

## Doing it by the numbers? Educational research and teacher education

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Although there is significant interest in and productivity among teacher education researchers, and considerable regard for Australian education research more generally (ARC 2008), Teacher Education as a research field is generally not well-regarded or well developed in Australia. Research efforts and effects in this particular area of education research consequently are diffuse. It is significant that AARE itself has only recently included a teacher education Special Interest Group (SIG). A survey of presentations at our own and other professional conferences, for instance, suggests there is a preponderance of small-scale studies that are not cumulatively knowledge-building or collectively coherent as a body of research that could function as a platform on which to build a strong research field. As a field of professional preparation, too, Australian teacher education is repeatedly positioned as inadequate in both public and professional commentary. Many institutions report increasing difficulty in attracting high-quality candidates to some initial teacher education programs, and there is public awareness of the lower entry requirements for teaching, compared with other, more prestigious professions. The Federal government's move towards national accreditation of initial teacher education programs serves to reinforce a general deficiency view of teacher education, and is suggestive of the attempted imposition of a standardised teaching professional who fits a prescribed, colour-by-numbers template of the Graduate Teacher. Yet it also establishes the need for robust theoretical re-conceptualisation of research-based teacher education practice, curriculum and pedagogy that will support the next generation of teachers (and teacher educators) as they deal with the effects of increasingly complex and diverse educational spaces.

In 2009, as the incoming president of AARE, I was asked to write the foreword to the splendid collection of AARE Presidential Addresses produced by Bob Lingard and Trevor Gale. In reading through this collection, I was surprised at how few

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former Presidents had actually directed attention to teacher education in their talks. When I was elected President in 2008, I already knew that I would be talking to AARE about teacher education in my presidential address, because at that time the effects of what had been an unremitting assault on teacher educators by media, politicians and our own institutions over the preceding five years had just reached its climax, with the publication of the 2007 *Top of The Class* report. Indeed, at the time, the findings and recommendations of that report were beginning to dampen at least, public criticism and hysteria about the allegedly poor quality, poor provision, poor outcomes, and urgent need to reform initial teacher education. *Top of the Class* (Hartsuyker, 2007) found, in fact, that teacher education in Australia, while not ideal, was certainly *not* ‘terrible’, and for teacher education to be improved would require that it be funded more appropriately and have the benefit of national education *research* funding to inform and support ongoing innovation and renewal.

The response to this report from government, of course, was to attend to the concerns of the more voluble critics in the public arena, who claimed that teacher education graduates lacked practical skills for teaching. They moved simply to increase the number of ‘days in schools’ that ITE candidates were required to experience, under a program of Improving the Practicum Component of Teacher Education. This was to provide funding to universities for a period of four years, and involved pushing teacher education providers to organise up to 120 days of Practicum for pre-service teachers. More days in schools, they argued, would produce better teachers—it was simple. There was nothing at all significant in such numbers, and there has never been research to indicate how many days ‘practice’ is optimum for student teachers: there was only a belief in a bureaucratic office that 120 is better than 80, and twice as good as 60.

Teacher educators around Australia had argued strongly that this increase in the ‘number of days’ was an unrealistic requirement. Deans and directors of professional experience in schools of education had argued that finding placements for even the existing numbers of practicum days had become increasingly difficult—indeed, almost impossible in some locations. But even strong anecdotal evidence and case arguments counted for nothing. On the surface, the large numbers of graduating students from teacher education programs seemed to contradict these claims, so that the arguments were interpreted as whinging, or resistance to change. It was not until teacher educators provided a set of numbers that Government could understand, that it was forced to admit that this was an impossible requirement to place on universities. The numbers could not be argued with, it seemed, and they certainly made a case for the managers at the Department of Education, Employment and Workplace Relations (DEEWR) to be able to reconsider this policy decision, and reverse it very quickly. As practicum takes place in schools and other settings, an increase to this number of days would mean, as Marea Nicholson’s (2007) study among the 12 universities in the NSW Teacher Education Council indicated, that almost every second teacher in every NSW government school would need to take a Prac Student each year, including Principals and others in administrative positions.

