. (Dan, 2013, p. 7)

Ali also struggled to think of anything specific:

I don’t think, I mean as a team we are pretty cohesive...we had one staff member who’d been off...she had some issues personally, and I think that was less about course design and course review, it was more about other things that were going on with her and they were the only difficulties that I think we’ve had as a team in terms of any of this process...I think we had a good relationship with our educational designer at the time, that I think she was very involved, very interested and wanting to be on board and so there were really no problems we had as such. (Ali, 2013, p. 6)

I could remember times when there were differences of opinion, but because we had the collaborative meeting process in place it did not affect the working relationship of the design team:

I can’t really recall anything particularly challenging about our process. Typically I would resent having to meet so often but because I could see everything progressing and I enjoyed working with the team, this wasn’t a hardship. It wasn’t that we always agreed on everything either. I remember some really robust discussions but because we had set up a respectful process of whipping and hearing all opinions as part of our meeting set-up, typically it would all be thrashed out by the end of a meeting and a workable solution would be generated...I think the wider perception in the School was that we always agreed on everything but that honestly wasn’t the case...we just had a clear process to deal with issues that we all used. (Lucie, 2013, pp. 7-8)

My point about wider perception when undertaking this course design and review process was also raised by Jo, although from a different perspective. Jo highlighted the time associated with using collaborative practice and how she felt that even though we willingly operated in this way it was criticised by others:

Time, absolutely time and the fact that we were rarely given recognition for the time that we spent...we did it off our own bats in the first iteration, it was
becoming more of a staffing issue [...] so self-organising implies that it can be self-organising but it’s a little bit hard to drag casuals in to be on the same page working at the level we were working at with our team. The team members all understood what the processes were about, and the principles in fact...but it’s hard to bring other people in. Yeah, so time was the biggest issue. It was really disappointing that we made time because we wanted to do it but we were criticised for it. I will never, ever forget that. (Jo, 2013, p. 5)

Contrary to Jo’s perception that it was difficult to bring other people into the process, Nick believed that it was actually easier. Where Nick identified the challenge was in shifting the traditional work practices of people, needing to keep a handle on not just your own work but also the work of others and understanding that the effort up-front will be worth it:

Well I think people would say initially that there were meetings and after the tradition of being private practice, and people doing things by themselves, I think there’s always a stress that comes from the time it takes to do collaboration...I think probably at the front end there were maybe more meetings than people had had before. You’ve also got to keep up to speed on the work of other people, not just your own which is an important thing to do in a genuine collaborative effort. I think what...we all came to see over time though, that initial effort was amortised over the life of the course where other decisions were easier. When we brought, when new people got involved it was much easier for them to work together. A lot of flexibility in terms of members of the course team being able to help each other take on subjects on board because we really owned the course not our particular little niche. (Nick, 2013, p. 4)

Eve was the only member of the design team who really focused on different personality types and how challenging working so closely together can be. Just as Dan had taken time to begin his response, Eve was similarly silent to begin with:

[silence]...I think when you come together as a team, a core part of collaboration is understanding that everyone comes with their peculiarities and their frame of reference...the other side of it that you take up in collaboration is being able to work closely with people...it’s almost like being in people’s personal space. In collaboration it’s kind of like taking that mental personal space and physically sitting with people and being in their frame, crossing over frames of reference, if that makes sense?...being able to have the skill and the knowledge to actually work with that because it’s not smooth all the time...things that happened within the team, there were differences of opinion about things, different ways of going about doing things and...collaboration challenges you in bringing all of that to the fore because you are working together but at the same time it gives you a process to enable you...to work through that. (Eve, 2013, pp. 12-13)
7.5 Building the Course

The process of building the course was a synthesis of a number of elements – the
development of standards, consideration of content for assessment and subject
development and then the implications for subject revision. This was also the stage
where, as a design team, we had to move the use of theory from a team process into the
development of content and consider how this was expressed and embedded for
students.

7.5.1 Developing course standards/objectives

The development of course standards or outcomes was interesting for the design team as
there was no accrediting body for inclusive education. As a consequence, and to begin
putting our simple rules into practice, we needed to create our own set of course
standards. Although Dan and Ali had not been involved in the development of course
standards at the time, they were aware of the process taken by the design team:

By what the literature said. I mean as a team we developed the course objectives
but the course objectives were based in what the literature said was best practice
in our field. (Dan, 2013, p. 8)

I know that [we used] the graduate attributes and standards from across different
courses and we looked at national and international standards, what we’d expect
for inclusive educators, what they should be able to do and achieve within the
field. (Ali, 2013, p. 6)

Ali emphasised the fact that she had not been part of the actual process a number of
times in her response, so I decided to ask her whether the standards met her expectations
of a course:

Yeah I do, particularly in relation to the practicalities of being an inclusive
educator and the multiple dimensions associated with being an inclusive
educator. (Ali, 2013, p. 6)

The four members of the design team who had been a part of the process from the
beginning all went back to the baseline of our process, by either mentioning the
connection to our simple rules, including research-based practice, or mentioning best practice in the field of inclusive education. Eve recalled:

So the course objectives that was you Lucie, and the team as a whole, so going away and looking...Because there was no accrediting body for inclusive educators with a nice neat set of accreditation standards already available, there was a need to go out and look at the research, look at the literature and see what an inclusive educator was really expected to do and what standards they were expected to meet as a professional...and to distil those down into a set of outcomes or graduate attributes of an inclusive educator and so that was the underpinning and very crucial first step. (Eve, 2013, p. 13)

My response was similar to Eve’s as I detailed the logistics of the standards creation process. The level of detail I went into was because I took the lead on this particular element and had coded the data compiled by the design team to create a more manageable document as a basis. I clearly recall at the time being overwhelmed by how much the design team had gathered and not quite knowing where to start.

The standards work was my first active “task” involvement in the course design process to date...where what I did would have implications for the process. Each member of the design team looked at different national and international data sources, including other institutional websites that specialised in inclusive or special education, and research-based or evidence-based best practices....I then took the role of sorting the 21 pages of data into themes and removed repetitive concepts. We ended up with four- pages of data and then this was reduced to the final two- pages that became our course standards...what was nice was that we also discussed these with our key education stakeholders to gain their perspective and to see whether there was anything missing. (Lucie, 2013, p. 9)

In her response, Jo clearly referred to the establishment of our simple rules and our decision to use evidence-based practices. This was the first opportunity to do so in our own team process:

Based on simple rules and one of our simple rules, there were a couple of simple rules, but an overarching rule was that we use evidence-based practices and so and we will use research base. So we would look at the research and only use research -based practices, nothing that was flavour of the month, to determine what our subject objectives were going to be. So the course objectives came from research as a first priority, but then other influences that were determining where we should go as well. (Jo, 2013, pp. 5-6)
Nick connected the establishment of standards back to the design team’s development of commitments as well as the theoretical basis of the process:

Well my recollection of that process was that they became an expression actually of the commitments... So, one of the harder ideas about this, in terms of this kind of work is the idea of self-similarity. ...What happens with this is...the objectives for the course very much became highly similar to the commitments for the course process because we were committed to collaboration, committed to particular bodies of evidence and research on which subjects would be base and the likes of. (Nick, 2013, p. 5)

What transpired through the interviews with both Ali and Eve was reference back to standards development and how this aligned with and influenced the rest of the design process. In both cases this part of the interview was not specifically connected to our discussion of the standards process. It was particularly interesting in Ali’s case, as at the time we explicitly discussed the creation of standards she had mentioned multiple times that she had not been involved in the process. Ali looked at how learning was scaffolded for students throughout the course and how this mapped back to the standards created that she referred to as the “graduate attributes”:

So the way that we designed the subjects was consistent and we’re creating a level of scaffolding for the students, so we’re scaffolding their learning as they go through the materials to enable them to demonstrate a skill that links back to those graduate attributes. So each of our assessment items then map back to those graduate attributes and we’re getting our students to demonstrate their competence in particular areas. (Ali, 2013, p. 7)

Eve also discussed the wider impact of the graduate attributes (standards):

Subjects were the end of the process and so having started with the graduate attributes we then looked at what the products would be, the assessable products that would be the outcome of that. What would those graduates actually look like, for a graduate walking out the door and then having done those? We then developed the assessment and then the subject that was necessary in order to enable the students to meet those outcomes and do those assessments. (Eve, 2013, p. 13)

7.5.2 Assessment and subject development

Assessment and subject development had a history of being individual tasks in course reviews, so working on these collaboratively and seeking feedback as content was being
developed was quite a different process. The language in the responses of design team members focused on products, sub-products and assessment tasks.

7.5.2.1 Assessment and subject development in this course
All design team members consistently responded that active involvement in the development of a design structure assisted them in the development of assessments and subsequent subjects. However, there were still challenging aspects. Ali said that the scaffolded nature of the subject design made things easier but she found it a little more difficult when moving from product development into assessments:

Yeah, I mean for us in many ways it’s easier because it actually sets up a scaffold or a template that you can use and so you have a consistent template or scaffold to use. What’s tricky though is it creates a difficulty in relation to thinking about particular assessment tasks...I know with the first subject I wrote for ESS422 the way that I looked at the product and built the product it was very difficult to scaffold and build that product over multiple tasks. (Ali, 2013, p. 7)

The subject Ali referred to, ESS422, was the first subject she wrote using the design process. One of the more demanding aspects of the more scaffolded approach used in the design and to support students was that the readings and resources used by the design team needed to align well with the subject design, tasks and intent:

What is complicated is getting readings that are appropriate readings to support the students to build the particular assessment product. If the reading is old, or if the reading is no longer available, it creates real difficulties because those readings are so critical in terms of scaffolding student support to support them to build and demonstrate what we want them to demonstrate...the way that our subjects are developed, each of those readings is critical in terms getting our students to go along a pathway to develop something that’s going to show particular proficiency in an area. (Ali, 2013, pp. 7-8)

Jo also mentioned the benefits of having a consistent design approach. The work on the initial subject by all design team members was particularly intensive but this provided a good scaffold that allowed for dispersed control with the knowledge that all design team members had a common schema for subject writing. Jo also mentioned the restrictive
nature of a previous review process where content was simply directed by the information required for CASIMS the data management system used by RU:

The process is easier because you had a system to follow. You know why you’re doing it, you’re not just trying to fill blanks or headings because they have to be in CASIMS. You’re doing it for a reason...there are certain design features that we have in every subject and we all do it, so we know why we’re doing things and where we’re putting them and what the result is for the students. So in a way it’s easier and it does become quicker. We didn’t take a year to do every subject, just the first one. (Jo, 2013, p. 6)

The importance of having a common framework and a shared understanding or shared schema was also evident in Nick’s response:

Well, profoundly different because in the spirit of the notion of course being a driver and coherence being a driver around those commitments, around that sort of idea of embedded design as part of the theory, the framework that we created for designing subjects was shared meant that we were using a shared model and people could work and get feedback about each other’s subjects based upon that shared understanding. So conceptually, it was quite different because the subject development was not private practice in the way that it used to be, there was a shared commitment to an approach. (Nick, 2013, p. 5)

In his response, Dan focused on the specific process undertaken and looked at how conceptually the work in this course design process positioned his thinking and work practices differently:

Yeah, I’d say enormously different. You know other course reviews people tend to sort of start with the concept of subjects and work their way down whereas with this we started with the concept of “What is best practice?” worked our way to course objectives, worked our way to what products would the students create or develop to show mastery of these objectives, how did those products map back to sub-products or assessment tasks and then how could those assessment tasks be organised into these things that were called subjects. (Dan, 2013, p. 8)

Eve’s response mirrored elements of Dan’s as she discussed the relationships evident through the various steps of the process and the impact on the work of the design team:

So by the time you actually got to the point of writing the subject...you know what were the learning experiences and what were the resources...We actually already knew what the outcomes would be in a very tangible way...By having assessable products first, you were able to see the relationships between all of the parts of the course and how they need to be structured in order to enable that to happen...the team went away and used all the expertise on content to do that
writing but with a structure that had already been agreed by the team. (Eve, 2013, pp. 13-14)

A number of times, after design team members explained our design process, others have interpreted the establishment of a common framework as too structured and restrictive. I did not ever find this to be true; in fact my reflection on the subject and assessment development process explained the value of having a common framework:

We all had the opportunity to delve further in our particular areas of interest and expertise but still had a common framework to refer to...we shared a common approach for the broad-scale aspects of the subject but had the space within which to nuance particular bits and pieces. I found breaking products into sub-products and then into specific assessable components and tasks made me really think about what I was after from the students...what did they have to do in order to demonstrate their understanding. (Lucie, 2013, p. 9)

7.5.2.2 Subject revision process

The use of a design framework also had implications for the subject revision process. This area was not originally targeted in the interviews, but in the first two interviews both design team members incorporated subject revision as part of their responses to subject development or work practices. As a consequence it was an aspect incorporated into subsequent interviews.

Design team members who touched on this aspect generally found the subject revision process easier. It seemed to encourage the design team to consider specific details and to think closely about the value readings were providing to students, rather than just grabbing anything that was recent in the field. The alignment across all aspects of subject and course design meant that changes made had implications for the broader design:

In terms of a process, you have a very clear idea about what you are looking for, what you want to do and why you want to do it in a particular way...It’s different in terms of the way that you scaffold things and pay attention to details...if I were just sending out 10 or 20 readings and just a couple of pages of a study
guide, it’s that is less work to do but it’s also less sound pedagogical and the students don’t get the same kind of output as a consequence. (Ali, 2013, p. 8)

The relationship between products and assessments was expanded upon in Jo and Dan’s responses. Both commented on products guiding how decisions were made with the challenge of using current research and literature with the broader intent of the course at product level:

We look at the assessment products differently, we look at assessment and work back, backwards, always...we need to update the literature of course and...make sure that research is current but we look, we start at the back, always and look at the assessment we want. We want the product, we know the product we want them to achieve, and we go about working our way back up to it. (Jo, 2013, p. 6)

I think subject revision becomes easier because it’s a process not really necessarily changing the products enormously but just looking for updated materials and you know latest research in the field and so on that allows for a progressive update. (Dan, 2013, p. 8)

Eve’s role as an educational designer meant that she was actively involved in the subject revision process for different courses across the faculty. Eve focused on the role of feedback in the decisions made when in the revision process. Given our close relationship with the stakeholders we had the opportunity to engage with feedback as the course was being delivered:

I think it made a huge difference because it goes back to what I was saying about doing a deep dive up-front and because there’s a shared structure and you’ve got that embedded design occurring throughout the whole course and through all of the subjects, and because feedback is embedded in the process as well...in that first semester in the first two subjects we got a lot of feedback from the students particularly around the amount of time it took to do things so we were able to then take that feedback and go “Okay, what did that mean for the rest of the course and the subjects that we were about to write?” and to take that up-front. (Eve, 2013, p. 14)

The feedback that the design team received about the subjects as they were being delivered allowed us to adapt and make changes to the design as the subjects to be offered later in the course were being written. The benefit of this was that by the time
the full course was written the design team had a very strong sense of what worked and what needed to be refined:

So I always felt that by the time we actually implemented all of the subjects of the course that we had addressed all of the possible design issues, concerns, feedback from the students...there was very little to do and the changes that occurred after that...We got feedback on implementation of course and were constantly looking at the feedback. (Eve, 2013, p. 14)

7.6 Responding to the Theory-to-practice gap
The third area of need identified in the literature that was seen as an issue in all three contexts was the theory-to-practice gap. As presented in Chapter 5, design team members had found that in previous course review experiences work had been highly focused on individual subjects, so there was little oversight to purposefully address the theory-to-practice gap in a targeted or cohesive manner. For one course two design team members identified potential but this was an exception rather than the rule.

7.6.1 Theory-to-practice gap addressed in this course
Addressing the theory-to-practice gap became an integral aspect of this course through the design process. A number of simple rules actively engaged with this aspect, namely the\textit{ theory-to-practice link}, \textit{contextual referencing} and \textit{assessment is authentic}. For Jo there was no theory-to-practice gap because a tenet of our design process was to utilise best practice in the field of inclusive education:

There wasn’t a theory/practice divide because we were doing what the research tells us is best practice. (Jo, 2013, p. 7)

Dan and I made reference to the simple rules and how they ensured that the theory-to-practice gap was not an issue.

What we did was based in research, what the research talked about as best practice in our field and so we look at theory and we look at practice all the way through the course design process. What we have students develop as their assessments, or as their products, is all based in the authentic setting of the school or the work-place...and all linked to their practice...that can help overcome that theory/practice divide but can also help to overcome the
perception that students sometimes have that what they do at university is
dissociated in some way from what they do in their work day. (Dan, 2013, p. 9)

The design process that we used really helped with this aspect. I think particularly having simple rules that targeted this aspect meant that making links between theory and practice was at the forefront of our minds...I suspect that things that were going on in other courses at the time also influenced the emphasis on this. A few of us had sat in meetings where the need to link theory and practice was discussed but then very little was actually done. (Lucie, 2013, p. 10)

The need for our students to make connections between theory and their experiences, learn from this, and use research to develop their practice was felt strongly by all design team members. Eve discussed the active alignment of theory and practice in the design process:

We didn’t just take a theoretical position on design. We translated theory into practice so I guess that’s what I’ve seen, that everything that we did was for the purpose of taking theory to the coalface, where you were actually teaching and making that about quality outcomes both for teaching and learning. In terms of the students engaging around practice I think because it was...very real, it was very much about what inclusive educators actually know and do. (Eve, 2013, p. 15)

Nick and Ali took this alignment a lot further in their responses and talked about the many ways theory was used in the design process:

Well in this instance, here was the theoretical framework being used to “walk the talk” of course design and it really did bridge the theory/practice gap at two levels: the theory is reflected in the actual learning experiences for students but it was also reflected in the approach that was taken to the design of the course. (Nick, 2013, p. 6)

Ali’s response was particularly detailed and identified the alignment of theory and practice in several ways – course design and development; as a way to utilise evidence-based practice; and for our students as practitioners:

I think you want to think about theory on a couple of levels. You want to think about the theory in relation to course design, so we’re thinking about what are we doing and why are we doing this? What is driving this process and what understandings are driving this process? So you’re thinking about theory from that perspective, from a course design and development perspective...then we also wanted to make sure that we had theory- and evidence-based practices
embedded into all of our subjects as well. So we weren’t just thinking about theory from our design perspective but we were also thinking about it from a practitioner perspective...So you can see within the way that our subjects and our course is developed, we’ve got good solid theory around how everything works together and evidence-based practices as well but then we talk the talk. So we’re talking about you need to use evidence-based practice and it’s important that things are rigorous, cohesive, coherent and tight. Then we want our students to be able to do that in practice as well. (Ali, 2013, p. 9)

The embedded nature of theory and practice meant that by the end of the course an expectation was that students would be able to scale up their practice beyond their classroom and become agents of change in their settings:

So a core idea, or a core principle of our course was that our students come out and be agents of change in the field in which they’re working and the way that we put our course together using theory and practice together across the course enables our students to come out as change agents. (Ali, 2013, p. 9)

7.6.2 Intersection of areas of need
An interesting perspective became evident through discussions with team members, in that frustration about addressing one area of need, such as collaborative practice or the theory-to-practice gap, began to be closely entangled with another area of need, institutional practice. Dan touched on the knowledge that sound course design cannot be done quickly, yet little time is allocated to the process:

The theory of good course design implies time that’s needed to do it and I’m yet to be part of a course review where anywhere near adequate time resourcing in terms of workload has been allowed by the university. (Dan, 2013, p. 10)

Ali and Jo also commented on the allocation of time allocated for involvement in course design and review but also on the active discouragement of working collaboratively. The personal commitment of design team members meant that we continued our process but it was not without cost:

We did this of our own initiative and we chose to do this and I guess from a broader institutional perspective within our own course review processes, we’re not encouraged to be involved any more, we’re not encouraged to collaborate because it all is not affordable...We did this because we were committed to this and we’re committed to a particular mode of course design and course delivery
and we’re committed to integrity and good practice in the way our courses are developed. (Ali, 2013, p. 10)

No credence is given to the need...to work collaboratively, one head’s better than two and, and that some cohesive theory is worth achieving. And spending the time up front to get that cohesion and agreement from people. They hire people if they breathe and then try and get them fit a mould that is driven by organisational time factors and it doesn’t work that way. (Jo, 2013, p. 7)

Eve also mentioned the time aspect of the process, although she believed that it was seen as a positive investment by her supervisors. To her mind, challenges arose when the design process intersected with institutional practices, requirements and flexibility to incorporate innovations:

If more of my time had actually been drawn into the process then my supervisors would have challenged my workload as well so I think in a sense we were able to work through...Our capacity to implement the design that we wanted was I think the really obvious point [where] we had to come back together with the system and engage with the system as it was...The other aspect is that we really wanted to have an online portfolio for the students and we even came up with the design for that and we could get no traction on having that taken up from a production technology perspective at the time. (Eve, 2013, p. 16)

Nick also highlighted institutional practices that made it difficult to position the work done as core to course design and review. Aspects that made little difference to learning and teaching were seen as immovable and critical, while conversely, the design team was challenged about the representation of aspects core to the design process:

Really important design things we had gone through were relegated to the appendix of the documents...when in fact “all this stuff” was the really important stuff but because the organisation had chosen to prioritise a load of administrative things over actual design considerations that were going to be proximal to success...getting some of the graphics that we wanted to use into the subject outline format was another thing because we put an advance organiser in every one of the things...there was nowhere to represent the really important things that we did but ironically we took it upon ourselves, which was a huge part of the work that you did, to map to standards... So I would call those barriers of omission as well as the areas because there were hurdles that were created. (Nick, 2103, p. 7)
My response picked up both the collaboration and institutional practice aspects that challenged the use of a theoretically-based design process. Like all other design team members I was aware of various things going on but different aspects bothered me more, possibly because I was actively involved in the negotiations regarding the design and organisation of subject outlines and modules to be released to students:

It seemed to me that the most ridiculous obstacles were placed at different times when it was obvious that there was no process of course design and review...a lot of urban myths about what could and couldn’t be done. I know that collaboration was viewed as a waste of time...there were all sorts of wacky “rules” about what could and couldn’t go in outlines and modules and so forth that made no sense...I have a laugh every time I see the learning design heading that is now compulsory in all subject outlines as that was about a half a year battle for us to include when we went through this process. (Lucie, 2013, p. 11)

7.7 Impact of Institutional Practice
The final area of need identified in the literature concerned the impact of institutional practice. This also figured strongly in the responses of design team members in relation to practice that could either assist or hinder course design processes. The responses to institutional practice were varied but could be sorted into two key categories: the impact of institutional mandates on practice and the barriers to course design.

7.7.1 Institutional mandates and this course
The key institutional mandates discussed by the design team included the use of collaborative practice, the central course administrative process used by the institution, CASIMS, and timing issues. Dan and Jo each explicitly referred to the lack of valuing collaborative practice, in fact Dan’s voice broke at the end of this response and I noted in my transcription notes that he had become emotional:

The institutional mandate was not to use the approach that we were using because it took too much time. We were told not to use a collaborative approach, we were told not to have meetings. I mean we did it anyway because it’s the way we work but we were told that it was a waste of time [emotional about this]. (Dan, 2013, p. 9)

Jo also mentioned the lack of higher level support for the use of collaborative practice:
It [our process] was a collaborative exercise just with our group. There was no support from above, no recognition, none. (Jo, 2013, p. 7)

Discussing institutional practice was the one area where design team members became particularly emotional in their responses, both positive and negative. In my transcriptions I noted the particular emphasis on words by italicising them. Ali highlighted institutional drivers to complete administrative work but also touched on the lack of understanding of what was involved in working with a different design process:

The only thing that is driving us in our process is CASIMS in relation to course development, course review, the content that *has* to go into the system and issues around workload, staffing, subject development and subject design. So the work that we did in terms of our subject design as such, we weren’t allocated any additional workload for collaboration, consultation, any kind of additional communication...But we did that because of *our* belief in...the integrity of the course design process (Ali, 2013, p. 9).

Eve and I also focused on the administrative processes required with course design and review that had little relationship with what was being done in practice:

I think the institutional mandate was exactly the same for any other course that you have to follow the administrative process, do the documentation, go to course approval, respond to feedback from that. (Eve, 2013, p. 15)

A key issue was meeting course approval deadlines. The irony was that there was no real flexibility for the process to take a longer or shorter period of time due to course size, number of staff involved and so forth...If a course hit the 3-year review deadline, it needed to be done. It was a lot of work without any critique of whether it was actually necessary. (Lucie, 2013, p. 10)

Nick’s response provided a number of examples of the discontinuities between what occurred in practice and the administrative requirements mentioned in previous responses. He pulled these concerns together by highlighting that the biggest issue was that there was no real methodology for course design and review that meant these practices continued:

So there were lots of those and I think that they came from the fact that the methodology for developing courses at that point in time, and still is the case here, was much more focused on documentation from an administrative
perspective than design from an education perspective…it didn’t create insurmountable barriers but it certainly created challenges. (Nick, 2013, p. 6)

7.7.2 Institutional barriers to design in this course

A number of the aspects touched on in the previous section also came to the fore when the design team members discussed specific institutional barriers. Eve and I mentioned the barriers created at the production level, where what seemed like quite inconsequential matters were amplified as issues with no real basis for not trying something different. We were also aware of aspects that could be potential barriers to the process if certain aspects had not worked to our advantage such as a small design team and a common physical location:

If we hadn’t been a small team who were flexible and able to find…common times to meet that we would have hit a lot more barriers than we did…we were all on the one campus so I think…that circumvented possible institutional barriers in that respect…The university’s always been focused at a subject level and we have a big production process for distance material. That’s I think primarily where we hit barriers in practice because when we wanted to implement a different design in the subject outline we were told point blank that we couldn’t because that was different…we were able to get some slight movement in that. (Eve, 2013, pp. 15-16)

Stresses occurred outside of the work we were doing…that was the easy part. They were predominantly institution-based things. We had push back about the amount of time we were spending although we never asked for more than the standard workload allocation for course review. We just split that time amongst the team members and then worked above that. We were explicitly told by an executive in the faculty that collaborating was a waste of time. When it came to the print packages we were told that the information about the course, subject and learning design could not go in the subject outline. Eventually we were permitted to create a new header about learning design. Lucie, 2013, p. 11)

The push-back about the amount of time being spent and the time frames given was also highlighted by Jo:

Time, in terms of getting things done. We did adhere to those time frame difficulties but we paid the cost for it with our health. (Jo, 2013, p. 7)
There was also the common frustration expressed by Nick, consistent with earlier remarks by the design team, that the administrative process to which we were required to conform did very little to ensure quality in the course design and review process:

It [CASIMS] wasn’t focusing on things that were going to make a difference it was focusing on whether we were going to be compliant with some regulations. (Nick, 2013, p. 7)

No one could ever direct the design team to anything formally stated about why changes could not be made and what was considered to be the standard period of time for a course design and review process. There was a perception that it was just the way things were done and would continue to be done. In practice there was very little support for innovation in course design.

7.7.3 Course quality through design

Historically at RU the quality of a course was reliant on an individual positioned as a “gate keeper” to the quality assurance process. The design process we created meant that all design team members and stakeholders were gatekeepers of the process, apart from the established formal institutional check points. Jo believed that a level of quality was attained through the self-similarity and embedded nature of the design:

I think it is because of the consistency...because there is a consistency with our design it’s easier to see things that are not matching. So we know that the assessment item must answer all of the objectives that are in the subject and we know the strategies that we use along the way will get them from A to B. (Jo, 2013, p. 6)

My response was quite similar to Jo’s, as I reflected on how we embedded the design in all subjects and the impact of this on the quality of submissions from students:

The consistent design did assure that the subjects maintained a certain level of quality and integrity...this also impacted the work students submitted as there were consistent expectations across all subjects...I don’t really think students could turn around and say that one subject was less rigorous than another...the quality was embedded. (Lucie, 2013, p. 9)
Nick considered the wider implications of working collaboratively, where team members were reliant on one another to progress the work, so there was a certain level of pressure to keep working at a high standard and not let anyone else down:

One of the really nice things about this is that there’s a sense in genuine collaboration of peer feedback and support. There’s also a sense of not wanting to let your teammates down, there’s also a sense that your teammates have high expectations and they’ll be looking at this work. All the way across I think it actually heightened the level of quality and that’s been reflected in the fact that our feedback on the performance of the course, student evaluations, have been really high, it’s won awards and different things. (Nick, 2013, p. 6)

Dan mentioned the roles particular team members adopted in the process to critique the work being done and to question whether there were better ways to do things. Due to the way in which the process had been collaboratively built and used consistently, this was never seen as a challenge but rather as another feedback opportunity:

By the fact that we were all working together and we had an ED [educational designer] who was a good devil’s advocate who would constantly say, “But have you thought about?”...when you’ve got those people who all understand the theoretical framework, all looking at everything then you can be far more sure that you’re going to get a quality product than if you’ve got one person sitting in an office writing a subject that may or may not slot into a course in a coherent manner. (Dan, 2013, pp. 8-9)

The importance of giving and receiving feedback and being open to the process was emphasised by Ali and Eve. An informal quality assurance process was embedded through the fact that all design team members were looking over the work completed, providing feedback, incorporating stakeholder feedback and constantly communicating with the team:

What we did was member checking so we actually looked at each other’s work and we were always open and we were always transparent about what we were doing... we were open to feedback and we had shared understandings. By creating that space of collaboration and that openness of communication we really were able to do these kinds of things but if you weren’t in a situation where you trust your colleagues or where you aren’t open to criticism or feedback, then it would make some people very uncomfortable I think. (Ali, 2013, p. 8)
Eve explicitly referred to the iterative feedback cycles as a way that quality assurance was embedded in the process:

You have embedded design and you’ve actually chosen the way in which all the subjects are taught and how the course is run you’re actually embedding quality assurance into the process and because of the feedback too...you were paying attention to feedback all the way through. (Eve, 2013, p. 15)

7.8 Responsiveness to Needs in Inclusive Education

This was an important consideration for our design team members because of our interest and expertise in this field. Comparison with the experiences of design team members in other courses was not considered a priority, as such comparison would be biased towards the process examined in this research as the entire course was focused in inclusive education, so the level of responsiveness would be comparatively high.

With this in mind, design team members were asked to reflect upon whether the course we designed was responsive to needs in inclusive education and what evidence they had for their response. Nick believed that there was “triangulating empirical support” (2013, pp. 8-9) to support his statement that the course did respond to needs in the area. He identified student feedback, success in competitive tenders, the publication of our work in journals and teaching awards as examples:

The first and most obvious thing was the feedback that we got from individual subjects and about the course...The second thing was the recurring expression of confidence in the program by the competitive tenders where it was held up as something that they continued to want to invest in...there’s some good empirical evidence of the fact that in the market-place it was competitive. I think the veracity of the ideas were tested in the professional literature...where those publications were successful in the journals that we put them in...and I suppose finally there would be the awards that it won. (Nick, 2013, p. 9)

Dan emphasised the use of research and best practice to design the course and then the positive comments from stakeholders when the course was circulated for feedback:

The fact that it’s informed by research and best practice and the fact too that we put the revised course out to a fairly comprehensive team of people working in
the field, took on board some of the suggestions that they had to make for improvements...we were pleased by the amount of positive feedback we had as to the potential of the course to meet the needs of the industry, of the workplace and to meet the needs of the children that were being served by our graduates. (Dan, 2013, p. 11)

Like Dan, I mentioned stakeholder support, and then I moved on to our graduates. There is still a very strong use of collaboration among the initial cohort as they continue to engage actively with one another and also to involve design team members at times to expand and continue their professional growth:

I have no doubt that the course we designed is responsive to needs in our field. Not only have we received very strong support from our stakeholders but students that have graduated from the course continue to engage with us in different ways...a few of us have also had new professional opportunities...so the course isn’t just responsive to needs in our particular field, it also taps into broader needs. (Lucie, 2013, p. 12)

Ali’s response also focused on the quality of graduates produced from the course. A key goal of the design process had been to build capacity in students to become agents of change in their settings and Ali indicated that this was evident in our graduates:

I think it has hit the mark and I think that we can see that in terms of the quality of graduates that we produce that come out of our courses. We’ve produced some very high calibre graduates that have come out of our course and who’ve really come through as agents of change in the environments that they work in...It’s been a huge success in terms of not only the design process but in terms of the actual course, the integrity of the course and the graduates that we produce as a consequence of being involved in the course. (Ali, 2013, p. 11)

The assertion made by Ali regarding success from the perspective of students completing the course is triangulated with stakeholder perspectives later in this chapter.

7.9 Key Features of the Design Processes
To synthesise the discussion that had taken place throughout each interview about the design process, I asked each of the design team members to identify the key features of our design process. When asked to do the same about previous design processes, the
team had identified aspects such as a perception of lack of rigour, inconsistent approach to course design, and variable quality.

For Ali, a few things stood out about the work of the design team: simple rules, shared understandings, collaboration and that continuity and consistency were central to the design process:

I think the whole issue of being on the same page, having those simple rules up front...I think that, those simple rules, were a key part of the process. I’d say the next thing that was so important was collaboration and that we had that ability to communicate effectively with one another...we had that real relationship of trust and I think that trust is really important within that process. I think the next thing that was really key was...not only our shared understanding, but a shared way that we designed and developed our subjects and that consistency across those subjects...I think those are some of the key things that make this different and make it stand out. (Ali, 2013, p. 10)

The organised nature of the process and the opportunity to work collaboratively were what made the process appealing to Jo:

The planning, the orderliness of it was actually a pleasure to work with our group...it was a pleasure to be able to work with people who were on the same page and working towards the same goal. You don’t mind going out of your way when you’ve got the support of someone else as opposed to...having to do things by yourself. (Jo, 2013, p. 7)

Eve and Dan highlighted similar points to Jo as they emphasised organisation through the use of a methodology, working together and the quality of the final product:

There was a methodology that underpinned it that gave you structure. That you could have this shared view of how you were going to go about what you were going to do and that was really embedded in good practice, best practice...a core part of that was then the way in which we worked together which was the collaborative process, where we all came together...total standouts in comparison to anything else that I’ve been involved in and total standout in terms of the quality it produced. (Eve, 2013, p. 16)

The clear path that we were all following, the clearly espoused theoretical underpinnings that we were following, the fact that we had a literature base so a research base that underpinned what we were doing. The fact that we worked collaboratively on everything...I suppose the fact that despite we weren’t given
the resourcing to do it, I actually looked forward to going to our meetings because I knew that something would result from them. (Dan, 2013, p. 10)

Nick raised similar points but then looked at how these aspects were followed through into the subject design and the work of students:

Well first of all it was collaborative and that meant that there was a genuine collaboration among the members of the team in doing the work...that commitment to collaboration was something that echoed not just in the work that we did but it was also reflected in the learning experiences that students had because we designed the subjects that way. The other piece in relation to that kind of work was that it was theoretically derived and that meant that the theory was applied to the design process but also it was applied to the design products so in a sense we were kind of bridging the theory/practice gap as a result of the way we were doing the work. (Nick, 2013, p. 7)

My response echoed those of the rest of the design team as I focused on collaboration and the use of theory:

Key features that stood out for me were the use of collaboration and the sustained use of that throughout the process...the collaborative development of a design process and the utilisation of theory to underpin that. (Lucie, 2013, p. 10)

All design team members emphasised either the theoretical underpinnings or the fact that the process was collaborative as the first features that came to mind. In some instances these points were expanded upon to detail theoretical elements, incorporate aspects of quality and student experience in the course.

7.9.1 Using a design process

It was evident in the responses of design team members that the use of a design process had been extremely beneficial. However, for the design process to be used more extensively and consistently it was important to consider not only the strengths but some of the challenges.

