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The instructional strategies and attitudes of effective inclusive teachers

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Abstract

This study considers effective teachers in inclusive classrooms, with a focus on the instructional strategies employed by these teachers and the rationale underpinning their use. Observations were conducted in the classrooms of six principal-nominated effective teachers working in four regional Australian schools with follow up interviews employed to clarify and extend observational data. Analyses were guided by a framework incorporating a range of extensively-researched instructional strategies. Results indicated that effective teachers used a selection of strategies, with the most favoured being feedback, direct instruction, questioning, and cooperative learning. In contrast, reciprocal teaching, metacognitive instruction, mastery learning, and worked examples were rarely observed. Teacher attitudes about inclusion were examined to clarify the practices observed and to identify enablers to inclusive practice. Interview and observational data were integrated into a proposed model of an inclusive educator. This model highlighted *how* support, collaboration, professional development, and teaching experience informed *what* instructional strategies were employed and *why* they were adopted.

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Increasingly, mainstream teachers are encountering greater numbers of students with diverse needs. In 2009, students with diverse needs attending regular classes in New South Wales (NSW) government schools totalled approximately 50 000, 6.6% of the total 750 000 students enrolled (New South Wales Parliament Legislative Council, 2010). The number of students with disabilities being educated in mainstream classes now exceeds the number being educated in segregated settings (Dempsey, 2009). The current study is concerned with how effective teachers employ inclusive education strategies in their day-to-day practice and the rationale behind their use. Given that there is limited research into the inclusive practices of Australian teachers, this study is timely and provides useful information for teacher educators and in-service education providers.

There has been much discussion in the literature regarding the term ‘inclusion’, with many definitions arising as a consequence. King (2003) suggests that inclusive education aims for all students to become a part of the school community, with all students sharing in a sense of belonging to their community. Similar to this, but on an international level, the Special Needs Mission Statement of United Nations Educational, Scientific and Cultural Organisation (1994) posits:

Inclusion and participation are essential to human dignity and to the enjoyment and exercise of human rights...*all children should learn together wherever possible regardless of difficulties, disabilities or differences* (UNESCO, 1994, p. 11, emphasis added)

Determining effective teaching and inclusive practice is a complex issue that has been extensively discussed in the literature. However, according to Ryndak and colleagues (2000), while much has been written in regard to what teachers should do when teaching inclusively, such recommendations are not usually based on classroom-based research. Moreover, Ainscow et al. (2003, p. 228) describe such recommendations as 'recipe-like suggestions', serving as teacher 'bibles' for practice, without acknowledging the complexities of classrooms.

In stark contrast, Hattie (2009) has identified, through a synthesis of over 800 meta-analyses relating to student achievement, a substantial number of teaching strategies that have merit. It is important to highlight that Hattie's (2009) synthesis provides an indication of the interventions that have an impact on student attainment, not whether something will improve student engagement, or other important classroom variables. Many of the strategies identified by Hattie (2009) have been shown to be effective for students with diverse needs. For example, reciprocal teaching has been linked to improved reading, particularly for students with low-level comprehension skills (Slater & Horstman, 2002). Kulik et al. (1990) found that students with lower ability made strong gains through mastery learning. With respect to peer tutoring, it has been found that students with special needs make gains not only in their academic work but also behaviourally (Spencer et al., 2003). Much of this improvement is attributed to individualised practice. Finally, Johnson and Johnson (2009) reported that cooperative learning experiences lead to positive relationships between students with differing intellectual abilities. While such classroom strategies have been widely advocated, how teachers implement them in inclusive classroom practice can be a major challenge (Angelides, 2007).

From interviews with Californian teachers, Villa et al. (2005) identified 'best inclusive practices'. These practices included collaboration, instructional responsiveness, and expanded authentic assessment, though these were not verified via observation of practice. In another US study, Udvari-Solner (1996), interviewed and observed five primary teachers to examine how theoretical inclusive practices were used by general educators. Udvari-Solner (1996, p. 14) reported that teachers who were willing to try new approaches to learning and could "articulate and translate" inclusive practice theory were more likely to create an inclusive environment.

Researching within an Australian context, Pearce (2009) invited educational leaders to develop a profile typifying the inclusive secondary teacher. This profile was characterised by a student-focused and collaborative approach. Flem et al., (2004) explored how one Norwegian teacher created an inclusive classroom in a regular primary setting over a three-month period. Observations of the classroom and interviews with the teacher found that collaborating with stakeholders, differentiating the curriculum, and a positive environment were important aspects of an inclusive classroom. Notwithstanding these studies, the majority of inclusive education research has focused on teacher attitudes towards inclusion and the factors that impede effective inclusive practice, highlighting a lack of support and resources and the inadequacy of teacher training (Downing & Peckham-Hardin, 2007; Forlin et al., 2008).