After setting out the results of a survey of placement records around NSW universities, indicating the number of student teachers and the number of placement

days that were currently required and would then be needed if the increases required by IPCTE went ahead, Nicholson presented the numbers that would be necessary under the new requirements.

### Current number of days required for field experience

- Number of **days** in field placements in schools in ‘Sydney’ is 249,396 (234,506 without Early Childhood).
- Number of **days** in field placements in schools in ‘Rural/Remote’ is 90,067 (81,007 without Early Childhood).
- Number of **days** in field placements in schools in ‘Other’ is 91,182 (85,897 without Early Childhood).
- Total **days** are 430 645 (401,410 without Early Childhood).

The significance of these placement requirements on schools is most evident when consideration is given to the total number of teachers and schools in NSW (Table 1).

### Proposed increases in days for field experience

If students are expected to increase their field experience days from 80 to 120 days over a 4 year program (from 45 to 60 for a 1 or 2 year program), at a rate of an additional 10 days increase per student per year, the increase is 164–170 days. This represents a 40.89% increase in the current number of days in school. If, however, the additional days cannot be added to existing placements (e.g. university teaching calendar, school holidays) there is a significant increase in the average number of students placed in a school (from 5 students to 10 per school). There is also an increase from 1 in 5 teachers to 1 in 2.5 teachers being required to take a student on field placement (Table 2).

Nikolas Rose provides a useful explanation of why these figures worked as a form of argument to drive policy change, where expert testimony from authoritative teacher education experts did not. He writes that where there is ‘mistrust of

**Table 1** Numbers of schools and teachers (2005–2006)

Category (NSW)	Schools	Teachers
Government	2,246	58,528
Catholic education commission	585	13,029
Association of independent schools	428	12,000
Total	3,259	83,557

Sources NSW Department of Education and Training 2006 Annual Report, [www.schools.nsw.edu.au](http://www.schools.nsw.edu.au), [www.ccc.nsw.edu.au](http://www.ccc.nsw.edu.au), [www.ais.nsw.edu.au](http://www.ais.nsw.edu.au)

**Table 2** Comparison of rates of placements per teacher and school

	Current placement ratio	Proposed placement ratio
	45 days for 1–2 year programs	60 days for 1–2 year programs
	80 days for 4 year program	120 days for 4 years programs
		1 additional placement per student per year
No. of schools = 3,259	5.03 students per school <sup>a</sup>	10 students per school <sup>a</sup>
No. of teachers = 83,557	1 teacher <sup>b</sup> in 5 needs to take a student each year	1 teacher in every 2.5 needs to take a student each year

Nicholson (2007, p. 7)

<sup>a</sup> This is an average across all schools, regardless of size

<sup>b</sup> This figure is based on all teachers being included (e.g. non teaching executive, beginning teachers)

authorities... where experts are the target of suspicion and their claims are greeted with skepticism by politicians and distrusted by public opinion', numbers are 'resorted to in order to settle or diminish conflicts in a contested space of weak authority' (Rose 2003, p. 208). In quoting Rose in this regard, Peter Taubman argued that:

It is hard to dispute that the work of teachers, teacher educators, and educators in general is often greeted with skepticism, suspicion and disdain. The bottom line, the authority of science, and the exactitude of numbers seem to offer critics and criticised alike a solution to such problems. We are quite literally teaching by numbers (Taubman 2009, p. 24).