7.9.1.1 Strengths and opportunities

The strengths identified by the design team similarly aligned with the key features of the process identified in the previous section. These included the use of a theoretical
base for course design, having a common schema, using feedback and collaborative process. For Jo, the theoretical base was key to the process:

The fact that there was a theory base that we could always fall back on, no matter what direction we go with our course, whatever the needs are for our students as they change, we’ll be able to deal with that and adapt course structures based on that theoretical understanding and process that we follow. It will still be consistent, it will still be reliable and we’ll still work together to do it. (Jo, 2013, p. 8)

Dan focused on schema building within the course design itself and how it supported students through the course:

The major strength would be...a coherent course in multiple strands to try and meet the needs of a variety of different learners that builds a schema within our students...by the time our students graduate with a Masters degree, they have a pretty good schema for practice in inclusive education...it’s an opportunity to develop a course that is up-to-date, you know, a bit cutting edge, perhaps a little bit contentious but in a good way...make students think about their practice...and allows them to become up-to-date inclusive educators. (Dan, 2013, p. 10)

Nick targeted the use of collaboration and the feedback process and how engagement with these aspects of the process also influenced practice:

The process almost demands agency and collaboration from the people involved...you learn a lot more about the way they think about things informs your own practice. There’s also the benefit of the feedback for improving the overall quality of the work. There’s the flexibility that comes from having a shared ownership which I think was massive. ...there was also the longevity of the design...in hindsight you look at the fact that even through that period of time when the faculty didn’t have a very collaborative culture or leadership, this group has managed to stay together. (Nick, 2013, p. 8)

Nick’s final comment used in this extract led well into my own, as a real strength in my opinion was the commitment of the design team to the process even though there was little support to continue:

A strength was the commitment of the design team to the process and seeing it through even though it was tough at times. We knew it was based in theory, we used evidence-based practice and stakeholder feedback was very positive... this sustained us even though we had continual push back about how much time we were spending, we were told that collaboration was pointless, what we could and couldn’t put in subject outlines and modules was randomly determined. (Lucie, 2013, p. 11)
7.9.1.2 Challenges

When Jo talked about the challenges, they were predominantly focused on the lack of support within our faculty rather than anything in the process itself. Her response quickly moved back to all the strengths of the process:

Well again it’s not being appreciated for what we’re doing and there’s research to support what we’re doing and they still choose not to take any notice of it! The mere fact that there are three doctoral theses going on but I think the tools that they’re gaining, the students that progress through the course, are gaining skills that they can be of benefit in their own classroom and in the broader context than their school and community settings too. So, I think we’re filling that need. (Jo, 2013, p. 8)

Nick believed that the feedback aspect of the process was under-utilised, particularly in regards to the use of sessional staff in teaching subjects and their understanding of the process. He had anticipated that there could be an issue with the research potential of the process but this never eventuated:

I think that we might have been able to do more with what we know about feedback around the improvement. For example, I would be really interested in...to interrogate the challenges that sessional staff had...maybe we could have done more with the feedback dimension of the theory...it was very labour-intensive for people, and that’s challenging...because so much of the way we work is organised as individuals. I thought that there might be a challenge because of the investment in it from a research perspective and all the rest but I don’t think that ever turned out to be the case...I think there was the challenge of it being different from what other people were doing...it was running in a way that was different from the operating culture of the organisation. (Nick, 2013, p. 8)

Ali mentioned the constraints created by systems within the institution, including the course review documentation process and a lack of valuing of sound course design processes:

You’re going to get push back from a system that has very rigid structures and processes and you look at our system where we’re bound by...“this has to be this way because this is how it’s always been done”, “sorry you can’t collaborate because we don’t have enough money to pay for you to participate in a process”. Those kinds of structures actually are counter to a good course design process and so I would say that it’s less to do with our structure...it’s more to do with environmental barriers within a system that create those difficulties. (Ali, 2013, p. 11)
Dan also mentioned external factors as impacting and challenging the process rather than anything that had occurred within. Just as Ali had highlighted, Dan mentioned the lack of support within the institution that created barriers:

“Time, and that’s not a weakness of the process, that’s a weakness of the institution that’s supposed to be encouraging good course design and speaks the platitudes but doesn’t put its money where its mouth is.” (Dan, 2013, p. 10)

My response also incorporated many of the same aspects that Ali and Dan had included. I could see where there were areas within the process that could be challenging, although we had not experienced these, but again most of the challenges were external to the process itself:

“The challenges weren’t actually within our process, although I could see areas where they could be issues such as conflicts within the team, strong theoretical opposition, no interest in collaboration...most of it came from external things that we had no control over and existing institutional practices that there was no rationale for.” (Lucie, 2013, p. 11)

Eve found the fact that we were designing a process while implementing it a challenge. She was also unclear about how to deal with conflict within the process as it was something we really didn’t have to deal with during our process, but could be a part of the reality when implementing the process with larger groups:

“I think for me going through the process as I was learning it...knowing how to address, because the majority of the time it was really smooth, but when there were issues, I didn’t know how to resolve conflict within the process...in a way I guess I’m still trying to work that out.” (Eve, 2013, p. 16)

7.10 Sustainability of the Design Process in Higher Education

An important aspect of the method we undertook was to see whether we could design a process that could continue to be used and sustained over a period of time. This was the fortunate aspect of completing course design and review at RU, as there was no formal process in place at the time. The major restrictions were around the documentation required rather than a theoretically-based process for design and review. Five of the six
design team members believed that the process we designed was sustainable, although there were caveats to this.

Jo’s belief that the process was not sustainable was based on the current condition within RU and informed by her experience in our process. Jo’s prime reasoning was around the lack of investment in this type of process and not understanding that the upfront allocation of time has beneficial implications down the track:

No...people are time poor, time is never going to be given because of the cost factor...people in management positions don’t see the benefit of spending upfront time getting people on the same page...they would rather designate one person to get it done, get it in and change a few words here and there to get it past accreditation, which is a pity because it’s a false assumption that it can’t be efficient. It’s time-consuming in the beginning and becomes more efficient and quicker as you go but that initial time requirement is never going to be given. (Jo, 2013, p. 8)

Dan saw the process as sustainable due to external accountability processes now being incorporated in the Australian higher education sector. The process we followed was an open and transparent way in which quality could be demonstrated as well as meet accreditation standards. He did highlight that this was contingent on resourcing and supporting such a process:

I think it’s sustainable if there’s decent resourcing for it. I think that it’s imperative, given how much more attention is being paid to higher education by governments...to try and make sure that we have quality programs... I think that the course design process like the one that we use is going to result in quality programs that will pass [accreditation] requirements with flying colours but will also be saleable to our markets because they will become pretty recognised as quality programs. (Dan, 2013, p. 11)

My response echoed Dan’s in regard to the need for support within the institution for a process. I could see the immense value of the process but it would just be too difficult to sustain without support for it:

For me the sustainability question is heavily reliant on institutional support. If that isn’t present then it is just too difficult. If a process like the one we created is to be successful at scale, certain conditions need to be established to support
it...course design and review can’t just be an exercise in ticking and filling in boxes...that isn’t supporting innovation in learning and teaching. Also learning and teaching needs to be genuinely valued...staff need to be able to be promoted on their excellence in teaching and learning just as they can be for research excellence. (Lucie, 2013, p. 12)

Since the design work done as part of this process, three of the design team have been seconded to work on a university -wide learning and teaching project that scales up this work across the institution. This has made us reflect closely on what needs to be in place to optimise success:

The project that we’re on right now is about scaling up that work to a large extent. I think that it’s absolutely necessary if you look at the drivers that are facing particularly universities in Australia right now...in the online space, the press of accreditation, standards and standards that are generated internally around the quality of work...it’s not a matter of being able to produce one excellent course. The high tide has to raise all the boats, which means that you have to have a methodology that builds quality across the board. (Nick, 2013, p. 9)

Eve also highlighted the need for certain conditions to be in place in order for the process to succeed:

Yes, I do. I don’t think it is easy and we know that now from the project that we’re working on...it’s also been clear over the last 10 years...how difficult it is to move people into this and there has to be certain conditions in place to enable that...I think it certainly for me definitely ticks the boxes about what we need to do and how we need to do it in order to get to the common goal that we have around quality learning and teaching. (Eve, 2013, p. 17)

Considering the less than ideal initiation to the process Ali had experienced, it was rewarding to hear her strong beliefs on the sustainability of the process:

I do, I actually do think it’s sustainable. I think that we as...tertiary institutions need to re-think the way that we’ve attacked this process in the past and that we need to be less bound by structures and artificial constraints and be thinking more holistically about course reviews, course design and what we want to achieve as a consequence of the course design. So I absolutely think that there’s scope for this kind of work within universities. (Ali, 2013, p. 11)

All design team members mentioned the need to move thinking and abolish constraints in order to support a course design process in higher education. The benefits of having a theoretically -derived design process were aligned with concepts of quality and
establishing a competitive edge in the market place. Even with such strong support amongst design team members for the sustainability of the process, every response came with a clarifier that tended to target the need for institutional support to ensure success.

7.11 Summary of Design Team Member Experiences
The experiences of team members in this design process were generally very positive. Real strengths included the use of a theoretical base for the process and further embedding theory in the content, the use of collaboration, the authentic and practical nature of assessments and the ability to respond to needs identified in the field and by stakeholders. Synthesising design team members’ experiences into a few core themes meant that these could be aligned with student and stakeholder feedback. Ali summarised the process well in stating:

> I think that in terms of the way that we [design team] look at our courses and construct our courses, having those simple rules and those shared understandings, those shared ideas about how things should be done, some shared conceptual ideas in relation to content and the shared theory that underpins that really cushions how everything is produced in relation to a course and the content. (Ali, 2013, p. 3)

Consistent challenges identified by all team members were typically focused on institutional practices. An additional future consideration that was overlooked at the time was a planned orientation for team members entering at a later stage in the process.

In the section that follows the themes of the use of a theoretically derived design process, collaboration and the transfer of knowledge from theory to practice as established through design team member interviews are used as an organiser to interrogate four additional sources of data to either confirm or refute these conclusions. Although institutional practices were heavily represented in design team members’
interviews and experiences due to their day-to-day engagement with these, they were not a significant part of the student or external stakeholder experience, so this aspect was not considered within the additional data sources. These sources of data were not designed specifically to respond to these themes but were an important source of information as they related to the perspectives shared by students and stakeholders.

7.12 Stakeholder Perspectives

The following section triangulated student and stakeholder feedback obtained and used this to further support or refute design team members’ experiences. The themes identified by design team members relevant to other stakeholders included the design and content of the course, collaboration and the practical application of course content. The intent was to build on the previous section where the findings were confined to the perspectives of design team members. This section incorporated student reflections about the entire course, student feedback at the midpoint of the course and feedback on the first subject in the course. The intent was not to provide an evaluation of the course but to provide multiple perspectives on the design. Three key pieces of data were used: feedback from the first cohort to complete ESS440, the first subject in the course; feedback from the same cohort at the midpoint of their course having completed four of the eight subjects (ESS440, ESS422, ESS423, ESS426); and interview data from the doctoral thesis of one of the students in this cohort. The thesis (Grima-Farrell, 2012) investigated how six students who completed this course reflected on the way the course built their capacity to address the theory-to-practice gap in their professional settings. As part of their course work, students were required to implement a theory-to-practice innovation in their setting. The examination of the sustainability of the innovation formed the basis of Grima-Farrell’s study. From the thesis data, information relating
specifically to course design was extrapolated. Stakeholder feedback was also inserted where appropriate, although this was not a key data source.

7.12.1 Initial subject feedback
As part of the design process the design team sought feedback from the first cohort of students about their experience, including the demand, utility, and design of ESS440 as well as their overall levels of satisfaction. The following section presents the data, major takeaways, and summary of the actions taken by the design team in response to feedback.

The first piece of data used by the team was the standard RU Student Distance Education Subject Survey that provided feedback about the first subject in the course, *ESS440 Teaching and Learning in the Differentiated Classroom*. Data from this subject were used as it was the first student-based feedback source for the course and because two different sources of information were available on the same subject – the standard institutional survey and a survey created by the design team based on the institutional one, allowing for more extensive qualitative feedback.

For the RU Student Distance Education Subject Survey, quantitative feedback was gathered using a Likert scale with a range from Very Strongly Agree (with the statement) to Very Strongly Disagree and an Unsure option as midpoint. There was also a N/A (not applicable) option available, although this was not selected by any students in this instance. Students could not be individually identified through these responses. At the time these surveys were completed the questions were standardised across the institution, with no opportunity to modify them for a particular subject or to drill down on particular subject design aspects. Items relating to library services and divisional
support were removed as they were not aspects for which the design team had responsibility.

Overall, students rated items with aspects such as learning tasks, content, readings and alignment between assessment and objectives highly as determined through responses in the Very Strongly Agree, Strongly Agree and Agree range. Aspects where students responded in the Unsure or Disagree categories included the objectives being clearly outlined, scheduling to allow adequate preparation and timely feedback. Table 7.1 provides a summary of the quantitative information provided by the eight students that responded to the survey.
Table 7.1 The RU Student Distance Education Subject Survey for ESS440 First Cohort

<table>
<thead>
<tr>
<th>Feedback criteria</th>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The production quality of the study material was high (e.g. printing, layout).</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The learning tasks suggested in the study material were helpful.</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The objectives of the subject were clearly outlined.</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subject content was clearly related to the stated subject objectives.</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The recommended readings helped in understanding the subject.</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The assessment tasks in the subject were consistent with the stated objectives of the subject.</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The assignments were scheduled to allow adequate time for preparation.</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My understanding of the subject has improved as a result of feedback from assignments.</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feedback from assignments was timely.</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The residential school was well organised.</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The teaching support provided was adequate.</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As a result of doing the subject, I have improved my ability to communicate about its various aspects.</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The overall quality of teaching in this subject was good.</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would recommend the subject to another student.</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N = 8 students
The final section of the survey allowed qualitative feedback and required students to respond to two framing phrases: *Comment on two aspects of the subject which you found helpful, useful or particularly good* and *Comment on two aspects of the subject which you would like to see changed*. Responses in this section varied between two comments in each section, one comment, no comment or a combination of these. The student responses are compiled below:

Helpful/particularly good:

- Assignment 2 – lesson plans were able to be transferred to real classroom situations.
- Generally, readings were informative and helpful
- The layout of each unit giving a step by step approach was useful
- Use of the forum for feedback was challenging but very useful in the learning process
- The residential
- The format of the resource materials
- Rich combination of materials presented in booklet form
- Classroom relevance
- All the readings together in one booklet
- Peer feedback process was good
- Enthused me again for teaching
- I enjoyed the second assignment and found it a great learning tool
- The workshop – opportunity to pool together, share expertise, collective intelligence

Aspects to see changed:

- Workload and assignment expectations was extremely heavy, review is necessary to make it more equitable
- Mailout and information regarding dates needs to be sent in time for adequate response. Even this survey, dated June 3, arrived June 30th making it impossible to return by the due date.
- Assignment One – peer assessment made completion of assignments on time difficult
- Some of the reading material was not legible
- Materials arrive earlier
- The amount of work required in assignments
- I only received this survey 30/6 and it was due back 1/7
- Huge workload

(ESS440,Student feedback, Year 2)

Even within the confines of responses permitted through the structure of this survey, these results co-varied with the perspectives of the design team about the overall utility
of the course. The three themes focused on for triangulation – design and content of the course, collaboration, practical application – were evident. Students targeted the design and content of the course through comments such as *The layout of each unit giving a step by step approach was useful* and *The workshop – opportunity to pool together, share expertise, collective intelligence*. The latter response aligned effectively with design team discussions about the development of a common schema and the use of collective intelligence.

Students also referred to the benefits of the various collaborative process elements embedded in the subject through comments such as *peer feedback process was good* and *Use of the forum for feedback was challenging but very useful in the learning process*. One of the primary motivations for embedding collaboration throughout the course was to enhance the learning process and reflect good practice in the field. For the design team, active use of collaboration meant that an evidence-based process was used in the work of the design team in creation of the course and in delivery and application of the course content.

Throughout the design process there was an emphasis on practical and authentic assessment and bridging the theory-to-practice gap. This also covered specific areas of need identified by stakeholders and the literature. In both their quantitative and qualitative responses, students focused on the practicality of the assessments, learning design, presentation of materials and the benefits of the workshop. In their written feedback, students noted the *classroom relevance* and that *Assignment 2…lesson plans were able to be transferred to real classroom situations*. The practical application of assessments was central to the work of the design team throughout the design process.
and had been embedded from the beginning through the simple rule of *assessment is authentic*. Aspects of student feedback showed alignment with comments made by the design team, particularly in relation to the intent of the assessments. Further, the overall quality of the learning experience was rated very highly by students with 9/11 students rating their experience as *very good* and 2/11 rating it as *good*. These were the top two response options available for this section.

The aspects to be changed as identified by students included workload issues and timing of material distribution. Design team members had considered the volume of content at various times during the design phase but that topic was not raised by any of the design team at the time of completing the interviews. Similarly, design team members were aware of issues with material distribution due to the feedback provided in these surveys and individual contact made by students with design team members, but it was not an institutional aspect controlled by the design team.

The second piece of feedback available to the team was the survey designed by the design team utilising a combination of quantitative and qualitative feedback about the student experience in ESS440. As mentioned earlier, this survey was used as a cross-check with the institutional survey completed on the same subject. This survey was sent to students by the course design team, its structure loosely modelled on the institutional survey used to collect information, *Student Distance Education Subject Survey*, to ensure some consistency with other data sources available to the design team. The quantitative feedback was gathered using a Likert scale with a range from Very Strongly Agree (with the statement) to Very Strongly Disagree, with an Unsure option as midpoint. I added a Did Not Respond (DNR) column to indicate statements where
students did not indicate a response preference. Students could not be identified through their responses. Eleven students in the initial cohort provided feedback.
Table 7.2 Design Team Subject Survey for ESS440 First Cohort

<table>
<thead>
<tr>
<th>Feedback criteria</th>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
<th>DNR</th>
</tr>
</thead>
<tbody>
<tr>
<td>The peer feedback component of the subject (i.e., sharing and critiquing peers’ work) contributed significantly to my learning</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>The peer feedback component was worth the time I expended upon it</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The workshop component of this subject made a significant contribution to my learning</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The assignments in this subject were highly applicable to my classroom practice</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The assignments in the course will help me as I support other teachers</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course outline helped me to understand the overall course design</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation of the learning materials made a significant contribution to my learning</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The reflection component made a significant contribution to my learning</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Overall, how would you rate the quality of the learning experience in this subject?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N = 11 students

Very Good | Good | Average | Poor | Very Poor
---|------|---------|------|-------
9 | 2 |         |      |        |
All students rated the fifth item *The assignments in the course will help me as I support other teachers* as Very Strongly Agree or Strongly Agree. From a design team perspective, this meant that the capacity-building aspect of the course design was already evident at this early stage of the course in the students’ responses. The comments section that followed allowed responses beyond those permitted by the formal institutional survey presented in Table 7.1. As students were able to provide extended responses in this section of the survey, it was interesting to note that the use of the language of self-organising principles had become evident in a manner that mirrored the embedded way this had been done in the subject materials:

The course provided excellent readings and I feel that the learning was very significant… The embedding of the learning theory with the teaching practices was an example… I found the work-load to be heavy, it required substantial blocks of time to be dedicated to each tasks.

I found the critiquing exceptionally draining time-wise and mentally. However, the pooling of the collective intelligence and being able to see others’ responses helped affirm and clarify one’s thinking.

(ESS440 Student feedback, Year 2)

The value of the feedback and reflection processes could be seen in the quantitative component of the feedback. As with the previous survey, the workshop was also identified as significantly contributing to student learning. Due to the possibility of providing more detail in their responses, it could be seen that students found the workshops particularly beneficial due to the collaborative and supportive atmosphere created:

The workshop was wonderful and a great forum for so much learning and sharing of ideas.

I enjoyed the workshops I believe these are essential to help eliminate the number of hours spent trying to work out what has to be done.

The workshop component is an excellent support for distance students.

(ESS440 Student feedback, Year 2)
Inclusion of the workshops as part of the course structure was something our stakeholders appreciated as well. The workshops had been embedded in the course after discussions with our stakeholders regarding the purpose and content:

From a [stakeholder] perspective, the big thing for us was to make sure that a return to study aspect was included in the workshops. Our biggest concern was that in most cases the students in the cohort hadn’t studied for quite a while and were...I suppose out of practice for want of a better term.

(L, stakeholder discussion, July, Year 4)

Students rated highly the relevance of the subject to their context, with the statement the assignments in the course will help me as I support other teachers scored as Very Strongly Agree or Strongly Agree. What resonated with the design team was the fact that the design of the assignments in the first subject of the course already made students feel that they would be able to support their peers in practice. The capacity-building aspect of the course was important to the design team and had been purposefully embedded throughout the course.

When focusing on the usefulness to practice, students mentioned the readings as a sound information source, the clarity of tasks, and the application of work completed to their teaching practice. This supported the work done by design team members, as the design metaphor had been created together, on the subject surveyed here, and then taken up individually. This meant working on tasks together to ensure clarity and consistency across subjects in relation to design and consideration of practical application.

The task requirements were on the whole clearly stated

I found the assignments useful to my teaching practice. It has been a very long time since I had to do a formal lesson plan (for someone to view).

I have enjoyed the readings immensely…I have enjoyed each assignment as I have learnt so much and I am using everything I have learnt daily.
I thoroughly enjoyed module 1 and have really boosted my professional development as a result of doing the [subject].

(ESS440 Student feedback, Year 2)
The most consistent criticism was of the workload as well as the late delivery of the subject materials. The workload issue was highlighted in both this survey and the formal RU one completed by students. This was also a matter that design team members had anecdotally picked up from students during the session, so it was a high priority aspect when reflecting on feedback:

I found this semester extremely worthwhile, I have learnt a lot. But the workload for me was huge and I kept thinking if this is one subject how will I manage working through two next semester.

Congratulations to the team who has always been responsive to guidance and direction. I am, however, fearing the coming semester and managing the balance between school, study and household.

I am thoroughly enjoying the course however I do fear that the workload of the 2 units next semester is humanly impossible when working full time.

(ESS440 Student feedback, Year 2)

Our stakeholders had also reported that workload was an issue in early conversations:

Jane, Grace and Rena have expressed concerns about the workload and their ability to continue. I think this may be an issue for more of the students in the cohort...they are worried about how they can keep up this level of intensity.

(V, stakeholder discussion, May, Year 2)

However, in our subsequent check-in discussion with stakeholders, I raised the issue of workload and had quite a different response:

Nope, well none of them have mentioned it... I think no news is good news.

(V, stakeholder discussion, November, Year 2)

This was positive news for the design team on two fronts. Our work at the design level to focus on the amount of content in subsequent subjects appeared to have had an impact and also the workload overall would have increased for the cohort as they were completing two subjects rather than one in this particular session, so to have had no specific feedback about workload was seen as a positive.
One of the students succinctly incorporated all the positive and challenging aspects identified by peers in their responses. The student mentioned the benefits of the workshop, collaboration, and thoughtfully designed course material. Challenges included the workload and timely arrival of study materials:

It has been very relevant to my teaching. This is the first time I have completed a course through Distance Education and was expecting to be working by myself for the duration of the course. I have however found the workshops to be most beneficial and enjoy the group collaboration… The course material is designed in order that there is a thorough examination of it. I do spend many hours reading the materials and working on assignments but I did expect the workload to be fairly heavy. I am hoping that we receive the next subject materials in ample time so that we can digest it well before commencing assignments.

(ESS440 Student feedback, Year 2)

Workload and the benefits of a workshop were aspects design team members had discussed extensively during the design process (as seen in Chapter 6) but were not touched on in interviews with design team members when reflecting on the overall process.

In summary, the feedback provided by students and other stakeholders aligned with three of the major themes to arise from the design team member interviews – the design and content of the course, collaboration and practical application. Students expressed high levels of satisfaction with the learning experience overall. The workshop component was considered highly valuable as students could engage with the collaborative process face-to-face, establish relationships and then continue this engagement via the subject forum and other feedback processes. There was more variability in feedback relating to the reflective components of the subject. Not all respondents felt that this was as valuable as the design team did. A number of students found the subject to be demanding and in excess of their expectations and previous experience with graduate study. The content of the course and the workshops were seen
as highly applicable to their practice as noted by both the students and their immediate employers (identified as key stakeholders here). Overall, students responded favorably to the new design. The level of thoughtful engagement was also reflected in the highly professional and considered comments provided in the first piece of feedback.

Based on this feedback, the design team undertook another cycle of refinement, reduced the assignment load, and threaded the study schedule for the next two subjects together, reviewing the narrative of the new design to increase accessibility, reviewing the length requirements for assignments and reviewing the scope of Module 2. We viewed the strengths and the overall positive nature of the feedback as a reflection of much hard work by the team and the students who engaged with the subject in such a positive manner and spirit.

7.12.2 Course feedback on the first four subjects
The third piece of feedback used by the team was the standard RU Student Distance Education Subject Survey that covered the first year of the course (ESS440, ESS422, ESS423, ESS426). This gave an overview of the course to-date and the student experience. As with the previous RU survey, quantitative feedback was gathered using a Likert scale with a range from Very Strongly Agree (with the statement) to Very Strongly Disagree and an Unsure option as midpoint. There was also a N/A (not applicable) option available, although it was not selected by any students. At the time these surveys were completed the questions had been standardised across the institution, with no option to modify them for a particular subject or to drill down on particular subject design aspects. Sixteen students responded to the survey with the quantitative feedback provided in Table 7.3.
### Table 7.3 The RU Student Distance Education Subject Survey of First Year Subjects

<table>
<thead>
<tr>
<th>Feedback criteria</th>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The workshop components of the course made a significant contribution to my learning</td>
<td>14</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The assignments in the course were highly applicable to my classroom practice</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The assignments in the course will help me as I support other teachers</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course outline helped me to understand the overall course design</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation of the learning materials made a significant contribution to my learning</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The reflection component made a significant contribution to my learning</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, how would you rate the quality of the learning experience in this course?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The final section of the survey allowed qualitative feedback and required students to respond to two framing phrases: *Comment on two aspects of the subject which you found helpful, useful or particularly good* and *Comment on two aspects of the subject which you would like to see changed*. Responses in this section varied between two comments in each section, one comment, no comment or a combination of these. The student responses are compiled below:

- I liked the workshops. I have learnt so much. Thank you. It is a lot of work.
- I love the workshops and the flexibility of the lecturers. You are all wonderful and helpful. I feel better equipped to participate in professional discussion and cater for a wide variety of student needs, thanks.
- I have found the readings and support to be outstanding, thank you. Very helpful, down to earth! Thankyou
- I found that even though breaking down assignments into components is beneficial their [sic] were to [sic] many sections.
- Some assignments had many sections – lost momentum by part H!!
- I can now drill down, walk the walk, talk the talk and appreciate collective intelligence!!
- Thank-you I have learnt a lot

(ESS440, ESS422, ESS423, ESS426 Student feedback, Year 3)

This was the first survey completed by students that provided the design team with information about the course to-date, as the questions and responses pertained to the first four subjects of the course – ESS440, ESS422, ESS423 and ESS426. Twice as many students responded than on prior feedback occasions, with 16 students completing this particular survey. To ensure consistency with previous analysis, the same three themes were used for triangulation with design team data – design and content of the course, collaboration, and practical application.

Aspects of the course that related to the design and content were all positively evaluated with responses in the Very Strongly Agree, Strongly Agree and Agree categories. This included understanding the overall course design and the organisation of learning
materials significantly contributing to learning. These responses supported a number of aspects highlighted by the design team, including the embedded nature of the design and skills throughout the course, particularly through the simple rule of a common subject development framework, and the self-similarity of subject design to support the development of a schema. When asked about the quality of the learning experience, students were overwhelmingly positive with 14 of the 16 students giving the highest rating of Very Good and the other two students rating their experience as Good. Additionally, the research-based language used by the design team in the subject materials such as *collective intelligence* and *components* was reflected in student responses.

Both the quantitative and qualitative data available showed that students continued to be very positive about the workshops. The quantitative responses to the statement *The workshop components of the course made a significant contribution to my learning* indicated 14 students Very Strongly Agreed and 2 students Strongly Agreed with this statement. This statement had the strongest positive response in the survey. Further, two students explicitly noted the benefits of the workshops in their comments. By the time students were completing this feedback, the amount of reflection expected during the completion of subjects had been reduced due to workload issues shared with the design team after the first subject. Interestingly, the statement that received the most diverse responses was *The reflection component made a significant contribution to my learning*, with nearly one-third of students choosing *Unsure* as their response choice. This result contrasted significantly with prior feedback where just one student had provided an *Unsure* response.
Responses ranging from Very Strongly Agree to Agree were evident when focusing on statements that considered the practical application of the course. These included statements about the applicability of assignments to classroom practice and identifying that assignments would help the student to support other teachers. The high student confidence in supporting others meant that capacity-building of students in the field of inclusive education was occurring. Design team members had all mentioned the impact of a common schema through the development of simple rules that were determined at the beginning of the design process as pivotal. This meant that practical application was consistently considered by referencing the simple rules of *theory-to-practice link* and *assessment is authentic*.

The design team had taken on earlier feedback regarding the workload expectations and volume of content in the first subject (ESS440), so that by the time students completed this survey that reflected their experiences of the first four subjects, workload was not an issue. It had been at the forefront for the design team as the subsequent subjects went into production and had obviously been resolved.

7.12.3 Post course feedback
When the same cohort had been followed through the course, it was particularly advantageous to have one member of that cohort decide to undertake doctoral study investigating the sustainability of the intervention projects completed in the final year of the course for *ESS527 Inclusive Education Project* (Grima-Farrell, 2012). As part of her doctoral work, Grima-Farrell interviewed six of the students from this cohort, including herself. Parts of these interviews specifically relating to the course were extrapolated as an additional data source. The quotes used from Grima-Farrell’s work bore no direct relationship to this study beyond the students having completed this particular course.
The questions for her study were developed independently. These pieces of interview data further supported the work done by the design team, with students highlighting the design and structure of the course, the benefits of collaboration, and the practical nature of the course-work. It was also evident in the responses of students that the language used to discuss the course was reflective of the terminology used throughout the course-work.

In regards to the course-work, Grima-Farrell used a combination of open-ended and semi-structured interview questions that investigated the transfer of course-work into project design and implementation in settings. These included:

- How did the master’s course influence the project? Were there specific features that exerted an influence on your project?
- Did you replicate any aspect of the RU course in your setting?
- What aspects of the degree helped with the design and implementation of the project?
- How did features of the university course have an impact on your knowledge and skill level in promoting the use of research-based projects?

(Grima-Farrell, 2012, pp. 420, 424)

The students interviewed were not privy to information on the design prior to the interviews and simply provided reflections based on their experiences of the course.

In her response, Sam compared her experiences with previous study she had undertaken. She touched on learning design elements to highlight the differences and incorporated the notion of a spiral of reflection:

It was the way it was scaffolded, the spiralling effect. I did a previous course in action research and I found this quite difficult, as there was no structure on how to do it. I found this a completely different experience and I followed the same process when I implemented my project. It was the whole package. (Sam, 2009b, p. 4 in Grima-Farrell, 2012, p. 246)
This spiralling effect noted by Sam had been highlighted by Eve during the design team member interviews and had been presented in visual form at the design process stage when describing her idea of a reflective spiral (see Figure 6.9). The design team had then endeavoured to embed this reflective cycle throughout the course.

Two other students, Wilma and Chris, also targeted learning and course design aspects. This also led to the incorporation of specific elements that assisted with their learning, such as the graphic organisers, use of collaboration and feedback:

> We had the graphic organisers that helped the more visual learners like myself go step by step through the task and get to the endpoint. The step-by-step structure of the course was huge. It was a main feature and so effective. (Wilma, 2009b, p. 4 in Grima-Farrell, 2012, p. 246)

> I think the consistency in the Master’s course across all subjects, was replicated in our setting because everybody knew what they were going to expect. I think the collaborative approach through the Uni masters project, the feedback; the consistency was replicated in my setting. (Chris, 2009, p. 3 in Grima-Farrell, 2012, p. 195)

Later in the interview, Sam highlighted the capacity-building aspect of the course:

> Being part of a cohort was really good. I really think that the course built capacity. It gave you the skills to engage with the people and to build their capacity and you did it without even realizing that you were doing it. (Sam, 2009b, p. 5 in Grima-Farrell, 2012, p. 248)

Through the design team member interviews, aspects such as a considered and consistent design structure, the need to scaffold learning and using evidence-based practice were highlighted. Even though students were not aware of these aspects informing the design process, support beyond the perceptions of design team members was evident in the responses of students in the course and key stakeholders.
Collaboration was mentioned by all six students interviewed, although in relation to different aspects. It was aligned with research, with good practice, and as a practical approach to be used in the field:

We were presented with a lot of the research across different subjects...You know learning about collaboration, working as a team, what was going to be good for the whole school and a lot of the stuff I had learned through my university course, I was able to use when we were devising that program and implementing it in the school. (Mary, 2009, p. 3 in Grima-Farrell, 2012, p. 202)

I think collaboration the fact that is was collaborative, and I also think that is was research driven...Another thing too is, that when I did it, the uni teachers really ensured that we did implement with integrity. You had to monitor that implementation integrity; you couldn’t just start the course and waffle back at the end and make sure. It was that the whole way through. (Sam, 2009, p. 2 in Grima-Farrell, 2012, p. 205)

From a stakeholder perspective, the collaborative aspect was touched on when discussing the workshop and how that had outcomes beyond those anticipated:

The other unforeseen benefit was the community of practice they [the students] created.

(L, stakeholder discussion, July, Year 4)

Alignment with practice was also incorporated by the students when discussing the assignments that had been designed for the course. It was evident that students made the connections between theory and practice, as intended through the course design, through the authentic nature of these assessments:

I think all the assignments that we did, were exactly the way we needed to follow through with the project. We had to do the theory side and the practical side of it, there was always three components to every assignment so you knew you were going to have the differentiation component...You need the total package. The depth of knowledge really came out in our projects. (Meg, 2009b, p. 4 in Grima-Farrell, 2012, p. 247)

The way the tasks were broken down in the assignments. Do this little bit then the next. The rest was practical. There was constant feedback and collaboration all the time and constant modelling. (Sue, 2009b, p. 5 in Grima-Farrell, 2012, p. 249)
Our key professional stakeholders also provided feedback on the practicality of the course, as indicated to them by the students, which aligned with the key themes extrapolated from design team member interviews including practical application of the course and capacity-building:

In our feedback session pretty much every single one of the students commented on how practical the course was and how it had helped them professionally...obviously the implementation of the projects in each of their settings further supported this and our intent as [employers] is to provide continued support to sustain these.

(V, stakeholder discussion, Year 3)

I think the other thing worth mentioning is that now three, no four, of the students in the cohort have now successfully applied for leadership positions within their schools...Having been involved in reviewing these promotion applications, all of them focused a great deal on what completing the course had done for them professionally.

(A, stakeholder discussion, Year 3)

Sam synthesised the various aspects of the course in one of her responses. She mentioned the way that aspects were modelled in the design, the embedded nature of the theoretical framework throughout the course, collaboration and capacity-building through her ability to transfer knowledge to practice:

By replicating what we had done in the course was the biggest feature. The course was modelled so well. The whole course was collaborative and was embodied into a theoretical framework. The other really big thing in that course was the whole professional language around inclusion. It is not superficial it was that go deeper [sic], it was actually going deeper and it is the total comprehension, the language, the living of the course. (Sam, 2009b, p. 6 in Grima-Farrell, 2012, p. 250)

The student responses were not purposefully aligned with this study and were simply their reflections about the course, yet their responses co-varied with the key themes identified from interviews with design team members – course design and content, collaboration and relevance to practice.
7.12.4 Design team research

Further data used for triangulation purposes included a number of studies completed by some of the design team members. These studies investigated various aspects of the design principles used in this study but with a focus on under-graduate courses and students. These studies covered a 5-year period from 2009 to 2013; two of the studies considered the impact of course design on student self-efficacy (Lancaster & Bain, 2010; Zundans-Fraser & Lancaster, 2012), one investigated embedding evidence-based practice (Bain, Lancaster, Zundans & Parkes, 2009) and two focused on pattern language (Bain, Lancaster & Zundans, 2009; Lancaster & Auhl, 2013).

With the knowledge the design team had gained through feedback on the course examined for this study, evidence of the efficacy of embedding design principles throughout a subject to ensure cohesion in both design and delivery was further replicated in a study of an undergraduate inclusive education subject completed by me and one of the other design team members (Zundans-Fraser & Lancaster, 2012). We found that embedding skills and knowledge throughout a subject, along with embedding practice in these skills within the design of the subject, positively affected the self-efficacy of students and their preparedness to teach children with disabilities. Practicality and clarity of tasks was consistently identified as beneficial to students and their teaching practice just as they had been for students completing the course examined in this study. The effectiveness of embedding principles and processes in the course content was highlighted by one of the students interviewed as part of Grima-Farrell’s doctoral work:

I think they embedded things right from the start. It was heavy going and we were coming from so many different worlds. We lived and breathed the course. It had a life of its own. It was the readings, the research, the collaboration and then we would put it into practice at school. It was putting the research into
Interviews with the design team indicated that collaboration, the iterative feedback process and the utilisation of collective intelligence were highly valued. These perceptions were supported by the feedback provided by the students. Even though students were unaware of the specifics with which the design team had engaged in to create the course, the comments and reflections were similar. The embedded nature of the design principles in the course content contributed a great deal to this. The gains made by using the embedded design approach described in this study were further supported by three pieces of research undertaken by design team members in undergraduate inclusive education subjects (Bain, Lancaster, Zundans & Parkes, 2009; Lancaster & Bain, 2010; Zundans-Fraser & Lancaster, 2012).

The need for and value of collaboration had been strongly evident in the design team member interviews. In this context it was delved into at greater depth by considering the specific strengths and challenges of collaboration. The embedding of collaborative practice was also targeted by members of the design team in an undergraduate subject, where our research found that “embedding collaboration generated a deeper and more elaborate understanding of, and facility with, the role of collaboration in inclusive practice and the role of inclusive practice as it relates to collaboration” (Bain, Lancaster & Zundans, 2009, p. 338).

The capacity to develop a professional lexicon that had been purposefully embedded in the design of a subject was similarly identified in two undergraduate inclusive education subjects taught by design team members, with the experience subsequently articulated.
in related publications. In both instances, the frequency and sophistication of the professional language co-varied with participation in the subject as students learned more about the inclusive approaches being addressed (Bain, Lancaster & Zundans, 2009; Lancaster & Auhl, 2013). Similar findings were evident throughout the student feedback for the course examined in the present study, with students using terms such as embedded and collective intelligence in their feedback. Design team members also noted the development of student language in both workshops and assessment submissions as they progressed through the course.

Even though each of the studies had a slightly different focus, they all looked at subject design and its impact on students. Overall, there was strong support for thoughtful design of subjects and teaching content in an integrated manner so that course work and field experiences were aligned. In instances where students were not exposed to practical experiences, the course work itself was very practical in nature.

7.12.5 Design process impact
Through the student survey data, interviews and stakeholder discussions, it was apparent that many of the aspects that the design team had endeavoured to embed throughout the course were evident to students and had significantly contributed to their course experience. This included the use of collaboration, alignment between theory and practice, a rigorous feedback process and the usefulness of workshops. These were all aspects that the design team had conscientiously worked on throughout the design process. The design process had constituted the majority of energy and focus for the design team for a significant period of time, so unsurprisingly their responses focused on specific design elements, the incorporation of theory and pedagogical aspects.
Even with these different perspectives there were many points of intersection. In the interviews with the design team aspects such as previous design and review experiences, use of theory, the development of a common schema, group processes and collaborative practice were discussed. Key features of the design process identified by the design team included having shared understandings, collaboration and consistent subject design: these were all noted by students as having worked well for them. The design team also focused on the way the course was built and reflected on institutional practices, quality, responsiveness to need and sustainability. These aspects were not considered or targeted by either the students or stakeholders in their feedback, predominantly because they were context-specific.

Although the time taken by the design team when beginning the design process to establish a common schema would not have been known to students, the result was evident in their feedback. Students referred to learning tasks, alignment between assignment and objectives, relevance to their context, peer support and collaboration as aspects that influenced their experience of the course. The embedded design within and across subjects, which had been purposefully considered by the design team, also resonated with students. As students worked through the course, the development of their professional language and understanding of design principle terms such as embedded design, collective intelligence and schema also became evident. There was an obvious progression of the use of this language from the two surveys completed after the first subject ESS440 to the following one at the mid-point of the course and then post-course with a project focus.
In summary, students emphasised various course and learning design aspects that ensured a positive experience of the course: scaffolding, graphic organisers, the consistency of design, and the explicit research and evidence-based nature of the course. These aspects were also mentioned by design team members when discussing the design process. Both the students and key stakeholders identified that student capacity was developed through active engagement with others, feedback processes and collaboration. From a stakeholder perspective, capacity-building was evident in the students’ ability to successfully apply for promotional positions within their particular educational settings. Students also recognised and appreciated the cumulative building of knowledge and skills to prepare them for the requirements of the final project. Stakeholders and students also appreciated that the work done as part of the course had direct application to their setting.