It is evident from the literature discussed above that many studies have been conducted in North American or European settings, focus on teacher attitudes to inclusive practice and/or employ a single research methodology. To this end, Carter et al. (2011, p. 49)

argue that there is “a paucity of data on the level of implementation of evidence-based practice and, in particular, a lack of data on Australian special education teachers”. Thus, the present research aimed to identify not what teachers should be doing but instead what they are doing when teaching inclusively. Hence, the current study explored the following research questions:

1. *What* inclusive strategies are employed by exemplary teachers in regular classroom settings?
2. *How* and *why* do these teachers use inclusive practices and strategies?

The ‘what’ involves the identification of specific instructional strategies employed by classroom teachers. The ‘how’ investigates the enablers or facilitators that support inclusive practice, while the ‘why’ refers to why teachers might teach inclusively.

Method

Design

The study employed a multiple case study approach whereby several cases are described and compared to develop a full understanding of what is being studied (Creswell, 2008). Data collection occurred in two phases. Phase 1 involved repeated classroom observations using a structured observational protocol in order to determine *what* inclusive strategies were employed. This protocol was developed in three steps: first, a selection of strategies described by the authors/editors of several leading Australasian textbooks (e.g., Ashman & Elkins, 2005; Foreman, 2008) was listed; and second, Hattie’s (2009) work was used to check and validate the list. The third step involved a final selection of strategies based not only on the magnitude of the effect size but gave

weight to the prominence given by the authors/editors of leading Australasian textbooks. It was argued that this weighting would reflect pre-service and in-service inclusive education emphases. Ten strategies were selected and these are listed with their respective effect sizes in Table 1.

During Phase 2, interviews were conducted with teachers to clarify and supplement the observational data and to ascertain enablers (the *how*) as well as the rationale for these strategies or practices (the *why*). The involvement of two sources of data can potentially “contribute to [the] verification and validation of qualitative analysis” (Patton, 1990, p. 464). The two data sets allowed for the comparison of what was actually observed with what people reported in the interviews. This form of triangulation offered an opportunity for deeper insight into the relationship among practice, context, and attitude.

INSERT Table 1 HERE

Participants

After the appropriate ethics approvals had been provided, participants were recruited from 16 regionally located NSW Department of Education and Training schools close to the researchers’ base. Most of the schools were situated within a large regional city, with a population of approximately 60 000. Several smaller towns surrounding the regional centre were also included in the recruitment area.

Principals of targeted schools were invited to nominate teaching staff according to the following inclusion criteria:

1. teachers they believed to be effective inclusive educators; and,
2. teachers who were currently teaching in an inclusive classroom, with a range of students, with and without identified needs.

While it has been argued that “teaching excellence... as a concept, lacks precision” due to “the multidimensionality of the concept” (Elton, 1998, p. 6), in this study we invited principals to identify effective teachers. Jacob and Lefgren (2008) found that principals were able to identify effective teachers on the basis of academic achievement and student satisfaction, variables typically valued by parents. Although we acknowledge the problems in identifying ‘effective teachers’, we believe that principal nominations are valid as they provide one indication of what might be considered exemplary inclusive educators.

On this basis, six teachers were nominated from four different schools and were invited to participate in the present study. Participant demographics are summarised in Table 2. There were four high school teachers and two primary school teachers, working in schools that drew on both low and high SES backgrounds, with a sizeable number of Indigenous students at one school. The primary schools’ population averaged about 380 students while the high schools ranged from 550 to 1 100 students.

Participants’ classrooms were classified as ‘inclusive classrooms’ conditional on at least one student being formally designated as having behavioural, learning, or intellectual difficulties/disabilities. The classification draws on the relevant NSW government disability criteria but may differ from other definitions/classifications used by other jurisdictions.

INSERT Table 2 HERE

Measures

Classrooms were observed by the first author who took extensive field notes of specific teacher practices. After observations were completed, these notes were then coded according to an observation protocol (table) consisting of the ten strategies in Table 1.

Participant interviews were semi-structured using a variety of open-ended questions grouped in two general areas. The first set of questions related to the strategies previously observed, allowing for the verification of the classroom observational notes (as per Ary et al., 2006). The second set of questions related to the teacher's attitudes about inclusive education and the enablers to support such practices.

Procedure

In the first instance, observations were arranged on a one-to-one basis with each teacher via a phone call or email. Two classroom observations, of between 50-60 minutes, were conducted for each participant during which detailed notes were made of the teaching strategies observed. Observations of teacher strategy were later matched to the strategies listed in Table 3.