In *The Order of Things*, Foucault (1970) also had a little to say about numbers, and the value of what he called *mathesis* and *taxinomia* for the project of a general science of order. He talked about this project as a classical ideal, by which (hu)mankind could come to know and thus have power over the world and its workings. He talked about the ways and means, the 'tools' that we would need to bring about this ordering of the world, to know it, and be able to control and predict its workings, as being of two sorts—numbers and words, algebra and signs. Only 'things rendered simple' can be ordered mathematically, he argued: and thus rendered, of course, they become, and they are made, positive representations of truth. Whether 'single number' scores of research productivity, or the precise numerical point along the scale of predefined possibility in a NAPLAN test achieved by an individual child—complex things are more easily understood when they are rendered simply into numbers. Or such was the dream of reason.

More complex ideas and phenonema, however, would always exceed and confound simplicity. These must be rendered knowable by means of 'the taxonomy', the grid of specifications that allows us to understand and order the differences between things as simply as they allow. For Foucault:

*Taxinomia* also implies a certain continuum of things (a non-discontinuum, a plenitude of being and a certain power of the imagination that renders apparent what is not, but makes possible, by this very fact, the revelation of that

continuity, and the possibility of a science of empirical orders requires, therefore, an analysis of knowledge—an analysis that must show how the hidden (and as it were confused) continuity of being can be reconstituted by means of the temporal connection provided by discontinuous representations (Foucault 1970, p. 73).

The small, unfunded, unpublished study that Nicholson completed for the NSW Teacher Education Council (TEC) may well have had more real impact on teacher education policy and practice than much other research in recent years. It certainly proved very powerful in convincing Government of one fairly simple but clearly not so obvious truth about the conditions of teacher education. With this example, I want to highlight the importance of *having* these numbers to argue our case, as well as the importance of what they mean. Data, ‘evidence’ of this sort, readily available, and continually updated, continues to be needed, as the large Australian Learning and Teaching Council (ALTC) scoping study for a data repository for teacher education research, completed for the Deans of Education (Willis and Preston 2007), indicates. Education researchers will continue to support the efforts of teacher education in this fight for the numbers—particularly as Government has provided no subsequent support for this work, and the scoping study has not been used to scaffold the development of the proposed repository, as had been envisaged. Faculties and schools of education continually struggle against rendering the complexity of what they do ‘simple enough’ to be understood as numerical truth.

However, there are two other ways in which teacher education is always, and everywhere, ‘doing it by the numbers’, and both of these have considerable impact on the practice and direction of educational research in this country. The first of these has to do with scale, and the fact that teacher education literally does what it does with numbers that are far greater than necessary or desirable for the field and for its sustainability. I will come back to this point, but need to note here that I am using ‘sustainability’ here in Derek Owens’ (2001) sense of sustainability, as a matter of intergenerational justice: ‘adjusting our current behaviour so that it causes the least amount of harm to future generations’ (Owens 2001, p. xi). The second has to do with the more metaphorical application, in terms of Foucault’s *taxinomia*, where teacher education—something that cannot be rendered simple—is analysed mathematically, and becomes knowable in terms of a grid of specifications. Foucault argued that such scientific analyses of complex behaviours or phenomena ‘always carry within themselves the project, however remote it may be, of an exhaustive ordering of the world... they are always directed, too, towards the discovery of simple elements and their progressive combination; and at their centre they form a table on which knowledge is displayed in a system contemporary with itself’ (Foucault 1970, p. 74). The table of course then becomes and stands for the knowledge itself, and its power lies in the order and arrangement of complexity rendered simple:

This kind of knowledge involves the allotting of a sign to all that our representation can present us with: perceptions, thoughts, desires; these signs must have a value as distinct sub-regions, all separated from one another by assignable characteristics; in this way they authorize the establishment of a

simultaneous system according to which the representations express their proximity and their distance, their adjacency and their separateness—and, therefore, the network, which, outside chronology, makes patent their kinship and reinstates their relations of order within a permanent area. In this manner the table of identities and differences may be drawn up (Foucault 1970, p. 73).