7.13 Conclusion
The design process created by the design team addressed the four issues of need identified in the literature – the need for a theory base for course design and reform, the need for utilisation of collaborative practice, the need to address the theory-to-practice gap and the need to examine the impact of institutional practice. The embedding of a theory base, collaborative practice and alignment between theory and practice were explicitly addressed by the design and in student feedback. Institutional practice was not focused on by students, simply because their involvement with the institution was at a course level with a student perspective, so they were unaware of processes and decisions made “behind the scenes”. As institutional practice impacted on design team members in their day-to-day work, it was highlighted as a key issue by them. Design team members were able to further demonstrate the sustainability of the design process by embedding it in undergraduate subjects in other courses. The investigation of this
work yielded publications in five peer-reviewed journals. The process developed sustained the design team in the course examined for this study and was seen as potentially sustainable in the higher education context, with the caveat that this would mean organisational change principally regarding requirements and support.
CHAPTER 8. DISCUSSION AND CONCLUSIONS

8.1 Introduction
In this chapter the results of the three phases of the study are discussed, and key concepts are extrapolated and used to create a set of empirically derived course design principles and a design model. This chapter is presented in four sections and is organised around the three phases. A brief summary of each phase is presented, followed by a summary of each of the key findings in relation to the research questions. The discussion provides a context for the presentation of the course design principles and course design model for higher education as my contribution to the field. The final section addresses the limitations of the study and provides suggestions for future research.

8.2 Overview of the Three Phases of the Study
Design-based research processes were utilised as an organisational tool for this study. This led to the evolution and examination of the course design process through three phases. Phase 1 focused on establishing the areas of need in the field using extant literature and a validation process to determine that the needs existed in the setting where the research was conducted. After determining that these needs existed, the processes of design and review at the study institution were examined. This involved consideration of the current policies, processes and practices of course design and review as well as design team members’ experiences working within this framework. Phase 2 described a process employed to address the findings of Phase 1 by engaging in a theoretically derived course design process to respond to the identified areas of need. This phase examined the development of a design process and the application to a higher education setting of a theoretical framework that had previously been deployed in K-12.
Phase 3 focused on the experiences of design team members and examined their views and perspectives on the development of a design approach, use of theory, the design process, course and subject design, learning design and the cycles of feedback. To further triangulate and validate these experiences, student feedback was examined for consistency across themes. Further, studies published by members of the design team utilising some of the design principles from this study were highlighted, and also utilised was post-course feedback provided by students as part of a course graduate’s thesis. This phase investigated the work done throughout the design process and considered how it addressed the identified areas of need and how these were evident in the final product, the course.

8.3 Phase 1 Conceptualisation of Institutional Context (analysis of the issues)
Research question: Do the design and review processes at RU address the areas of need identified in the higher education, teacher education and inclusive education literature?

In this phase a design-based research approach was initiated through identification of the areas of need to be resolved. The four areas were: the need for a theoretical basis of course design and reform, the need to reduce the theory-to-practice gap, the need to utilise collaborative practice, and the need to examine and acknowledge the impact of institutional practice on reform. These areas of need were triangulated with an examination of current course review and design processes at RU that included a keyword and thematic analysis of the institution’s course design and review process. This was further triangulated with the previous course design experiences of design team members completed as Part A of the design team member interviews. The lack of empirical research in the four areas of need was evident. The body of publications was predominantly comprised of opinion and narrative pieces rarely derived from actual
study. This was the conclusion of Hoban (2005) who explored the use of theory in course design and by Grima-Farrell (2012) who investigated the theory-to-practice divide, and it was further supported through the literature explored in Phase 1 of this study and literature used in the subsequent phases.

8.3.1 Role of theory

The key concepts highlighted by researchers examining the impact of theory on various aspects of higher education was that the use of theory could be seen as a way to be responsive to needs identified in practice (Bain, Walker & Chan, 2011; Hodson et al., 2012). A theoretical framework provides a structural basis for the process of course design (Hoban, 2004) by making closer and more explicit links between theory, what has been espoused through research, and what is done in practice (Biesta et al., 2011; Juuti & Lavonen, 2006; Norton et al., 2013). Theoretically informed methodologies help to identify the needs and preferences of students so that course design and teaching methods used are appropriate for student needs, educators and the institution (Brownell et al., 2005; Norton et al., 2013; Stierer & Antoniou, 2004).

Thematic analysis of the three key institutional documents employed at RU – the CAP, the Draft ICP document and the CRC – found no reference to the role of theory or theoretical frameworks as a requirement to guide course design. The focus was almost exclusively on documenting in instrumental ways the course process rather than employing theory in the review of existing courses or the design of new ones. The only mention of theoretical design in the FCC minutes (May, 2013) occurred when it appeared in relation to the course examined in this study as it went through another review cycle. The limited consideration of theoretical design in current course review processes at RU was confirmed by team member interviews. There is no formal
institutional requirement at RU for courses to have a theoretical basis although some course leaders have made attempts to embed this type of information in sections of their documentation. This situation has led various design teams to feel constrained by what they saw as inflexible institutional practices that forced design teams to adapt existing work rather than engaging in a full process of design (Burgess, 2004). This pressure was identified by design team members when discussing their previous course design experiences. Team members mentioned constraints from supervisors determining whether they could be involved, stipulating the level of involvement, or actively discouraging them from involvement.

Norton et al. (2013) highlighted the point that universities send strong signals about what is valued through their practices. Current practices at RU do not privilege the theoretical work done in learning and teaching as it relates to course design (Brown et al., 2013; Toohey, 1999). Fallon (2008) examined the focus of higher education journals and identified two dominant themes in 406 articles under review, with 48% focusing on either system policy or course design. Few of these appeared to have focused on practice-based studies in the area. This finding is consistent with the findings of Grima-Farrell et al. (2011) and the challenge in locating practice-based examples to inform this study. Thematic analysis of key documents in this study revealed that terms linked to learning and teaching were minimally represented in these documents. The exception to this was in the use of the term – *practice*, which commonly appeared in relation to subject titles, literature lists and supporting documentation, but not specifically in connection to the application of theory. Korthagen (2010) highlighted the importance of considered course design and course structure and the implications of the positioning of content on the student experience. This lack of connectivity was further evidenced in
critique of the key course approval documents for course approval at RU, the CAP, the Draft ICP document and the CRC. No space existed to provide information about learning design and the broader design process undertaken by design teams.

8.3.2 Collaboration
The value of working collaboratively has been recognised by many researchers and is linked with programs of high quality (Cochran-Smith, 2004c; Coronel et al., 2003; Kezar and Leister, 2009). The use of collaborative processes allows the sharing of knowledge, the use of collective intelligence, and the opportunity for deeper engagement. The literature on collaborative practice focused on three main themes – organisational culture and conditions required for collaboration (Coronel et al., 2003; Jones, Lefoe, Harvey & Ryland, 2014; Oliver & Hyun, 2011); the logistics and relationships required for effective collaboration (Deppeler, 2006; Friend et al., 2010; Hixon, 2008); and building capacity in skills for collaboration (Jones et al., 2012; vanSwet et al., 2013).

The document analysis undertaken of the three key institutional documents employed to support and guide the course review process at RU found no reference to collaboration within the context of a course design process. In the FCC minutes, 92 instances of reference to collaboration were made. These references predominantly focused on subject content information and supporting documentation included for some of the courses being reviewed at the meeting, with statements such as “You will learn about the culture and skills required for effective collaboration” included as part of subject content information.
Collaborative practice is highly reliant on the individual who has carriage of the course design and review process. Researchers have identified the need to establish relationships as critical to a positive collaborative experience (Allen & Wright, 2014; Norton et al., 2013); and this view was supported by the varied experiences of design team members of previous reviews. Asked to comment on their previous experiences, design team members indicated that some previous review processes were very open, with anyone interested being permitted to be involved and highly collaborative, whereas others were relatively low-key with little involvement from a wide range of staff. This inconsistency is indicative of the lack of a course design framework. Design processes were idiosyncratic and highly reliant on the preferences of the person leading the process. This variability in practice was consistent with the absence of an institutional term of reference for collaboration.

Although research in all three contexts (higher education, teacher education and inclusive education) continually highlighted the benefits of collaborative practice, and more specifically the opportunities afforded in higher education to improve practice and quality (Chao, Saj & Hamilton, 2010; Patel & Herick, 2010), this was not evident in existing processes at RU. Three design team members made explicit reference to times they had been told explicitly that it was a waste of time to work collaboratively or had been actively discouraged from doing so. The quality of the work produced and the feedback cycles being engaged with were not a consideration. Two design team members had had positive experiences when the individual in charge of the review also valued collaborative process.
8.3.3 Theory-to-practice gap

The theory-to-practice gap is not a new area in educational research, although more recent work has been taking a more proactive approach, considering which strategies would best work in reducing this gap, particularly in higher education where this work has historically had little focus (Hardman, 2009; Norton et al., 2013). The use of evidence-based practice has been identified as way to minimise the theory-to-practice gap (Cook & Cook, 2011; Grima-Farrell, 2012; Kretlow & Helf, 2013). There is also a body of work examining the importance of selecting appropriate instructional strategies, linking coursework assessment to practice, and the importance of role modelling by institutional educators (Allen & Wright, 2014; Cheng et al., 2010).

Document analysis of the three institutional documents and the FCC minutes found no reference to theory-to-practice, nor any model of effective practice for course design and implementation. Overall, key concepts that related to this area of need were minimally represented in the institution-wide documents examined. In the Draft ICP document there had been an attempt within each of the institutional priority areas to link to research in the field to which the program applied but there was no sense or expectation of whole course links being required between theory and practice. There was high representation of the term practice in the FCC minutes. This association with practice was made in a variety of ways including professional practice, best practice, authenticity and the use of research to inform practice.

If a course is considered the focal point for learning and teaching (Levin, 2010) the greatest omission would be a lack of reference in the guidance and regulation around course design and development. Little has been done at RU in practice to meet these
needs contrary to research Hora, 2012) that explicitly details the impact organisational practices have on teaching.

8.3.4 Institutional practice

Many researchers have identified the significant impact of institutional practices on change and reform (Eppel, Matheson & Watson, 2011; Henard, 2009; McNicholl et al., 2013). A number of these researchers have also highlighted that institutions are slow to reform their practices (Forlin, 2010) and that higher education teaching is not valued in Australian institutions (Norton, 2012). Further, institutional regulations and procedures are often viewed as a constraint to creativity and innovative course design (Burgess, 2004), suggesting that a genuine examination is needed within institutions regarding constraints and affordances to practice (Hora, 2012).

In this study, the lack of specificity determined by the institution in relation to the operational process for course design, review and approval, as articulated in the institutional documents, led to various interpretations of what was required and how the process should work. As Hora (2012) noted, what can also work against such a process are institutional cultural factors. Several design team members had experienced a situation where institutional practice was used as the reason for not doing something different, though better from their perspective, because there was no space in the process to do so. As Jo said to me in casual conversation during the first year of the process “This whole process focuses purely on admin stuff...we can’t talk about our course design, our theoretical influences, our design process” (researcher log, Year 1). In the guidance provided to staff leading a course design and review process as provided in the documents analysed, all information mapped directly to CASIMS (the institutional documentation system). The data categories within this system did not
include reference to, or address, the key areas of need identified in the literature. This was indicative of a need for reform in this area. Design teams had no opportunity to detail the theoretical principles that drive a course, the manner in which content was determined and developed, teaching and learning beliefs and strategies, the learning experiences and how they aligned with the course standards, and course feedback, because the process for course design at RU afforded no place for these points of emphasis. Moreover, RU lacked a learning and teaching policy as a term of reference at the time.

Through the synthesis of the three institutional documents examined for this study, directives were found about the various pieces of content that need to appear, rather than a design process. Figure 5.1 presented in Chapter 5 showed an excerpt of the subject profile proforma that staff were required to use to complete content. This indicated the key components for inclusion such as abstract, objectives, syllabus, grading system and enrolment restrictions. There was no suggestion of design and the creation of a framework to inform either subject or course design. The documents did not provide any procedural support or direction for a course design and review process although those aspects were integral to the creation of the documentation required by the institutional policy.

8.3.5 Summary of Phase 1 discussion
Examination of the current institutional practices at RU showed that those practices were entirely consistent with the literature. This study found that all four areas of need were poorly addressed by the operational and organisational structures currently in the institution. No framework based on theory and research on course and learning design
was evident in the three documents used in the current RU review processes or evident as a requirement in the FCC minutes that detailed the course reviews undertaken.

Design team members noted that although there were instances where collaborative practice and a focus on reducing the theory-to-practice gap had been part of their experience, ultimately the lack of a consistent, articulated approach institutionally meant that this type of work was not routine or valued. Instances were identified in interviews and the researcher log where theory, collaborative practice, reduction of the theory-to-practice gap and improvement on institutional practice were evident in the work of the design team but there was no set institutional process that would support this way of working in a sustained and consistent manner.

In summary, this phase confirmed that the areas of need identified in the literature were also evident in the context in which the research was undertaken. The findings suggested that within the institutional course design and review process there was a need for guidance about the role of theory, guidance about and examples of the way theory should be employed, and criteria for determining the quality with which the theory was employed. An institutional process that embeds collaboration within organisational structures as a standard process expectation would move the course design and review process beyond simply entering information into a document database. The committee whose role is to determine the readiness of a course would also need to be re-worked to focus on quality, course design process and support provided, rather than positioned as a data checker.
8.4 Phase 2 Development (iterative cycles of the design process)

Research question: How did the theoretical principles of self-organisation inform the course design process and the work of the design team, and what was produced as a result?

This phase of the study reported Phase 2 of the design-based research approach through the application of an existing theoretical framework and design principles to anchor the design process and detailed the course created. A key intent throughout this phase was to respond directly to the claims that an evidence base was lacking in course design and reform undertaken in higher education. In this phase, minutes of meetings, researcher log, observational notes and participant comments taken during the design process were used to support the creation and application of a theoretically based design process. These data sources were triangulated with Part B of the design team interviews to build a comprehensive picture of the course design process.

Four areas of need were identified in Phase 1 and validated as needs at RU: the need for a theoretical basis for course design and review, the need to utilise collaborative practice, the need to reduce the theory-to-practice gap, and the need to examine the impact of institutional practice. Phase 2 addressed the findings of Phase 1 by engaging in a theoretically derived course design process to respond to these areas of need. From the four areas of need, the creation and implementation of a theoretical process for course design was chosen as the focus area, as the other areas of need could be embedded in a theoretically derived process. The creation and application of a theoretical process in itself was a practical way to reduce the theory-to-practice gap and collaborative practice was central to the course design process. Institutional practices were then examined in terms of how well such a process was supported.
8.4.1 Role of theory
The theory applied to the course design process was derived from complexity theory and principles of self-organisation (Bain, 2007; Bain & Weston, 2012). These principles were used to underpin the design process and also used in the content and delivery of the course. Self-organising principles, namely simple rules, embedded design, feedback, dispersed control, similarity at scale and common schema were embedded throughout this phase where theory was used as tools to drive a design process. Design-based research provided the methodology and characteristics for deploying the design process to which the theoretical principles of self-organisation were applied (Cotton, Lockyer & Brickell, 2009; Juuti & Lavonen, 2006; Kennedy-Clark, 2013). As areas of need were identified, a course design process was created to address them; the design process, refined through iterative feedback cycles and reflection on the process, informed the creation of a course design model. These iterative cycles included those completed by design team members as various iterations of the process were trialled and modified, and adaptations made based on stakeholder feedback. This section discusses the way the theoretical base was employed in the design process used by the design team, they way in which content was written and delivered, and the expectations of students.

8.4.2 Influence of the theoretical framework
The use of the theoretical framework influenced the design approach in two broad areas:

- the way the design team was constituted and the design process was framed;
- the design of the course, its subjects and in the innovation that resulted.

Examination of the design approach within these areas provided the capacity to look at the course from a meta-perspective through the lens of the theory, in order to identify principles that emerged from this process.
8.4.3 Influence on design team and process

Given the existing processes and requirements for course design processes at RU, the use of a theoretical framework approach was not familiar to the design team. As noted in Chapter 6, at the beginning of the process when practical understanding was minimal, most of the design team conflated course content with a course design process in design team discussions. It was important that, as part of the design process, capacity was built around understanding of theoretical framework.

While the design principles worked interactively there were a number of distinct contributions of the theory to the overall design-based research approach to the work of the design team and the course process. For the purpose of this discussion, they can be categorised as primary and secondary influencers. The simple rules and embedded design principles were primary influencers. Primary influencers are defined as those that exerted a direct influence on the development of the design process and the way the team was constituted. Secondary influencers related to principles that exerted influence on the process after it was developed. These included dispersed control and similarity at scale where the framework and core of the process had to be established before these principles could be enacted. The simple rules design principle of the theoretical framework provided the team with an opportunity to do more than establish who would be involved when constituting the design team and its work schedule based upon the RU processes. The team members used the simple rules principle to identify what they believed and valued in a design process related to the key areas of need identified in the literature and in doing so they connected the actual work of course design with a genuine commitment to collaboration and research to practice. For example, the simple rule that we have a *common subject development framework* required the team to meet
more often and use a collaborative process. These became working meetings where
design team members tabled their work, discussed modifications and referred back to
the course simple rules and standards. As the team moved through the process,
discussions focused on practical aspects such as identifying the role research-based
practice would play and how collaboration could be embedded in the course for
students.

The creation and use of simple rules ensured that the areas of need identified in the
literature, design process aspects and best practice principles highly valued by the
design team, were central to the process. In a number of cases the simple rules
determined had multiple roles. For example, the first simple rule that decision making
and design is collaborative targeted both the team process and the design process, also
reflecting the need for both theory and collaborative process identified in the literature
(Cook & Cook, 2011; Nagel, 2008; Nevin et al., 2009; Norton et al., 2013; Oliver &
Hyun, 2011). The embedded design principle was also a primary influencer. It provided
a mandate and method to ensure that the simple rules would find their way into the
practice of building the course. This included building a scaffold for our team meeting
process incorporating a feedback point that ensured that work completed during the
meeting aligned with the simple rules and standards established for the course. This
ensured that theory would be embedded in the practice of course design and
implementation.

There were several secondary influences of the design principles on the way the design
team was constituted and on the design process. Synergies were created among the use
of design-based research and the principles of self-organisation, particularly the use of
iterative cycles triggered by the feedback points throughout the design process. In self-organising systems, feedback is used to monitor and manage a process and to provide an avenue through which agents can problem-solve issues as they arise. This study focused on refinement of the design process informed by design team and stakeholder feedback. The design of an embedded iterative feedback process ensured that stakeholders were actively involved throughout the design process. Without a doubt, the use of iterative feedback cycles did increase the time required to work on the course, but all design team members highlighted their depth of knowledge about the course, the value of being able to provide feedback throughout and the quality of the final product due to the process used. The process also provided an opportunity to actively engage stakeholders rather than further perpetuate the theory-to-practice gap already discussed. As one of the key stakeholders noted “Being asked so specifically for our feedback, and at multiple times throughout the process, kept us on our toes….it also meant that our needs as well as your [institutional] needs were met by the final offering” (V, November, Year 2). The design team ensured that the theoretical work developed was authentically connected to tasks that reflected the practical knowledge and experiences of the students in classroom practice. For example after students had built their capacity in a teaching method such as direct instruction as a pedagogical tool, the subsequent assessment component required them to create the conditions for curriculum and instruction to be differentiated and explain how this could be done in their classroom. This direct and explicit link between course design and theory and practice was embedded throughout the course.

The establishment of a collaborative process for the design work based upon simple rules and common commitments made dispersed control for the design work possible. The design team created a common design framework that included an advance
organiser, chunking of tasks, assessable components and clear assessment criteria (Gargiulo & Metcalf, 2013; Woestenenk, 2011). Once this design framework had been agreed upon, design team members were able to work on individual subjects with confidence that they would fit the overall course schema. The design team then used design team meetings to share this work and receive feedback.

In combination, the principles worked to create a common schema for the course. This shared schema was evident to all design team members as expressed throughout their interview responses presented in the Chapter 7. Having a highly scaffolded process (Allan, Clarke & Jopling, 2009; Murtagh & Webster, 2010) reduced the possibility of elements being disconnected and ensured that the course standards and simple rules were a key driver of the design. Theory was used to reflect the approach taken to the design of the course as well as the design incorporated within the subjects and learning experiences.

8.4.4 Course and subject design

The simple rules also exerted a primary influence on specific components of the course design process. One of the first major design steps taken was the development of a course mapping process. In previous processes at RU, no mapping process or way to demonstrate it had been considered; therefore, mapping was undertaken as a design step. As the field of inclusive education has no specific accreditation body, course standards were developed, informed by teaching standards, national and international standards used by other institutions offering inclusive education courses, evidence-based practice in the field and the needs of stakeholders. The simple rules were used as a term of reference for the selection of key standards. For instance, a simple rule focused on contextual referencing. A number of standards explicitly expected that
students made connections between their learning and what was done in their school context. These was evidenced in standards such as *develops collaboration and consultation techniques for working effectively with parents, teachers and other professionals; employs strategies to scale innovation beyond own work and classroom* and *understand and be able to discuss current legal and ethical issues in inclusive education* (see Appendix 6K, p. 630). The triangulation of these created a core set of standards that were constantly referred to and mapped back to throughout the course design process. The need for a set of standards to inform the course was further amplified by the embedded design process used by the design team. The simple rules drove the process which in turn generated the kind of methodology that could be used to inform institutional practice.

The embedded design approach implemented in the course design process also reflected the need to refine thinking around the process used to identify the high-level assessment outcomes of the course as well as specifying what a graduate needs to know and can do to satisfactorily complete the course. In the existing RU process, standards were directly matched to subjects and assessments. This meant that a direct correlation between a standard/s was amplified without any notion of how they were being addressed across the life cycle of a course. It also encouraged individuals to work on subjects in isolation without an understanding of the relationship between subjects and the broader course and its intent. Unless a matching process occurred along the way, it was possible for graduates to complete a course with particular elements being disregarded, due to an assumption that they were being addressed elsewhere. As there was no required process for course review it was feasible that this aspect could be overlooked.
In the application of the embedded design principle which was a primary influencer, a key step was added to the process. Products, or graduation assessment tasks, were developed that broached the usual chasm between standards and subject level assessment and meant that design team members established course level assessments which they believed demonstrated that a student had met the standards established. Products were conceptualised as course level assessment tasks that could be mapped back to the standards to demonstrate graduate achievement. For example, a standard required that students were able to modify teaching strategies and behaviour in relation to child success, modifying plans and instructional approaches accordingly. The product created required students to develop a 5-lesson unit of differentiated instruction. This product contained various elements that required students to demonstrate their ability to differentiate according to a child’s achievement. The creation of products gave the course focus areas where particular content could be matched and aligned directly with the course standards. Thus, the beginning and the end of the design process could be linked – from the intentions to the expected outcomes. Sub-products and related assessments were then created by considering the specific skills and mastery required to meet the intent of each product. Stakeholder feedback was incorporated at this point, as particular needs had been identified earlier in the design process and the team wanted to ensure that these were represented in this work. Accreditation processes often claim this kind of connection without a generative methodology for making it happen in practice – the theory used here provided that methodology.

This process also amplified the characteristics of design-based research (The Design-Based Research Collective, 2003). Through the process of embedded design, theory, learning, and their impact on the environment were continually intertwined. The notion
of a process of development built through continuous cycles of design (Reeves, 2006) aligned well with the feedback cycles employed throughout this process. This was done through the design process with key stakeholders and then refined as subjects began to be offered when student feedback was also incorporated. In effect this highlighted one of the core characteristics identified that reflected how the design functioned in an authentic setting and documented the success and issues (Characteristic 4). In this study, an example of the importance of this was student feedback about the workload involved in the first subject offered. This had been a concern of the design team, and having it confirmed by students meant that changes could be made to subsequent subject offerings. The issue was not subsequently raised by students. Requiring students to apply their learning in authentic settings also refined the learning of the design team as feedback about the value of this practice was fed back to the team.

Another example of embedded design was the breaking up of assessments into smaller components. This was done to provide students with manageable chunks of work, allowed a highly scaffolded design for each assessment component to be put into place, and ensured that there was a purpose for every part of the assessment. Design team members were also conscious of embedding learning through the completion of each scaffolded task rather than creating additional work for students. Through the account of the design process in Chapter 6 it was apparent that a number of design team members were concerned at the time about the amount of content to be covered and how to be strategic about this. By continually referring the design work done back to our simple rules and standards, purposeful decisions were made about the relevance of the work included. As various design team members mentioned in Part B of the interviews, there
was great benefit in experiencing and completing the design of the first subject together before moving on to more independent work.

As delivery of the course rolled out, stakeholders’ feedback continued to inform the design of the subsequent subjects. This meant that lessons learned and the feedback provided were dynamic (Andrews et al., 2012), allowing the design team to immediately incorporate this into discussions about the course as the design process continued. This kind of agency is central to the function of self-organising systems (Serugendo et al., 2004). The feedback process also contributed significantly to the evolution of the schema. The intention was for the simple rules and the design process created to use a common language and term of reference that could be used to share feedback in consistent ways and to evolve the schema for course design over time.

The principle of embedded design was also a vehicle for the methodology and saw the enactment of the simple rules in the design process. These simple rules were expressed in the design and then embedded in the design features throughout the course. This was evident, for example, in the unit design created by the team and then consistently embedded across the course. Thus all units began with a general overview followed by a graphic advance organiser that identified the connections between theoretical constructs, concepts and their practical application in inclusive settings. Students then moved through the tasks that worked through these elements and led to an assessment component that required them to demonstrate their understanding. Theory was used to instantiate institutional practice and bridge the theory-to-practice gap.
As comfort levels of all team members in relation to the design increased and there was an established design metaphor for the subjects to be written, dispersed control was evident within the design team. A criticism of course design has been that conceptions for a course are too vague (Edwards et al., 2002; Hoban, 2004; Tom, 1997). This was resolved in this study as all design team members (agents) were clear about the simple rules and how design would be embedded throughout the course before any individual work began. As all design team members had been involved in the process of creating the simple rules and had discussed which elements needed to be embedded in the design, there was little room for error or misunderstandings. At this point in the process rather than meeting weekly, design team members used the scaffolds determined collectively to begin writing particular subjects. Fortnightly team meetings were then utilised to report back to team members and present the work done for feedback. This cycle continued throughout the subject-writing component of the process. The secondary influencer of dispersed control, another theoretically derived design principle, ensured that ownership of the course was felt by the collective rather than by any particular individual, as all design team members and stakeholders had had the opportunity for input at various stages of the process. By dispersing control for the subject design, the schema was developed further and instantiated as team members worked deliberatively with the design process in groups and as individuals.

The iterative feedback cycles also allowed aspects of the initial design to be altered. A journal requirement was originally embedded within the process to enable students to monitor their growth as part of the feedback cycle. In subsequent iterations this became a self-check component rather than an assessable one, due to feedback provided by students regarding their work-load. The design team had also expended considerable
time and effort in designing a portfolio container but this could not be progressed as “there was no IT support” (Eve, researcher log, Year 2).

The application of similarity at scale, a secondary influencer, meant that the basic operations, procedures and constitution were similar at all levels. The collaborative process among design team members was also used at meetings with key stakeholders and was modelled and used with students at residential schools. This also meant that teaching staff emphasised the connection between theory and practice to students and addressed a key area of need identified in the literature. Similarly, an iterative feedback process employed for the course was used by design team members, key stakeholders and students. There was an element of difference here in that some student feedback was still gathered via existing institutional channels. This feedback gathered was synthesised with other feedback provided by students as part of the process established by the design team.

8.4.5 Summary of Phase 2 discussion
Ultimately, the design framework emerged as a powerful tool that guided the design team to create a course that prepared students who implemented evidence-based practices, understood research, were reflective learners and became change agents in their various contexts. While theory figured prominently in this study, the practical meta-theory necessary to interface the content, process and implementation of course designs with the systems, people and processes that they sought to engage and influence (Bain, 2007) was also considered. The design team established a framework for course design with iterative cycles of feedback and engagement with stakeholders. The feedback provided was used by design team members to refine the subjects being designed, the content, design and delivery.
Dispersed control was assured through the process as course design was not the responsibility of a single person and was shared amongst the design team members. The enactment of secondary influencers such as dispersed control and similarity at scale meant that the design team members could confidently work on individual subjects with the knowledge that the work done in isolation aligned with course requirements. With the establishment of a design framework that had been negotiated by all design team members, the theoretical principle of similarity at scale was also echoed throughout the design process. All these elements were qualitatively transformed by the connections made to the simple rules determined by the design team at the beginning of the process and the standards developed for the course. The most consistent issue raised was the time required to work in this manner. Interestingly, although design team members appreciated working with such a collaborative process, it was not recognised by institutional leadership as a valued way of working.

In summary, this phase demonstrated that the underpinning of theory informing the course design process created a richer experience and allowed the design team to respond to the areas of need identified through Phase 1. Theory informed the design process by creating a structure to the work undertaken and supported the iterative cycles created through the application of design-based research. In essence, the work undertaken in this phase utilised design-based research to document a theory-to-practice effort that was underpinned by theory and employed collaborative practice and iterative feedback cycles to design a course.
8.5 Phase 3 Capacity Building (Convergence of need, design and process)

Research question: What were design team members’ experiences of the course design process and how did this work respond to the areas of need in higher education, teacher education and inclusive education?

Phase 3 focused on the experiences of design team members at RU during the design of a postgraduate inclusive education course and examined how the design responded to the areas of need identified. In essence, this phase triangulated the work done in Phases 1 and 2 and confirmed that the final product created, the course, responded to the needs identified. To validate and further support these findings, student feedback and studies published by members of the design team utilising some of the design principles from this study were highlighted.

8.5.1 Reflections on the role of theory in course and subject design

A common criticism of course design in education has concerned the lack of theory of design or the establishment of a foundational framework (Clark et al., 1999; Edwards et al., 2002; Smith et al., 2003). Embedding particular design principles throughout the course ensured cohesion in both content and delivery.

Using a consistent design framework also gave design team members the confidence to speak about other subjects in the course that may not have been in their specific area of expertise. The common subject design meant that all design team members could answer any of the general student questions with ease and consistency – something that had been noted by students in their feedback (Chapter 7, section 7.12.1). Research has suggested that the use of theory provides a rigorous base for a course or subject being designed and this was supported by the experiences of design team members. The research studies completed by design team members also showed that embedding
design principles throughout a subject ensured cohesion in both design and delivery in undergraduate inclusive education subjects to which these principles were applied and improved student achievement (Bain et al., 2009; Lancaster & Bain, 2010; Zundans-Fraser & Lancaster, 2012). These studies were an expression of the design team’s facility and engagement with the process as well as broader validation of the experience by peers in the field. They further demonstrated the feasibility of applying the principles of design beyond the initial work done as presented in this study.

The course design utilised had obvious impacts beyond the design team. As design team members were so entrenched in the work it was difficult to predict whether the particular design of the course and subjects would make any difference to the learning experiences of students. Student responses to feedback detailed in Chapter 7, indicated that the alignment between objectives, task descriptions and assessment was evident to students. The scaffolded approach used to present content and assessment was a very positive step. This contention was further supported in the doctoral study undertaken by one of the students in the initial cohort who found that students appreciated the graphic organisers, the use of collaboration and the feedback opportunities from both instructors and peers (Grima-Farrell, 2012).

8.5.1.1 Pattern language and schema development
This was the first time that all design team members had experienced a course design and review process that was so explicitly underpinned by theory. Through the language used by all design team members in Part B of the semi-structured interviews, it was evident that complexity theory and the principles of self-organisation were a core part of their design experience. The embedded nature of this pattern language was seen in the response of Jo when discussing the course design experience “one of our principles, one
of our simple rules was that we would work collaboratively...we also tried to embed it” (2013, p. 4). This knowledge was evident in the responses of all design team members, who were able to discuss in great detail the theoretical underpinnings of the design process and used terms such as complexity theory, self-organisation, complex systems, shared schema and pattern language consistently in their responses.

When asked about the theoretical underpinnings of the course design process undertaken by the team, both Ali and Eve had foreshadowed their responses by indicating that they were not as confident or knowledgeable as other design team members, yet their responses suggested otherwise. They could articulate their knowledge about these terms and what they meant in practice as well as any other design team member. As mentioned above, as this was the first time any of the course team members had worked in a process so theoretically driven, there were points of frustration as team members grappled with the theory. This was particularly evident early in the process, when our different levels of understanding meant that at times we believed we had already addressed elements of the process. For example, when Nick led a discussion about a design approach the responses from other team members included, “Didn’t we just talk about this” (Lucie, researcher log, January, Year 1), and “Can you just ask this bit again because now I’m lost” (Jo, researcher log, January, Year 1). Until we were all comfortable with the rhythm of the meeting process it was very easy for us all to fall back into the processes we had experienced in other situations beyond the course design process.

8.5.1.2 The use of theory and its impact on students

Although students were not explicitly aware of the design process undertaken by the design team, they were cognisant of how theory was evident in the subject design. The
interconnected nature of how the areas of need had been addressed throughout the course was also seen in student feedback: “the learning was very significant...the embedding of the learning theory with the teaching practices was an example” (ESS440 Student feedback, Year 2) where both the need for theory and the theory-to-practice gap were targeted. This was further supported in the comments made by students after the completion of the course, where it was noted “the step-by-step structure of the course was huge. It was a main feature and so effective” (Wilma, 2009b, p. 4 in Grima-Farrell, 2012, p. 246) and “the whole course was collaborative and was embodied into a theoretical framework” (Sam, 2009b, p. 6 in Grima-Farrell, 2012, p. 250). Ensuring that assessment was authentic had been a key issue throughout the process from the stakeholder perspective. Examination of the feedback provided by students on the first subject in the course indicated that alignment between assessment and objectives and the practical aspects of the subject were highly valued by students. This meant that the use of the theory as an organisational framework for the substantive work of course design had translated into practice.

8.5.2 Extent of collaboration

All design team members had extensive teaching experience and had skills in collaboration. Six of the seven team members who were former inclusive educators had actively used collaborative processes when working in school settings. Obviously a different type of working relationship was required as the design team progressed through the process, but the skill of collaboration was not unknown to the design team. It was also a method that all design team members were very keen to use, especially in the higher education context.

Conditions identified by Oliver and Hyun (2011) and earlier by Burgess (2004) were mirrored in many of the decisions made by the design team in relation to course design,
development and execution. From the beginning the collaborative meeting process was used for all discussions. The positive experience of design team members with collaborative process led to it also being embedded in the course content and used as a model of instruction with students (Chao et al., 2010; Hixon, 2008; Nevin et al., 2009). When participating in the interviews, all design team members spoke about collaboration as a central aspect of the design process. I had not anticipated this, and had loosely structured the interviews with questions around the areas of need and key features of the design process without consciously thinking about where there might be natural synergies. The design process and the use of collaboration were so intertwined in our experience that it was difficult to separate one from the other.

Collaboration, as well as various student experiences that encouraged collaborative practice, were embedded in each subject. A key element was peer feedback processes. This was seen as both a positive and negative by students “Peer feedback process was good” and “peer assessment made completion of assignments on time difficult”. Anecdotal comments from students at residential schools suggested that working with peers was valued but anxiety was created if peers did not keep to deadlines. After the completion of their course, when students were asked which elements assisted their learning (Grima-Farrell, 2012), they identified “the collaborative approach through the Uni masters project, the feedback” and “there was constant feedback and collaboration all the time and constant modelling.” This strong support for the use of collaboration was reflected in research completed by design team members indicating that, after collaborative practice was embedded in an undergraduate inclusive subject, students demonstrated a more authentic understanding and ability to utilise collaborative practices (Bain, Lancaster & Zundans, 2009).
For design team members, designing the course collaboratively meant the creation of a more coherent course, transparent design, structure and content for all those teaching and for students undertaking the course, and a quality product. Although the design team focused on in this study were very positive about collaboration and could see great benefits of working in this mode, clear evidence of the challenge of collaboration exists both in the literature (Brown, Eaton, Jacobsen, Roy & Friesen, 2013; Chiang et al., 2011) and in the experiences of design team members in other courses. I had a consistently interesting response from all design team members when I asked them to reflect on any challenges to collaboration in our design process. In every single case this question elicited a long pause before a response that included a reference to time. With some more specific questioning it became apparent that all design team members were happy about the time spent, as they could see the quality of what was produced at the end. Most of the frustration was due to the perceived lack of institutional support in investing this time. Eve, our educational designer, was the only team member who indicated that her supervisors saw the value in her time investment. The valuing of collaborative practice and its impact should not be underestimated as an issue given that all design team members had had prior experience with collaboration. Embedded collaboration was identified as a strength in student feedback presented in Chapter 7. To encourage the use of the process in higher education settings, capacity needs to be built and there need to be drivers embedded for using the process. As mentioned in Chapter 6, design team members had pre-existing skills in collaboration that made the level of experience and commitment to collaborative practice in this group different from what is more commonly encountered in higher education settings.
8.5.3 Reducing the theory-to-practice gap

Although the literature in all three contexts highlighted the theory-to-practice gap as an issue, this was the area that had the least impact on the working of the design team. During the extensive discussions with design team members, they stated that this area was of least concern to them, possibly because the concept that theory might not be connected to practice was foreign to them. This was best exemplified by Jo’s comment “We wouldn’t have this...there wasn’t a theory-practice divide because we were doing what the research tells us is best practice” (2013, p. 7). Jo and other design team members were initially perplexed by questions associated with the theory-to-practice gap as it was not in their spectrum of experience. Although teacher preparation courses are often criticised for this lack of connection, the field of inclusive education has always had a very practical and evidence-based focus. To design a course that did not actively make the connections between theory and practice would be the antithesis of the way in which the team worked and that relationship was an important feature of the final course produced.