After observations had taken place, individual interviews were conducted with each participant. Interviews lasted between 60-90 minutes and with consent, were audio-taped. Interview data were transcribed and a qualitative content analysis with an inductive approach was applied (Berg, 2004). Individual interview transcripts and

identified themes were sent to each participant, with an invitation to add or change information that might be incorrect or potentially identifiable; this provides a means of enhancing the validity of the study (Kitto et al., 2008).

Results

Observational results

As reported in Table 3, all participants employed feedback, elements of direct instruction, questioning, and cooperative learning strategies. However, none of the participants explicitly used reciprocal teaching, metacognitive instruction, mastery learning, or worked examples.

INSERT Table 3 HERE

Feedback.

Hattie and Timperley (2007) describe feedback as a teacher providing information on a student's performance or understanding. All of the participants gave praise in their classrooms, using general positive descriptions such as "Looking good" (SM1: 23/05/08) and "Well done!" (SF3: 17/06/08). Typically, feedback moves beyond praise and involves providing detailed information in response to student progress. Importantly, corrective feedback can assist students' progress, or prompt students to change their approach, as can be seen below.

Ms Jones approached a student who was complaining to a peer that they didn't know what to do next. Ms Jones asked, "How's it going?"

In an attempt to encourage the student, Ms Jones also commented,

“This part looks good, how about you consider shades of green for this section?” (SF3: 13/05/08)

Many participants used detailed task feedback. For example, PF2 invited individual students to her desk to complete an activity and give feedback (06/05/08). Similarly, Mrs Roberts stated to her Year 11 Drama class:

“I have given feedback about what people did well and what was done poorly, with suggestions on how some work could have been improved. I hope you all find this helpful, particularly for your next assignment”. (SF1: 19/06/08)

Feedback was used by participants to provide information on student progress (i.e. How am I going?) and for the students to know they were ‘heading in the right direction’. According to Hattie and Timperley (2007), effective feedback addresses “How am I going?” (feed back), “Where am I going?” (feed up) and “Where to next?” (feed forward). These three aspects of the feedback process are apparent in the extract above.

Direct instruction.

Hattie (2009) suggests that direct instruction can be characterised by seven main elements: the provision of clear learning outcomes; criteria for success; building engagement; structured presentation; guided practice; lesson closure; and, independent practice. Typically direct and explicit teaching commences with a review of previous learning and finishes with a review at a later date. Many of the elements of this approach were observed and are highlighted below.

Opening the lesson.

Most participants began their lessons by recapping what was covered previously and then moving on to provide an overview and explanation of the lesson about to occur:

Mrs Roberts told the students that they would be working on their next assessment task during the lesson, which they had briefly discussed in their last lesson. She then began to outline what the assessment task involved. She read out the marking criteria following the exact wording on the sheet and then explained these criteria by giving a summary of what was expected. (SF1: 19/06/08)

Review strategies ensured that all students were reminded of conventions and previous discussion in topic areas, no matter whether some students could recall this information on their own accord or not. In addition, the criterion for success was specified.

Modelling.

Participants often modelled aspects of how to complete a task, providing a clear example of what to do as well as emphasising what not to do:

Once students were sitting at their desks, Ms Collins told them that the letter they were writing today was 'b'. She asked students to watch her as she drew a lower case 'b', stating the direction that she was taking in order to write the letter; "Down, back up half way and around". (PF2: 12/05/08)

Similarly, a secondary participant used expression, pauses, exaggeration, and emphasis to model descriptive words:

Ms Hall read the poem aloud to the class, emphasising the descriptive words, pausing between lines and changing the pace/tempo at which she read; “The *best* place to watch the rain...is from the window of an apartment building – on the third floor – looking across an *empty* sports field at night...” (SF2: 19/05/08)

Guided practice.

Guided practice can be structured in different ways but it is often designed to give students opportunities to practise activities as a whole class and in smaller groups before independent practice is required. An example of guided practice came after participant PF2 modelled the writing of the letter ‘b’:

Ms Collins then asked students to write this letter in the air with their fingers at the same time as her, repeating the instruction, “Down, back up and around”. Then Ms Collins asked students to start tracing a ‘b’ in their books. (PF2: 12/05/08)

Cues and prompts.