When standards ‘stand in’ for knowledge about teaching, and when teacher education graduates are required to demonstrate a capacity to teach ‘in the language of the standards’, they are demonstrating their capacity to ‘join the dots.’ Moving across the taxonomy of standard sets, passing through each one and connecting them together, they will produce a conventionally recognisable representation of a teacher. Like a ‘colour by numbers’ approach to painting, this will often produce a pretty good representation of the model on which it is based, but it becomes metaphorical death for the field of teacher education as an intellectual endeavour.

This is the lesson that teacher educators *and* educational researchers cannot afford to ignore, in terms of the potential threat it poses to faculties and schools of education around the nation. My strong sense, paradoxically, though, is that we cannot afford to ignore the opportunity it provides us as well. Overseas reports such as Arthur Levine’s (2006) *Educating School Teachers* have been read with interest in government circles, and the effects are being felt in Australian universities already, particularly in the open welcome that programs such as ‘Teach for Australia’ and more recently ‘Teach Next’ have received in this country. These new approaches to teacher education closely emulate the ‘best practice’ that Levine, for instance, recommends, including being conducted only in prestigious institutions, whose high admission standards ‘guarantee’ high-quality exit standards.

This context broadly frames my discussion, here, of the uneasy relationship between teacher education and educational research, and the importance of the need for educational researchers to understand and contribute to teacher education as it rethinks itself as a research *and* practice field at the present time.

It is the lived reality of teacher educators that, with the existing lack of status in the academy, teacher education research is regularly dismissed and devalued by others, including many other educational researchers. It has emerged as the poor cousin of more ‘innovative’ and theoretically mature *education(al)* research, particularly those forms of research that are done *on*, and *about* education, rather than *by* educators. Teacher education research remains susceptible of claims of parochialism, critiques of theoretical vacuity, and an inward-looking focus on ‘small r’ research activity that does not traditionally make a difference to the very people it claims to serve: teachers, schools and students (Murray et al. 2008). In what follows, I explore some of the reasons behind this state of affairs, to argue that teacher education (and teacher education research) need to be supported, to grow far stronger at the current time if they are to survive in the academy and in the academic field at all. And I hope I will convince AARE that in the end, somewhat ironically, teacher education is also—paradoxically—more powerfully positioned at this point in time than it has been in decades. This power comes only through our capacity to resist, to say no to moves to increase numbers in initial teacher education courses as a means of solving the ‘problem’ that the Bradley Review has posed for university

managers: what to do with increased numbers of low SES students entering the academy (by definition therefore without economic capital, but often without also the cultural capital that best prepares them for study). This is the issue of scale.

### **A number of stories**

***Story 1** In early 1998, the entire Year 12 of one rural western high school was recommended by their school Principal for early entry to a teacher education program at a regional university in 1999. The University, cash-strapped already at this time by the lack of federal funding indexation and needing to raise its own revenue to maintain infrastructure, staffing levels, research output, and therefore status, accepted these students. Subsequent examination of their UAI scores by concerned staff indicated that these ranged from under 20 to almost 60. The advertised University cut-off score at that time was a University Admission Index (UAI) of 70. This advertised score did not change. No additional preparation was required of the students, but significant support was provided by the Faculty for their literacy skills, once they entered. This was not funded by the University, however, but by individual staff members who had sought outside funding from Committee for University Teaching and Staff Development (CUTSD) (an earlier iteration of the ALTC) to develop an online interactive academic literacy program.*

*Staff themselves tested the students on entry, and a large group of staff members met to mark the initial academic literacy test during Orientation Week. Students were required to: access the library; find a chapter in one of a range of recommended books on the shelf (these had been placed on closed reserve with a maximum of 2 hours borrowing time for the exercise); read (or photocopy) this article; take its details; discuss it and another journal article, that had been provided, with at least one other student; write a 200–300 word response to a general review question about the work of teachers, based both on their own observational experience and on their reading of both these papers; and reference them in the style modelled in the question. There were very few students (less than 5%) whose writing showed that they could perform all of these academic tasks. Over 30% of students were found to be unable to demonstrate a capacity to paraphrase the content of the articles, to express their own thoughts or those of the other writers in grammatically formed and correctly spelt language, to indicate quotations from the set texts, or copy a referencing format from the assignment question. With this information, staff across the course made significant changes to the program. They made a request to the Faculty to require students to attend support workshops, provided by specialised literacy tutors hired under the CUTSD funding. While I do not know how many of this particular sub-group remained in the program, I do know that less than 10% of the entire cohort actually met the advertised cut-off for entry to teacher education.*