The process had also been established with simple rules that targeted the essence of the theory-to-practice gap in explicit and implicit ways, such as assessment is authentic, theory-to-practice link and research is embedded. For example, the design team created scaffolds to support students in the completion of their assessments. These were recognised as beneficial by design team members and in the feedback provided by students. Having a consistent subject development framework ensured that the theory-to-practice gap was never overlooked. The concepts presented by various researchers (Burgess, 2004; Oliver & Hyun, 2011) as principles informing effective curriculum reform and course design were applied to this study. Backward mapping, identification...
of need, and clarification of aims and objectives, were all concepts that the design team had experienced, read about or personally believed to reflect sound research-based practice and were naturally incorporated. They also coalesced effectively with design-based research as a process organiser and with the six principles of self-organisation as a theoretical basis and course content organiser.

Student feedback highlighted the practical nature of elements of the course: “lesson plans were able to be transferred to real classroom situations”, “assignments useful to my teaching practice”, “I am using everything I have learnt daily” (ESS440, Student feedback, Year 2). Such comments were particularly rewarding for design team members, as during the design process we had been conscious of addressing the theory-to-practice disconnect. In trying to address this we were quite ambitious with the content of the first subject, as feedback from students indicated that they believed the workload to be excessive. We reduced the workload for subsequent subjects after considering how rigour and quality could be ensured after making such an adjustment. Workload was never highlighted by students as an issue after this change was made. Students were well aware of the theory and practice dimensions of the course, with a student noting, “We had to do the theory side and the practical side” (Meg, 2009b, p. 4 in Grima-Farrell, 2012, p. 247).

8.5.4 Impact of institutional practice

After discussion of institutional practice with the design team members, the responses in this component of the interviews were broken into two key themes – impact of institutional mandates and barriers to course design. It was the one area of need where design team members became particularly emotional, and it was difficult to capture the depth of this emotion in the transcripts. They were either angry and frustrated that
established processes did nothing to support them or upset and disappointed that their hard work was not valued and recognised. The lack of connection between the course design process and institutional mandates had significant implications for the work of the design team. Three design team members again highlighted the fact they were actively discouraged from using a collaborative process of design with two respondents moving from being disappointed to being irritated during discussion of this interview topic. Much of the frustration came from design team members identifying the completion of CASIMS documentation as the driver for course design and review, rather than any notion of quality. The work done could not be recorded anywhere in the body of that documentation, which meant that the substantive work done ended up being placed in the appendices as if an after-thought. As Nick noted in Part A of his interview “it wasn’t focusing on things that were going to make a difference it was focusing on whether we were going to be compliant with some regulations” (2013, pp. 6-7).

The major barrier to the course design process at RU was that there was no formal course design process. This meant that advice provided was highly variable, practices that had been embedded within the institutional culture continued although there was no mandate to do so, there was no learning and teaching policy to guide the work and many institutional practices did not align with one another. During the period in which design team members were trying to implement the subject design, numerous obstacles were thrown our way. For example four of the examples that design team members provided during their interviews related to alignment between subject outlines, subject modules and units. Often different responses were received regarding what information needed to go where and who was responsible for this decision, further highlighting the lack of
consistency and clarity. More often than not, when particular aspects were followed up they were cases of institutional myths and what had become regular practice, rather than an official mandate. Feedback from students did not touch on institutional practice as it was not something students would be privy to. Institutional decisions did have an impact on later delivery options for the course. Usefulness of the workshops had been highlighted as central by students: – “the workshop component is an excellent support”, “a great forum for so much learning and sharing of ideas” (ESS440 Student feedback, Year 2). Workshops attached to six of the subjects were not offered in later iterations as a cost-saving measure.

The team still operates in a collaborative manner, but as time has gone on more institutional level impacts have been felt. An external faculty review suggested that the course and team were highly effective but not efficient. The general message was that quality could be sacrificed for efficiency and that efficiency was seen as desirable by the existing RU processes for course development and design. The only measure of efficiency seemed to be time spent. No mechanisms for establishing and amortising the benefits of the process over time existed, nor were quality measures used to see this investment as a positive. As the course was offered to subsequent cohorts, design team members were able to see these benefits through completion rates, reduced attrition and very positive student feedback provided on institutional feedback measures and by key stakeholders. Although this was not a focus of this study, time usage is much more complex than the time taken to perform a task at inception. There were very obvious time savings as the course progressed, and the high quality of the course resulted in time reductions elsewhere, including reduction of student queries for clarification of tasks.
A challenging aspect of dispersed control is the need to build organisational structures that support this type of collaborative work (Bain, 2007). An established course design process that would support a different way of working was clearly lacking at RU. This meant that although the design team had shared ownership of the course and valued the collective intelligence generated within the team, having to represent the design work within existing processes was challenging. Organisational structures and organisational culture have been identified by multiple researchers (Awbrey, 2005; Fumasoli & Stensaker, 2013; Kezar & Lester, 2009; Pegg, 2013) as among the greatest challenges to reform in higher education, and the impact of failure of institutional practice to support a course review and design process was apparent even at this small scale.

8.5.5 Summary of Phase 3 discussion

In this phase of the course design process, the needs identified in Phase 1 and the design process established and followed in Phase 2 converged. This phase focused on the experiences of design team members and used feedback from students to further support these findings.

The course design process and the work of the design team responded to the areas of need described in the literature to varying degrees. Course design was identified as the potential catalyst through which the other three areas of need could be addressed. Addressing the needs to utilise collaboration and to reduce the theory-to-practice gap was embedded through the design process. The lack of institutional support could not be altered through this study and, although at times prohibitive, these challenges were not insurmountable.

Application of the similarity at scale principle ensured that there was coherence among the various course elements and pedagogical practices, a coherence that has been
lacking in education programs (Johnson, Adams-Becker, Estrada & Freeman, 2014; Sullivan 2002; Vernon-Dotson, Floyd, Dukes & Darling, 2014) and that the simple rules and principles established at the design level were replicated and embedded throughout the course. Institutional practice and processes within which the design team had to operate undervalued much of this work. As design team members noted in interviews there was nowhere to record the substantive design work completed as practices were heavily skewed towards documentation and data entry.

8.5.6 Linking the three phases
This study found that all four areas of need identified in the literature – the need for a theoretical basis for design and reform, the need to utilise collaborative practice, the need to reduce the theory-to-practice gap and the need to examine and acknowledge the impact of institutional practice – were poorly addressed by the operational and organisational structures currently in the institution. The design team in this study established a framework for course design that utilised complexity theory and principles of self-organisation. Through the design, content and delivery of the course, embedded collaboration and feedback processes tackled the quality issue and created a more rigorous approach to course design. The course design process and work of the design team responded to the areas of need; the worth of that response was further evidenced through student feedback and the success of using and studying the same methodology in undergraduate inclusive education subjects. This knowledge informed the creation of a framework for course design that included design principles and a design model.
8.6 Responding to the study questions

This study had three major questions I wished to address:

1) Do the design and review processes at RU address the areas of need identified in the higher education, teacher education and inclusive education literature?

2) How did the theoretical principles of self-organisation inform the course design process and the work of the design team, and what was produced as a result?

3) What were design team members’ experiences of the course design process and how did this work respond to the areas of need in higher education, teacher education and inclusive education?

After determining the four areas of need that were raised consistently in all three contexts – higher education, teacher education, inclusive education – the processes currently used at RU were examined. Through this process it was determined that current processes did not address the identified areas of need. I determined that the most expeditious manner with which to address the issues was by using the need for theory to inform course design as the driver to respond to the other areas of need. My rationale for doing this was that a theoretically driven process of course design could embed collaboration and ensure that the theory-to-practice gap was considered. The impact of institutional practice could be examined through the process of course design.

The second study question focused on how the theoretical principles of self-organisation informed design team work and what was produced. Ultimately a new course was created, but what was significantly different was the process undertaken. Principles of self-organisation were used as a design tool and in the content of the course while the application of design-based research provided a framework for the design process.
There were obvious synergies between principles of self-organisation and design-based research – in particular the use of iterative cycles to inform changes where feedback and collaborative practice were key.

The final study question made the connection back to the initial study question and considered whether the work done by the course design team responded to the areas of need initially identified. Using a theoretical base for course design provided structure, collaboration was evident in both the way the design team worked and the content designed, and the theory-to-practice gap was also addressed through content and delivery. Institutional practice was seen as critical to course design and could either support or inhibit a process. In this study institutional practices often created barriers, but specific focus on them provided areas to be targeted for future work in course design and the development of a framework for course design that included design principles and a design model.

8.7 Framework for Course Design in Higher Education

The intent of this study was to establish a course design and review process that responded to the four areas of need identified in the education literature. This study also addressed the fact that researchers had identified the need for a theoretical basis for reform but few had built a process and studied it. Through this process, the various factors that affected the ability to respond to these areas of need became apparent. A set of course design principles and a course design model (CDM) were developed at the conclusion of the present study to show the various factors that were required for a course design process at RU.
8.7.1 Course design principles

Six principles were identified as critical to course design:

1. Need for a theoretical basis for design
2. Establishment of simple rules or common commitments as a basis for collaboration
3. An articulated institutional process of design that includes a policy framework and design procedures
4. Integrated standards for course cohesion
5. Collaborative culture and practice are fundamental to the design process
6. Embedded feedback system for improvement and refinement

Each is addressed in more detail below.

8.7.1.1 Need for a theoretical basis for design

The need for a theoretical basis that informs and underpins a design process was central to this study. A practical theory provides useful guidance, addresses issues and needs and links to the design process. The theory used needs to be responsive to the nature of the course design practice in higher education and address issues in the field. The course design process undertaken and examined for this thesis utilised complexity theory and principles of self-organisation as a theoretical basis. Although this resonated with the design team and could easily be applied in other higher education contexts, it is acknowledged that it is not the only theory that could be used. Therefore, the design principles and CDM recognised the importance of a theoretical base to the course design process but did not specify a particular theory. This study illustrates one way a theory can be used.
8.7.1.2 Establishment of simple rules or common commitments as a basis for collaboration

For a design team to function effectively in a collaborative manner, a scaffold for the organisational concepts that drive the team is helpful. Simple rules provide this scaffold and also highlight aspects that the design team values. In this study, establishing rules or commitments was central to the theory, but it is clear that establishing a baseline of shared values and understanding is central to any collaborative process. Collaboration cannot occur in a vacuum nor can it be reduced to an instrumental process for conducting meetings. The creation of simple rules also supports the establishment of a design process, the next principle.

8.7.1.3 An articulated institutional process of design that includes a policy framework and design procedures

The establishment and articulation of a process of design is essential. All stakeholders need to be aware of what constitutes such a process, the responsibility of each person involved, the working relationship and the expected final product. Emphasis must be placed on a process of design rather than documentation. Further, the foci of the design process must have been shown to improve learning and the student experience. The experience of members of the design team in previous course reviews demonstrated the problems that occur when an expectation (e.g. collaboration) is set in place without the extant methodology for making that expectation happen. The result is high levels of variability in the course design and development experience and questions about the validity of the process. These expectations need to be embedded in the institutional policy and regulatory operating framework.

8.7.1.4 Integrated standards for course cohesion

In a climate of increased accountability in higher education, the creation of integrated standards at the beginning of a course design process ensures that multiple stakeholder
needs are identified and met through the development of a course. Course teams identify international, national and institutional standards and stakeholder needs relevant to their course, integrate these standards and use them to drive the design process. Further, the mapping of those standards should not simply be claimed; rather, they must be part of an extant methodology that is part of institutional practice. These standards must be utilised as a term of reference, although the previous principle focusing on design process is needed to create methods for using these standards.

8.7.1.5 Collaborative culture and practice are fundamental to the design process

Collaboration, the establishment of a collaborative culture and the use of collaborative practice throughout a course design process are fundamental. They ensure that the collective intelligence of a team of academics and other key stakeholders is utilised and moves away from siloed practices that appear to be prevalent in higher education. Through the input of multiple stakeholders, the relevance of course content and the application of authentic experiences to enrich student experiences become a natural expression of the course design process.

8.7.1.6 Embedded feedback system for improvement and refinement

By the embedding of iterative feedback throughout the design process, changes and adaptations can be made in real time rather than retrospectively and after a course design and/or review has been completed. The embedding of a feedback process also provides support for design team members as they can feel assured that what they are doing is on the right track, or make changes as necessary. Feedback needs to reflect the work people do in a manner that is not lagged or summative but ongoing. In the process used in this study, the establishment of weekly and then fortnightly meetings meant that feedback was consistently provided and expected.
8.7.2 Course design model (CDM)

To support the work of the design principles and embed them in a working model, the CDM was created to demonstrate the conditions that should be in place for the design principles to have the best opportunity for success and for them to be operationalised successfully within an institution. The CDM is presented in Figure 8.1.

Figure 8.1. Course Design Model: A Framework for Implementing a Course Design Process in Higher Education

Underpinning the design principles identified in 8.6.1 are broader establishment features that should be in place for the design process to have every chance of success. These are core to the CDM, and they are the capacity building of individuals, the establishment of institutional practice and an institutional culture that supports the course design process.
The significance of these aspects and how they were informed by the results of this study are unpacked below.

The surrounding square of the model identifies two core organisational factors that need to be in place – a culture that values learning and teaching, and conditions that support course design and review. Policy, shared ownership, and engaged leadership are all critical, but in order to embed these aspects within the work of an institution there must be capacity within the institution to undertake this kind of change and ultimately the work involved in course design. It is recognised that there is existing capacity within institutions for particular tasks. That capacity needs to be utilised but cannot be assumed. The capacity of those involved in such wide-scale reform needs to be built institution-wide and then expressed through the process of course design.

For the process aspects of the CDM as expressed through the design principles stated earlier, the establishment of institutional practices that support such a model are key. The major processes are identified in the open circles where all aspects are embedded in one another and cannot work in isolation. Core to starting the active work of course design is the use of a theory to underpin this work. Although complexity theory was used in this study, the model is theory non-specific, in recognition that the value lies in having a theoretically derived process. Theory can be used to provide methodological guidance for the work of course design. To ensure that a course design team progresses through a design process with a unified conceptual understanding, the creation of course commitments is central. These should be developed collaboratively by all members of a course team so that there is a common reference point for all work as the design process progresses. In the process of design used in this study the course commitments were
established at the simple rules stage and principles of self-organisation were used as a design tool. Active involvement of all stakeholders is required and for the process to evolve it must be undertaken in a collaborative manner and utilise iterative cycles of feedback to improve and develop. Working in a way that requires continual feedback and collaborative practice raises the quality of the course and creates a rigorous design process.

8.8 Implications of the Principles and Model for Practice
The purpose of this research, as discussed in Chapter 1, was to employ a design-based research approach to account for and document a course design process that responded to the four areas of need consistently identified in the higher education, teacher education and inclusive education literature. The research was significant for the following reasons: 1) it built a responsive model of course design employing a theoretical base, 2) it used theory to describe and account for the design process from the perspective of the design team, 3) it recorded the emergent behaviour of the design team as the process was developed, and 4) it took up the key needs in the field empirically and in so doing responded to the need for empirical research on course design.

Common themes identified through the literature and reflected in the findings produced by the study include the benefit of a theoretically based framework for the design process (this led to the continued sustainability of the course beyond just one review cycle), the tangible benefit of collaborative practice and feedback which suggested that a real connection between theory and practice was evident.
8.9 Application of design principles and CDM Elements

Examples of the positive application of the design principles and CDM can be seen in elements of this study. Conversely, this study has also highlighted the need for institutional infrastructure to be in place, particularly capacity building and supportive institutional practice, to ensure that course design and review are successful. Dan, Eve and I had all experienced positive course review processes, in which the one consistent element was the use of collaborative practice. In my case this had also illustrated a turning point in the course: it had begun positively, but – as the course team became pressed for time it reverted to the siloed way of working historically used in the institution. Without any formal course review process or structure in place this could easily occur. Dan and Eve also highlighted the feedback and reporting opportunities for course team members to share their work, and the difference that had made to their understanding of the course and how their work fitted into it.

It was apparent that whenever there was unease about trying something different, established institutional practice was always used as the reason. Rather than people asking why something was not included or valued, and challenging that situation, the established course approval process was reduced to the entry of the “correct” data. There was also such variability between the course reviews in which team members had been involved that it was apparent there was no particular process, just tasks that needed to be completed in order to demonstrate that some reflection on a course had been undertaken. The non-specific nature of institutional practice could be seen as both a positive and negative feature, depending on what an individual leading a course review and design process wished to do.
The process aspects that were highlighted by all design team members in this study informed the design principles and model. None of the course team members had previously used a theoretically based process in higher education course design, and this was a major feature. It was a different way of thinking, and initially quite challenging, but once it was part of our everyday work it was not at all onerous. The aspects that really sustained the design team were the continued use of collaborative practice and feedback. This created a sense of community and ensured that the work done was responsive to the needs identified not only by the design team but also by students and external stakeholders.

Simply working through the process built the capacity of all design team members in various ways. We were all developing our skills in course design and process as we went along, but there were numerous other benefits. Design team members improved their individual skills in collaboration and providing feedback, learned how to embed theory in practical way and how to critique and determine essential content to design a cohesive course. As the design team worked through the process, they simultaneously built their course design schema. Without a doubt, our individual capacities were built through the process, yet the biggest inhibitor to progress was institutional practice.

All design team members mentioned the impact of institutional practice, although it manifested in various ways. In Jo’s case it was the lack of support from leadership and active discouragement of collaboration; for Ali there was no clear process articulated and the administrative side of the institution was driving the process. Nick also noted this and emphasised that the course documentation required did not allow the inclusion of information beyond compliance. Dan was also frustrated by the fact in his view that
this documentation was assessed by a committee with limited knowledge of what constituted an effective course review process. Eve believed that the focus of reviews was about meeting accreditation standards and people simply matching subjects as “evidence” that these standards were being met. I had experienced all these things, and also noted the elevation of particular individuals in the faculty who spent much of their time establishing what the bare requirements were and figuring out the most efficient way to work around them.

With regards to the CDM, the need for institutional practice and capacity building as establishment issues are core to the success of a course design process. Design principles need to be embedded in the institutional practice of course design, alongside capacity-building of staff to best support the implementation of the process. As demonstrated in this study, a course design process can work without all these elements in place, but in order to bring these concepts to scale, broader institutional reform is required.

8.9.1 Summary

The development of course design principles and the CDM furthers the body of knowledge in the field of higher education course design and builds on existing areas of need identified by researchers in a cross-section of fields in education. The principles and model provide a framework that can support various stakeholders in higher education in considering the foundational elements for an effective course design process and the establishment aspects required to ensure that the process has every chance of success.
8.10 Limitations of the Study and Recommendations for Future Research

It is important to acknowledge that the course design principles and model described here were derived from the experiences of one course design team in a particular higher education institution. While the methodology reconciled the findings from the experiences of the design team with the areas of need identified in the literature, the applicability of the model to other settings must be carefully considered by assessing the context and findings associated with the design team experiences described here and those of others where the model may be applied. My role in the process as participant-researcher had implications for the way that the data were viewed and interpreted. Although I was conscious of ensuring that statements and opinions cited had supporting evidence, it is possible that, with the volume of data collected throughout the process, the best sources of evidence were not always selected. I was also heavily invested in the process due to its use as the basis of this study, so it is possible that my objectivity was compromised at times. The original application of the theory in a K-12 setting was completed by one of the design team members, Nick. One of the intents of this study was to demonstrate the feasibility of applying the theory in a higher education setting and, although the earlier design had been implemented in a different country, setting and with different design team members, the connection must be acknowledged.

There were periods of interruption during the data collection period due to my taking leave at various points during the process. Aspects of the data were also collected in retrospect as design team members were asked to reflect on occurrences earlier in the design cycle. It is possible that errors were made due to the time lapse between certain events. The fact that all design team members were from the same institution might be considered a limitation. Future research could broaden the range of contexts in which
the design principles and CDM are used. The course design process was undertaken with a small team in the field of inclusive education. This might be considered a limitation as the process may manifest differently with different content and modes of working. Additional research with different discipline foci would be beneficial. This study provided the deep explication of a design process required of an efficacy study. It demonstrated that the needs indentified in the literature could be addressed in a design process and provided a set of design principles and a course design model to do so.

A recommendation for future research from this study is to investigate the effectiveness of a course design process where institutional practice conditions were created that embedded capacity building and the design process within the institution. Using the course design principles and CDM, aspects such as collaboration, feedback and use of theory would be central to the creation of institutional conditions that supported such a process.

The complex nature of the intersecting and interrelated factors that influenced successful course design was a key finding of this study. Prior research had identified numerous discrete factors and their impact as isolated variables on the success of course design in educational settings. Further research examining the nature of these relationships could provide insightful information for both researchers and educational stakeholders seeking to implement and sustain theoretically derived and empirically derived practices in higher education course design.

As the design principles and CDM presented in this chapter resulted from a comprehensive analysis of the literature in three educational contexts and the
experiences of design team members presented in this study, further research is required to empirically test the efficacy of the CDM on a broader scale. Further studies would need to determine whether the model was robust to differences in context, content, implementation integrity, institutional practices and so on.

8.11 Conclusion
The purpose of this study was to employ a design-based research approach to a course design process that utilised self-organising principles to respond to four areas of need consistently identified in education literature. As a result of this study, a set of empirically derived course design principles and a model (the CDM) were created as my original contribution to the field. They were informed by the design process, experiences of the design team, feedback from students and external stakeholders, and were triangulated with literature in the fields of higher education, teacher education and inclusive education.

The knowledge gained from this study can be applied to assist stakeholders in higher education course design. As a result of this study five major findings can be drawn. These findings are:

1. Theory can, and should be, a powerful driver for course design processes.
2. Course design processes need to be supported by institutional practice.
3. Organisational change to process and culture needs to occur so that collaborative working and use of feedback are part of the every day mode of working within an institution.
4. The areas of need consistently identified in the literature require broad range change and cannot be addressed in isolation.
5. Recognition, capacity building and encouragement of staff to work in different ways are critical.

The creation and implementation of a theoretically derived course design process and the experiences of design team members confirmed that the areas of need identified in the literature in three educational contexts – higher education, teacher education and inclusive education – were evident in the context within which the study was undertaken. However, the study also confirmed that by taking a theory-based approach to course design, other areas of need such as the need for collaboration and the closing of the theory-to-practice gap could be embedded. A move to collaborative practice as a consistent way of working across the institution would require organisational and cultural change beyond the scope of this study.

It is intended that the course process described and the course design principles and model (CDM) suggested can advance the progress of course design in higher education and respond to the areas of need identified in the literature. This study has contributed to addressing these areas of need and has generated evidence demonstrating a course design process that can potentially be scaled across an institution, given wider institutional commitment to such a process. Use of the course design principles and the CDM as a starting point and their recommended application and setting of conditions is intended to promote the extensive knowledge of course design to embed collaboration, feedback and theory in the process and to be more responsive to the needs of design teams grappling with course design and review.
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Appendix 4A: Semi-structured Interview Questions
At the beginning of each interview a brief structural overview will be given to participants letting them know of the intended interview structure where previous course design/review experiences will be discussed and then compared to the MIE experience.

**Previous course design/review experiences**

Can you tell me about your course design/review process experiences outside of the MIE course process?

Did the process have any theoretical base of which you were aware?
- Explain the theory base of the design as you understand it.
- How did the theory influence your work in the design process?
- How did the theoretical base influence the course team’s design process?

How did people work together in the process?
- How would you describe the collaborative process used?
- What were the benefits of working in a collaborative manner?
- What was challenging about working in a collaborative manner?

In your previous course review experiences, how were course objectives determined?

How were assessment tasks and subjects developed in other course review and design experiences?

Do you believe the course team had a shared schema? (framework/organisational system)
- What evidence do you have of this?

How did the use of this process of design influence the subject revision process?

How was quality and consistency ensured through this process?

Was the theory to practice divide addressed in any way through the design?

Was there any sense of an institutional mandate in the process? Provide examples

Were there any particular institutional barriers to the design process? Provide examples

In summary, what were the key features/aspects that stood out for you in these review processes? (outside of the MIE)

In your view, how was the design process responsive to the needs specifically in the field of inclusive education?

Do you see this process as sustainable in the higher education context? Why/why not?

**MIE work**

Can you tell me about your course design/review process experience as part of the MIE course process?

Did the MIE process have any theoretical base of which you were aware?
How did the theory influence your work in the design process?
How did the theoretical base influence the group design process?

How did the team work together in the process?
How would you describe the collaborative process used in the MIE?
What were the benefits of working in a collaborative manner?
What was challenging about working in a collaborative manner?

How were course objectives determined in the MIE experience?

Do you believe the course team had a shared schema? What evidence do you have of this?

Was the subject writing process different when using this design process? How?

Has the use of this process of design influenced the subject revision process?

How was quality and consistency ensured through this process?

Was the theory to practice divide addressed in any way through the design?

Was there any sense of an institutional mandate in the process? Provide examples

Were there any particular institutional barriers to the design process? Provide examples

In summary, what were the key features/aspects that made the MIE process different?

In your view, what were the strengths and opportunities in using a design process like the one we used for the Master of Inclusive Education?

What were the weaknesses?

In your view, how was the design process responsive to the needs specifically in the field of inclusive education?

Do you see this process as sustainable in the higher education context? Why/why not?
INFORMATION STATEMENT FOR RESEARCH PARTICIPANTS

Lucia Zundans-Fraser
Charles Sturt University
School of Teacher Education (N1)
Panorama Avenue
Bathurst NSW 2795
Ph: 02 6338 4424
Email: lzundans@csu.edu.au

Dear colleague,

My name is Lucia Zundans-Fraser. I am a lecturer within the School of Teacher Education at Charles Sturt University and am conducting this study as part of my PhD. The title of the study is:

Self-organisation in course design: A theory-based approach to course development in inclusive education.

The research undertaken in this study will emerge from collaborative interactions with colleagues within the School of Teacher Education. I intend to examine the experiences of individual design team members, their views and understandings of the course design process, collaboration and inclusive practice as well as reflect on team interactions. Complexity theory will be used as an analytic lens through which to interpret any data.

One phase of the data collection will consist of individual interviews. It is anticipated that these interviews will take between 30 minutes – 1 hour to complete. These audio-taped interviews will be semi-structured and will use the design team members’ explanations and interpretations of the collaborative process to elicit their views about course design and the methodology used.

The audio tapes of the interviews and critical conversations will be fully transcribed. Transcriptions of each of the interviews will be returned to all participants who are interested in reviewing them for accuracy and making any amendments. Then these transcriptions, along with additional data generated during the study will be analysed for emerging themes and patterns.

I would like to invite you to take part in this study.

Names of participants will not be published. If names are required at any point, pseudonyms for participants will be used.

Research participants are under no obligation to participate in the study and can withdraw from the project at any time. If a participant chooses to withdraw from the project they will not be subjected to force, deceit, coercion or discriminatory treatment.

Charles Sturt University’s Ethics in Human Research Committee has approved this study – Protocol number 2004/254.

I understand that if I have any complaints or concerns about this research I can contact:

Executive Officer
Ethics in Human Research Committee
Academic Secretariat
Charles Sturt University
Private Mail Bag 29
Bathurst NSW 2795

Phone: (02) 6338 4628
Fax: (02) 6338 4194

Any issues raised will be treated in confidence and investigated fully and you will be informed of the outcome.
CONSENT FORM

Research project: Self-organisation in course design: A theory-based approach to course development in inclusive education.

Principal investigator: Lucia Zundans-Fraser
Charles Sturt University
School of Teacher Education (N1)
Panorama Avenue
Bathurst NSW 2795
Ph: 02 6338 4424
Email: lzundans@csu.edu.au

I understand that I am free to withdraw my participation in the research at any time and that if I do so I will not be subjected to any penalty or discriminatory treatment.

The purpose of the research has been explained to me and I have read and understood the information sheet given to me. I have been given the opportunity to ask questions about the research and received satisfactory answers.

I permit the investigator to tape record my interview as part of this study.

I understand that any information or personal details gathered about me in the course of this research are confidential and that neither my name nor any identifying information will be used or published without my written permission.

Charles Sturt University’s Ethics in Human Research Committee has approved this study Protocol number 2004/254.

I understand that if I have any complaints or concerns about this research I can contact:

Executive Officer
Ethics in Human Research Committee
Academic Secretariat
Charles Sturt University
Private Mail Bag 29
Bathurst NSW 2795

Phone: (02) 6338 4628
Fax: (02) 6338 4194

Signed by: _________________________ (Research participant)

Date: ___________________
7 February 2013

Ms Lucia Zundans-Fraser
School of Teacher Education
Bathurst Campus

Dear Ms Zundans-Fraser,

The CSU Human Research Ethics Committee (HREC) operates in accordance with the National Health and Medical Research Council’s National Statement on Ethical Conduct in Research Involving Humans.

The HREC has reviewed your report requesting an extension for your research project “Self-organization in Course Design: A theory-based approach to course development in inclusive education”, protocol number 2004/254 and I am pleased to advise that this request for an extension meets the requirements of the National Statement; and an extension for this research is granted for a twelve month period from 7 February 2013.

Please note the following conditions of approval:

- all Consent Forms and Information Sheets are to be printed on Charles Sturt University letterhead. Students should liaise with their Supervisor to arrange to have these documents printed;
- you must notify the Committee immediately in writing should your research differ in any way from that proposed. Forms are available at http://www.csu.edu.au/_data/assets/word_doc/0010/176933/ehre_anrrep.doc you must notify the Committee immediately if any serious and or unexpected adverse events or outcomes occur associated with your research, that might affect the participants and therefore ethical acceptability of the project. An Adverse Incident form is available from the website: as above;
- amendments to the research design must be reviewed and approved by the Human Research Ethics Committee before commencement. Forms are available at the website above;
- if an extension of the approval period is required, a request must be submitted to the Human Research Ethics Committee. Forms are available at the website above;
- you are required to complete a Progress Report form, which can be downloaded as above, by 7 February 2014 if your research has not been completed by that date;

Extension.doc

Last updated: February 2013
Next review: September 2014
you are required to submit a final report, the form is available from the website above.

You are reminded that an approval letter from the CSU HREC constitutes ethical approval only.

If your research involves the use of radiation, biological materials or chemicals separate approval is required from the appropriate University Committee.

Please don’t hesitate to contact the Executive Officer: telephone (02) 6338 4628 or email ethics@csu.edu.au if you have any enquiries about this matter.

Yours sincerely,

Julie Hicks
Executive Officer
Human Research Ethics Committee
Direct Telephone: (02) 6338 4628
Email: ethics@csu.edu.au

Cc: Dr Alan Bain

This HREC is constituted and operates in accordance with the National Health and Medical Research Council’s (NHMRC) National Statement on Ethical Conduct in Human Research (2007)
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1. INTRODUCTION

This document explains the processes for the approval and review of awards, courses and fields of research within the University. The policy objectives which underlie these processes are as follows:

- to ensure the development of courses which
  - (i) are of high academic standard and which meet the needs of relevant professions or industry groups; and
  - (ii) fit the University’s planning profile;

- to ensure that existing courses continue to meet these objectives;

- to ensure that consistency with regulations is maintained across courses concerning nomenclature and structure;

- to ensure the effective documentation of proposals for both new and modified courses; and

- to ensure that course accreditation processes enable timely introduction of new or modified courses within the University’s framework of student induction and course delivery.

2. GLOSSARY

A Glossary of Terms can be found in Section C1 of the Academic Manual.

3. AUSTRALIAN QUALIFICATIONS FRAMEWORK

The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) established a taskforce to develop an Australian Qualifications Framework (AQF).

The AQF provides descriptors for each qualification level. The descriptors define the qualifications in terms of:

- the characteristics of learning outcomes;
- the authority for those learning outcomes; and
- pathways to the qualification.
Detailed descriptions of each qualification level may be found on the AQF website. Courses at CSU are expected to comply with AQF guidelines, and the attestation from the Executive Dean of a Faculty proposing a course certifies that this is the case, for that course.

4. ACADEMIC GOVERNANCE

4.1 University Council

Under the Charles Sturt University Act, 1989, the Council is, *in controlling and managing the affairs and concerns of the University*:

- to oversee the academic activities of the University. (19(1B)(c)).

and

may, for and on behalf of the University in the exercise of the University’s functions:

- provide such courses and confer such degrees and award such diplomas and other certificates, as it thinks fit. (19(1)(a)).

4.2 University Course Planning Committee

The University Course Planning Committee was established by the Vice-Chancellor to "assist him in the planning and management of the University". With respect to the approval of awards and courses, the Committee:

- determines their compatibility with the University's mission statement and educational profile;
- reviews evidence of their need and demand;
- evaluates their resource implications;
- determines their priority and date of introduction; and
- allocates load.

4.3 Academic Senate

The Academic Senate is the principal academic body of the University. As such, the Academic Senate ensures on behalf of the Board of Governors (now University Council) that:

- the structure and requirements of each course are consistent with the award to which it leads;
- the depth of content and standard of assessment of each course is appropriate to the award to which it leads;
- the Faculty providing the course has the academic staff and other resources to offer the course;
- the methods of course delivery are appropriate in achieving the purpose of the course;
- the course and the award to which it leads are consistent with the Australian Qualifications Framework.

In the case of undergraduate courses, postgraduate coursework courses and coursework professional doctorates, this role has been delegated to the Faculty Courses Committees.
4.4 Research Advisory Committee

The Research Advisory Committee is responsible for overseeing, and advising the Academic Senate on, the accreditation of research higher degree courses and research professional doctorates. In particular, the Research Advisory Committee is responsible for the final approval of all higher degree research program proposals and research professional doctorate proposals emanating from the Faculties and recommends changes to the Academic Senate’s policy on course accreditation.

4.5 Curriculum, Learning and Teaching Committee

The Curriculum, Learning and Teaching Committee has delegated authority from Academic Senate with respect to the accreditation of all courses except master by research programs and research doctoral programs. In particular, the Curriculum, Learning and Teaching Committee provides advice to the Academic Senate on all proposed changes to academic policy, and has particular responsibility for recommending changes to the Academic Senate’s policy on course accreditation.

4.6 Faculty Boards

The Faculty Boards for the Faculties of the University have delegated authority for the implementation of the teaching, scholarship and research policies prescribed by the Academic Senate.

Under their terms of reference as prescribed by the University Council, Faculty Boards are required to consider and make recommendations to the Research Advisory Committee, with respect to the approval of new and revised research courses proposed by the several Schools of the Faculty.

4.7 Courses Committees of Faculty Boards

The Faculty Courses Committees have delegated authority from Academic Senate with respect to the approval of all course documentation except master by research programs and research doctoral programs.

The role of the Courses Committee for each Faculty Board is to:

- approve additions and deletions to the course profile for the Faculty;
- approve all proposals for new or revised courses submitted for accreditation;

4.8 Faculty Research and Higher Degree Committees

Faculty Research and Higher Degree Committees may be used by Faculties to consider and make recommendations to the Faculty Board with respect to the approval of new and revised research courses proposed by the several Schools of the Faculty.

4.9 School Boards

School Boards are the principal academic body of each School. School Boards consider and make recommendations to the Faculty Board with respect to all matters relating to the subjects taught by the School and with respect to general matters relating to courses.
4.10 Course Committees

A Course Committee is established for each course or group of courses to advise the Faculty Board (or, for shared courses, Faculty Boards) through the Board's Courses Committee on the development and academic administration of the course or courses for which it is responsible.

4.11 Course Advisory Process

4.11.1 Objectives

1) To ensure that the academic standing of courses remains high. To this end, the advisory process chosen for the development and review of a particular course or courses will be one that assists in ensuring that:

   - the course is current and constitutes an intellectually challenging and stimulating learning experience;
   - the course has clear and appropriate aims and objectives;
   - the course content, including teaching and learning experiences and assessment strategies, is at an appropriate level and is consistent with the aims and objectives of the course; and
   - the teaching methods are appropriate for the course.

2) To ensure that courses remain relevant to the professions and industries they serve. To this end, the advisory process chosen for a particular course or courses will be one that can provide an awareness of:

   - the changing needs of the community;
   - the industry/professional reputation of the course;
   - the changing focus of those professions and industries; and
   - existing, emerging and potential markets.

4.11.2 Minimum Requirements

The minimum requirements of the policy are that, for every course, there must be:

   - an identified advisory process in place;
   - independent external experts included in that process; and
   - records of all aspects of the process.

The advisory process chosen may be one that includes a number of courses or be specific to a particular course.

The advisory process chosen may also:

   - provide avenues for community input into the enhancement and further development of courses
   - encourage recognition of course by relevant bodies; and
   - assist in promotion of courses.

It is the responsibility of the Faculty to ensure that the advisory process chosen for each course meets the minimum requirements of the policy and that in the advisory process overall there is the expertise to address all of the objectives of the policy.
Where a course includes specialisations, and a particular specialisation is being added to a course or is being reviewed individually, the advisory process requirements apply for that specialisation.

The records of the advisory process for a particular course will be kept in a “course portfolio” that will be located in the School office or the Faculty office, depending on the Faculty’s policy on this matter.

The details of the advisory process employed for a particular course will be set out in Course Approval and Course Review documents for the course and will describe the mechanics of this process and its outcomes. For a particular specialisation, these details will be set out in the equivalent field in the Course Modification document (to add a specialisation) and the Course Review document.

5. APPROVAL OF COURSES

This section applies to courses as defined in (a) and (b) of the definition of "award course" in the glossary (section C1 of the Academic Manual). The approval of courses as defined in (c) of the definition of "award course" in the glossary is covered in Section 6.

5.1 Course Structures

5.1.1 Standard Courses

For each level of award offered by the University there is a standard course structure. A standard course may be specified in terms of: the number of points required to complete the course; or the number of standard subjects or their equivalent required to complete the course.