Various cues were used to focus student attention and to build engagement. Reminders of how much time students had left to work on a task were verbally announced by several participants. These cues were explicit with exact timeframes given to students and expressed in a manner appropriate to student understanding of time:

“When the big hand is on the six, I want you to have finished your page and have all your things packed away.” (PF2: 06/05/08)

“You have fifteen minutes left on this so power on.” (SF1: 19/06/08)

Others used verbal attention grabbers. To exemplify,

Mrs Roberts said, “Ladies and gentlemen.” The students stopped what they were doing and turned to face her. (SF1: 19/06/08)

Cues were also used to focus student attention on particular aspects of the task:

“As we’re reading this, I’d like you to pay attention to the description of the setting, particularly the haystack metaphor.” (SF2: 09/05/08)

Peer tutoring.

Informal peer tutoring occurred in half of the classrooms observed, with an example presented below.

The teacher suggested to the whole class that students could help one another. After the announcement she specifically said, “Matthew, can you please help Sarah with that?” (SF2: 13/05/08)

Questioning.

Although closely related to feedback and direct instruction, teacher questioning has received considerable research attention as a strategy in its own right. All participants used various forms of questioning, which were often embedded within other instructional strategies. At times, teachers asked students surface questions related to the lesson. For example, during a lesson in a primary classroom, PF1 (28/06/08) said:

“Billy kept going, making the snowball bigger and bigger. How did he make the snowball?” The students all enthusiastically replied with, “Bigger and bigger!”

Higher-order questioning was also observed, although less frequently in primary classrooms. During a student news session, for example, one participant guided students through the structure of how they were to present their news:

The first student stood up the front to tell his news and forgot to open with, “Good morning everyone”. Ms Collins quietly asked the student if they forgot to say good morning. The student then corrected himself and said, “These are my dinosaurs”. After a pause, Ms Collins assisted the student to talk more about his news to his classmates by asking, “Can you tell me some more about your dinosaurs?” (PF2: 06/05/08)

In the secondary setting, higher-order questioning was used to assist student progress, as per the example below.

“Now look at what you have here – how are you going to put this on your canvas?” (SF3: 13/05/08)

Cooperative learning.

Although multiple examples of group work were observed in all the classrooms, most participants did not employ a structured co-operative procedure such as the jigsaw method (as per Slavin et al., 2009).

Mrs Roberts explained the task to the students and read out their allocated groups. She told students they were allowed to work in any

part of the classroom. There was a great deal of excited chatter and students moved to their groups to begin work immediately. The majority of the students appeared to be engaged in the task, with lots of work-related chatter and scribbling of notes. (SF1: 19/06/08)

The classrooms of Ms Collins and Ms Hall were deliberately set up to facilitate social interaction via seating arrangements. Cooperative learning was typically observed through the discussion and clarification that occurred within the small groups. During group work activities the teacher often acted as a facilitator, ensuring that groups remained on task and were cooperating with one another. To exemplify, Mr Smith said:

“OK guys, if you want to ask myself or each other questions about how to complete some of the theory that’s fine. Just make sure you know how to complete the questions by yourself at the end of this lesson because in the exam you won’t be able to ask each other.”

(SM1: 24/06/08)

Audio/visual methods.

Various technologies, including projectors, a laser pointer, DVD players and computers, were used to engage students and present work. For example, PF1 projected a large and clear book image onto a screen, ensuring that all could read it, including one student with impaired sight. Time on the class computer was used as a reward for completing work on time in PF2’s classroom. In one of the secondary settings, the use of a computer was set aside for one student identified as having special needs.

Interview results

The interviews aimed to identify the *how* and *why* of the observed practices. Three major themes emerged from the analysis of the interviews: teachers' attitudes, support systems, professional development and experience.

Teachers' attitudes.

Participants' understanding of inclusion was typically short and concise:

“It's about accepting everyone as an individual and treating them with respect and doing the best you can for them”. (PF2: 04/07/08)

Several participants highlighted the significance of accepting and valuing individuals so that all could be involved.

“An inclusive classroom is any classroom that makes every child feel valued... nobody in the classroom feels any less than anyone else because of their ability or lack of ability...everyone feels that they can succeed”. (PF1: 02/07/08)

Additionally, the importance of being equitable was highlighted:

“To me it is the essence of education, and that is the notion that it is the involvement of every person in the room regardless of any aspect of their life or their physicality or their mental state – being an equally important member of the class and being entitled to as much attention as they need...”. (SF1: 26/06/08)

One participant expressed her concerns about the idea of inclusive education in schools, citing the dilemma between her philosophical and pragmatic beliefs:

“It’s really difficult because...you can do all sorts of things on an individual level for anyone of those kids who would be defined as fitting the category of inclusive education. But it’s based on the premise that the rest of the room cooperates so that you can get to them...philosophically I don’t have a problem...pragmatically I have enormous problems because I’m the one that has to make it happen”.