My concern here is not that the University took in this group of underprepared and poorly-guided students, but that, like the schools they had come from, even though it tried hard, it failed to support them adequately. It could not even require

them to attend the additional support sessions that were provided. My concern is that staff continued to find ways to pass most of them who managed to submit assignments. My concern is not really with the aspirations and actions of the Principal, who 'glad handed' on his under-prepared students to become primary teachers; and it is not with the hard-working and under-resourced university staff who tried hard to set standards and had no structures to deal with the fact that student work that stood out from the rest so much that it needed to be given Distinction or High Distinction grades may not have merited even a credit mark at another institution.

My real concern is rather with the cynical approach of the university management system that considered 'primary teaching' to be an appropriate field in which to take in and over-enrol masses of under-qualified students. My concern is with university reporting standards that compelled staff to fear 'attrition' as an indicator of their own incapacity to teach well, and thus ensured that as many students as possible were retained in courses and graduated, without consideration of the injustices, of the effects of these actions on the children of the state. My concern is that many of the management staff who made these decisions did not care, and did not need to care, because they could afford to send their own children to private schools, which generally had the capacity to attract a wider range of potential staff. In many respects, I claim that these actions by the university could be seen as a misrepresentation of entry standards published in the public domain, and that they could also be seen as complicit in defrauding the poor (and in this case, rural) citizens of the state, who could be forgiven for believing the university's advertising that primary teacher education had a certain minimum standard for entry. These people, who have no 'choice' about who teaches their children, can be seen as victims of an inter-generational injustice inflicted on them, as vulnerable and powerless in this regard.

Yet, of course, some of these people knew that their child, often the first in the family to consider a university education, had not actually achieved the entry score that was advertised by the university. They may have been pleased that the offer of a teacher education place came through so early in Year 12 that their child could still afford to continue to take paid work through their final year of school, and not have to concentrate too much on their studies, and they were proud that their child had 'got into uni', even though the UAI or Australian Tertiary Admission Rank (ATAR) score they finally received was far different to that advertised in the paper. And they possibly believed that they were unique in this position, that all the other students in the course had achieved a higher standard of secondary education, and that their child would benefit from the interaction with them all, accessing a profession that would bring upward social mobility.

This raft of concerns underpins my argument here: that students unprepared for study, unsupported in study, and under-resourced by the universities that take them in, need a better form of teacher education than what we currently offer. They do not need courses that produce large numbers of 'paint by numbers', 'join the dots', standardised, mass-produced teachers, all with the same stamp of approval from a national board of teacher accreditation. And yet—here is the paradox—I also believe that teacher education needs the external push towards accountability, in



order to force our institutional leaders to allow the results of critical self appraisal to inform the renewal of much of its current practice. It appears that this will only be motivated by such an external driver—because our history has shown that the low status of teacher education within the university means that, with a few very telling exceptions, we have been incapable of arguing for and resourcing such renewal on our own.

Arguing for this position is not easy in my own back yard, of course, and it is always easier to effect an act of Brechtian ‘estrangement’ by thinking comparatively, and drawing our own conclusions about ourselves in relation to others. For this reason I turn now to a piece of overseas research on teacher education that may well be the precursor to the sort of research that I suspect our own Government, through the Australian Institute for Teaching and School Leadership (AITSL), may well wish to carry out. This is the *Educating School Teachers* report by Arthur Levine (2006), who was President of Teachers College, Columbia University at the time of the study. This report was based on surveys of deans, teacher educators, graduates and school principals around the US, and a series of site visits to 28 colleges with teacher education programs. It concluded that teacher education is a ‘chaotic’ field, largely lacking in uniform standards and accountability, and in need of drastic and immediate reform.