The following standard courses apply:

<table>
<thead>
<tr>
<th>Award</th>
<th>Standard Course Points</th>
<th>Standard Subjects (or equivalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td>192</td>
<td>24</td>
</tr>
<tr>
<td>Doctorate (see note 1)</td>
<td>128</td>
<td>16</td>
</tr>
<tr>
<td>Master (2 year) (see note 2)</td>
<td>96</td>
<td>12</td>
</tr>
<tr>
<td>Master (1.5 year)</td>
<td>64</td>
<td>8</td>
</tr>
<tr>
<td>Master (1 year) (see note 2)</td>
<td>64</td>
<td>8</td>
</tr>
<tr>
<td>Graduate Diploma</td>
<td>64</td>
<td>8</td>
</tr>
<tr>
<td>Graduate Certificate</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td>Bachelor (4 year)</td>
<td>256</td>
<td>32</td>
</tr>
<tr>
<td>Bachelor (3 year)</td>
<td>192</td>
<td>24</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>128</td>
<td>16</td>
</tr>
<tr>
<td>Diploma</td>
<td>128</td>
<td>16</td>
</tr>
<tr>
<td>University Certificate</td>
<td>64</td>
<td>8</td>
</tr>
</tbody>
</table>

Note - The minimum duration for a Master degree is one-year full-time equivalent (FTE), and the maximum duration is two years FTE.
5.1.2 Standard Subject

A standard subject is an 8 point subject taught over one session. An equivalent standard subject may be a half standard subject or a subject whose point value is a multiple of eight. Examples include:

- half standard subject 4 points;
- double standard subject 16 points;
- quadruple standard subject 32 points.

5.1.3 Subject Levels in Postgraduate Courses

Prior to 2006, University policy on subject levels in postgraduate courses specified only that an identified proportion of undergraduate subjects may be included in graduate certificate (100 per cent), graduate diploma (50 per cent) and master degree (25 per cent) courses. These proportions have been replaced by the requirements set out below.

A graduate course at certificate or diploma level may comprise undergraduate and/or postgraduate subjects, subject to the limits set out below. These limits are directly related to articulation or non-articulation with a master degree. Where an existing subject in an undergraduate course is also used in a graduate certificate or diploma, that subject shall retain the undergraduate code.

a) articulated with master degree

Graduate Certificate: all postgraduate subjects (where articulation is with a 1 year FTE master degree)

Graduate Diploma: maximum of 2 undergraduate subjects (no level specified)

b) not articulated with a master degree

Graduate Certificate: maximum of two level 1 subjects, minimum of one level 3 (or above) subject

Graduate Diploma: maximum of two level 1 subjects, minimum of four level 3 (or above) subjects

5.1.4 Double Degrees

5.1.4.1 Definition

There are two types of double degree.

1) Type 1 - A program which combines all of the components of two separate bachelor degree courses (each referred to in this context as a constituent course) into a single program such that the overall duration of the program is shorter than the sum of the constituent courses whilst still meeting all of the requirements of each of those constituent courses.

Students completing a double degree program graduate with a separate award for each of the constituent courses in the double degree program.
2) **Type 2** - A degree leading to only one award, but which meets the requirements of two separate degree areas. Students completing this type of double degree receive a single testamur with a double nomenclature e.g. Bachelor of Sports Science/Bachelor of Teaching.

### 5.1.4.1.1 Type 2 Double Degree Rules

a) **Allowable course combinations** - Type 2 double degrees will normally not be approved for major, generic degrees, such as the Bachelor of Arts or Bachelor of Science. More generally a Type 2 double degree will not be approved where one of the degrees exists as a separate course.

b) **Advertising & Course Information** - Type 2 double degrees shall be clearly distinguished in course information and advertising from Type 1 double degrees.

c) **Course requirements** - there are no constituent courses in a Type 2 double degree. However the course shall allow students to meet the requirements of both degrees in the course nomenclature, as if they were independent awards.

d) **Equivalence** - a Type 2 double degree may be constructed in such a way that there is overlap between the two degree areas. This would allow a reduction in learning required by the student, and thus of course duration.

All clauses below refer only to Type 1 double degrees.

#### 5.1.4.2 Requirements of the Constituent Courses

The primary rule for a Type 1 double degree program is that all of the requirements of each of the constituent courses must be met. This means that, in a specific double degree program, every component of each of the constituent courses must be able to be found. Course components include one or more core subjects, any elective sequences (i.e., sets of specialisations, majors, minors or, for the Bachelor of Business and Bachelor of Accounting courses, joint studies) and restricted elective or unrestricted elective options.

For each component, this is achieved through either:

i) the inclusion of that component of a constituent course in the double degree program exactly as it is in the constituent course; OR

ii) the identification, for the component in a constituent course, of an equivalent of that component in a component of the other constituent course, and the inclusion of that equivalent component from the other constituent course in the double degree program so that it serves to meet this requirement for both constituent courses.
5.1.4.3 Duration and Point Value

There is no prescribed duration or point value for a Type 1 double degree program. Whilst the most common model is a four-year, 256 point (32 standard subjects) double degree program based on two three-year degree programs, the duration and point value of a specific double degree program is determined by those reductions in time and point value made possible by the presence of common subjects (i.e., the same subject is part of both constituent courses), identification of equivalent subjects or components, and/or genuine overlap of components.

Thus, for example, the common features and/or equivalences for a specific double degree program may mean that that program comprises 248 points (31 standard subjects) and be of four year's duration, with one session in the program containing three subjects instead of four.

Where a constituent course has specialisations, and some of these specialisations overlap more than do others with the components of the other constituent degree, students undertaking the more overlapping specialisations in the double degree program will be required to complete fewer points than those undertaking the other specialisations. This is because the corollary to the rule that all requirements of both constituent courses must be met is that no student in a double degree program can be required to undertake more than is required by the course requirements of each of the constituent courses.

5.1.4.4 Equivalent Components

The identification, for components of one constituent course, of equivalents in components of the other constituent course relates to how specific the components of each constituent course are (and, in particular, whether individual subjects are specified in a component), and to the purposes for which each component is included in the course (for individual subjects that are core components of a course, this will also relate to the aims and objectives of the subject and to the level of the subject).

Equivalence for each type of component may be met as follows:

i) Core subject(s) - either an equivalent subject, or a number of subjects which together meet the aims and objectives of the core subject, in the other course must be identified. Where a core subject is a practicum subject, its equivalent in the other constituent course would also need to be a practicum subject, such that the practicum subject being included in the double degree program also serves to meet the requirements (aims and objectives, level, proportion of the course it represents, etc.) of the practicum subject that is not being included.
ii) An elective sequence component (i.e., a set of specialisations, majors, minors or (in the Bachelor of Business and Bachelor of Accounting) joint studies) – equivalence is possible either when some of the subjects in an elective sequence component in one constituent course are not specified by code/title or when the discipline areas only (rather than specific subjects) for an elective sequence component are specified, and there are subjects in the other constituent course that meet the specifications (subject or discipline area) of the elective sequence component. Where subjects in an elective sequence component are specified, these subjects would either have to also be offered in the other constituent course (i.e., they are common subjects, not equivalences) or specific subject equivalence would have to be identified as for core subjects above. See also clause 5.1.4.5 on minors.

iii) Restricted elective(s) - where these subjects are specifically identified in a constituent course, the same conditions for equivalence apply as for a core subject. Where the discipline area(s) only of the restricted elective(s) have been specified, then sufficient subjects in the other course in one or more of those discipline areas must be able to be identified to enable the requirements for number and type of restricted elective to be able to be met.

iv) Unrestricted elective(s) – any subject in the other constituent course will meet this requirement.

Where equivalent subjects or components are identified for inclusion in a double degree program, any student who is enrolled separately in one of the constituent degree courses, and who has already completed that equivalent subject or component instead of the prescribed subject or component in their course, must be entitled to credit for that subject.

5.1.4.5 Variations to Requirements in Double Degree Programs

For any component of one of the constituent courses of a Type 1 double degree program, a variation to that component may not be offered in the double degree program that is not also available to students enrolled in the constituent course offered separately. Note: this does not apply to equivalences that have been identified according to the guidelines in clause 5.1.4.4 above.

The single exception to this rule relates to minors. Where, for a specific double degree program, one component of one of the constituent courses comprises a set of minors, then a minor or choice of minors that is different from those offered in the constituent course may be included in the double degree program (i.e., available only to the students enrolled in that double degree program) provided that these double degree minors are consistent with the aims and objectives of the constituent course. The rationale for this is that it enables a specific double degree to be more effectively tailored to meet an identified need.

Should the Faculty then wish to add one or more of the “double degree only” minors to students enrolled separately in the constituent course, this would need to be done through the standard approval
process for the addition of a minor to a course.

On the other hand, a component in a constituent course that includes choices (such as a set of elective sequences or a range of restricted electives) may be included in the double degree program in a more prescriptive form. For example, whereas in a constituent course the student may have a choice of five identified majors, only one of those majors might be available to the double degree student because the subjects in that major also comprise a component of the other constituent course in the double degree program (and so enable a reduction in the overall duration and point value of the program).

5.1.4.6 Courses Offered Only Within Double Degree Programs

A Faculty may choose to offer a course only as a constituent course within one or more specific Type 1 double degree programs. Since the constituent course will still lead to a separate award, it will be required to meet all of the requirements for a bachelor degree course, including fitting within the guidelines of the Australian Qualifications Framework.

Where a course is offered with a generic structure and with a set of specialisations, a Faculty may choose to offer just the generic course as a constituent course within a specified double degree program or programs, provided that the generic course is not also offered as a separate course. In such an instance, students in the separate course would be required to complete one of the specialisations in the course.

See also clauses on shell courses for policy on shell courses in double degree programs.

See below for the documentation and approval processes for double degree programs.

5.1.5 Articulated Sets of Courses

5.1.5.1 With Multiple Entry Points

An articulated set of courses with multiple entry points is one in which the student may be admitted to any course in the set depending on the student's academic qualifications at the time of application for admission.

A student who completes or has graduated from a course in an articulated set of courses with multiple entry points must apply for admission to another course in the set through UAC, VTAC or the Admissions Office as appropriate (that is, progression to the next course in the articulated sequence is not automatic).

A student who has completed a course in an articulated set of courses with multiple entry points in a given session, then applies for admission and is admitted to another course in the next consecutive session, may at the same time apply to graduate with the first award as specified in the graduation regulations.
A student who chooses to exit an articulated course with multiple entry points with an award or whose application for admission to another course in the set is unsuccessful, may graduate with the exit award.

A student who has completed but has not graduated from a course in an articulated set of courses with multiple entry points and who withdraws from or is excluded from other courses within the set, may graduate with the completed award.

5.1.5.2 With Single Entry Points

An articulated set of courses with a single entry point is one in which the student is admitted to the last course in the articulated sequence on the understanding that the student may exit with an earlier award in the sequence. In such cases the student must reapply for admission through UAC, VTAC or the Admissions Office as appropriate, should the student wish to complete the final course in the articulated sequence at a later date.

A student in an articulated course with a single entry point, but which offers exit points, who has completed an earlier course in the articulated sequence, may apply to graduate from that course as specified in the graduation regulations and at the same time continue on in the last course in the articulated sequence, to which they were admitted.

5.1.5.3 Limits on Articulation

Articulation allows credit to be granted in the final course of an articulated sequence for the entire sequence of earlier courses within the articulated set. For courses not in an articulation arrangement credit limits will apply, as described in the credit regulations.

For this reason where the articulated courses are at the same AQF level (such as a bachelor course articulated with another bachelor course), the articulated set itself must be of sufficient duration to allow for learning equivalent to two or more degrees at that level to be completed, and thus one of the courses must be of significantly longer duration than the other to allow for the articulation (as otherwise it will be impossible to 'nest' one course within another).

For example it would not be appropriate to have a 3-year bachelor exit point from a 4-year bachelor course, as this would allow the student to graduate with two bachelor awards after only 4 years of study. In this situation a Type 1 double degree would be more appropriate, where equivalences can reduce overall course duration while allowing for graduation with two awards.

All graduate certificates articulated with a one-year FTE Master program shall contain only postgraduate (i.e. not undergraduate) subjects.
5.1.6 Higher Degree Programs

5.1.6.1 PhD and Master by Research

The University awards Master and Doctoral degrees following the successful completion of a program, the assessment of which is based primarily (i.e., two-thirds or more) on a thesis or portfolio (as specified) arising out of original research. See also Academic Manual, Part H: Progress, Supervision and Assessment Regulations for Theses and Other Examinable Research Works.

Any Master by Research program may be designated Master (Honours) if the Faculty has so recommended to Senate, but levels of honours (class 1, etc) do not apply to Master (Honours) programs.

In all matters pertaining to research degrees at Master and Doctoral level the Academic Senate will be advised by the Research Advisory Committee (hereinafter referred to as the Board). The Research Advisory Committee shall exercise those authorities vested in it by the Academic Senate and by virtue of these Regulations.

All matters relating to individual students that are to be referred to the Research Advisory Committee shall be submitted through the Research Office.

5.1.6.2 Professional Doctoral Programs

Note that below ‘Committee’ refers to the Research Advisory Committee, ‘coursework’ means the subjects that are a component of a professional doctoral program, and ‘research’ means the project undertaken as a component of a professional doctoral program.

Professional doctoral programs by research shall be administered by the Research Office. Professional doctoral programs by coursework shall be administered by the Faculty.

5.1.6.2.1 Research Professional Doctorates

A research professional doctoral program is a program:

a) leading to the award Doctor of [professional area]; and

b) comprising coursework, and a research component which is two-thirds or more of the content of the program, the results of which shall be published in a thesis or portfolio (as specified).
5.1.6.2.2 Coursework Professional Doctorates

A coursework professional doctoral program is a program:

a) leading to the award Doctor of [professional area]; and

b) comprising coursework, and a research component which is at least one-third but less than two-thirds of the content of the program, the results of which shall be published in a dissertation or other examinable work.

5.1.6.2.3 Object of Professional Doctorates

The object of a professional doctoral program is advanced, critical reflection on professional practice. This object has three components:

a) the extension of a candidate’s knowledge of the disciplines which underpin his or her profession; and

b) the development of attributes required of the candidate to successfully identify, investigate and resolve problems confronting his or her profession; and

c) the successful conduct by the candidate of research into a current problem confronting the profession and the presentation of the findings of the research in a thesis or other examinable work.

More pragmatically, the object of a professional doctoral program is to give candidates a competitive advantage in achieving high-level success in their profession.

5.1.6.2.4 Coursework

5.1.6.2.3.1 Object of the Coursework

The coursework in a professional doctoral program shall:

a) extend a candidate’s knowledge of the disciplines which underpin his or her profession; and

b) provide the knowledge and skills necessary for the candidate to successfully research a current problem confronting the profession.

5.1.6.2.3.2 Shared Coursework
The subjects comprising the coursework in a professional doctoral program may be doctoral versions of subjects that are taught in a master, graduate diploma or graduate certificate course. In such cases, the doctoral versions of these subjects shall be qualitatively different from the subjects offered in the lower level course (as specified in 5.1.6.2.3.4b) below and shall be coded as level 7 subjects to distinguish them from the lower level subjects.

5.1.6.2.3.3 Relationship with Master Programs

5.1.6.2.3.3.1 Articulated Master Programs

A master program may articulate with a professional doctoral program, either in part or as a whole. An articulation in part would typically mean that part, but not all, of the master program also comprises the first component of the professional doctoral program, or that a specified set of subjects in the master program must be completed if students wish to subsequently apply for admission to the professional doctoral program.

In articulated programs, all students complete the master degree (or, for partially articulated programs, the specified part thereof) before applying for admission to the professional doctoral program. Admission to the professional doctoral program will be dependent upon the master program having been completed at a credit average (see 5.1.6.2.3.4 a) below) or better.
5.1.6.2.3.3.2 Non-Articulated Master Programs

A non-articulated master program is one that, in a professional doctoral program, represents an essential component of the professional doctoral program (i.e., all students are required to complete that master program prior to admission to the professional doctoral program) but where the full point value of the master program is not represented in the professional doctoral program. For such a non-articulated component of a professional doctoral program, students will be required to have obtained a credit average in the master program as specified in 5.1.6.2.3.4 a) below.

5.1.6.2.3.3 Parallel Master Programs

A parallel master program is one in which all or some of the coursework subjects are paralleled by equivalent doctoral subjects (offered and coded at a doctoral level) in a particular professional doctoral program. Students who have completed that component of the master program which parallels the doctoral subjects may apply for admission to the professional doctoral program, provided they have obtained a credit average for the master subjects as specified in 5.1.6.2.3.4 a) below.

5.1.6.2.3.4 Coursework Standards

The coursework subjects in a professional doctoral program shall be required to have been completed at doctoral level. This means:

a) for subjects comprising an essential component of a professional doctoral program, but where the subjects in that component are always completed during enrolment in a lower level program (such as an articulated or non-articulated or parallel master program) then counted for credit in the professional doctoral program, those subjects shall have been completed at a master level and with a credit average (see 5.1.6.2.3.4.1 below) or better; and

b) for subjects that are completed during
enrolment in a professional doctoral program and that are also offered in a lower level program (such as a master program), the doctoral versions of those subjects shall be delivered at a qualitatively higher level (requiring greater intellectual demand and assessment tasks that reflect this greater demand) in the professional doctoral program than in the lower level program and shall be coded at level 7.

5.1.6.2.3.4.1 Credit Average

A credit average may mean:

i) a credit grade or better is required in every one of the subjects in question; or

iii) some subjects with a grade lower than a credit may be offset by subjects with a grade higher than a credit; or

iii) a credit grade is required in each of certain specified subjects and, for the remaining subjects, a grade lower than a credit may be offset with a grade higher than a credit.

The relevant course document shall specify which of i), ii) or iii) will apply.

5.1.6.2.4 Research

5.1.6.2.4.1 Object of the Research

The object of the research in a professional doctoral program shall be to identify, analyse and propose solutions to current problems confronting a profession through the application of knowledge, thereby improving professional practice or understanding.

See also Academic Manual, Part H: Progress, Supervision and Assessment Regulations for Theses and Other Examinable Research Works.
5.1.7 Shared Courses

A shared course is one which is developed collaboratively between two or more Faculties and in which each of the Faculties contributes to the development, delivery and ongoing review of the course. One Faculty, designated as the "host" Faculty, is responsible for administering the course. (See also 5.2.4)

5.1.8 Shell Courses

5.1.8.1 Characteristics

A shell course:

- is structured by a number of parameters, which do not normally specify individual subjects;
- has a flexible content that is determined by the parameters stipulated; and
- has a nomenclature that is generic rather than course-specific to reflect the broad content, e.g. Graduate Certificate in Applied Science, Graduate Certificate in Commerce, except where the course is designed to be offered in double degree programs only. In such cases, a course-specific nomenclature is likely to be more appropriate.

Notwithstanding the fact that the specific content of a shell course is not normally identified in the Course Approval course document, the parameters and the aims and objectives of a shell course must be consistent with each other and must be able to meet the same requirements concerning AQF learning outcomes that other courses at the same level must meet.

5.1.8.2 Shell Courses as Constituent Courses in Double Degree Programs

A shell course structure may be appropriate where a course is designed to be offered only as a constituent course within specified double degree programs (as is, for example, the Bachelor of Teaching (Secondary)), and the content of the course will need to be varied (within identifiable parameters) for each double degree program.

5.1.8.2.1 Selection of Subjects

The subjects to be included in the course for a specific double degree program will be selected by the Faculty and will be specified in course documentation as set out in clause 5.1.8.4.2 below.
5.1.8.2.2 Nomenclature

Where the parameters of the course are such as to allow significant variations for specific double degree programs, such variation will be indicated in the nomenclature of the course through the addition of a descriptor. For example, the descriptor (Birth to 5 Years) has been added to the nomenclature Bachelor of Early Childhood Teaching when that course is offered in a double degree program with the Bachelor of Nursing. In other double degree programs, the content of the Bachelor of Early Childhood Teaching may cover different age ranges within the broad range of birth to 8 years (the range identified in the shell course document).

5.1.8.3 Specialisations in Shell Courses

Where a shell course also includes specialisations, a separate set of parameters must be identified that will apply to all specialisations offered within that course.

5.1.8.3.1 Selection of Subjects

In a standard specialisation in a shell course, the student will select from those subjects for the specialisation that have been identified by the Faculty as falling within the parameters for specialisations in that course. Where the Faculty has identified as one of the objectives of the course that each specialisation will be designed by the Faculty for an identified cohort of students with specific needs, the content of each specialisation will be specified by the Faculty and will be set out in the documentation for the specialisation as set out in clause 5.1.8.4.3 below.

5.1.8.3.2 Nomenclature

The nomenclature for specialisations will follow the format of the nomenclature of the shell course, e.g. Graduate Certificate in Commerce (Business Banking).

5.1.8.4 Documentation

5.1.8.4.1 Standard Shell Courses

The documentation required for a new shell course will be the standard documentation for the approval of a new course.

5.1.8.4.2 Shell Courses in Double Degree Programs

Where a Faculty proposes a shell course for inclusion only within double degree programs, the parameters will be set out in the shell course documentation and the specific content for the shell course within a particular double degree program will be identified in the course documentation for that particular double degree proposal.

In the shell course documentation, those fields for which completion is meaningful only for a specific double degree
program will contain a reference to the documentation for the individual double degree program.

5.1.8.4.3 Specialisations in Shell Courses

Where specialisations are being added to an existing shell course, the documentation will use CASIMS procedures for modification to an existing course. The document will identify all those specialisation subjects from which the student may choose or, for those specialisations that are designed for an identified cohort of students, the specialisation structure and content will be specified and will be tailored for the specific cohort.

Example 1: Standard generic course

Graduate Certificate in Applied Science

Parameters: At least two of the four subjects must be selected from one discipline area. At least one of these two subjects must have a pre-requisite. The remaining two subjects may be chosen from any discipline in the Faculty. All subject combinations must receive Faculty approval.

Example 2: Standard specialisation in shell course

Graduate Certificate in Applied Science (specialisation)

Parameters: All four subjects must be chosen from the specialisation discipline. [Faculty provides list of subjects within this category]

Example 3: Shell course as constituent in double degree programs

Bachelor of Teaching (Secondary)

Parameters:

- Foundations of Education subjects - minimum of 32 points, including one on adolescent development and one on adolescents with special needs;
- Curriculum Studies subjects – minimum of 24/maximum of 64 points (with details of coverage required);
- Teaching Practice subjects – minimum of 24 /maximum of 32 points (with details of possible coverage, practicum requirements);
- Discipline subjects – for a teaching major, minimum 48/maximum 80 points; for a teaching “minor”, minimum of 24/maximum of 32 points.

Example 4: Specialisation for identified cohort in shell course

Graduate Certificate in Commerce (specialisation)

Aims: The aim of the course is to provide a graduate qualification in management which will meet the vocational and professional requirements of specific cohorts of business and industry personnel who are seeking various “packages” of subjects relevant to their own workplace needs.
Parameters

- The 32 points are to be selected from the specialisation or from subjects in the same specialist area chosen with the concurrence of the course director or course coordinator;
- All subjects must be taken from the range of subjects offered by the Faculty of Commerce subjects at level 5 or equivalent;
- The student will not enrol in any subject which is substantially similar to a subject already completed; and
- The student will meet all pre-requisites.

5.1.9 Combined Courses

A combined course comprises two existing courses which are combined to produce a single course. For example, a pass degree may be combined with its associated add-on honours degree to produce an integrated honours degree, with the pass and add-on courses remaining as separate courses.

5.1.10 Exit Point and Exit Point Only Courses

See also the section on articulated sets of courses, for rules on graduation and the different methods of entry to courses containing articulated exit points.

An exit point course is a course ‘nested’ within another course, and which students may graduate from before completion of the course to which admission was made. The exit point award is an independent award requiring full approval as a course.

Where admission is not permitted into an exit point course, that course is deemed to be an exit point only course. Exit point only courses do not require separate course approval, although they must meet all of the requirements of an independent award at that level (Bachelor, Graduate Certificate, etc.).

Exit point courses may be at the same or different course levels (bachelor, graduate certificate etc.). For example two bachelor courses may be articulated, although more commonly courses of different level are articulated, such as a graduate certificate, graduate diploma and master degree.

5.2 Approval Process

5.2.1 Two Stages of Approval

The approval of a new course as defined in (a) and (b) of the definition of "award course" in the glossary involves a two-stage process.

- The first stage is the course planning stage involving approval by the University Course Planning Committee of the inclusion of the course in the University's profile and approval of the date of introduction of the course and any resource support; and
- the second stage is the course approval or accreditation stage involving the approval of the academic components of the course by the appropriate Faculty Courses Committee, or the Research Advisory Committee, for research higher degrees.

Following UCPC approval, a course may be advertised as being available
“subject to final approval” only when the Faculty has provided the Division of Marketing the detailed course information it requires for promotion.

5.2.2 Standard Courses

The course accreditation policy specified in clause 5.2.1 shall apply.

5.2.3 Courses Leading to Double Degrees

5.2.3.1 Where only one Faculty is involved

Where the course being developed for a double degree involves one Faculty, the course accreditation policy specified in clause 5.2.1 shall apply.

5.2.3.2 Where more than one Faculty is involved

Where the course being developed for a double degree involves more than one Faculty, the following action will be taken:

- the appropriate Executive Deans will determine the host Faculty for the course, and where there is dispute will refer the matter to the Deputy Vice-Chancellor (Academic) for decision; and

- the Executive Dean of the host Faculty will appoint a person or group (satisfactory to the Faculties involved) to develop the planning documentation.

- the Executive Dean of the host Faculty will convene a working party to develop the Course Approval document. The Working Party will comprise up to three nominees of each Executive Dean plus a convenor nominated by the host Executive Dean.

The Course Approval document shall be approved by the Faculty Courses Committees of the Faculties involved.

5.2.4 Shared Courses

For a shared course:

- the Deans of the collaborating Faculties will determine the host Faculty (ie. the Faculty responsible for administering the course). In the event of a dispute, the Deputy Vice-Chancellor (Academic) shall make the determination; and

- the Executive Dean of the host Faculty will appoint a person or group (satisfactory to the collaborating Faculties) to develop the planning documentation.

- the Executive Dean of the host Faculty will convene a working party to develop the Course Approval document (see the course approval section of this policy for requirements of this working party). The working party will comprise up to 3 nominees of each Executive Dean and a convenor nominated by the host Executive Dean.
The proposal shall be finally approved by the Faculty Courses Committees of the collaborating Faculties before approval by the Research Advisory Committee, if it is a research higher degree course.

5.2.5 Courses Leading to Awards Conferred Jointly with Other Universities

Faculties may develop proposals which result in an award being conferred jointly with another university or equivalent educational institution. Such an award may be at any level from diploma to doctoral level. The accreditation process would be the same as for standard courses, although it is expected that the agreement between the parties would specify the role the other institution would play in the development and delivery of the course in question, including its representation on a Course Committee constituted to manage the course (and equal in status to the Courses Committees of the Faculty Board).

5.2.6 Specific Offering of a CSU Course in a Particular Language of Study

Where, for a specific offering of a CSU course, the primary language of study is a language other than English, the Faculty in question shall be required to provide details in the relevant course documentation of the means by which acceptable language proficiency will be ascertained.

5.3 Course Planning Stage

5.3.1 Course Planning Documentation

The initiative to develop a new course may come from within a Faculty or Division, or from senior management who may wish to respond to a Government or other external initiative. The person or group given responsibility for developing the course will prepare course planning documentation, in the format required by the University Course Planning Committee.

5.3.2 University Course Planning Committee

The University Course Planning Committee will then approve or otherwise the proposal contained in the course planning documentation. If approved, the Executive Dean may then arrange for the Course Approval document to be prepared.

5.3.3 Advertising of a New Course

Following UCPC approval, a course may be advertised as being available "subject to final approval" only when the Faculty has provided the Division of Marketing the detailed course information it requires for promotion.

5.4 Course Approval Document Development Stage

5.4.1 Course Approval Document

Once the University Course Planning Committee has approved a course, the Executive Dean may arrange for the Course Approval document to be prepared within the Faculty, via CASIMS.
A Course Approval document must provide sufficient, specific information about the course to enable the Faculty Courses Committee or the Research Advisory Committee to satisfy themselves as to the academic standard of the course and the academic capacity of the Faculty to deliver it.

5.4.2 Working Party

The Executive Dean will normally establish a working party to develop the Course Approval document. Such a working party may include academic staff from other Faculties particularly if the course will involve service teaching.

In relation to courses leading to double degrees and shared courses, the Executive Dean of the host Faculty will convene a working party to comprise up to three nominees of each Executive Dean plus a convenor nominated by the host Executive Dean.

Consultation with appropriate professional bodies may occur at this stage if professional accreditation of the course is required. An interim Course Advisory Committee (see the section in this policy on the course advisory process) may be established for this purpose.

5.4.3 School Boards

When the Course Approval document is developed the Executive Dean may refer it to the appropriate Schools of the Faculty for comment. School Boards might be asked to comment on the design of the subjects which comprise the course although their comments need not be confined to subjects.

5.4.4 Faculty Courses Committee

All Course Approval documents for undergraduate and postgraduate coursework programs and coursework professional doctorates must be referred to the Faculty Courses Committee. The Faculty Courses Committee will not consider the Course Approval document until the course proposal has been approved by the University Course Planning Committee. The Faculty Courses Committee may:

- approve the document unamended for its inclusion in the University Register of Awards and Courses; or
- request amendment of the document; or
- not approve the course document, in which case the Faculty would have to decide whether to develop a new course document or have the course deleted from the University's educational profile.

Before approving an undergraduate or postgraduate coursework document, the Faculty Courses Committee must satisfy itself that the course is of a standard appropriate to an undergraduate or postgraduate award. The Committee is empowered, therefore, to examine the course documentation in detail.

In particular, the Faculty Courses Committee shall satisfy itself that:

- the course is consistent with University Policy on standard course
structures or the reasons advanced for a departure from the standard are appropriate;

- the course is consistent with the Academic Regulations and other University Policy;

- the Faculty or Faculties involved in teaching the course have the academic depth to offer the course at the level of award proposed;

- the disciplines included in the course will be taught by the appropriate Faculties;

- the Faculty and Divisions involved in the delivery of the course have the necessary resources to support the course;

- the Course Approval document is consistent with the proposal approved by the UCPC;

- the course structure is consistent with those described in this policy, or the reasons advanced for a departure from the requirements of this policy are appropriate;

- the Faculty has the academic depth to offer the course at the level of award proposed; and

- the course structure and content will meet the objectives of the course.

The Faculty Courses Committee shall also recommend to the APC the period of accreditation for the course, where a non-standard accreditation period is proposed.

5.4.5 Research Advisory Committee

All Course Approval documents for higher degree research or research professional doctorate programs must be referred from Faculty Boards, after approval of the proposal by the Faculty Research and Higher Degrees Committee, to the Research Advisory Committee. The Research Advisory Committee will not consider a Course Approval document until the proposal has been approved by the University Course Planning Committee. The Research Advisory Committee may:

- approve the document without amendment for inclusion in the University Register of Awards and Courses; or

- request the Faculty to amend the document and approve that the program as amended, be included in the University Register of Awards and Courses; or

- refer the document back to the Faculty Board for revision.

Before approving that a program be placed on the University Register, the Research Advisory Committee shall satisfy itself that the program is of a standard appropriate to a higher degree award. The Research Advisory Committee is empowered therefore to examine the documentation in detail.

In particular the Research Advisory Committee shall satisfy itself that:
• the program structure is consistent with course structures described in this policy, or the reasons advanced for a departure from the requirements of the policy are appropriate;

• the program is consistent with the Academic Regulations and other University policy;

• the Faculty or Faculties involved in teaching the program have the academic depth to offer the program and, in particular, to provide adequate supervision at the level of award proposed;

• the disciplines included in the program will be taught by the appropriate Faculties; and

• the Faculty and Divisions involved in the delivery of the program have the necessary resources to support the program.

5.4.6 Curriculum, Learning and Teacher Committee

The Curriculum, Learning and Teaching Committee shall monitor the implementation of this policy and recommend any changes to the policy to Academic Senate. It is also the arbiter of any disputes arising out of course approvals at Faculty Courses Committees, and provides definitive advice on application of regulations, including coursework course regulations.

The Curriculum, Learning and Teaching Committee also approves accreditation periods for coursework courses, outside the standard five-years between course reviews.

5.5 Lead Times for New Courses or Specialisations, New Subjects, Major Reviews and Other Course Modifications, Subject Revisions and Course and Subject Phase-outs

The University Course Planning Committee approves the composition of the University’s course profile, including the addition and deletion of all courses. Subjects added or removed from the profile are approved by the Faculties, although the University Course Planning Committee has ultimate authority for which subjects may be offered.

Approval by the University Course Planning Committee of a proposed date of introduction for a new course or specialisation, or for the modifications proposed as a result of a major review is related to a number of critical factors. These include, but may change from time to time:

• timely approval of the Course Approval document or proposal, the Course Review document or proposal or other relevant documentation or proposals (for other types of modification);
• inclusion in the UAC and VTAC guides (where appropriate);
• inclusion in the University Handbook and other University publications;
• advertising and promotion of courses;
• production of study notes;
• admission processes;
• textbook ordering; and
• internal timetabling (where appropriate).

Each of these critical factors has either a “critical date” (e.g., the deadline specified by UAC, for inclusion in the UAC handbook) or a standard lead time (e.g. period required
for production of study notes for a new DE subject by the Learning Materials Centre).

When a new course or course review is being prepared, each of these dates or lead times shall be taken into account in determining the proposed date of introduction for the new or revised course or specialisation.

The University Course Planning Committee shall approve either the proposed date of introduction or some later date and advise the Faculty accordingly.

Variations to sessions of offering of a course may be approved as part of the Course Availability List (CAL) process.

Approval by the University Course Planning Committee of the dates for discontinuation of intakes in courses, specialisations, majors or offerings in particular modes and/or locations is also related to critical factors, including:

- consultation with staff and students;
- adjustment of entries in the UAC and VTAC guides (where appropriate);
- adjustments to advertising and promotion publications; and
- timely documentation and approval of appropriate phase-out arrangements for enrolled students.

5.5.1 Timelines for Course and Subject Approval

In the schedules given below, the year of introduction is called Year X. The year of introduction refers to the year in which a new course is introduced or in which proposed modifications to an existing course are introduced or, for phase-outs, to the first year in which there will be no intakes for the course, specialisation, etc. Where a date is given in a year preceding the year of introduction, it is indicated as Year X-1, Year X-2, etc.

5.5.1.1 Approval of new courses, specialisations and subjects

The approval schedule has been developed to provide for appropriate course promotion and preparation of learning materials. For internal courses advertised through UAC/VTAC, see the Exceptions note below the timelines schedule.

All programs and subjects except research higher degree programs (this includes all undergraduate programs, postgraduate coursework programs and coursework professional doctorates)

Course planning approval by the University Course Planning Committee (UCPC) will be dependent upon evidence being provided that an effective marketing strategy is in place.

Course Approval document approval by the Faculty Courses Committee (FCC); and/or

Subject Profile document approval by the FCC, is required as follows:

For introduction of course, specialisation or subject at any time in Year X: by that date determined by the Research Advisory Committee which will allow this approval to be finalised to meet the relevant Federal Government Department deadline for publication of courses and subjects to be offered in Year X.
Research higher degree programs

Course planning approval by the UCPC will be dependent upon evidence being provided that an effective marketing strategy is in place.

Course Approval document approval by the Research Advisory Committee (RAC); and

Subject Profile document approval, where applicable, is required as follows:

For introduction of course, specialisation or subject at any time in Year X: by that meeting of the Academic Senate which will allow this approval to be finalised to meet the DEST deadline for publication of courses to be offered in Year X (currently August 31 of Year X-1).

Exceptions

New internal courses to be included in Year X UAC/VTAC guides
The Course Approval document (or, for a double degree program with two existing courses with no revision required, UCPC approval of the proposed course) must be approved by April of Year X-1.

Note: In all instances, the Course Approval proposal must be approved by the Faculty Courses Committee, or the Research Advisory Committee for research higher degrees, prior to the date of introduction of the course.

A Major Review of a Course or Specialisation

Major reviews of courses or specialisations are to follow the same time-lines as approval of a new course or specialisation. That is, the date of approval of the Course Review document determines the session/trimester in Year X in which proposed modifications will take effect.

Subjects in Courses Where the Discipline Are is New to CSU

Where a new course is being approved in a discipline area that is new to CSU, subjects in these courses must be approved within the timelines shown below.

New Undergraduate Courses in a New Discipline Area

May of year prior to introduction: Course Approval document to be submitted. New Subject Profiles for all 1st year subjects to be submitted.

Feb-May of year of introduction: New Subject Profiles for all 2nd year subjects to be submitted.

Feb-May of year 2: New Subject Profiles for all 3rd and subsequent year subjects to be submitted.
New Postgraduate Courses in a New Discipline Area

May of year prior to introduction: Course Approval document to be submitted. New Subject Profiles for all 1st year subjects to be submitted.

Feb-May of year of introduction: New Subject Profiles for all 2nd and subsequent year subjects to be submitted.

5.5.2. Review and Modification of Courses

5.5.2.1 Review

The reviewing of courses is, in practice, a process of constant monitoring to ensure that any course offered by the University maintains its academic standing and remains up to date and relevant to any industries and professions it may serve.

A number of critical factors may influence the scheduling of a major review of a given course, such as the requirements of a professional body which accredits the course, sudden changes in the marketplace, resource factors or individual factors identified by a particular Faculty.

The purpose of a major review is to evaluate the quality and performance of the course or specialisation in terms of a number of factors, including academic performance, efficiency and the capacity of the Faculty to support its profile. This process of evaluation is done for the period of time since the introduction of the course or since the previous major review (whichever is the more recent) and on the basis of the outcomes of the advisory process, of a number of indicators and of other relevant information.

The date of the first course review will be a minimum of five years (FTE) from the first year of offering of the course and for courses that are longer than five years (FTE) the date of the first course review will be the length of the course plus one year from the first year the course is offered. The period of time between reviews of any given course shall be five years (FTE). If periodic accreditation by a professional body is needed there is an expectation that the dates for course accreditation and review will be aligned.

A Faculty may apply to the Curriculum, Learning and Teaching Committee for extension of the review period (first or subsequent review) where exceptional circumstances apply.

Each Faculty shall report to the University Course Planning Committee and to the Academic Senate each year its schedule of reviews for a normal five year review cycle. This schedule should include all courses offered by the Faculty.

Notwithstanding this, where a course review is not finalised (including final approval) within twelve months of the scheduled year of review, intakes into the course may be suspended by the University Course Planning Committee effective immediately.
5.5.2.2 Major and Minor Modifications to Courses

The review of courses is an ongoing process. Faculty courses Committees also have delegated authority to approve revisions or modifications to existing courses.