(SF2: 02/07/08)

When asked what effective teaching and learning looked like, most participants highlighted the importance of student engagement, with a particular emphasis on a positive atmosphere:

“It is happy, engaged students really, really enjoying what they’re doing, getting excited by it and getting end results that they’re proud of. There is a tangible atmosphere of collective working”. (SF1: 26/06/08)

Good communication was noted as an important element for effective teaching, with reference made to the ability of teachers to be honest with their students:

“If I want my students to feel free to make a mistake in my room, then I have to be free to admit to any that I make. I don’t mind if they gleefully tell me I’m wrong, that’s fine”. (SF1: 26/06/08)

Support systems and collaboration.

When participants were asked about what assisted their ability to be an inclusive educator, several types of support were identified, including specialist support:

“The learning support team is useful...when you have your meetings with your parents and your learning support coordinator and the class teacher etc., you map out [the child’s] strengths and weaknesses and areas for development”. (PF1: 02/07/08)

The importance of supportive colleagues was highlighted:

“...we’re lucky here; this is the most amazing environment for teacher reflection. We have no qualms about sharing with our peers when things fail”. (SF1: 26/06/08)

A supportive administration was also given prominence, with many stressing the commitment and dedication of their school principal. Finally, the importance of the parent-teacher relationship was emphasised, especially for parents of children with diverse needs:

“...parents and teachers really have to work together. They have to be on the same page. Parents have to be really honest with you about what they want and why they’ve chosen inclusive education”. (PF1: 02/07/08)

Professional development and experience.

Many participants acknowledged the importance of professional development. Two participants reported undertaking professional reading or further study in the area. Participants described the concept of professional development as an ongoing process and the need to be receptive of new ideas:

“The challenge is to make sure you keep trying new things and don’t just sit back on the same ones”. (SF1: 26/06/08)

Teaching experience was another contributing factor to participants’ practice, as illustrated here,

“I get caught out less than I used to because of experience”. (SF1: 26/06/08)

Discussion

This study identified specific instructional strategies (the ‘what’) alongside various enablers (the ‘how’) and teacher attitudes (the ‘why’) that supported such practices. On this basis, a proposed model of an inclusive educator was developed to represent the major categories that had arisen from the analysis of the observational and interview data sets (see Figure 1).

INSERT Figure 1 HERE

The instructional strategies (the ‘what’) employed are, in the main, consistent with well-evaluated and researched strategies advocated by Hattie (2009). All teachers used feedback, elements of direct instruction, questioning, and cooperative learning strategies. Several instructional strategies were used informally by teachers such as peer tutoring and cooperative learning. This is consistent with North American research indicating that more than 75% of surveyed teachers use an eclectic approach to instructional strategy use (Snider & Roehl, 2007). Similarly, Smith (2009) found that a

move to classroom differentiation has encouraged a greater mix of instructional strategies.

Strategies such as reciprocal teaching, mastery learning, worked examples, and metacognitive instruction were not observed or mentioned by participants. It is not possible, from the data collected, to conclude why these strategies were not employed. However, one possible reason is a lack of in-service training or support in these specific strategies.

Interviews provided further insight into the ‘how’ or in other words the enablers for inclusive practice, with specific reference to the effective use of support systems, collaborating with others, professional development opportunities, and teaching experience. The findings are consistent with previous studies which underline the importance of collaboration for successful inclusion (Cesar & Santos, 2006; Downing & Peckham-Hardin, 2007; Flem et al., 2004). Collaboration involving staff, specialists, consultants, and parents of students has been regarded as a critical element in the implementation, maintenance, and ongoing development of inclusive educational environments and the data generally support these findings.

At the centre of the proposed model of inclusive practice is teacher attitude. All participants spoke positively about inclusive education, and articulated attitudes about the principles of inclusion and equity. While numerous studies have highlighted teacher attitudes as a key contributing factor to building inclusive environments (Angelides, 2007; Downing & Peckham-Hardin, 2007), the teaching practice of these participants was not observed. Thus, the combination of observation and interview data presented

here allow us to make some suggestions as to the interrelationship between teacher attitude and practice. The proposed model of an inclusive educator depicts four key features:

- i. The teacher is central to the practice of inclusive education, but is also influenced by others and in turn, influences others. More specifically, teachers' attitudes are at the hub of the model and provide an indication of 'why' teachers are motivated to create an inclusive environment.
- ii. The 'how' assists teachers to produce the 'what' and shapes teacher attitudes. The 'how' refers to the support systems that assist teachers to create an inclusive environment.
- iii. In turn, the 'what' or the instructional strategies employed, is affected by teachers' attitudes.
- iv. Collectively, these features impact on student learning.