The titles of Levine’s chapters give us some indication of the tenor of the report. Chapters on: ‘Teacher Education in Flux’, ‘The Pursuit of Irrelevance’, ‘Inadequate Preparation’, ‘A Curriculum in Disarray’, ‘A Disconnected Faculty’, ‘Low Admission Standards’, ‘Insufficient Quality Control’, and ‘Disparities in Institutional Quality’<sup>1</sup>—each tell a story that teacher educators in Australia recognise, resist and refute as we talk among ourselves... reluctant to admit that our imperial clothes are starting to fray, and that people are talking about us.

**Story 2** *At a recent meeting inside my own university, a discussion was taking place about a new TAFE Vocational Education and Training (TVET)/University pathway proposal that would allow ‘high achieving’ students at a local low socio-economic status (SES) secondary school to enrol in two first-year university subjects while still at school. There are a number of reasons for this proposal, including raising aspirations among this target group of students, allowing them a greater chance of success at university study by reason of having to study fewer subjects (and thus by implication being able to take on more paid work during their first year of study, due to necessity—being low SES). It is also, quite frankly, paving the way for high-achieving students to choose to enrol at their local university rather than taking up an offer from a more prestigious metropolitan institution.*

*The proposal was developed over many months of careful negotiation between staff in the Faculty of Education, teaching and careers staff at the local senior college, the local TAFE, the Department of Education and Training (DET), and the Board of Studies. Various divisions, such as student admin and student services, within the University, were also invited to comment and provide advice and feedback. The director of one of these administrative centres began his feedback*

<sup>1</sup> These lead into the final chapters on: ‘Exemplary Teacher Education Programs’ and ‘Educating the Teachers America Needs.’

with some well-considered advice about high school students accelerating into university study. Pointing to the well-known 'Distinction courses' that several NSW universities have run for high achieving students, in astronomy, philosophy, physics etc., he cautioned us with the words: 'You're suggesting education subjects here, you know! There is a real danger that high-achieving students will actually be turned away from the university if you give them education subjects! They are bright people, they need something that will challenge and extend them!'

His point was clear. Academics and others outside of this field perceive the content of education subjects to be intellectually less demanding and inferior to that in other fields.

This lack of status for education, and teacher education in particular, remains at the heart of our challenge as educational researchers. According to Levine's report (2006, p. 23): 'From their inception, America's schools of education have engaged in a continuing quest to gain acceptance in the academy.' He further differentiates and classifies teacher education providers according to their defined status as institutions in terms of Undergraduate only ('Baccalaureat Granting') Colleges, Masters Granting Universities, and Doctorate Granting Universities). Thirty-four percent of teachers graduate from the most prestigious universities, while 54% of teachers graduate from the Masters Granting institutions, and just 13% from the undergraduate-only colleges, which tend to be small institutions mostly offering liberal arts degrees.

So when he also highlights the claim that: 'a majority of teachers are prepared at the education schools with the lowest admission standards and least accomplished professors' (2006, p. 26), he does not mention the *professional* accomplishments needed to educate teachers: what he is pointing to here is *research* status. And as Ivor Goodson argues in this respect, the history of struggle for the professionalisation of teaching has not had the outcomes that education academics and theoreticians desired:

Schools of education may have entered into a devil's bargain when they entered the university milieu. The result was that their mission changed from being primarily concerned with matters central to the practice of schooling, towards issues of status passage through more conventional university scholarship (Goodson 2003, p. 12).