For the guidance of Faculties, the following sections define more precisely course modifications which may be approved by Faculty Courses Committees and those that must be approved by the Research Advisory Committee and/or the University Course Planning Committee.

5.5.2.3 Modification Approvals

The following proposed modifications to a course must be approved by the Faculty Courses Committee of the relevant Faculty, or Academic Senate (on recommendation from the Research Advisory Committee) in the case of higher degree research or research professional doctorate programs, and/or the University Course Planning Committee. The approvals required are given in brackets after each type of modification.

- Change of nomenclature (FCC, or RAC for RHDs)
- Change of duration (usually only master courses - includes shortening or lengthening of course by altering the length of the dissertation or by deleting coursework subjects, but may also apply to a double degree program as a result of changes to a constituent course) (FCC, or RAC for RHDs, and UCPC if any resource issues)
- Creation or deletion of an exit point only course (FCC);
- Change or addition of a location (UCPC);
- Change or addition of a funding source (UCPC);
- Change to or addition of a mode (UCPC, and FCC if adding DE mode with new subjects);
- Change of Faculty ownership (UCPC);
- Addition of a major or minor or phase-out of a minor (FCC, and UCPC if any resource issues);
- Addition or phase-out of a joint study in the Bachelor of Business and Bachelor of Accounting (FCC, and UCPC if any resource issues);
- Addition of a specialisation (FCC, or RAC for RHDs, and UCPC if any resource issues);
- Variation to the content or structure of a course specifically for an identified category of students (FCC, and UCPC if any resource issues);
- Change of session type/pattern e.g. from session-based to
trimester-based (UCPC);

- Addition of a specialisation to a shell course (FCC, and UCPC if any resource issues).

For the phase-out of a specialisation, a major or an offering in a particular mode and/or location, see below.

5.5.3 Phase Out of a Course, Specialisation, Major or Mode and/or Location

The phase-out process includes both the process of determining that there will be no further intakes and the approval of phase-out arrangements for students and subjects in a course, specialisation, major or offering in a particular mode and/or location.

Proposals to phase out a course, specialisation, major or offering in a particular mode and/or at a particular location may be initiated either by the University, as part of its annual course profile review, or by a Faculty.

5.5.3.1 Annual Course Profile Review

At the discretion of the UCPC, the University may conduct a course profile review of courses, disciplines and professional fields for possible modification or discontinuation of intakes.

5.5.3.2 Preliminary Course Profile Meeting and Faculty Responses

The Deputy Vice-Chancellor (Academic) will identify courses, disciplines and professional fields for possible review on the basis of data (including demand, attrition, graduation, CEQ and load and funding data) provided by the Office of Planning and Audit. The University Course Planning Committee, at its course profile review preliminary meeting, will consider the recommendations of the Deputy Vice-Chancellor (Academic) and will determine courses, disciplines or professional fields to be reviewed for modification or discontinuation of intakes. Faculties will then be advised of these determinations and requested to respond, with responses addressing the fit with the University’s strategic directions, sustainability, links with research, demand, attrition, and academic critical mass.

5.5.3.3 Major Course Profile Meeting and Consultation Period

The Committee’s course profile review meeting will consider the Faculty responses and will make determinations on discontinuation of intakes (or, alternatively, modification) to courses, disciplines or professional fields. Faculties, relevant divisions (including Human Resources, Marketing and Student Administration), staff and students will then be notified and a consultation period with same will be coordinated by the Deputy Vice-Chancellor (Academic).

5.5.3.4 Final Confirmation and Notification of Determinations

The University Course Planning Committee will consider determinations for confirmation, followed by notification to all sections of the University and to applicants in the system who are affected by determinations, and amendment, where appropriate, to the UAC/VTAC guides.
5.5.3.5 Faculty-Initiated Proposals

Faculty-initiated proposals for phase-out shall be forwarded to the University Course Planning Committee. Processes for phase out are the same as follow a full course profile review.

5.5.3.6 Approval of Phase Out Procedures

These procedures will involve the University Course Planning Committee, and, as appropriate, the Research Advisory Committee. These bodies will ensure that phasing-out arrangements are appropriate.

5.5.3.7 Final Year of Intake

For all proposals which result in a decision to discontinue intakes in a course, specialisation, major or offering in a particular mode and/or location, discontinuation of intakes will take effect in the year plus one following the proposal. For example, a proposal put forward in 2003 will mean that intakes will be discontinued from 2005. See above for the full schedule of lead times.

5.5.3.8 Timeline for course phase out

Note that the UCPC may decide to not have a review of the course profile in any given year.

April/May of Year X-2 Planning & Audit prepare course, discipline and professional field data and Deputy Vice-Chancellor (Academic) identifies courses, disciplines and/or professional fields for possible review.

Mid-June of Year X-2 UCPC course profile review preliminary meeting considers recommendations of the Deputy Vice-Chancellor (Academic) and determines courses, disciplines and/or professional fields to be reviewed for modification or discontinuation of intakes.

End June of Year X-2 Faculties are advised of determinations regarding reviews and requested to provide responses by end of August which address the factors outlined below.

Mid-September of Year X-2 UCPC course profile review major meeting receives and considers Faculty responses, and determines discontinuation of intakes (or, alternatively, modifications) to courses, disciplines and/or professional fields.
End September of year X-2 Notification of UCPC determinations to Faculties, students, Divisions of Human Resources and Marketing, Student Administration and other Divisions.

October-December of Year X-2 Consultation period co-ordinated by the Deputy Vice-Chancellor (Academic).

February of Year X-1 UCPC considers determinations for final confirmation.

February-March of Year X-1 All sections of the University are notified, UAC and VTAC guides are amended and all applicants in the University's admission system who are affected by determinations are notified. Faculties commission Phase-out documents for all courses, specialisations, majors or offerings in a particular mode and/or location for which discontinuation of intakes in Year X has been determined.

July-August of Year X-1 Final meeting of FCC/RAC to which Phase-out proposals may be submitted.

Faculty-initiated phase-outs

Faculty-initiated proposals for discontinuation of intakes or modifications to a course, discipline or professional field are to be forwarded to the UCPC by the meeting in September-October of Year X-2. Those submissions approved by the UCPC then follow the timelines for consultation and confirmation outlined above.

5.5.3.8.1 Phasing Out of Subjects

All subjects being phased out must follow the relevant Federal Government deadline for reporting of subjects for the following year.

Where continuing students remain enrolled in subjects in a course after it has been phased out and is receiving no further intakes, the following principles shall apply.

(a) Full communication with students is required in all decisions to phase out subjects within a phased out course, with an expectation that there will be no disadvantage to them, wherever possible.

(b) Where there is no newer version or related course to which students may transfer, a Faculty shall continue to offer the subjects in that course for the time necessary to allow continuing students to complete it. Students in this situation will need to complete the
course within the standard course duration. For example, if the course duration is 3 years full-time, then full-time continuing students in their second year will have one further year to complete the course, etc. The normal academic progress rules relating to maximum time of enrolment will not apply.

(c) Where a newer version of a phased out course does exist, the Faculty may choose whether to continue to offer subjects servicing the phased out course, or to require that all continuing students transfer to the other course. Where transfer is given as the only option, the student should wherever possible experience no disadvantage, for example in terms of duration or cost of study.

(d) Where a subject being made obsolete is inter-Faculty (“service”) taught into other courses, the Faculties concerned shall negotiate the phasing out according to the Academic Senate inter-Faculty teaching policy.

(e) If a Faculty wishes to expedite or extend the phasing out of a subject or subjects, consultation with the students involved should be a critical concern and also documented.

(f) Where the students affected are international students, any visa, regulatory or other conditions pertaining to such

5.5.3.8.2 Obsolescing of Subjects

Subjects may be deleted (made obsolete) at any time prior to the relevant Federal Government Department deadline for reporting of subjects for the following year.

5.6 Advertising of Courses

5.6.1 Inclusion in UAC/VTAC Guides

A new course may not be included in the UAC/VTAC guides until approval of the Course Approval document (unless the University Course Planning Committee explicitly gives approval for a new course to be included in the UAC/VTAC guides prior to approval of the Course Approval document). A new course includes any proposed double degree program in which one or both of the constituent courses is new or requires a revised structure.

A double degree program comprising two existing courses neither of which will be altered as a result of the proposed double degree program may be included in the UAC/VTAC guides following approval by the UCPC.

Confirmation of the inclusion of a new course in the UAC/VTAC guides will be provided to the Division of Marketing by staff in the Office of Academic Governance and Office of Planning and Audit.

5.6.2 Inclusion in the University Handbook
A new course may not be included in the next year’s University Handbook unless the course proposal has been given approval or provisional approval by the relevant academic body. Where there has been provisional approval only, the relevant course entry shall clearly indicate that the course is “subject to final approval”.

5.6.3 Inclusion in other Promotional Literature

New courses may only be included in promotional literature such as advertisements and course brochures after the UCPC has given approval for the course to be offered but before approval of the Course Approval document if the Faculty has provided the Division of Marketing with the detailed information it requires for promotion. This includes information on admission criteria, course structure and course content, content of subjects, employment prospects, starting salaries and practicums. Entries made before a course has received final approval must carry the proviso “subject to final approval” until final approval has been given.

5.6.4 Correct Course Nomenclature

The Faculties and the Division of Marketing are required to have in place mechanisms to ensure that, where specific courses are being identified in promotional literature such as course brochures or advertisements, the correct course nomenclature is used.

For inclusion of a new course in the UAC/VTAC guides or the University Handbook, the course nomenclature will be taken from the Course Approval document (or, for new double degree programs with existing, unchanged courses, from UCPC documentation).

6. APPROVAL OF FIELDS OF RESEARCH

This section applies to courses as defined in (c) of the definition of “award course” in the glossary which are courses by research and thesis. The approval of coursework only or coursework and dissertation courses is covered in Section 5.

6.1 Fields of Research (as defined by the Australian Research Council)

The Research Management Committee shall recommend to the Academic Senate for approval fields of research within Faculties. Candidates wishing to pursue research in fulfilment of the requirements of higher degrees by research may be admitted to candidature and enabled to complete that research work in designated fields of research. A field of research (as defined by the Australian Research Council) will normally be contained within a University Centre for Research but may be separately identified and approved by the Academic Senate after considering a nomination initiated by a Faculty.

6.2 Process

Before a higher degree student can be admitted to candidature, an appropriate field of research must have been approved by Academic Senate. Fields of Research should be reviewed every seven years.

6.3 Field of Research Approval

No field of research may be publicly advertised or promoted until approved by the Academic Senate.
6.3.1 Documentation

The initiative to have a new field of research approved shall come from within a Faculty. The Executive Dean of a Faculty shall prepare a Field of Research Approval Submission for consideration first by the Faculty Board, then by the Research Management Committee and finally to the Academic Senate.

6.3.2 Research Management Committee

The Research Management Committee shall assess whether a proposed field of research conforms to the research and research training triennial plan and the University Strategic Plan and if it does so whether the Faculty or Research Centre has the capacity and the strategic commitment to maintain the field of research. In making this assessment the Research Management Committee should be guided by:

(i) The general research activity of the Faculty.

- the number and seniority of staff, including the number of professoriate staff, in the field of research and the number of staff in a University Research Centre(s) and/or Faculty(s) with higher degree qualifications apposite to the specified field of research;

- the level of research activity in the proposed field of research as measured by:
  - the number of research workers in the field of research including University research students, research officers, visitors or affiliates;
  - the number of staff with experience and/or training in supervision and/or examination of research degrees;
  - publications recorded including current publications on topics apposite to the field of research; and
  - income from competitive research grants, consulting work etc.

(ii) Strategic Commitment to the Field of Research by the Faculty or the University.

The Committee will assess the emphasis that the Faculty or University places in its internal planning on developing the field of research, by considering:

- staffing priorities apposite to the field of research;
- purchase of equipment and assignment of technical and other staff to support the field of research;
- the provision of library and other research infrastructure to support the field of research; and
- availability of space to the field of research; and
• staff development initiatives as these relate to developing the field of research.

The Research Management Committee will advise the Academic Senate on whether a nominated field of research meets the criteria detailed in (i) and (ii) above.

6.3.3 Academic Senate

Academic Senate will assess whether or not the Faculty proposing the field of research has the academic capacity to support higher degree by research students in the nominated field of research.
(DRAFT) INTERIM COURSE APPROVAL PROCESS – CSU DEGREE

This document has been developed to meet the requirements established by APC as an Interim Course Approval for all Undergraduate Courses to indicate progress towards alignment to the CSU Degree.

What is the CSU Degree?

CSU has made a commitment to all CSU undergraduates that, as well as gaining an in-depth understanding of their chosen disciplines and professions, they will have access to:

- A supported transition into the first year of university; and thereafter throughout the undergraduate student experience;
- Employability and generic skills such as effective communication; analytical skills; critical and reflective judgment; problem-solving; team work; and time-management;
- The opportunity for international experiences and to develop an international perspective in their discipline or profession;
- An engagement with the responsibilities of global citizenship;
- The opportunity to develop cultural competence;
- The opportunity to engage meaningfully with the culture, experiences and histories of Indigenous communities;
- Understandings of financial, social and environmental sustainability;
- A firm understanding of ethics;
- Education based in practice;
- Engagement in activities that foster web-based proficiency;
- Threshold disciplinary outcomes (to be developed).

The CSU Graduate Commitment will be achieved through a process of ongoing course design. The result of this course design will be called “The CSU Degree”. To read more about the CSU Degree, visit [http://www.csu.edu.au/division/landt/curriculumrenewal/index.htm](http://www.csu.edu.au/division/landt/curriculumrenewal/index.htm)

In order to achieve the CSU Degree, all Undergraduate courses at CSU need to engage in a process of curriculum renewal that achieves progress towards the CSU degree design principles. Some courses began this process some years ago; others are in the process of alignment. Good Practice Guidelines have been developed to assist in the process of ensuring that the CSU Degree Commitments are embedded in every degree, in a way that is appropriate to each degree. Good Practice Guidelines have been developed to assist Course Directors in embedding:

- Ethics and Global Citizenship
- Environmental, Social and Financial Sustainability
- Internationalisation
- Indigenisation
- The First Year Experience
- Assessment Innovation including Capstone Experiences
- Development of Cultural Competence
- Blended and Flexible Learning
- Education for Practice

The following template provides Undergraduate Course Directors with a means whereby they can articulate the alignment of an undergraduate degree to the CSU degree, and to indicate plans for future progress towards alignment.
Interim Course Approval – CSU Degree, 2011.

During 2011, every undergraduate course at CSU will need to begin demonstrating how it responds to the CSU Degree. This is an interim process. From 2012, a more detailed process will be established.

PLEASE PROVIDE THE FOLLOWING

1. Faculty

2. Course Name

3. Course Director

4. Course Aims

THE CSU DEGREE COMMITMENTS

Please see the draft Good Practice Guidelines at

1. COURSE PRIORITIES

Each course will balance the aspirations of the CSU degree against the risk assessment needs of the course. This means each course will engage in curriculum renewal in different ways, using different priorities. Please identify the priority order you think best reflects the needs of your course, in terms of progress towards the CSU degree principles. Provide a rationale for your thinking. For example, your course may already have effectively embedded ethics and global citizenship, which might make it a low priority.

<table>
<thead>
<tr>
<th>CSU Degree Design Principles</th>
<th>Priority Order</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenization¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethics and Global Citizenship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internationalisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental, Social and Financial Sustainability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment, including the Capstone Experience or Subject</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The first year experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blended and flexible learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education for practice – workplace learning</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Note that the Indigenization of the Curriculum must be achieved by 2015
2. PROGRESS TOWARDS ALIGNMENT TO THE CSU DEGREE

*Please fill in the following tables. When you answer the right hand column, please make sure you refer to the appropriate Good Practice Guideline.*

### 2.1 Indigenous Education Strategy

Does this Course contain Indigenous content?

**If there is Indigenous content, please answer the following questions:**

1. **Provide a detailed summary of Indigenous content.**
   Summary:

   2. **Does the Indigenous content fulfill the requirements of the Indigenous Curriculum Guidelines and in particular the Cultural Competence Pedagogical Framework?**
   Answer:

   3. **Is the Indigenous content linked to assessment requirements?**
   Answer:

   4. **Has the Indigenous content been approved by the Indigenous Board of Studies**
   Answer:

   **If there is no Indigenous content, please answer the following questions:**

   Outline the plans that are in place to fulfill the requirements of the Indigenous Curriculum Guidelines by 2015?
   This resource may be useful in your considerations:-

   Outline your plans:

<table>
<thead>
<tr>
<th><strong>2.2 Ethics and Global Citizenship</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What would you say to a student about Ethics and Global Citizenship in this course now?</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>2.3 Internationalisation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What would you say to a student about Internationalisation in this course now?</strong></td>
</tr>
</tbody>
</table>
### 2.4 Environmental, Social and Financial Sustainability

| What would you say to a student about Environmental, Social and Financial Sustainability in this course now? | This is what we plan to do to make further progress embedding Environmental, Social and Financial Sustainability in this course during the next few years. |

### 2.5 Assessment

| What would you say to a student about assessment in this course now? If you have a capstone subject or capstone experience, describe this to the student as well. | This is what we plan to do to make further progress improving assessment in this course during the next few years. |

### 2.6 The first year experience

| What would you say to a student about the first year experience in this course now? | This is what we plan to do to make further progress improving the first year experience in this course during the next few years. |

### 2.7 Blended and flexible learning

| What would you say to a student about the experience of blended and flexible learning in this course now? | This is what we plan to do to make further progress improving the quality of blended and flexible learning in this course during the next few years. |

### 2.8 Education for practice – workplace learning

| What would you say to a student about workplace learning in this course now? | This is what we plan to do to make further progress embedding workplace learning in this course during the next few years. |
Course Review Checklist. PLEASE NOTE THAT THIS CHECKLIST IS DESIGNED TO BE USED IN CONJUNCTION WITH ACADEMIC SENATE’S COURSE ACCREDITATION AND OTHER POLICIES, AND CASIMS, AND IS NOT IN ITSELF POLICY. IF THIS CHECKLIST VARIES WITH SENATE POLICY IN ANY WAY, THE POLICY IS CORRECT.

<table>
<thead>
<tr>
<th>Title page</th>
<th>All courses being reviewed are identified, earliest proposed date for introducing any changes is used, and date of introduction is inside allowed timelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rationale for review</td>
<td>Standard schedule/other reasons</td>
</tr>
<tr>
<td>Date(s): previous reviews/year &amp; session course introduced</td>
<td></td>
</tr>
<tr>
<td>Reason for any delay provided</td>
<td></td>
</tr>
<tr>
<td>Continued offering</td>
<td>Statement: ‘Based on the review process, the Faculty has determined that continued offering of this course, in its current modes (specify these), is appropriate.’</td>
</tr>
<tr>
<td>Brief summary provided of reasons for determination, taking account of:</td>
<td></td>
</tr>
<tr>
<td>• advice received in review advisory process</td>
<td></td>
</tr>
<tr>
<td>• continued relevance of the course</td>
<td></td>
</tr>
<tr>
<td>• analysis of all relevant performance indicators (see fields 3 and 4, and Appendices)</td>
<td></td>
</tr>
<tr>
<td>• any notification of the course being ‘on notice’</td>
<td></td>
</tr>
<tr>
<td>• context of other course offerings</td>
<td></td>
</tr>
<tr>
<td>• justification for continuation of underperforming course (check fields 2,3 &amp;4 for adequate analysis and discussion of problems).</td>
<td></td>
</tr>
<tr>
<td>If continuation is inappropriate, notification to UCPC to suspend intakes, and Phase Out docs. required as follows:</td>
<td></td>
</tr>
<tr>
<td>• stand alone course – course review doc not needed, just notification and Phase-Out doc</td>
<td></td>
</tr>
<tr>
<td>• articulated set/4 year degree with honours ALL to go – as for stand-alone course</td>
<td></td>
</tr>
<tr>
<td>• applies to some parts of a set, or integrated honours stream, proposals included in this doc.</td>
<td></td>
</tr>
<tr>
<td>Changes in the Course since Approval / last Review</td>
<td>Any changes to the following, with rationale:</td>
</tr>
<tr>
<td>• Course structure</td>
<td></td>
</tr>
<tr>
<td>• subjects</td>
<td></td>
</tr>
<tr>
<td>• standard credit packages</td>
<td></td>
</tr>
<tr>
<td>• admission requirements</td>
<td></td>
</tr>
<tr>
<td>• point value</td>
<td></td>
</tr>
<tr>
<td>• nomenclature</td>
<td></td>
</tr>
<tr>
<td>• other</td>
<td></td>
</tr>
<tr>
<td>Advisory Process</td>
<td>List of names, titles and positions of CSU staff is provided, to include educational designers, learning skills advisors, library staff, and staff from other schools or faculties whose subjects are included in this or an associated double degree.</td>
</tr>
<tr>
<td>List of advisors provided, including:</td>
<td></td>
</tr>
<tr>
<td>• name</td>
<td></td>
</tr>
<tr>
<td>• position</td>
<td></td>
</tr>
<tr>
<td>• why their contribution addresses policy objectives under L1.1, S4.10. In sum, these are:</td>
<td></td>
</tr>
<tr>
<td>o intellectual challenge &amp; stimulating learning experience</td>
<td></td>
</tr>
<tr>
<td>o clear &amp; appropriate aims and objectives</td>
<td></td>
</tr>
<tr>
<td>o content (inc. T/L strategies and assessment) is at appropriate level &amp; consistent with aims and objectives</td>
<td></td>
</tr>
<tr>
<td>o relevance to the profession/industry, the community, reputation and trends</td>
<td></td>
</tr>
<tr>
<td>o presence of independent external experts</td>
<td></td>
</tr>
<tr>
<td>o provide for community input into and enhancement of courses</td>
<td></td>
</tr>
<tr>
<td>o encourage professional recognition and assist in course promotion</td>
<td></td>
</tr>
<tr>
<td>o representatives of professional bodies are not included (belong in S2.3)</td>
<td></td>
</tr>
<tr>
<td>• students (current and graduate), are included here</td>
<td></td>
</tr>
<tr>
<td>• Indigenous/international representation included here</td>
<td></td>
</tr>
<tr>
<td>List of professional bodies, including:</td>
<td></td>
</tr>
</tbody>
</table>
High quality account of the advisory process, not a reiteration of what each person said—details are provided in attachments, which match the summary statements. The account is to be a synthesis of:

- type and frequency of interactions
- whether specifically for the review or ongoing
- input, including specific recommendations, from those listed under S2.2
- documentation attached
- relevant extracts incorporated in the description

Arrangements for monitoring course effectiveness specified (only at major reviews or ongoing)

Arrangements for continuing professional accreditation specified

Faculty decisions arising from the advisory process are summarised, incorporating:

- summary of advisory recommendations
- rationale for any decisions (including not following advice)
- how the decision has been addressed in this document

Course Performance and Teaching Quality
[Part A: Need and Demand: Need]
[Part A: Need and Demand: Demand and Student Enrolment Figures]
[Part A: Other Perf Indicators: Quality of Teaching]

High quality account of industry need, and demand is required, with appropriate data and analysis

Has the need and/or demand identified in the previous course document been shown to be real/unchanged/different? Evidence includes, for each mode (internal/DE/onshore with/out partner):

- claims and predictions of previous course document
- internal UG – 1st to 3rd preferences and total preferences for preceding 5 years or other courses – numbers of applications over the last 5 years
- UAI cut-off & other criteria used to fill quota
- Enrolment figures: intake, retention, progress, completions
- performance indicators (Graduate Destination Survey; graduate full-time employment figures)
- Information from Division of Communications & Internal Relations
- advice from advisory process
- any other relevant information

Future demand outlined and intake quota specified

An analysis of the quality of teaching since the last major course document, inclusive of service teaching indicators, is provided. Paucity of information in areas such as the CEQ must be supplemented by other information on the quality of teaching

For effective teaching

- CEQ Broad Agreement: Good teaching scale
- Student Subject Surveys – aggregated data
- Other advice on the quality of teaching (EDs, LSAs, field personnel, etc.)

For appropriate assessment

- CEQ Broad Agreement: Appropriate assessment scale

Statement about the learning experiences of students is provided

Recommendations for the improvement of course quality are provided

Resources [Part A: Other Perf Indicators: Resources]

High quality account is required, with appropriate data and analysis. This field is one of those for which contact with relevant divisional staff is required

Description of previously identified resource needs (staff, teaching rooms, equipment)

Resource needs that still exist or will arise are identified

Graduate

UG courses only provide evidence of students’ acquisition of
<table>
<thead>
<tr>
<th>attributes [Part A: Other Perf Indicators: Graduate Attributes]</th>
<th>graduate attributes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEQ Broad Agreement: Generic Skills scale is drawn on.</td>
<td>CSU Graduate Attributes build students’ capacity to contribute to their community and to the wider society. By the conclusion of their studies, students are able to:</td>
</tr>
<tr>
<td></td>
<td>• Demonstrate a broad overview of their field of knowledge</td>
</tr>
<tr>
<td></td>
<td>• Communicate effectively in a manner relevant to their discipline</td>
</tr>
<tr>
<td></td>
<td>• Demonstrate analytical skills, including the exercise of critical and reflective judgement</td>
</tr>
<tr>
<td></td>
<td>• Address unfamiliar problems</td>
</tr>
<tr>
<td></td>
<td>• Plan their own work</td>
</tr>
<tr>
<td></td>
<td>• Work as a team member</td>
</tr>
<tr>
<td></td>
<td>• Demonstrate a national and international perspective</td>
</tr>
<tr>
<td></td>
<td>○ Demonstrate an understanding of, and commitment to, values-driven practice in their field of study that takes account of open enquiry, ethical practice, social justice, cultural diversity, and environmental sustainability.</td>
</tr>
<tr>
<td>Details of the measures used to ascertain their acquisition are provided.</td>
<td>• Ways in which the Graduate Attributes can be demonstrated to external bodies (an e-portfolio; a ‘map’ of the course; charts of the focus of each subject in Subject Outlines; etc.) are provided in an attachment</td>
</tr>
<tr>
<td>Recommendations to ensure they will be achieved in future are provided.</td>
<td></td>
</tr>
<tr>
<td>Aims and Objectives [Part A: Aims and Objectives: Aims]</td>
<td>Aims and objectives of the course are provided. In assessing the need for change, consider:</td>
</tr>
<tr>
<td></td>
<td>• Their continued relevance, given the current need and their capacity to ensure the achievement of CSU Graduate Attributes</td>
</tr>
<tr>
<td></td>
<td>• Conformity to AQF Guidelines as to the level of the course</td>
</tr>
<tr>
<td></td>
<td>• Any changes suggested are borne out in course structure and/or content</td>
</tr>
<tr>
<td>Course Structure and Content [Part A: Course Str &amp; SrvTeach: Any Proposed Changes to Course Structure and/or Enrolment Pattern] [Part A: Other Courses - Effects: Effects on Other Courses]</td>
<td>Statement that ‘There are (no) changes to the course structure or enrolment pattern’ is supported with a rationale</td>
</tr>
<tr>
<td></td>
<td>Proposed changes are listed</td>
</tr>
<tr>
<td></td>
<td>• Subject levels are appropriate to the level of the award</td>
</tr>
<tr>
<td></td>
<td>• Implications for other courses (upon partners, or upon other Schools and/or Faculties) are identified</td>
</tr>
<tr>
<td></td>
<td>• Proposals to phase out parts of a course, or to create an exit only course in an articulated set, are included here</td>
</tr>
<tr>
<td>Admission</td>
<td>Academic or other qualifications required for entry are described, including for each course in a double degree, non-school leaver applicants, and international students</td>
</tr>
<tr>
<td></td>
<td>Standard entry for PhD, Master by research covers standard qualifications, other qualifications and preliminary candidature</td>
</tr>
<tr>
<td></td>
<td>Prof. doctorate entry covers academic/other requirements compliant with Admission Regs (5) and sufficiently detailed to show students are capable of this level of study</td>
</tr>
<tr>
<td></td>
<td>Level of performance required to get into hons. (integrated or add-on), or a specialist stream to which students are not admitted directly, or to the next course in an articulated set, is clear</td>
</tr>
<tr>
<td></td>
<td>Any changes to admission requirements are indicated.</td>
</tr>
<tr>
<td>Implications for current students [Part A: Student Implications: Implications for Current Students]</td>
<td>Impact of proposed changes on students is outlined in terms of:</td>
</tr>
<tr>
<td></td>
<td>• cohorts</td>
</tr>
<tr>
<td></td>
<td>• effects on each cohort</td>
</tr>
<tr>
<td></td>
<td>• steps being taken to alleviate problems for each cohort</td>
</tr>
<tr>
<td></td>
<td>Where cohorts are to complete within the existing structure, how this will be achieved is set out</td>
</tr>
<tr>
<td></td>
<td>If there is to be a change of course nomenclature, the opportunity (or not) to transfer is outlined</td>
</tr>
<tr>
<td></td>
<td>Any differences between modes/partners are outlined</td>
</tr>
<tr>
<td></td>
<td>Where no current cohorts are affected, this is stated</td>
</tr>
<tr>
<td>Prop. date(s) of introduction of changes</td>
<td>Dates are within required timelines</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>[Part A: Dates: Proposed Date(s) for Introduction of Modifications]</td>
<td>Session/year is indicated for any course change to a current course (taking account of different modes, specialisations, etc.), and where these differ, all dates of introduction are specified</td>
</tr>
<tr>
<td></td>
<td>In an articulated set, all changes would normally be introduced simultaneously: if different dates are specified, credit issues must be addressed</td>
</tr>
<tr>
<td></td>
<td>Bachelor degrees with separate add-on honours have same year of introduction if students can choose a changed nomenclature; otherwise, the first date of graduation from the degree with the old title is specified for the add-on honours</td>
</tr>
<tr>
<td></td>
<td>If there is a new exit-point only course, the phrase: ‘First session in which the requirements of the exit point only course could be met: session/year’.</td>
</tr>
<tr>
<td></td>
<td>If a course/stream is being phased out, last session/year of intake is specified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Course Structure &amp; Enrolment Pattern</th>
<th>Existing Course Structure is automatically inserted, and should include the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a) point value of each course in set, including any which are exit points only</td>
</tr>
<tr>
<td></td>
<td>b) current course structure (no. of cores, restricted and free electives, majors and minors – in groups if there is more than one set), supported by list of subjects by code and title under each type</td>
</tr>
<tr>
<td></td>
<td>c) current key subjects</td>
</tr>
<tr>
<td></td>
<td>c) current enrolment pattern, session by session, including</td>
</tr>
<tr>
<td></td>
<td>- Any non-CSU or articulated components and points they contribute</td>
</tr>
<tr>
<td></td>
<td>- Subject codes, titles and points, where these vary from the standard 8 points</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Course Structure and Enrolment Pattern</th>
<th>Any necessary changes to the overview of the course structure are made (core/elective subjects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Part B: Subjects/Curriculum]</td>
<td>Changes to subjects in the course are completed as follows</td>
</tr>
<tr>
<td></td>
<td>4.2.3.1 completely new subjects</td>
</tr>
<tr>
<td></td>
<td>4.2.3.2 new subjects based on other subjects, where those subjects still serve other courses,</td>
</tr>
<tr>
<td></td>
<td>4.2.3.3 new subjects with subject profiles in another course document under approval</td>
</tr>
<tr>
<td></td>
<td>4.2.3.4 existing subject has been revised for inclusion in this course. If an existing subject has a change of code or title, it is described thus:</td>
</tr>
<tr>
<td></td>
<td>- ABC123 Title previously XYZ*** Title</td>
</tr>
<tr>
<td></td>
<td>4.2.3.5 existing subjects with revised profiles in another course document</td>
</tr>
<tr>
<td></td>
<td>4.2.3.6 subjects which continue unchanged</td>
</tr>
<tr>
<td></td>
<td>4.2.3.7 subjects already in the course revised as a result of the review. If an existing subject has a change of code or title, it is described thus:</td>
</tr>
<tr>
<td></td>
<td>- ABC123 Title previously XYZ*** Title</td>
</tr>
<tr>
<td></td>
<td>4.2.3.8 subjects already in the course for which no revision is required</td>
</tr>
<tr>
<td></td>
<td>4.2.3.9 subjects that will continue to be offered in other courses, but not in this one</td>
</tr>
<tr>
<td></td>
<td>4.2.3.10 subjects to become obsolete, with final session/trimester and year of offering specified</td>
</tr>
<tr>
<td></td>
<td>Implications of this decision for other courses have been identified</td>
</tr>
<tr>
<td></td>
<td>4.2.3.11 subjects in a course which partially articulates, such as a professional doctorate with a</td>
</tr>
</tbody>
</table>
masters, a new course in an articulated set, all subjects in a course that includes an integrated honours stream, only the integrated honours stream subjects for a course that already exists

Appendix includes: new or revised subject profiles (under status categories 1, 2, 4, and 7 above).
### Year 0 - Design potential discussions

<table>
<thead>
<tr>
<th>Meeting date</th>
<th>Design leaders</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>27th November</td>
<td></td>
<td>B1</td>
</tr>
<tr>
<td>12th December</td>
<td></td>
<td>B1</td>
</tr>
</tbody>
</table>

### Year 1

<table>
<thead>
<tr>
<th>Meeting date</th>
<th>Design team</th>
<th>Design leaders</th>
<th>Stakeholders</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th January</td>
<td></td>
<td></td>
<td></td>
<td>D1</td>
</tr>
<tr>
<td>9th January</td>
<td></td>
<td></td>
<td></td>
<td>C1</td>
</tr>
<tr>
<td>15th January</td>
<td></td>
<td></td>
<td></td>
<td>D2</td>
</tr>
<tr>
<td>16th January</td>
<td></td>
<td></td>
<td></td>
<td>D3</td>
</tr>
<tr>
<td>21st January</td>
<td></td>
<td></td>
<td></td>
<td>D3 (name change)</td>
</tr>
<tr>
<td>29th January</td>
<td></td>
<td></td>
<td></td>
<td>B1</td>
</tr>
<tr>
<td>13th February</td>
<td></td>
<td></td>
<td></td>
<td>B1</td>
</tr>
<tr>
<td>24th February</td>
<td></td>
<td></td>
<td></td>
<td>B1</td>
</tr>
<tr>
<td>26th February</td>
<td></td>
<td></td>
<td></td>
<td>C1</td>
</tr>
<tr>
<td>2nd March</td>
<td></td>
<td></td>
<td></td>
<td>Res school (Sydney)</td>
</tr>
<tr>
<td>5th March</td>
<td></td>
<td></td>
<td></td>
<td>Res school (507)</td>
</tr>
<tr>
<td>12th March</td>
<td></td>
<td></td>
<td></td>
<td>C1</td>
</tr>
<tr>
<td>18th March</td>
<td></td>
<td></td>
<td></td>
<td>B1,D4</td>
</tr>
<tr>
<td>19th March</td>
<td></td>
<td></td>
<td></td>
<td>B1,D6</td>
</tr>
<tr>
<td>26th March</td>
<td></td>
<td></td>
<td></td>
<td>B1</td>
</tr>
<tr>
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Appendix 6B: Meeting Agenda Example
January, Year 1

Program design and review

Inclusive education – identity (frame internationally or just Australia?)