Even though all the participants were strong advocates for inclusion, some identified challenges when teaching inclusively. This current study confirms that nominated effective teachers acknowledge barriers to inclusion, but they also appear to maintain a strong focus on finding solutions to overcome these barriers.

Exploring the effective practices of inclusive educators has the potential to inform the training of both pre-service and classroom teachers. Given that the study identified

strategies rooted in the classroom, the data presented here can be usefully applied by pre- and in-service teachers as well as those providing ongoing professional development activities. The study demonstrates that some strategies, such as providing feedback to students and direct instruction, are accessible to teachers, whilst others, namely reciprocal teaching, are not so readily picked up and perhaps require greater support and/or exposure. The various support systems that teachers find useful, including collaborations and professional development activities, need to be actively encouraged.

The results of this study are not necessarily able to be generalised to the wider population, given the limited nature of the participant pool. Additionally, those nominated as effective teachers were identified by only one stakeholder. No explicit criteria were provided to principals as to what an effective inclusive educator might do. Future studies may attempt to address this issue by compiling explicit criteria from the evidence-based literature and/or elicit other stakeholders' nominations, including students and parents. Further classroom observations would have permitted a more comprehensive and detailed monitoring of the strategies being employed by the participants. Nevertheless, Creswell (2008) acknowledges the difficulty of replicating classroom observations and the fact that observations are dependent on unique contextual factors such as researcher rapport.

The three components of the model in Figure 1 represent the interrelated components of the 'how', the 'why' and the 'what' of an inclusive educator. On the basis of the observational and interview data collected here, we propose that teacher attitude is the means by which teachers are motivated to establish inclusive teaching practices when

certain support systems are in place. We place attitude at the centre of the model because we believe that it is this quality and passion towards inclusivity that motivates teachers to employ certain strategies. Fertile ground has now been laid for future investigation so that more detailed information about effective teachers in inclusive classrooms can be amassed.

References

- Ainscow, M., Howes, A., Farrell, P., & Frankham, J. (2003). Making sense of the development of inclusive practices. *European Journal of Special Needs Education, 18*(2), 227-242. doi:10.1080/0885625032000079005
- Angelides, P. (2007). Patterns of inclusive education through the practice of student teachers. *International Journal of Inclusive Education, 12*(3), 317-329. doi:10.1080/13603110601103253
- Ary, D., Jacobs, L.C., Razavieh, A., & Sorensen, C. (2006). *Introduction to research in education* (7th ed.). Belmont, CA: Thomson Wadsworth.
- Ashman, A., & Elkins, J. (Eds). (2005). *Educating children with diverse abilities* (2nd ed.). Frenchs Forest, NSW: Pearson Education.
- Berg, B.L. (2004). *Qualitative research methods for the social science*. Boston, MA: Pearson.
- Carter, M., Stephenson, J., & Strnadová, I. (2011). Reported prevalence by Australian special educators of evidence-based instructional practices. *Australasian Journal of Special Education, 35*(1), 47-60. doi:10.1375/ajse.35.1.47
- Cesar, M., & Santos, N. (2006). From exclusion to inclusion: Collaborative work contributions to more inclusive settings. *European Journal of Psychology of Education, 21*(3), 333-346. doi:10.1007/BF03173420
- Creswell, J.W. (2008). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson Education.
- Dempsey, I. (2009). Characteristics of Australian teachers of young children with special needs and their relationship with their students. *Australasian Journal of Special Education, 33*(1), 60-71. doi:10.1375/ajse.33.1.60

- Downing, J.E., & Peckham-Hardin, K.D. (2007). Inclusive education: What makes it a good education for students with moderate to severe disabilities? *Research and Practice for Persons with Severe Disabilities*, 32(1), 16-30. Retrieved from <http://tash.org/about/publications/>
- Elton, L. (1998). Dimensions of excellence in university teaching, *International Journal for Academic Development* 3(1), 3–11.
- Flem, A., Moen, T., & Gudmunudsdottir, S. (2004). Towards inclusive schools: A study of inclusive education in practice. *European Journal of Special Needs Education*, 19(1), 85-98. doi:10.1080/10885625032000167160
- Foreman, P. (2008). *Inclusion in action* (2nd ed.). South Melbourne, Vic.: Cengage Learning Australia.
- Forlin, C., Keen, M., & Barrett, E. (2008). The concerns of mainstream teachers: Coping with inclusivity in an Australian context. *International Journal of Disability, Development and Education*, 55(3), 251-264. doi:10.1080/10349120802268396
- Hattie, J.A.C. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.
- Hattie, J.A.C., & Timperley, (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112. doi:10.3102/003465430298487
- Jacob, B.A., & Lefgren, L. (2008). Can principals identify effective teachers? Evidence on subjective performance evaluation in education. *Journal of Labor Economics*, 26(1), 101-136. doi:10.1086/522974
- Johnson, D.W., & Johnson, R. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher*, 38(5), 365-379. doi:10.3102/0013189X09339057