Problem - Pre-service teacher education (inclusive education?) – areas of need
Catalyst for course change

Theoretical base – design theory
- complexity theory (none of us can exist independent of our relationships with each other)
- chaos theory
- social cognitive theory (Bandura)

Portfolios
Course design
Course mapping

General ideas about method
- Compare specialisation stream vs non-specialisation re: comfort/confidence in teaching students with special needs
- ESS407 – what works well? What do students want?
- Areas of need as seen by the students
- Track the SE specialisation group through from 2nd to 4th year
- Take representative samples from 2nd, 3rd and 4th year students

Incorporate the idea of relationships throughout (complexity theory)
Personal skills

- Identify and analyse the educational needs of adolescents, particularly those in inclusive classes;
- develop a range of relevant instructional strategies that target the needs identified;
- Describe and integrate the principles of assessment;
- demonstrate application of these principles in a rational and sophisticated manner,
- describe and evaluate assessment procedures for the identification and evaluation of children with varied education needs;
- To develop skills in classroom-based evaluation.
- Analyse and adapt curricula to cater for learners with special needs,
- To plan systematically instructional programs for students with learning difficulties (IEPs)
- To select or adapt appropriate instructional programs/materials for students with learning difficulties/disabilities.
- apply and evaluate a number of instructional strategies relevant for students with special needs
- recognise and understand the integral relationship of models of learning to instructional methodologies, and apply this knowledge in service delivery for students with special needs.
- understand the importance of non verbal and verbal communication;
- have a set of skills and tools to work directly with families of children with disabilities
- design and evaluate services in relation to family needs
- have the confidence to do this work and
- care.
- ability to introduce strategies and adaptations that can be implemented within classroom and school environments that promote the inclusion of students;
- critically evaluate research literature in special education, particularly in the areas of methodology and analysis,
- produce a comprehensive literature review in an area of special education research,
- identify and justify a number of research questions pertinent to your proposed area of study.
- design an individual research project;
- be cognizant of the need to limit the breadth and depth of a project within set time constraints;
- demonstrate your understanding of the due processes of ethics and confidentiality;
- apply your knowledge of basic research methods;
- demonstrate competency in presenting the research material;
- demonstrate accurate, concise and meaningful material of an empirical study, or an evaluation of a curriculum or an aspect of a curriculum, or a report of a special education issue or a critical review of literature.
- CEC
- Understands the models, theories and philosophies of special education
- Demonstrates knowledge of laws, policies and ethical principles regarding behavior managements
- Demonstrates knowledge of the rights and responsibilities of students, parents, teachers, other

Standard 2: Characteristics/ Knowledge of human development

- Knowledge of typical and atypical growth and development
- Knowledge of family systems and the role of families in supporting development
- Similarities and differences of individuals with and without exceptional learning needs

Standard 3: Individual learning differences/Instruction adapted for diverse learners
• Demonstrates understanding of impact of learner’s academic and social abilities, attitudes, interests and values on instruction
• Demonstrates understanding of the effects an exceptional condition can have on an individual’s life
• Demonstrates understanding of differing ways of learning of individuals with exceptional learning needs

Standard 4: Instructional strategies /Use of multiple instructional strategies and resources

• Selects, adapts, and uses instructional strategies and materials according to the characteristics of the individual with exceptional learning needs.
• Monitors and adjusts strategies in response to learner feedback.
• Uses strategies to facilitate inclusion, maintenance and generalization of skills

• Demonstrates use of augmentative, alternative and assistive communication strategies
• Models effective communication strategies
• Supports and expands learner expression in speaking, writing and other media.
• Demonstrates understanding of the effects of cultural and linguistic differences on growth and development
• Identifies and prioritizes areas of the general education curriculum and develops accommodations for individuals with exceptional learning needs
• Plans, sequences, implements, evaluates individualized learning objectives
• Develops and implements comprehensive, longitudinal individualized programs in collaboration with team members.
• Uses a variety of formal and informal assessment techniques to enhance knowledge of learners and evaluate students’ progress and performance
• Uses assessment information in making eligibility, program and placement decisions
• Reports assessment results to all stakeholders using effective communication skills
• Demonstrates understanding of the CEC code of Ethics
• Demonstrates sensitivity for the culture, religion, language, gender, disability, socio-economic status and sexual orientation of individuals
• Conducts self evaluation of teaching process
• Accesses information on exceptionalities
• Reflects on one’s practice to improve instruction and guide professional growth
• have knowledge of current definitions and characteristics of individuals with learning disabilities and how these disabilities affect students' development and educational performance
• have knowledge of legal rights of the students and parents/guardians and the responsibilities of teachers and schools regarding special education and related services
• have knowledge of procedures for accessing and providing special education and related services (i.e., prereferral, referral, and implementation)

Student Evaluation
• be familiar with commonly used instruments for assessment of students with learning disabilities
• identify informally each child's strengths and weaknesses across developmental areas
• use various formal and informal assessment techniques, including observation, interviews, samples of student work, student self-assessments, and teacher-made tests
• evaluate student performance on an ongoing basis in order to make instructional modifications and referrals when appropriate
• modify/adapt assessment tools in order to meet the specific needs of students with learning disabilities
• use grading procedures appropriate to the needs of students with learning disabilities

Instruction

• develop and implement lesson plans to meet students' unique needs as identified in Individualized Education Programs (IEPs)
• demonstrate knowledge of the continuum of services and placements for students with learning disabilities
• plan and implement instruction in collaboration with the special education teacher when indicated
• modify instruction given students' unique learning characteristics
• modify instruction given such external factors as size of groupings, seating, pace of instruction, and noise level
• adapt technology for students with learning disabilities
• integrate students with learning disabilities into the academic and social classroom community

Social/Emotional Development

• model respect and acceptance of students with learning disabilities
• provide opportunities for meaningful and ongoing social interactions among all students
• recognize and reinforce all student successes, even the small ones, to enhance self-esteem
• demonstrate various classroom management techniques that assist students with learning disabilities in their social interaction and self-regulation
• facilitate the participation of all students in large- and small-group interaction.

Definitions and Characteristics

• demonstrate an understanding of the major theories, contributors, history, and trends in the field of learning disabilities
• demonstrate an understanding of (a) the characteristics of students with learning disabilities across the developmental spectrum, (b) cultural influences, (c) social/emotional development, and (d) medical interventions
• understand the differences between learning disabilities and other exceptionalities

Rights and Procedures

• know federal, state, and local laws and regulations that directly affect students with learning disabilities
• understand and be able to discuss current legal and ethical issues in special education

Student Evaluation

• evaluate the impact of related factors on a student's learning (e.g., self-regulatory behavior, social perception, social interaction)
- administer and interpret various assessment measures (e.g., formal and informal, achievement- and process-oriented instruments) to identify learning disabilities
- work on a multidisciplinary team to problem-solve and to determine prereferral interventions or eligibility for special education services
- understand the biases and limitations of assessment tools used to identify the abilities and disabilities of diverse learners
- identify and use alternative grading procedures (e.g., oral presentations, projects, portfolios).

**Instruction**

- demonstrate competence in developing individualized education programs (IEPs) and working with a multidisciplinary team to translate diagnostic data into interventions
- determine prereferral intervention strategies for students suspected of having learning disabilities
- match the unique needs of these students with mandated services along the continuum
- demonstrate the ability to use various specialized methods and materials (e.g., multisensory approaches)
- use assistive technology in instruction across the curriculum
- recommend to general educators appropriate academic modifications and accommodations (e.g., extended time on exams, alternative test formats, spell checkers, audiotaped instructional materials)
- provide instruction in life skills and preparation for transitions from elementary to middle school, middle to high school, and high school to adult living
- provide instruction in learning strategies (e.g., self-monitoring) and organizational strategies (e.g., note-taking, time management, study skills)

**Social/Emotional Development**

- understand the psychosocial variables affecting self-esteem, behavior, and academic progress
- understand the impact of the complexities and pervasive psychological effects of learning disabilities
- teach students self-awareness (e.g., understanding one's strengths and weaknesses), self-determination (e.g., goal-setting, decision-making and problem-solving), and self-advocacy
- teach students social skills to enhance social competence in school, outside school, and in work settings

**Foundations**

- 10.1.1a. The teacher explains and discusses models, theories, and philosophies that provide the basis for special education practice;
- 10.1.1b. The teacher explains and discusses current and historical state and national rules and regulations relating to special education practice;
- 10.1.1c. The teacher explains and discusses the procedural safeguards relating to educational services; and
- 10.1.1d. The teacher explains and discusses the federal mandates for students with disabilities

10.1.3 Exceptionalities - To plan and implement effective programs

- 10.1.3a. The teacher defines each exceptionality;
- 10.1.3b. The teacher identifies the cognitive, physical, cultural, social, emotional, and sensory needs of each exceptionality.
• 10.1.3c. The teacher discusses general characteristics, etiologies, and learning styles of each exceptionality;
• 10.1.3d. The teacher describes current theories and research for education of exceptional students; and
• 10.1.3e. The teacher demonstrates skills needed for effective advocacy on behalf of students and their parents.

10.1.4 Least Restrictive Environment - To plan and implement effective programs

• 10.1.4a. The teacher describes rationale necessary to determine a child's least restrictive environment;
• 10.1.4b. The teacher demonstrates knowledge of common service delivery options related to least restrictive environment;
• 10.1.4c. The teacher demonstrates knowledge in facilitating least restrictive environment; and
• 10.1.4d. The teacher considers the pros and cons of various inclusive models.

10.1.5 Individual Educational Planning Team

• 10.1.5a. The teacher describes the role and responsibilities of the team;
• 10.1.5b. The teacher describes the composition of the team; and
• 10.1.5c. The teacher demonstrates and participates in developing individual educational plans, individualized family service plans, and transitions and post-secondary planning.

10.2 Human Growth and Development

10.2.1 Motor, Language, Social-emotional, Sensory and Cognitive Development

• 10.2.1a. The teacher describes the developmental stages/milestones of normal motor, language, social-emotional, sensory and cognitive development; and
• 10.2.1b. The teacher discusses the impact of socio-economic, cultural, and physiological aspects on human development.

10.2.2 Medical and Health Needs

• 10.2.2a. The teacher describes medical and health needs commonly found among special populations and their impacts on learning; and
• 10.2.2b. The teacher identifies and describes programs and assistive technologies that could enhance functioning.

10.3 Assessment/Evaluation

10.3.1 Screening, Referral, Evaluation, Eligibility and Re-Evaluation Procedures

• 10.3.1a. The teacher describes screening, referral, evaluation and eligibility procedures;
• 10.3.1b. The teacher utilizes various types of assessment procedures, informal and non-standardized tests, norm-referenced and criterion
referenced tests;

- 10.3.1c. The teacher interprets and uses educational diagnostic evaluations, observations, vocational assessments, assessments from related services and information from necessary parties to develop the individualized education plans; and
- 10.3.1d. The teacher demonstrates skill in various formal and informal observation techniques.

10.3.2 Individualized Educational Plan Implementation

- 10.3.2a. The teacher identifies the procedural steps for the development and implementation of the individualized educational plan;
- 10.3.2b. The teacher describes the procedures and strategies necessary for participation in the general education curriculum and the statewide general assessment system;
- 10.3.2c. The teacher collaborates with general educators, administrators, related services personnel and parents in the development and implementation of the IEP;
- 10.3.2d. The teacher develops appropriate annual goals and short term objectives/benchmarks; and
- 10.3.2e. The teacher develops the timelines and procedures for implementation of the individualized educational plan.

10.4 Curriculum and Development

10.4.1 Curriculum Development

- 10.4.1a. The teacher discusses and applies knowledge of teaching the curricula that is aligned with Content Standards with Benchmarks;
- 10.4.1b. The teacher develops and implements individualized modifications and/or accommodations; and
- 10.4.1c. The teacher discusses and applies knowledge of alternate curricula that are aligned with Content Standards with Benchmarks for students for whom the general education curriculum is not appropriate.

10.4.2 Instructional Strategies

- 10.4.2a. The teacher demonstrates knowledge of data based approaches to instruction, including assessment, assistive technology, direct instruction, monitoring, and evaluation;
- 10.4.2b. The teacher describes and demonstrates various methods for individualizing instruction;
- 10.4.2c. The teacher designs and implements appropriate lesson planning and methods for managing individuals, small groups, large groups, and inclusive groups, and individual instruction;
- 10.4.2d. The teacher collects and analyzes instructional data for effectiveness of programs;
- 10.4.2e. The teacher uses data to adapt and revise programs as necessary;
- 10.4.2f. The teacher collaborates with regular education teachers and related services for support of students with special needs in inclusive environments; and
- 10.4.2g. The teacher teaches students in the use of self-advocacy skills.
10.4.3 Materials

- 10.4.3a. The teacher selects and matches instructional materials to the learning needs and styles of individual students;
- 10.4.3b. The teacher evaluates commercial materials and technological products commonly used in special education programs;
- 10.4.3c. The teacher selects appropriate materials for targeted curriculum classroom instruction;
- 10.4.3d. The teacher adapts commercial materials and technological products for use with specific populations; and
- 10.4.3e. The teacher constructs instructional materials and technological products to meet individual objectives.

10.4.4 Transition

- 10.4.4a. The teacher describes models for enabling exceptional learners to make transitions from special education to regular education, early intervention to school, level to level, and post-secondary options;
- 10.4.4b. The teacher develops options for successful transitions with student participation; and
- 10.4.4c. The teacher discusses and implements follow-up, evaluation and interagency collaboration for student.

10.5 Technology

10.5.1 Basic Computer and Technology Operations and Concepts - The teacher uses computer systems to: run software, access, generate, and manipulate data; and publish results. The teacher evaluates performance of hardware and software components of computer systems and applies basic troubleshooting strategies as needed. The teacher...

- 10.5.1a. Operates a multimedia computer system with related peripheral devices to successfully install and use a variety of software packages;
- 10.5.1b. Uses terminology related to technology appropriate to the teaching field in written and oral communication;
- 10.5.1c. Uses terminology related to technology appropriate to the teaching field in written and oral communication;
- 10.5.1d. Describes and implements basic troubleshooting techniques for multimedia computer systems with related peripheral devices,
- 10.5.1e. Uses imaging devices,
- 10.5.1f. Demonstrates knowledge of uses of computers and technology in business, industry, and society; and
- 10.5.1g. Operates a variety of audio-visual devices.

10.5.2 Personal and Professional Use of Technology - The teacher applies tools for enhancing his/her own professional growth and productivity. The teacher uses technology in communicating, collaborating, conducting research, and solving problems. In addition, the teacher plans and participates in activities that encourage lifelong learning and promotes equitable, ethical, and legal use of computer and technology resources. The teacher...
10.5.2a. Uses productivity tools for word processing, database management, and spreadsheet applications;
10.5.2b. Applies productivity tools for creating a multimedia presentation;
10.5.2c. Uses computer-based technologies including telecommunications to access information and enhance personal and professional productivity;
10.5.2d. Uses computers to support problem solving, data collection, information management, communications, presentations, and decision making;
10.5.2e. Demonstrates awareness of resources for adaptive assistive devices and software for students with special needs;
10.5.2f. Demonstrates awareness of resources for culturally and linguistically diverse students;
10.5.2g. Demonstrate knowledge of equity, ethics, legal, and human issues concerning use of computers and technology;
10.5.2h. Demonstrates awareness of computer and related technology resources for facilitating lifelong learning and emerging roles of the learner and the educator; and
10.5.2i. Demonstrates awareness of broadcast instruction, audio/video conferencing, and other distant learning applications.

10.5.3 Application of Technology to Support Teaching and Learning - The teacher applies computers and related technologies to support teaching and learning in the grade level and subject areas. The teacher integrates a variety of software, applications, and learning tools in the teaching and learning process. Lessons developed must reflect effective grouping and assessment strategies for diverse populations. The teacher...

10.5.3a. Explores, evaluates, and uses technology resources including applications, tools, educational software, and assorted documentation;
10.5.3b. Describes best practice and appropriate assessment as related to the use of technology resources in the curriculum;
10.5.3c. Designs, implements, and assesses learning activities that integrate technology for a variety of grouping strategies for diverse populations;
10.5.3d. Designs learning activities that foster equitable, ethical, and legal use of technology by students; and
10.5.3e. Practices responsible, ethical, and legal use of technology, information, and software resources.

10.6 Diversity

10.6.1 The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners;
10.6.2 The teacher organizes and manages varied learning groups as appropriate in each of the disciplines as appropriate to the needs and/or interests of students and the goals of the lesson;
10.6.3 The teacher is aware of and can apply current research findings regarding individual differences such as linguistically backgrounds, developmental levels, exceptionalities, and gender;
The teacher identifies stereotypes in curriculum materials and adapts instruction appropriately;
10.6.4 The teacher helps students develop critical perspectives on biased
materials;
- The teacher identifies and develops appropriate responses to differences among language learners; and
- The teacher demonstrates sensitivity to New Mexico's unique linguistic and cultural diversity.

Core Educator Competencies (Prerequisites or Foundational Skills)

1. Belief that all decisions should be made from the perspective of putting children's needs first.
2. Belief that schools operate as an integral part of the larger community: promotes participatory decision-making for educational policy; includes all members of the school community.
3. Belief that diversity benefits learning communities: seeks and gives credence to those with conflicting views.
4. Belief that all students and teachers can learn, but that all learn differently.
5. Belief that all people are life-long learners: models continuous self-improvement and learning; examines own assumptions, beliefs, and practices on an ongoing basis; always seek to learn and understand; always asks questions.
6. Belief in balance between professional and personal lives and interests.
7. Understanding of self as core member of many different teams: district team, building level team, and others.
8. Promotes and models innovation for continuous school improvement.
9. Adheres to professional code of ethics: maintains trust and confidence; models legally and morally responsible actions at all times; treats all individuals with fairness, dignity, and respect; models core values of the school and district.
10. Demonstrates introspective and reflective behaviors: analyzes data and systems thoughtfully before acting or reacting.
11. Expresses self clearly and confidently orally and in writing; capable of responding to hard questions in a public forum.
12. Prioritizes time and work to ensure attainment of organizational goals: able to delegate effectively.

Promotes high quality standards: communicates expectations; and ensures superior performance for all members of the learning community (students, staff).

14. Ensures that curriculum is implemented, evaluated, and refined: bases curriculum decisions on research, expertise of teachers, Massachusetts' Curriculum Frameworks, and recommendations of learned societies. Knows and understands pedagogy and effective classroom practices; insures instructional
programs and policies promote learning for all students; articulates learning goals in a diverse society; recognizes, evaluates, and applies emerging trends in education.

15. Demonstrates principles of effective instruction: models the principles of effective teaching and learning; helps faculty and staff align their classroom instruction with MA Curriculum Frameworks, Professional Standards for Teachers, and Professional Standards for Administrators.

16. Ensures curriculum/technology integration: understands and values role of technology in promoting learning; plans for and encourages use of technology in instruction.

17. Provides student support services: provides for adequate pupil personnel and support services to ensure that faculty and classroom staff can focus on teaching and learning; develops programs to meet the needs of students and their families.

18. Plans for special needs: plans for successful, cost-effective special education through the use of collaboratives, inclusion, and parental input.


20. Co-chairs the school council: defines group composition and forms the group within the parameters set forth by policy guidelines and regulations.

21. Develops techniques to monitor and report school improvement: seeks input from all stakeholders in improving school performance.

Data-Based Decision Making

27. Collects and uses data and information from a variety of sources: determines present status of the organization, identifies root cause problems, proposes solutions, and validates accomplishments; assesses and improves learning through analysis of MCAS results and other sources and techniques; uses data related to student learning to develop school goals, create effective plans, and make informed decisions regarding instructional materials and programs; provides accurate information to stakeholders to maintain trust and confidence.
1.0 Content Knowledge

1.1 Liberal Arts. Teachers have broad knowledge of the liberal arts.

1.1.1 Have background in basic subject areas: the arts, humanities, mathematics, and sciences, and have a broad understanding of the major cultures, religions, geography, political systems, philosophies, and economic systems by which people organize their lives.
1.1.2 Know and appreciate the great creative works of world cultures.

1.2 Subject-area Content. Teachers know the content appropriate to their teaching specialty and the relevant applications of this content.

1.2.1 Know their subjects considerably beyond the content they are expected to teach, and know how professionals in their field think and analyze the world.
1.2.2 Have a strong background in the subjects related to their specialty area.
1.2.3 Understand major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the discipline they teach.
1.2.4 Know how to apply information from their discipline to real-world situations.

1.3 Curriculum Theory. Teachers understand the ways in which their teaching area connects to the broad curriculum.

1.3.1 Know the links between the grade or subject they teach and what comes before and after their course or grade.
1.3.2 Can relate disciplinary knowledge to other subject areas.

1.4 Developmental Theory. Teachers know the ways in which learning takes place, and they know the appropriate levels of intellectual, physical, social, and emotional development of the students they teach.

1.4.1 Understand how learning occurs-how students construct knowledge, acquire skills, and develop habits of mind.
1.4.2 Understand that students' physical, social, emotional, moral and cognitive development influence learning.
1.4.3 Are aware of expected developmental progressions and ranges of individual variation within each domain (physical, social, emotional, moral and cognitive), can identify levels of readiness in learning, and understand how development in any one domain may affect performance in others.
1.4.4 Understand how social groups function and influence people, and how people influence groups.
1.4.5 Recognize factors and situations that are likely to promote or diminish intrinsic motivation.

1.5 Diverse Cultural Environments. Teachers recognize the impact of cultural, economic, political, and social environments upon their discipline.

1.5.1 Know the history of their discipline.
1.5.2 Know the contributions that diverse cultural groups have made to their discipline.

1.6 Subject-Specific Technology. Teachers know the specific uses of technology in their discipline.

1.6.1 Understand how technological advances affect their discipline.
1.6.2 Know where to find technological resources specific to their discipline.
2.0 Pedagogical Skills

2.1 Effective Classroom Management. Teachers practice effective classroom management.

2.1.1 Exercise leadership by taking personal responsibility for the progress of all students.
2.1.2 Organize and motivate students to act in ways that meet the needs of both the individual student and the class as a whole.
2.1.3 Maximize efficiency, maintain discipline and morale, promote teamwork, plan, communicate, focus on results, evaluate progress, and make constant adjustments.
2.1.4 Work to minimize disruptions in student learning and take advantage of unexpected events to teach students.
2.1.5 Are skilled at facilitating consensus and mediating conflict.
2.1.6 Use a range of strategies to promote positive relationships, cooperation, and purposeful learning in the classroom.
2.1.7 Engage students in individual and cooperative learning activities that help them develop the motivation to achieve.
2.1.8 Organize, allocate, and manage the resources of time, space, activities, and attention to provide active and equitable engagement of students in productive tasks.
2.1.9 Help the group to develop shared values and expectations for student interactions, academic discussions, and individual and group responsibility that create a positive classroom climate of openness, mutual respect, support, and inquiry.

2.2 Effective Teaching Practices. Teachers use a variety of methods to teach students, including cooperative learning techniques, to promote content knowledge, critical thinking, and problem-solving skills.

2.2.1 Teach students how to live and work together productively and in a positive manner.
2.2.2 Effectively use multiple representations and explanations of disciplinary concepts that capture key ideas and link them to students’ prior understandings.
2.2.3 Represent and use differing viewpoints, theories, “ways of knowing” and methods of inquiry in the teaching of subject matter concepts.
2.2.4 Integrate interdisciplinary learning experiences that allow students to integrate knowledge, skills, and methods of inquiry from several subject areas.
2.2.5 Use multiple teaching and learning strategies to engage students in active learning opportunities that promote the development of critical thinking, problem solving, and performance capabilities and that help students assume responsibility for identifying and using learning resources.
2.2.6 Constantly monitor and adjust strategies in response to learner feedback.
2.2.7 Engage students in individual and cooperative learning activities that help them develop the motivation to achieve.
2.2.8 Model effective communication strategies in conveying ideas and information and in asking questions.

2.3 Effective Assessment. Teachers use a variety of methods to assess what students have learned.

2.3.1 Use formal tests, responses to quizzes, evaluation of class assignments, student performances and projects, and standardized achievement tests to understand what students know.
2.3.2 Evaluate informal measures of student understanding, such as the questions asked in class and the level of student enthusiasm.
2.3.3 Use assessment strategies to involve learners in self-assessment activities, to help them become aware of their strengths and needs, and to encourage them to set personal goals for learning.
2.3.4 Modify teaching strategies and behavior in relation to student success, modifying plans and instructional approaches accordingly.
2.3.5 Maintain useful records of student work and performance and communicate student progress knowledgeably and responsibly, based on appropriate indicators, to students, parents, and other colleagues.
2.4 Curriculum Alignment. Teachers align their instruction with the required curriculum.

2.4.1 Develop and apply strategies to make the North Carolina Standard Course of Study, local curriculum framework, and content standards developed by professional organizations in their specialty area significant to the students they teach.

2.4.2 Meet the requirements of the entire curriculum, while recognizing and focusing on those concepts in the curriculum which are fundamental to student understanding.

2.5 Diversified Instruction. Teachers plan instruction that is appropriate for a diverse student population, including students with special needs.

2.5.1 Develop short- and long-range plans for instruction, which reflect understanding of how students learn, and allow for students who learn at a faster or slower pace than others to be successful and engaged in learning.

2.5.2 Understand that plans are general guidelines and must be constantly monitored and modified to enhance the learning that is occurring in the classroom.

2.5.3 Make inclusion of special needs students in the regular classroom a positive experience for each student in the class and collaborate with the range of support specialists to help them meet the needs of all students.

2.5.4 Identify and design instruction appropriate to students’ stages of development, learning styles, strengths, and needs.

2.5.5 Bring multiple perspectives to the discussion of subject matter, including attention to students’ personal, family, and community experiences and cultural norms.

2.5.6 Know how to take contextual considerations (instructional materials, individual student interests, needs and aptitudes, and community resources) into curriculum goals and students' experiences.

2.5.7 Know when and how to adjust plans based on student responses and other contingencies.

2.6 Technology Skills. Teachers have strong and current technology skills.

2.6.1 Know when and how to use current educational technology.

2.6.2 Understand the most appropriate type and level of technology to use to maximize student learning.

Contextual skills

- Understand the social, legislative and educational basis for the philosophy of inclusion, and access appropriate support services
- Demonstrate competence in the use of selected educational assessment tools in fieldwork applications.
- Analyse and adapt curricula to cater for learners with special needs
- To select or adapt appropriate instructional programs/materials for students with learning difficulties/disabilities
- Identify and place in a theoretical and research framework a range of instructional strategies relevant for students with special needs;
- Apply and evaluate a number of instructional strategies relevant for students with special needs
- Recognise and understand the integral relationship of models of learning to instructional methodologies, and apply this knowledge in service delivery for students with special needs
- CEC
- Create a conceptual framework to understand families of children with disabilities and situate your role within this framework
- Identify factors which positively and negatively influence the effectiveness of professionals working with families of children with disabilities
- Understand the importance of making the family unit the focus of your work, other than the
child, or worse, the disability

- Demonstrates effective classroom management and behavior strategies for individuals with exceptional learning needs.
- Teaches social skills needed for educational and other environments.
- Demonstrates strategies for crisis prevention and intervention.
- NJCLD
- demonstrate various classroom management techniques that assist students with learning disabilities in their social interaction and self-regulation
- facilitate the participation of all students in large- and small-group interaction.
- promote positive attitudes toward individuals with disabilities and their families
- understand the child’s culture and community
- develop an effective partnership with the family in the education of the child
- establish and maintain collegial relationships with school and community
- collaborate with the general education teacher to assist in differentiating between primary behavior problems and those secondary to the learning disability
- develop and implement strategies to help students manage and regulate their behaviors in school

10.7.1 Behavior

- 10.7.1a. The teacher implements disciplinary procedures consistent with state and federal rules and regulations;
- 10.7.1b. The teacher conducts functional behavior assessments;
- 10.7.1c. The teacher collaborates, develops, implements, and subsequently evaluates implemented behavior management programs; and
- 10.7.1d. The teacher demonstrates appropriate group and individual interventions.

10.7.2 Environment

- 10.7.2a. The teacher demonstrates skill in establishing a safe and appropriate environment;
- 10.7.2b. The teacher uses factors affecting motivation and learning; and
- 10.7.2c. The teacher implements adaptations for that are appropriate for students with special needs.
Capacity building skills
- Apply policies and access resource provisions for students from a number of employing authorities in Australia,
- identify and critically discuss a number of key theories which have been proposed to account for and deal with learning problems commonly encountered by students with special educational needs;
- ability to develop processes which enable the creation of novel solutions to novel circumstances; and
- ability to apply problem-solving processes to develop appropriate strategies and adaptations.

1.2 Parent/Professional Communication Skills

10.1.2a. The teacher discusses and applies a variety of communication techniques;
10.1.2b. The teacher provides information about community and state resources available to parents and staff;
10.1.2c. The teacher demonstrates the ability to work with parents of exceptional children on issues and problems;
10.1.2d. The teacher understands and uses various models of service delivery at all service levels (minimal, moderate, extensive, maximum); and
10.1.2e. The teacher demonstrates knowledge of and sensitivity to cultural, social, environmental and ethnic dynamics in interpersonal and group interactions with students, parents, paraprofessionals and professionals.

Promotes activities honoring academic and professional excellence: celebrates faculty and staff accomplishments; acknowledges the responsibilities and contributions of all faculty and staff; shares credit for success and accomplishments.

Creates a high performance team culture for faculty and staff: encourages initiative, innovation, collaboration, and a strong work ethic; encourages adult learning; expects and provides opportunities for staff to engage in continuous personal and professional growth.

Implements fair and effective methods of personnel selection, supervision, evaluation, and coaching/professional development for all staff: conducts timely and effective supervision and evaluation of teachers in accordance with district-defined supervision and evaluation procedures; provides coaching and mentoring to teachers; works with each faculty and staff member to construct individual professional development plans appropriate to their needs and skills; assesses, recruits, mentors, and promotes potential leaders, including establishment of teacher leaders and ongoing team development.

Manages union negotiations and other contractual agreements objectively and consistently.

Demonstrates knowledge of laws and regulations pertaining to schools and school management: designs all operational procedures to maximize opportunities for successful learning.
Process Skills
- have an understanding of resolving and dealing with conflict;
- be able to apply various communication techniques such as listening, assertiveness;
- interviewing and working in groups to a teaching and learning environment;
- have awareness of the communication difficulties encountered by students with special needs;
- develop collaboration and consultation techniques for working effectively with parents, teachers and other professionals;
- plan problem solving strategies for a special education environment, and
- have a basic understanding of what is required in planning for inclusion
- Demonstrates understanding of the models of collaboration and consultation
- Collaborates with families and others in the assessment of individuals with exceptional learning needs
- Communicates effectively with families, school personnel, and para-educators regarding characteristics, learning needs and the inclusion of individuals with exceptional learning needs

Relationships with Families and Colleagues
- provide effective resource assistance to and/or collaborate with general education teachers
- be involved with various parent and professional organizations and advocate for individuals with disabilities
- be able to collaborate with families to meet the child's special needs in the home
- collaborate and consult with related service providers, administrators, community services agencies, and others in planning for further education, careers, and transition/vocational programming

Works with all stakeholders, including Central Office, to develop the vision, mission, and goals for the school in alignment with the overall district mission.

Implements and articulates the vision and mission of the school to students, staff, parents, and the community.

Identifies objectives and strategies to ensure that vision, mission, and goals can be clearly implemented.

Promotes partnerships among faculty, staff, families, students, and the business community to improve student performance and enhance resources to improve instruction.

Maintains effective media relations and communications: visible and actively involved in larger community; reaches out to different business, religious, political, and service organizations and treats community stakeholders equitably; articulates school/district accomplishments to the community

- Demonstrates knowledge of theories and models of organizational development: implements effective approaches to organizational change, school-based management, and school restructuring by regularly scanning internal and external environments to identify potential problems and opportunities; and maintaining effective relationships with the school community, including the school committee, to maintain focus and overcome potential resistance.

3.0 Professional Dispositions

3.1 Belief That All Students Can Learn. Teachers believe that all students can learn.

3.1.1 Instill a love of learning and self-confidence based on achievement.
3.1.2 Treat students as individuals.
3.1.3 Enjoy spending time in the company of children and young adults learn all they can about each of their students; maintain the dignity of each student; express pride in their students' accomplishments.
3.1.4 Believe that all children can learn at high levels and persist in helping all children achieve success.

### 2 Respect for Diversity.

Teachers know and respect the influence of race, ethnicity, gender, religion and other aspects of culture on a child's development and personality.

3.2.1 Demonstrate the belief that diversity in the classroom, in the school, and in society is a strength and show this commitment by daily conduct.
3.2.2 Do not allow subtle or overt intolerance to bigotry in classrooms or schools, and actively select materials and develop lessons that counteract stereotypes.
3.2.3 Strive to understand how an individual child's culture and background influence his or her school performance.
3.2.4 In schools and communities where population diversity is limited, find ways to acquaint children with a wide variety of people who make up our society and world.

### 3 Professional Development and Ethics.

Teachers meet high ethical standards of practice and engage in professional development activities, including development in the area of technology.

3.3.1 Keep the needs of students at the center of professional thoughts and actions.
3.3.2 Live up to universal ethical principles of honesty, truthfulness, integrity, fair treatment, and respect for others.
3.3.3 Maintain a clear distinction between personal values and professional ethics.
3.3.4 Advocate for teacher professionalism, for school conditions that encourage teaching and learning, and for decision-making structures that take advantage of the expertise of teachers.
3.3.5 Recognize that life-long learning is an integral part of the profession.
3.3.6 Recognize the professional responsibility for engaging in and supporting appropriate professional practices for self and colleagues.

### 4 Reflective Practice.

Teachers are reflective about their practice.

3.4.1 Think systematically about what happens in the classroom and school, why it happens, and what can be done to improve student achievement.
3.4.2 Study educational literature and interpret research and apply it to classroom and school.
3.4.3 Value critical thinking and self-directed learning as habits of mind.

### 5 Community & School Collaboration.

Teachers work collaboratively with colleagues, families, and the community to support the learning environment.

3.5.1 Reach out beyond the school to promote trust and understanding, to build partnerships with all segments of the school community, and to overcome obstacles that stand in the way of effective family and community involvement in the education of children.
3.5.2 Are informed about policy issues and initiate or assist in implementing initiatives to improve the education of children.
3.5.3 Are respected members of the community who play key roles in helping improve communication and collaboration between the members of the community and educators in the school and school system.
3.5.4 Realize that everything that happens in the community, between individual students, with families, or with colleagues has an impact in the classroom, and work to minimize disruptions in student learning and take advantage of unexpected events to teach students.
3.5.5 Value and learn from the expertise of other educators.
Personal skills

- Identify and analyse the educational needs of students, particularly those in inclusive classes;
- develop a range of relevant instructional strategies that target the needs identified;
- demonstrate application of these principles in a rational and sophisticated manner,
- describe, integrate and evaluate assessment procedures for the identification and evaluation of children with varied education needs;
- understand the importance of non-verbal and verbal communication;
- have a set of skills and tools to work directly with families of children with disabilities
- ability to introduce strategies and adaptations that can be implemented within classroom and school environments that promote the inclusion of students;
- critically evaluate research literature in special education, particularly in the areas of methodology and analysis to produce a comprehensive literature review in an area of special education research,
- CEC
- understands the models, theories and philosophies of special education
- demonstrates knowledge of laws, policies and ethical principles regarding the rights and responsibilities of school executive, parents, teachers, students and other key stakeholders.
- knowledge of typical and atypical growth and development
- similarities and differences of individuals with and without exceptional learning needs
- selects, adapts, and uses instructional strategies and materials according to the characteristics of the individual with exceptional (varying) learning needs.
- demonstrates use of augmentative, alternative and assistive communication strategies
- identifies and prioritizes areas of the general education curriculum and develops accommodations for individuals with exceptional learning needs
- plans, sequences, implements, evaluates individualized learning objectives
- develops and implements comprehensive, longitudinal individualized programs in collaboration with team members.
- uses assessment information in making eligibility, program and placement decisions
- reports assessment results to all stakeholders using effective communication skills
- demonstrates sensitivity for the culture, religion, language, gender, disability, socio-economic status and sexual orientation of individuals
- have knowledge of current definitions and characteristics of individuals with learning and other disabilities and how these disabilities affect students' development and educational performance
- have knowledge of procedures for accessing and providing special education and related services (i.e., prereferral, referral, and implementation)
- be familiar with commonly used instruments for assessment of students with learning disabilities
- identify informally each child's strengths and weaknesses across developmental areas
- develop and implement lesson plans to meet students' unique needs as identified in Individualized Education Programs (IEPs)
- model respect and acceptance of students with learning disabilities
demonstrate an understanding of the major theories, contributors, history, and trends in the field of learning disabilities
understand and be able to discuss current legal and ethical issues in special education
use assistive technology in instruction across the curriculum
recommend to general educators appropriate academic modifications and accommodations (e.g., extended time on exams, alternative test formats, spell checkers, audiotaped instructional materials)
provide instruction in life skills and preparation for transitions from elementary to middle school, middle to high school, and high school to adult living

The teacher demonstrates skills needed for effective advocacy on behalf of students and their parents.
The teacher describes rationale necessary to determine a child's least restrictive environment;
The teacher considers the pros and cons of various inclusive models.
The teacher demonstrates skill in various formal and informal observation techniques.
The teacher identifies the procedural steps for the development and implementation of the individualized educational plan;
The teacher collaborates with general educators, administrators, related services personnel and parents in the development and implementation of the IEP;
The teacher develops appropriate annual goals and short term objectives/benchmarks; and
The teacher develops the timelines and procedures for implementation of the individualized educational plan.
The teacher designs and implements appropriate lesson planning and methods for managing individuals, small groups, large groups, and inclusive groups, and individual instruction;

The teacher collaborates with regular education teachers and related services for support of students with special needs in inclusive environments
The teacher describes models for enabling exceptional learners to make transitions from special education to regular education, early intervention to school, level to level, and post-secondary options;

Demonstrates awareness of resources for adaptive assistive devices and software for students with special needs;
Describes best practice and appropriate assessment as related to the use of technology resources in the curriculum;
Designs learning activities that foster equitable, ethical, and legal use of technology by students
The teacher is aware of and can apply current research findings regarding individual differences such as linguistically backgrounds, developmental levels, exceptionalities, and gender;

Belief that all decisions should be made from the perspective of putting children's needs first.

Belief that all students and teachers can learn, but that all learn differently.

Belief that all people are life-long learners: models continuous self-improvement and learning; examines own assumptions, beliefs, and practices on an ongoing basis; always seek to learn and understand; always asks questions.

Adheres to professional code of ethics: maintains trust and confidence; models legally and morally responsible actions at all times; treats all individuals with fairness, dignity, and respect; models core values of the school and district.

Promotes high quality standards: communicates expectations; and ensures superior performance for all members of the learning community (students, staff).

Demonstrates principles of effective instruction: models the principles of effective teaching and learning; helps faculty and staff align their classroom instruction with MA Curriculum Frameworks, Professional Standards for Teachers, and Professional Standards for Administrators.

Plans for special needs: plans for successful, cost-effective special education through the use of collaboratives, inclusion, and parental input.

Promotes effective assessment strategies: promotes multiple strategies to assess student performance; recognizes importance of learning standards and significance of assessments.

Are aware of expected developmental progressions and ranges of individual variation within each domain (physical, social, emotional, moral and cognitive), can identify levels of readiness in learning, and understand how development in any one domain may affect performance in others.

Use a range of strategies to promote positive relationships, cooperation, and purposeful learning in the classroom.

Organize, allocate, and manage the resources of time, space, activities, and attention to provide active and equitable engagement of students in productive tasks.

Modify teaching strategies and behaviour in relation to student success, modifying plans and instructional approaches accordingly.

Develop short- and long-range plans for instruction, which reflect understanding of how students learn, and allow for students who learn at a faster or slower pace than others to be successful and engaged in learning.

Make inclusion of special needs students in the regular classroom a positive experience for each student in the class and collaborate with the range of support specialists to help them meet the needs of all students.
Contextual skills
- Understand the social, legislative and educational basis for the philosophy of inclusion,
- promote positive attitudes toward individuals with disabilities and their families

Capacity building skills
- identify and critically discuss a number of key theories which have been proposed to account for and deal with learning problems commonly encountered by students with special educational needs;
- The teacher understands and uses various models of service delivery at all service levels (minimal, moderate, extensive, maximum); and
- Creates a high performance team culture for faculty and staff: encourages initiative, innovation, collaboration, and a strong work ethic; encourages adult learning; expects and provides opportunities for staff to engage in continuous personal and professional growth.