- King, I.C. (2003). Examining middle school inclusion classrooms through the lens of learner-centered principles. *Theory into Practice*, 42(2), 151-158. doi:10.1207/s15430421tip4202_9
- Kitto, S.C., Chesters, J., & Grbich, C. (2008). Quality in qualitative research. *Medical Journal of Australia*, 188(4), 243-246.
- Kulik, C., Kulik, J., & Bangert-Drowns, R. (1990). Effectiveness of mastery learning programs: A meta-analysis. *Review of Educational Research*, 60(2), 265-306. doi:10.3102/00346543060002265
- New South Wales Parliament Legislative Council (2010). *The provision of education to students with a disability or special needs: Final report*. Sydney: Author. Retrieved from <http://www.parliament.nsw.gov.au/prod/web/common/nsf/v3home>
- Patton, M. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Pearce, M. (2009). The inclusive secondary school teacher in Australia. *International Journal of Whole Schooling*, 5(2), 1-15. Retrieved from http://www.whole schooling. net/Journal_of_Whole_Schooling/IJWSIndex.html
- Pearce, M. (2009). The inclusive secondary school teacher in Australia. *International Journal of Whole Schooling*, 5(2), 1-15.
- Ryndak, D.L., Jackson, L., & Billingsley, F. (2000). Defining school inclusion for students with moderate to severe disabilities: What do experts say? *Exceptionality*, 8(2), 101-116. doi:10.1207/S15327035EX0802_2
- Slater, W.H., & Horstman, F.R. (2002). Teaching reading and writing to struggling middle school and high school students: The case for reciprocal teaching. *Preventing School Failure*, 46(4), 163-166. doi:10.1080/10459880209604416

- Slavin, R.E., Lake, C, & Groff, C. (2009). Effective programs in middle and high school mathematics: A best-evidence synthesis. *Review of Educational Research*, 79(2), 839-911. doi:10.3102/0034654308330968
- Smith, S.R. (2009). A dynamic ecological framework for differentiating the primary curriculum. *Gifted and Talented International*, 24(2), 9-20.
- Snider, V.E., & Roehl, R. (2007). Teachers' beliefs about pedagogy and related issues. *Psychology in the Schools*, 44(8), 873-886. doi:10.1002/pits.20272
- Spencer, V.G., Scruggs, T.E., & Mastropieri, M.A. (2003). Content area learning in middle school social studies classrooms and students with emotional or behavioral disorders: A comparison of strategies. *Behavioral Disorders*, 28(2), 77-93.
- Udvari-Solner, A. (1996). Theoretical influences on the establishment of inclusive practices. *Cambridge Journal of Education*, 26(1), 101-121. doi:10.1080/0305764960260108
- United Nations Educational, Scientific and Cultural Organisation (1994). *Salamanca Statement and Framework for Action on Special Educational Needs*. Paris: United Nations.
- Villa, R.A., Thousand, J.S, Nevin, A., & Liston, A. (2005). Successful inclusive practices in secondary and middle schools. *American Secondary Education*, 33(3), 33-50. Retrieved from <http://www.ashland.edu/ase>

Table 1

Teacher strategies and their effect size (Adapted from Hattie, 2009)

Strategy	Effect size
Reciprocal teaching	.74
Feedback	.73
Metacognitive instruction	.69
Direct instruction	.59
Mastery learning	.58
Worked examples	.57
Peer tutoring	.55
Questioning	.46
Cooperative learning	.41
Audio/visual methods	.22

Table 2

Participant demographics

Teacher code	Pseudonym	Years of school teaching experience	Current class or grade taught	Highest qualification
PF1	Mrs Taylor	19	Year 2	Graduate Diploma
PF2	Ms Collins	30	Kindergarten	Diploma of Teaching
SF1	Mrs Roberts	26	Year 10 & 11 Drama	Masters degree
SF2	Ms Hall	28	Year 11 English	Graduate Diploma
SF3	Ms Jones	20	Year 10 Visual Arts	Graduate Diploma
SM1	Mr Smith	7	Year 11 Metalwork	Bachelor of Education

Key: P = Primary
 S = Secondary
 F = Female
 M = Male

Table 3
Participant use of instructional strategies

Strategy	PF1	PF2	SF1	SF2	SF3	SM1	Total
Reciprocal teaching							0
Feedback	✓	✓	✓	✓	✓	✓	6
Metacognitive instruction							0
Direct instruction	✓	✓	✓	✓	✓	✓	6
Mastery learning							0
Worked examples			✓				1
Peer tutoring		✓		✓	✓		3
Questioning	✓	✓	✓	✓	✓	✓	6
Cooperative learning	✓	✓	✓	✓	✓	✓	6
Audio/visual methods	✓	✓		✓			3

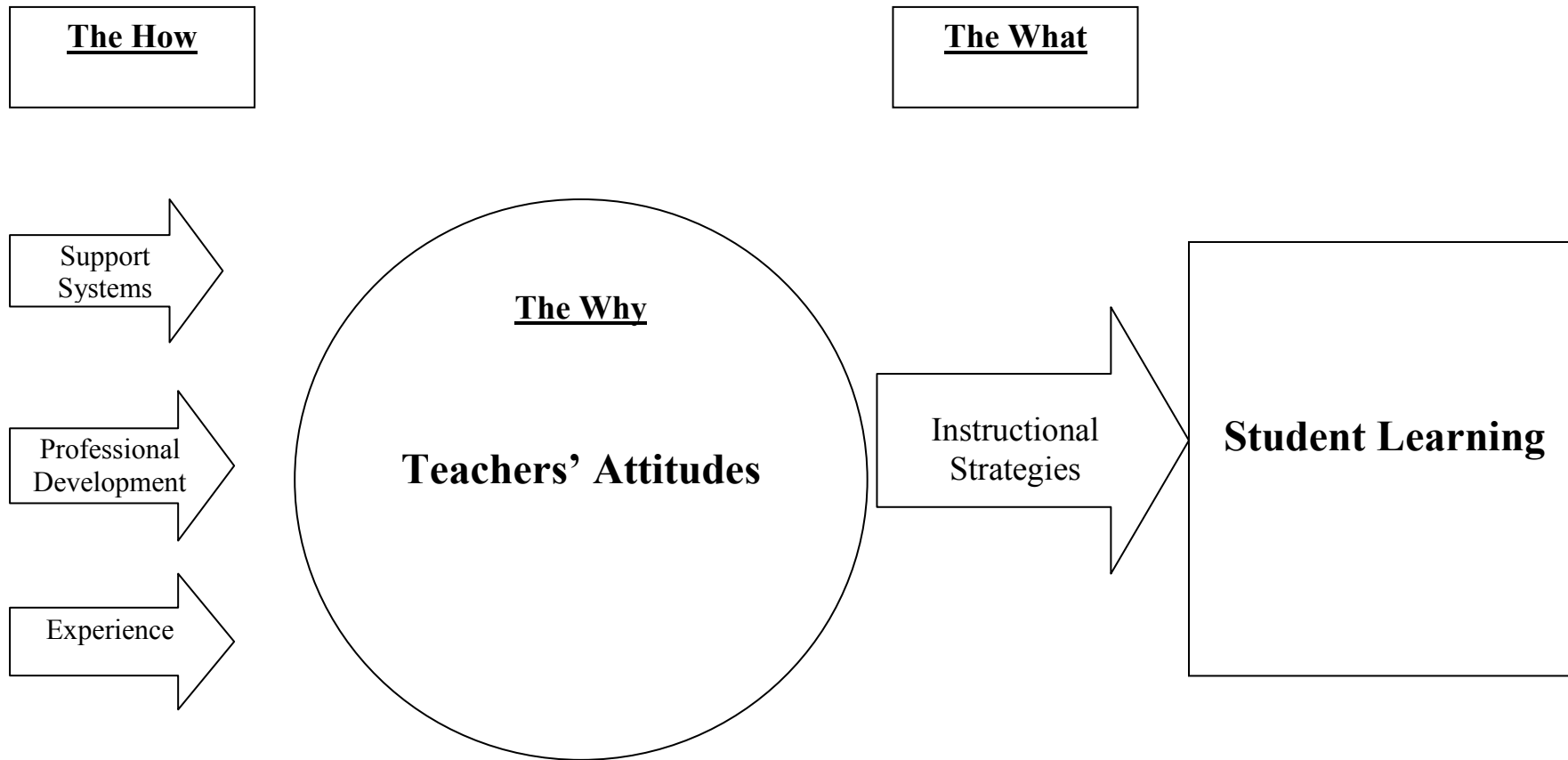


Figure 1. Proposed model of an inclusive educator