Process Skills
- be able to apply various communication techniques such as listening, assertiveness; interviewing
- develop collaboration and consultation techniques for working effectively with parents, teachers and other professionals;
- Collaborates with families and others in the assessment of individuals with exceptional learning needs
- Communicates effectively with families, school personnel, and para-educators regarding characteristics, learning needs and the inclusion of individuals with exceptional learning needs
- Implements and articulates the vision and mission of the school to students, staff, parents, and the community.
- Promotes partnerships among faculty, staff, families, students, and the business community to improve student performance and enhance resources to improve instruction.
- **Belief That All Students Can Learn.** Teachers believe that all students can learn.
- Treat students as individuals. Value and learn from the expertise of other educators.
Appendix 6E: Product Content Scaffold
1. Product X: 5 lesson unit of differentiated instruction
   • Know the steps in the 3 types of pedagogy/instruction and use them in a
differentiated setting - Direct, cooperative learning & peer tutoring
   • Break KLA's down into prerequisite skills
   • Know software unit/lesson format
   • Know how to place software in the software framework
   • Research/ know literature on control questions leading to deriving questions for
the KLA's/differentiated strategies of the curriculum
   • Know how to adapt instruction/cognitive strategies, curriculum
materials/resources & materials
   • Understand different ways to group students & the strengths and weaknesses of
each option
   • know students abilities - Curriculum based assessment
   • Be able to re-sequence post differentiation
   • Know potential uses/types of technology for differentiation
   • Be able to conduct activity analysis leading to task analysis and short term
objectives (where not KLA based)

2. Product X: Needs analysis & policy development (Legislation and practice -
evaluation criteria)
   NB 2 comes before 4.
   • Know/understand/determine what inclusive practice is
   • Define a policy - its good characteristics
   • Access policies at state federal and local levels
   • Analyse policies/legislation from stake holders perspectives, toward development
of evaluation criteria
   • Meta-analysis of policy documents/legislation for positioning
   • Implications of legislation - practicalities of legislation, loopholes or conflicts (legislative or ethical)
   • Discrepancy analysis/ evaluation methodology - look at own school
     - Gather data in your setting
     - Create an attitudinal survey
     - Administer and evaluate
     - Conduct situational analysis
     - Design classroom
   • Comparison of different contexts - USA, Aust, Aust states
   • Policy framework - steps to create a policy, what must be included
   • Write a policy
3. Product X: Screening process

- Know
  - domains of human development (adaptive behaviour - non traditional area of development)
  - curriculum based method (models of these in the text)
  - criterion based method
  - observation data method

- Analyse these methods to determine strengths & weaknesses/advantages & disadvantages

- Interpret these methods to determine:
  - when to apply them
  - who applies them
  - where to seek further help

- Know what to screen - literacy and numeracy content (traditional curriculum area/KLA focus)

- Know how to critique a standardised test

_School level_

- Design a screening process/policy & a screening continuum for your setting based on best practice

_Student_

- Apply the screening continuum to a student
- Develop a program/intervention based on the results of the assessment, including:
  - rationale
  - methodology (for outcomes)
  - measurement (for outcomes)
  - evaluation
- Implement and evaluate program?

4. Product X: Strategic IE plan

- Literature from Ed management - what is & how to construct a strategic plan

- Know/identify
  - the elements of a strategic plan - people, place, strategies
  - barriers and opportunities (opportunities from 2?)
  - structures to create an inclusive environment
  - how to fund your plan
  - how to get grants

- Develop a plan, including:
  - position/philosophy
  - rationale
  - stakeholders
  - goals
  - strategies
  - implementation timeline
  - evaluation component
  - how to mobilise stakeholders
5. Product X: Portfolio/Reflection
Reflects the conceptual framework of the course & is based on a reflective learning spiral/matrix with students positioned as practitioner, researcher, advocate, change agent.

- Locate Paper assessment task in one subject each semester
- Introduce reflection: process and portfolio concept at initial workshop/res school
- Scaffold development on reflection
  - 4 levels practice/self to meta-analysis/system
  - 4 roles Practitioner/Researcher/Advocate/Change agent
- Scaffold development of philosophy/statement of philosophy
  - Create a set of linked questions, which fade out over the course
- Scaffold skills in:
  - text type development eg: paper
  - reviewing literature/critiquing research
  - modelling
  - evaluation of self, as student and as practitioner
  - goal setting
- Include models/samples
- Create appropriate container for course artefacts:
  - embed course schema in container design, include levels and roles
  1. role - Practitioner/Researcher/Advocate/Change agent
  2. stage of development
  3. point of reflection
  4. model of practice/IE
    - website with sections for plans, journal, paper, etc
    - ring binder, workbook, full website (differentiated model)
- Know about reflective learning, positioning
- Know about the 4 spirals/matrix of reflection
- Be able to hyperlink, publish, word process, powerpoint, blog
- Peer reflect and review on the forum
- Know about and be able to collaborate
  - emergent/collaborative feedback (what you need to know to do the next thing)
  - leading to self organisation
- Write and revise a statement of philosophy
- Create model of philosophy/inclusive education
- Reference of & to artefacts and literature
- Develop a portfolio reflective of your learning throughout the course and your personal and professional philosophy, including the following:
A. Paper
Develop a model of practice (personal/professional) and of Inclusive Education (environment/system).
- Write a paper based on your model
- Revisit the model and the paper 4 times:
  1. Personal level (current practice)
  2. Literature (Current state of practice in inclusive education, what does this mean)
  3. Comparison/analysis of own setting (where to from here)
  4. Meta analyse the system as reflected in the action-research project (implementation & reflection on project, future planning)

B. Learning/reflective journal/workbook/Blogging?
- Reflect on and evaluate skills and learning to support Task A, your learning in the course and the 4 roles of practitioner, researcher, advocate, change agent
- There are 4 broad cycles
  1. Reflect on own practice and skill level as practitioner and returning student/academic
  2. Situate self in the system, self evaluation
  3. Reflect on setting in the system, role development, goal setting
  4. Reflect on action-research project and self in the project and course (meta-analysis)

C. Collection of artefacts
- Collect and present artefacts from the course and practice as part of the portfolio that illustrate:
  - the model of practice/inclusive education;
  - point of reflection or learning;
  - stage of development; and/or
  - role

6. Product X: Collaboration and communication
- Know
  - about relevant stakeholders - who they might be & their perspectives
  - communication
  - Positioning
  - Genre shifting
  - Meetings - what is a meeting
    - roles - timekeeper, scribe etc
- Develop effective communication skills
  - Reflective listening
  - Open questions
  - Equal voice
- Develop effective meeting skills
  - Meeting planning & conduct
  - Fulfilling roles
  - Action planning, implementation and evaluation
  - Transcribing
- Analysis of video model, content and group interaction analysis
- Participate in workshop - role plays, dilemma
7. Product X: Designing the inclusive classroom

NB: Map in subject outlines the students' trajectory: know/ do/ be, by roles and levels

To follow subjects on strategies for differentiation
This subject to revisit the planning elements:
- Curriculum drivers
- Student and teacher roles
- Role and recognition
- Use of physical space
- Role of technology
- A continuum of behavioural interventions
and result in the design/development of an inclusive classroom plan.

Create a site for a matching exercise/simulation:
- Match behaviour to intervention to reward
- Explain why these choices were made
ie give the students the information and they have to choose the strategy and justify

Create a model/visual schema showing connections between strategies ?? in response to a scenario, (eg a class list of test results, histories of the children, reading levels and examples to support student learning - video, model...) then develop a plan. Look at the whole classroom not just the child.

Reflect the framework of the course - self/self in literature or system/ big picture
Understand teacher - student roles and write on this
Develop student and teacher position descriptions
Know how to be proactive (behavioural interventions) and to revisit post plan/action
Know how to design reward structures- hard to teach
Match behaviour to intervention to reward, then explain why these choices were made
Participate in forum/peer interactions on elements and plans

Workshop - frames the plan
Assessment - ecological concept
Package - fills in the details, learn how to fold the intervention into the plan

Student competencies
reiterate competencies such as:
- differentiation of the curriculum
- use curriculum as a management strategy
- utilise student/teacher roles for management
Write up and apply a continuum of behavioural interventions
- utilise physical space and technology
Plan – a classroom management plan which encompasses all of these perspectives
- include a scenario which addresses each of these dimensions and ask students to create a classroom plan based on this.
8. Product X: Capstone

Formal evaluation of one of the previous products that students have completed

This task is basically an evaluative project

We need to create an evaluation plan for the whole course (subject by subject) in case students wish to use one of the earlier subjects as a basis to complete this task.

Current format of the capstone product indicates the various competencies required by students
### Appendix 6F: Two Page Standards Match to Products

<table>
<thead>
<tr>
<th>Standards Match to Products</th>
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<tbody>
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<td>605</td>
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General

- demonstrate an understanding of the major theories, contributors, history, and trends in the field of inclusive education (across all products)
- model respect and acceptance of students with diverse learning needs (Product 1,4)
- Demonstrates knowledge of laws, policies and ethical principles regarding the rights and responsibilities of school executive, parents, teachers, students and other key stakeholders. (Product 2)
- understand and be able to discuss current legal and ethical issues in inclusive education (Product 2)
- consideration of the pros and cons of various inclusive models. (Product 1)
- promote positive attitudes toward students with diverse learning needs and their families (Product 6)
- Belief that all students and teachers can learn, but that all learn differently. (across all products)

Identification

- have knowledge of current definitions and characteristics of students with learning and other disabilities and how these disabilities affect students’ development and educational performance (Product 3)
- Knowledge of typical and atypical growth and development (Product 1,3) {low priority as this may lead to labelling}
- identify informally each child's strengths and weaknesses across developmental areas (Product 3)

Instructional (Capacity building)

- develop a range of relevant instructional strategies that target the needs identified (Product 1,7)
- Selects, adapts, and uses instructional strategies and materials according to the characteristics of the student with diverse learning needs (Product 7)
- The teacher designs and implements appropriate lesson planning and methods for managing individuals, small groups, large groups, inclusive groups, and individual instruction (Product 4,7)
- The teacher collaborates with regular education teachers and related services for support of students with diverse learning needs. (Product 6)
- Modify teaching strategies and behaviour in relation to student success, modifying plans and instructional approaches accordingly (Product 7)

Education/environment

- ability to introduce strategies and adaptations that can be implemented within classroom and school environments that promote the inclusion of students (Product 4)
- Organize, allocate, and manage the resources of time, space, activities, and attention to provide active and equitable engagement of students in productive tasks (Product 4)

IEP

- The teacher collaborates with general educators, administrators, related services personnel and parents in the development and implementation of the IEP (Product 4,6)
• The teacher, in collaboration with other stakeholders, develops appropriate annual goals and short term objectives/benchmarks (Product 4)
• Identifies and prioritizes areas of the general education curriculum and develops accommodations for students with diverse learning needs (Product 7)
• Develop and implement lesson plans to meet students' unique needs as identified in Individualized Education Programs (IEPs) (Product 4)
• Recommend to general educators appropriate academic modifications and accommodations (e.g., extended time on exams, alternative test formats, spell checkers, audiotaped instructional materials) (Product 1)
• Provide instruction in life skills and preparation for transitions from special education to regular education, early intervention to primary school, primary to high school and post-secondary options

Assessment

• Have knowledge of procedures for accessing and providing special education and related services (i.e., prereferral, referral, and implementation) (Product 2,4)
• Be familiar with commonly used instruments for assessment of students with diverse learning needs (Product 1,3)
• Describe, integrate and evaluate assessment procedures for the identification and evaluation of students with diverse learning needs (Product 3)
• Uses assessment information in making eligibility, program and placement decisions (Product 1)
• Demonstrates skill in various formal and informal observation techniques (Product 1,4)

Communication

• Understands the importance of non verbal and verbal communication (Product 3)
• Demonstrates use of augmentative, alternative and assistive communication strategies (Product 3)
• Develops collaboration and consultation techniques for working effectively with parents, teachers and other professionals (Product 6)
• Collaborates with families and others in the assessment of students with diverse learning needs (Product 6)

Technology

• Demonstrates awareness of resources for adaptive assistive devices and software for students with diverse learning needs (Product 1,7)
• Describes best practice and appropriate assessment as related to the use of technology resources in the curriculum (Product 1,3)
• Designs learning activities that foster equitable, ethical, and legal use of technology by students (across all products)

Research

• Critically evaluate research literature in inclusive education, particularly in the areas of methodology and analysis to produce a comprehensive literature review in an area of inclusive education research (Product 5,8)
Appendix 6G: Sub-product and Assessment Development
Design team meeting June, Year 1

Jo and Nick (collapsed 1 and 2)
Build a curriculum module of differentiated instruction – (incorporate software?)
Write an IEP with a sequence of short term objectives and where the task is differentiated + change the short term objectives so the scaffolding for the task changes (across KLA’s)

Lucie (collapsed 3 and 8)
Discrepancy analysis of legislation and practice (scaffolding)
Evaluation of policy
-program evaluation/funding/resourcing
include legislation, tests, policy, curriculum

Pam (collapsed 7 and 10)
Administer a standardised test in literacy or numeracy and develop a program from these results. Comment on the reliability and validity of the assessment item
Screening and programming process – advantages and disadvantages
CBM/criterion based
Screening plan that addresses multiple aspects based on cases that are varied – learning difficulties, autism, behaviour etc

Jo and Lucie (collapsed 5 and 13)
Strategic inclusive education plan for school
change agent roles, collaborative structures, resources
Create an inclusive environment
Funding, working with colleagues, special provisions, alternative tests, teaching modifications
- Changing school culture

Eve (collapsed 4 and 14)
Reflective process/product throughout course/journal/impersonal to personal
- critical/self evaluative/practicum connections
- reflective whole course goals
- create personal model of inclusive education
Academic culture and skills
- students engage at each point to have a product
- course rubric

Pam (collapsed 6)
Conduct a collaborative meeting – record/evaluate
- analysis of collaborative meeting
- key stakeholders and families included
- what difficulties might arise? Consider ‘worst case’ scenarios
- collective intelligences
Nick (collapsed 9 and 12)
Technology plan for the inclusive classroom
Classroom organization design/plan
- context behaviour, learning environment
- attach this area to screening??

Nick (collapsed 11)
Complete a piece of research based upon selected objectives from the course as a research experience/phenomenon/topic
- plan to take student experience into classroom

Preparation for next week
Create a product that you would like the students to produce for your focus area
Only needs to be 2-3 paragraphs in length

Thinking for next meeting (Upstairs meeting room)
- how do we connect themes/central concepts developmentally throughout the course?
- mapping from our products
Aim = to make indicators operational

Task:
Given a topic and subject of your choosing and \textit{X KLA outcomes or performance indicators} write a 5 lesson unit of differentiated instruction that includes the following:

1. A central question for the unit that is accessible for all students (albeit at different levels)
2. A unit product and rubric that answers the central question differentiated at three levels
3. A Unit Framework built in the framing tool describing the central question and the \textit{scaffolding of the lesson outcomes}
4. 5 lessons designed in the lesson tool to enable all students to complete the unit product. Lessons should include:
   - a minimum of 3 outcomes per lesson (3 levels)
   - an instructional routine and strategy description designed to fulfil the demands of all three outcomes for each lesson outcome drawn from the pedagogies and approaches taught in class (e.g., direct instruction, cooperative learning or peer tutoring).
   - a rotation plan showing what students and teacher will be doing in each 15 minute interval during the lesson
   - a set materials for each lesson differentiated by level

Each must be linked to a data sheet with hypothetical data entered to illustrate progression towards STO.

Rubric Criteria:

\textbf{Topic:} Is accessible to all groups and reflects clearly defined KLA

\textbf{Central Question:} Is accessible to all groups and is of a scope and scale required to focus the unit.

\textbf{Unit Framing Tool:} written in the second person and easily understood by the student.

Written in second person to the student.

Has a rationale that –
- links a central theme or question for the Unit and KLA
- explains the role of the unit in within the scope and sequence
- contains a set of skill and/or integrative products
- is described clearly
- is completed independently

\textbf{Learner Outcomes (BI)}
Make sure all the necessary components are included in the objectives (who, what—observable, where—context, and how well—criteria).

- Linked to, and aligned with appropriate teaching strategy
- Clearly link to lesson product, independent practice, lesson description and are easily understood by the student
- Are levelled to three groups as appropriate
  - state the condition as a description of the strategy to be employed in the lesson (e.g., Given Direct teaching)
  - state the action as a description of what will be done by the student to demonstrate learning
  - state the criterion as a description of the product (including specific reference to minimum expectations) to be completed in independent practice.
  - the criterion must be measurable and be linked to the unit product.

### Strategies:

Appropriate for outcomes and central question and include all of the necessary procedural elements required for successful implementation. Build toward the completion of the unit product.

- have clear directions for teaching practices for students bulleted items to tell the teacher exactly how to introduce the lesson, objectives and task structures as well as mastery expectations and description of how learning will be assessed
- have a description of any evaluation activities that are clearly defined implemented in a timely fashion, well designed and appropriate to the task
- reference materials for lesson by lesson number title of material and where to be found

**Direct or Master teaching needs to include all of the following:**

- an anticipatory set that explains the purpose of the lesson, how and when learning will be assessed and, if appropriate, how the outcomes of the lesson have real world application
- a linking activity that places the lesson into the scope of the program (past and future learning) and its application to module products
- a modelling activity which clearly has the teacher demonstrating the skill/content/concept to be learned and includes all the materials needed for modelling
- clearly defined tasks for guided practice with directions for the feedback cycle and includes materials needed for the guided practice
- an independent practice which occurs within the class period which clearly checks for mastery of the skill learned during the lesson and includes materials needed, including directions for administration, completion and assessment criteria

**Needs to include all of the following:**

- Peer tutoring needs to include: Guidelines for tutor and tutee and the “correct” answers for the tutor
  - a list of the skills/content to be learned
  - task structure needs to explain how task structure, interdependency, shared goal/role/reward/individual accountability
  - all skills/content required for success with the PT need to be taught through DT, and may be part of guided practice

**Needs to include all of the following:**

- Guidelines for STAD activity
  - reference for STAD scoring and how improvement points and used for reward
  - task structure needs to explain how task structure, interdependency, shared goal/role/reward/individual accountability

**Jigsaw strategies need to include all of the following:**

- an explanation of the way teams are developed
- assigned reading and research task which is appropriate to the level of the learner
- expert sheets with appropriate questions
- explanation of how reward structure will be used (can use STAD scoring) but should include explanation of how points = rewards
- task structure needs to explain structure, interdependency, shared goal/ role/ reward/ individual accountability

**Needs to include all of the following:**
- the explanation of whether teams are heterogeneous or homogeneous
- at the beginning of the year must include instructions in working cooperatively – reference guidelines in all subsequent jigsaws
- assigned reading and research task which is appropriate to the level of the learner
- expert sheets with appropriate questions
- explanation of how reward structure will be used (can use STAD scoring) but should include explanation of how points = rewards
- task structure needs to explain structure, interdependency, shared goal/ role/ reward/ individual accountability
- written in the second person and easily understood by the student

Includes a purpose statement that:
- describes the rationale for the lesson
- places in within the context of the unit
- mentions the expected product

All strategies need to –
- be written to the teacher
- name thinking skills stated in outcomes
- differentiate strategies for each group in the class as appropriate
- have evidence of a clear and direct connection between the instruction and the unit and lesson products (probably in the link)
- contain all details of what is to be done or said in implementing the lesson include the materials that provide exemplars to be used for modelling and guided practice – nothing to be left to the teacher to create spontaneously – reference material location
- have homework that is doable in the amount of time allocated

**Program Implementation – Rotation Plan**
- The plan is viable and avoids excessive independent seatwork and places the teacher in the best possible instructional situation for each group
- have notes for implementation of the differentiated instruction which include anticipated problems with the management of behaviour
- using the imperative voice, describe within the time boxes how the teacher manages three instructional groups during the lesson
- using the imperative voice describe within the time boxes where technology is used in the instructional sequences
Materials
The materials are aligned with the central question and outcomes and differentiated in a manner consistent with the expectations of the Learner Outcomes
- stored within a folder and names of materials must be specifically referenced in lesson template
- differentiated for each group in the class and so labelled to make it easy to access them
- attached to every lesson they are used in
- appropriate for time allotted (non electronic materials compiled in a three ring binder)
- include instructional adaptations which modify activities to the needs of the individual learner

Technology
All technology used within the lesson to be listed and specified for each group
- skills needed to use technology need to have been taught

Products
All products are to be listed in the noun form (what will the student have in their hand at the end of the lesson?)
- make sure the product correlates with the action/criterion listed in the objective

Skill Product = a product that indicates mastery of a discrete skill item

Integrative Product = a product that shows the application of more than one skill or a skill in concert with concepts/content in a larger context

Must be:
- stored within a folder and names of materials must be specifically referenced in lesson template and attached to the lesson planning tool
- differentiated for each group in the class and so labelled to make it easy to access them
- attached to every lesson they are used in
- appropriate for time allotted (non electronic materials to be compiled in a black three ring binder)
- include instructional adaptations which modify activities to the needs of the individual learner
Managing the Differentiated Classroom – Module 1

General considerations:
- creation of an ongoing framework – links to first subject
- differentiation strategies that are necessary to make the classroom work
- instructional perspective – the management implications of differentiated approaches and the pedagogies addressed in the first subject

Break the module into three units:

Unit 1
- Scenario – develop the Antoine scenario from the first subject. Describe the particular classroom context. Provide details linking to classroom ecology and various student behaviours that may be present in the class.
- Differentiation processes
- Assessment – develop a list of classroom management implications for the particular scenario given. Identify the challenges and opportunities from prior work and experience.

Unit 2
- A more concentrated feed-in of literature
- Cover areas such as managing space, time and behaviour
- Assessment – develop a product which uses positive classroom features, strategies and approaches
- Develop a compendium of solutions and describe their utility in a differentiated classroom.

Unit 3
- Place the information from the first two units together
- Further literature
- Assessment – a product which demonstrates synthesis of content from units 1 and 2. How do you place all this information together to create a management plan that reconciles academic learning with management of space, time, behaviour (student and teacher)?
- Provide a framework of a management plan

Areas to be addressed:
Learning – behaviour relationship
Features of positive classrooms
Effective grouping
Positive communication (listening/questioning)
Classroom ecology
Pedagogies of inclusion
Management of physical space
Peer mediated learning
Rules/Class-wide BM approaches
Standards match up:

- Have knowledge of current definitions and characteristics of individuals with learning and other disabilities and how these disabilities affect students’ development and educational performance
- Develop a range of relevant instructional strategies that target the needs identified
- Selects, adapts, and uses instructional strategies and materials according to the characteristics of (students period) the individual with exceptional learning needs *(should this be worded more broadly to include all needs??)*
- The teacher designs and implements appropriate lesson planning and methods for managing individuals, small groups, large groups, inclusive groups, and individual instruction;
- Modify teaching strategies and behaviour in relation to student success, modifying plans and instructional approaches accordingly
- Ability to introduce strategies and adaptations that can be implemented within classroom and school environments that promote the inclusion of students
- Organise, allocate, and manage the resources of time, space, activities, and attention to provide active and equitable management of students in productive tasks
- Understands the importance of non verbal and verbal communication
Number 5 and 13 brainstorming session

Create an inclusive education plan for your school/create an inclusive environment

School attitudes:
- Post attitudes to forum
- Respond to three other postings as to how you might manage the situation
- Create a survey to examine the attitudes of your colleagues regarding inclusion and analyse results

Perhaps a particular student group scenario would need to be included. For example: You have just been informed that with the new enrolments for year 7 and Year 11 a number of students with special needs have been included. So far you are aware of a student in a wheelchair, three students with LD (Year 7) and a Year 11 student with behaviour problems. What adaptations would have to be made, considering the focus areas above, to create an inclusive environment for these students in your school setting?

- Consider building and classroom designs (re: mobility)
- Set up a team of appropriate people to be involved in the creation of a school IEP. Justify the inclusion of each person.

Complete a situational analysis of your setting involving inclusion of students with diverse needs;
- What changes could you make to your school culture to start a change in attitude towards students with diverse needs?
- List the different stakeholders that might be involved? Why?
- List their potential roles in reaching a solution
- Do you believe change is possible within your school context? Why/why not?
- What do you see as your role as an inclusive educator within your school context?

Funding:
Complete the official application form for funding for your setting for a case study child
Then put the plan into practice – actionable, timeline etc.

Change agent roles

Collaborative structures...what does it mean?
- List those in your setting
- Comment on their effectiveness
- List structures needed to create an inclusive environment
Course Reform Brainstorming
Collapsed 7 & 10

These really are 2 separate assignments with multiple components although there are some shared elements.

1. Outline a one-page “screening” policy for your particular school that is an adjunct to the screening continuum, and reflects the particular contextual circumstances of the school in which you work (and therefore could be implemented at your school). Provide a one page data collection sheet to be used with parents for one area of your screening policy requirements.

2. Screening

Design (and provide a rationale for) a “screening” continuum for their own setting’s spectrum of school students that takes into account:
- stage and age of development
- school setting (population, local district, enrolments, language and ethnic influences)
- whole school involvement (CTs, STLDs, itinerant teachers, parents)
- individual students and cohorts of students
- domains of human development
- readiness for learning and required learning outcomes
- incorporates curriculum based and criterion referenced methodologies
- reflects an awareness of the divergence between developmental difficulties that are remediable and developmental difficulties that require further investigation

3. How to tell there are gaps/apply/benchmark

4. Student focused – assessment of students using specific skills

Demonstration of the continuum with an actual student

This assessment will require you to work with a student who has a literacy and/or numeracy difficulty that requires some intervention.

* Using the parallel methods of:
  - curriculum based/criterion referenced (learning outcomes)
  - observational
  - and standardised assessment

Investigate the nature of the student’s literacy or numeracy difficulty. Document your approach including a rationale for the decisions made regarding the selection of assessment modalities. Report the objective findings from your parallel approach to this investigation in a paper that would be able to be shared (ie: read and understood) amongst parents, and relevant other professionals. In this report, indicate which parts of the report are using “deficit model” language and which parts of the report are using “learning ability model” language...there should at least be a balance.

* Outline the advantages, disadvantages and deficits of each of the “fishing nets” you have used in gathering information about the nature of the student’s abilities and difficulties in
literacy or numeracy. In this section of your assessment you should address issues such as validity, reliability, subjectivity, discrimination, representation etc.

* Write a program that will provide some intervention for this student over a compact period of time. The nature of your program will be dependent on the age and stage of the individual student, the nature of the classroom requirements with which that student is faced, and on the student’s prerequisite of confidence building (This means your program may not necessarily be a unimodal form of intervention).

Your program must contain a rationale for the approach that you are recommending, and this rationale must incorporate the findings from your assessment. It must also clearly indicate the chief stakeholders in the implementation and follow-through stages of the program. It must also indicate realistic and grounded outcomes (which may be subskills of larger skills indicated by the assessment) for that student by the end of the prescribed period. It must also contain some clear methodologies for measuring the attainment of the learning outcomes intended. The learning outcomes planned in the program must be attainable given that you may be working with a student whose literacy or numeracy difficulties are severe.

Collapsed 6

I have written an assignment similar to the one expressed on the brainstorm sheet. However the assessment does not include the recording of a collaborative meeting but rather a meeting between two colleagues (or more) discussing a relevant but controversial article on an educational issue to do with inclusion. The transcript from this meeting is then analysed using subskills belonging to effective communication and basic counselling/reflective listening analysis...I pulled it together rather quickly and without time to consider the ethical issues of recording a collaborative meeting amongst parents and school-based professionals.

If the assignment were to be based on a transcript of a full collaborative meeting, including parents and possibly even a student, then I would like to make the entire assignment a project that also includes a formal ethics process (mutual consent, release of information, approval from the school executive etc) as well as an analysis of the transcript using reflective listening analysis, content analysis, group interaction analysis as well as suggestions/recommendations/skill building towards the next collaborative interaction.
Designing the Inclusive Classroom

The purpose of this authentic assessment product is to make differentiated instruction a practical reality in the inclusive classroom. The central question for all school teaching and learning is how does one teacher meet the needs of many students with different aptitudes, learning histories, motivational and social characteristics and dispositions. This product looks at this challenge holistically, developing new roles for students, approaches for classroom and school-wide recognition, integrating planning for groups, individual planning for challenging behaviour, the role of technology and ways to pull these elements together in a total inclusive classroom plan.

Planning Components

1. Planning Schema: You will develop a big picture planning map or schema that connects at a conceptual level the following components:
   a. Curriculum Drivers
   b. Student and Teacher Roles
   c. Role Recognition and Reward
   d. Use of Physical Space
   e. Role of technology
   f. A continuum of behavioural interventions

2. Instantiating the Plan
   In this section you will flesh out the components of the plan by identifying and developing the discrete components:
   a. Curriculum: Analyse the needs, impacts and responses associated with a truly differentiated curriculum. In this section you will use the module of curriculum developed in XXXX to identify what the curriculum means for the way the classroom is organised and managed. This includes: the roles of students in the instructional process, the use of different grouping approaches, the use of physical space and the role of technology.

   b. Role Development: In this section we will build student position descriptions and a plan for the way those roles and responsibilities are recognised within the classroom and the school.

   c. Proactive Behaviour Interventions
      In this section you will develop a process for integrating what we know about pro-social interventions into the classroom environment. This includes social skills training, Life space interviewing and conflict resolution. In this section you will also plan for more extreme behaviour in the classroom by describing a core of interventions including self-management and how to develop programs for students with greater behavioural needs.
d. Technology

In this section of the plan you will describe the technology you need in order to make your plan work, how to identify and select it and then integrate it meaningfully into your inclusive classroom.

3. Threading
In this section you will thread together the elements into a total classroom plan connecting together those elements described in a-d. You will use the planning protocol to pull the pieces together from schema to technology into a “useable” model that can be applied in your classroom.
Assignment reading –
- Draft Disability Standards
- Disability Discrimination Act – Section 22 “Education”
- Stakeholder document re: inclusion
- ‘Scarlett Finney vs Hills Grammar School’ [www.austlii.edu.au](http://www.austlii.edu.au)

Is there a place for inclusive practice in Australian schools today?

Argue and justify your position using policy, research and anecdotal evidence. In your discussion, include an examination of:

a. the goodness of fit of policy documents (how well do they work together?)
b. inclusive practice principles
c. ethical considerations
d. practical issues
e. attitudes towards inclusive practice as presented through literature

Create a new inclusive policy for your school. Consideration of the various documents listed above must be evident.

(perhaps ask students to reference their sources)
- some sort of word length guide
- cannot use existing school policy
Reflection/Portfolio
Rationale
Reflecting the conceptual framework of the course
Reflective learning spiral (Action research process)
Students positioned as practitioner, researcher, advocate, change agent

Task
Over the period of the course develop a portfolio reflective of your learning throughout the course and your personal and professional philosophy. As this suggests this is an umbrella assessment that draws together all the elements of the course and your personal and professional development. There are three tasks in this assessment.

A. Paper/Lit review
   - Develop a model of practice (personal/professional) and of Inclusive Education (environment/system)
   - Write a paper based on your model
Revisit the model and the paper 4 times:
   1. Personal level (current practice)
   2. Literature (current state of practice in inclusive education, what does this mean)
   3. Comparison/analysis of own setting (where to from here)
   4. Evaluation project (implementation & reflection on project, future planning)
      - Publish paper/s

B. Learning journal
   - Reflect on and evaluate skills and learning to support Task A, your learning in the course and the 4 roles of practitioner, researcher, advocate, change agent
   - There are 4 broad cycles
      1. Reflect on own practice and skill level as practitioner and returning student/academic
      2. Situate self in the system, self evaluation (both academic and inclusive education)
      3. Reflect on setting in the system, role development, goal setting (CSU course feedback)
      4. Reflect on evaluation project and self in the project and course

C. Collection of artefacts
   - Collect and present artefacts from the course and practice as part of the portfolio that illustrate:
      - The model of practice/inclusive education;
      - Point of reflection or learning;
      - Stage of development; and/or
      - Role
Capstone Product (12)

This product represents the final step in the completion of your degree and focuses on establishing the effects and impacts of those things you have learned throughout the course. Select one of the products built as part of your program so far and evaluate its impact on your classroom or school. Choices include:

- The Curriculum Module
- Inclusive Education Plan
- Differentiated Classroom Plan
- Assessment Plan

Your evaluation should include:

1. A description of the evaluation object
   a. Summary of supporting literature and description

2. A description of the context and boundaries
   a. Who are the audiences?
   b. What are the limits and scope?

3. Identification of evaluation questions
   a. What do you want/need to find out?
   b. Explain how you used multiple sources and techniques
   c. How will you triangulate the information you have gathered?

4. A description of the methods
   a. Describe the method you employed
   b. How did you select/build evaluation tools?

5. A plan for Information Collection
   a. How was the information collected?

6. A Management Plan
   a. How did you manage the information?

7. An analysis and interpretation of the plan
   a. What did/can you conclude?
   b. What impacts did the object have on the classroom and school?
   c. What recommendations emerged from the evaluation?

8. A description of strengths and weaknesses
   a. What were the major contributions of the evaluation to your school, classroom, audiences and stakeholders?
   b. What are the limitations and caveats?
   c. How would you do it differently next time?

9. A reflection on the process as described in your...course journal.
Appendix 6J: Course Portfolio Wireframes
### Masters course mapped to graduate attributes

<table>
<thead>
<tr>
<th>Graduate attribute</th>
<th>Indicators taken from the literature on best practice for inclusion</th>
<th>ESS440</th>
<th>ESS422</th>
<th>ESS423</th>
<th>ESS426</th>
<th>ESS512</th>
<th>ESS513</th>
<th>ESS599</th>
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<td><strong>General</strong></td>
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<tr>
<td>1, 7</td>
<td>• demonstrate an understanding of the major theories, contributors, history, and trends in the field of inclusive education</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>8</td>
<td>• model respect and acceptance of students with diverse learning needs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>1, 7, 8</td>
<td>• demonstrates knowledge of laws, policies and ethical principles regarding the rights and responsibilities of school executive, parents, teachers, students and other key stakeholders</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>8</td>
<td>• understand and be able to discuss current legal and ethical issues in inclusive education</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>3, 4, 5, 8</td>
<td>• consideration of the pros and cons of various inclusive models.</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>2, 6, 8</td>
<td>• promote positive attitudes toward students with diverse learning needs and their families</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>8</td>
<td>• belief that all students and teachers can learn, but that all learn differently</td>
<td>✓</td>
<td>✓</td>
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<td><strong>Identification</strong></td>
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<tr>
<td>1, 7</td>
<td>• have knowledge of current definitions and characteristics of students with learning and other disabilities and how these disabilities affect students' development and educational performance</td>
<td>✓</td>
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<tr>
<td>1</td>
<td>• knowledge of typical and atypical growth and development</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>3, 4, 5</td>
<td>• identify informally each child's strengths and weaknesses across developmental areas</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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631
<table>
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<tr>
<th>Instructional (Capacity building)</th>
<th>ESS440</th>
<th>ESS442</th>
<th>ESS443</th>
<th>ESS446</th>
<th>ESS512</th>
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<tbody>
<tr>
<td>1,7,8</td>
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<tr>
<td>• develop a range of relevant instructional strategies that target the needs identified</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>3,4,5</td>
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<tr>
<td>• selects, adapts, and uses instructional strategies and materials according to the characteristics of the student with diverse learning needs</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>3,4,5</td>
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<tr>
<td>• the teacher designs and implements appropriate lesson planning and methods for managing individuals, small groups, large groups, inclusive groups, and individual instruction</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>2,3,4,5,6</td>
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</tr>
<tr>
<td>• the teacher collaborates with regular education teachers and related services for support of students with diverse learning needs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>3,4,5</td>
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<tr>
<td>• modify teaching strategies and behaviour in relation to student success, modifying plans and instructional approaches accordingly</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Education/environment</td>
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<td>1,3,7,8</td>
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<tr>
<td>• ability to introduce strategies and adaptations that can be implemented within classroom and school environments that promote the inclusion of students</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>• organise, allocate, and manage the resources of time, space, activities, and attention to provide active and equitable engagement of students in productive tasks</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>1,2,4,5, 6,7,8</td>
<td>• the teacher collaborates with general educators, administrators, related services personnel and parents in the development and implementation of the IEP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2,4,5,6, 8</td>
<td>• the teacher, in collaboration with other stakeholders, develops appropriate annual goals and short term objectives/benchmarks</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>3,4,5,8</td>
<td>• identifies and prioritizes areas of the general education curriculum and develops accommodations for students with diverse learning needs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3,4,5,8</td>
<td>• develop and implement lesson plans to meet students' unique needs as identified in Individualized Education Programs (IEPs)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2,4,5,6, 8</td>
<td>• recommend to general educators appropriate academic modifications and accommodations (e.g., extended time on exams, alternative test formats, spell checkers, audio taped instructional materials)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
</tr>
<tr>
<td>2,3,4,5, 6,8</td>
<td>• provide instruction in life skills and preparation for transitions from special education to regular education, early intervention to primary school, primary to high school and post-secondary options</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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**Assessment**

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<th>IEP</th>
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<tbody>
<tr>
<td>1,7,8</td>
<td>• have knowledge of procedures for accessing and providing special education and related services (i.e., pre-referral, referral, and implementation)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>1,7,8</td>
<td>• be familiar with commonly used instruments for assessment of students with diverse learning needs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>3,4,5,8</td>
<td>• describe, integrate and evaluate assessment procedures for the identification and evaluation of students with diverse learning needs</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>3,4,5,8</td>
<td>• Uses assessment information in making eligibility, program and placement decisions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>3,4,5,8</td>
<td>• demonstrates skill in various formal and informal observation techniques</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>2</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
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<td>• understands the importance of non verbal and verbal communication</td>
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<td>✓</td>
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<td>• Demonstrates use of augmentative, alternative and assistive communication</td>
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<td>• develops collaboration and consultation techniques for working effectively</td>
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<td>• Collaborates with families and others in the assessment of students with</td>
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<td>• Demonstrates awareness of resources for adaptive assistive devices and</td>
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<td>software for students with diverse learning needs</td>
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<td>• Describes best practice and appropriate assessment as related to the use</td>
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<td>• Designs learning activities that foster equitable, ethical, and legal use</td>
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<td>• critically evaluate research literature in inclusive education, particularly</td>
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<td>in the areas of methodology and analysis to produce a comprehensive literature</td>
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<td>• Demonstrates knowledge of the essential principles and attributes of an inclusive school</td>
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<td>• Employs strategies to scale innovation beyond own work and classroom</td>
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<td>• Designs features and attributes of the inclusive school</td>
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<td>• Critically evaluates the role of technology in the inclusive school</td>
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