Goodson is worth quoting further on this issue, as he notes that schools of education have rarely succeeded in 'satisfying the scholarly norms of their campus letters and science colleagues', and 'the more forcefully they have rowed toward the shores of scholarly research, the more distant they have become from the public schools they are duty bound to serve'. He is quoting Clifford and Guthrie (1988) here, who articulate the parallel consideration, that when education research has addressed issues of teaching, 'systematic efforts at addressing the applied problems of public schools have placed schools of education at risk on their own campuses' (Goodson 2003, p. 12). Under such duress, of course, faculties and schools of education have constructed their own hierarchy of value, their own taxonomies of distinction—and have often placed teacher education at the bottom, with the least status of all.

To illustrate, I give you Story 3.

**Story 3** *Some years ago, as a new head of school at a regional campus, where our work is primarily focused on initial teacher education, I attempted to infuse what I experienced as a lingering ‘college culture’ by inviting friends and colleagues from more prestigious metropolitan universities to visit us, whenever I saw possibilities for some of our younger staff to connect, place their own work and interests, and benefit from intellectual exchange. I thank all of those who made the trip. One time, a number of colleagues came for a full day workshop on theory and methodologies related to subjectivity and gender. At the end of a fabulous day of sharing presentations and really critical engagement with the work of several of the participants, more and less experienced, the conversation developed into how this work might get published and out into reputable and high quality publication outlets. A suggestion was made that a national teacher education journal had been publishing some interesting things recently, and that might be a good venue to try. One of the visitors, a young and very promising academic—one who was obviously a good bet, because they have since fulfilled all that promise—actually guffawed, chortling with all the assurance of youth: ‘**Teacher education?** Who would be seen **dead** in a teacher education journal?’*

The distinction Goodson (2003) was pointing to has been played out within our own Faculties—the theorists and the practitioners, educational researchers and ‘teacher education researchers’ are in different camps, and the status of educational research has been seen to be tainted by association with that ‘less intellectual, practical, applied, classroom-focused’ research that is seen to be ‘teacher education’ research.

Research efforts and effects in this particular area of education research certainly are diffuse. A survey of presentations at our professional conferences, for instance, suggests there is a preponderance of small-scale studies that are not cumulatively knowledge-building nor collectively coherent as a body of research. They do not function as a platform for building a strong research field. As noted above, a recent review of teacher education research (Murray et al. 2008) concluded that Australian research in the field of teacher education is predominantly fragmentary, non-cumulative and parochial, with little longitudinal, cumulative or meta-analytic work to produce oversight and clear direction for policy and practice. What I note here is the challenge this gives us to reposition the field of teacher education research and its relationship to policy and practice, acknowledging the areas for building rather than the areas of weakness. How do we develop different forms of research for different purposes that include but go beyond the status-bound practices in the university?

But it is as a field of professional preparation, where Australian teacher education is repeatedly positioned as inadequate by both public and professional commentary, that the most serious implications arise. I have already outlined the situation that characterises admissions to many of our own teacher education programs here in Australia, but note here as a warning, the added complication and major concern for teacher education that Levine (2006) gives as explanation for his assessment of teacher education’s failure in this regard. He notes that his study indicates, overall, that US teacher education providers mostly fail to meet the criterion of excellence

applied to admissions to teaching programs. This standard is that ‘Admissions criteria are designed to recruit students with the capacity and motivation to become successful school teachers.’

There are teacher education programs with high admission standards and others with lower admission standards but high graduate requirements. More common, however, are low admission requirements and low graduation requirements.

This study finds the widely held belief that teacher education students are among the weakest in the university to be false. It is not true for students in secondary education, but elementary teacher education students do have significantly lower standardised admission test scores than their university classmates. Job status and teacher salaries certainly contribute to this.

There is a troubling tendency for many less selective teacher education programs to defend their absence of rigour and standards on the grounds of being committed to access for underrepresented populations (Levine 2006, p. 29).

For Levine, it is the large mass recruitment of candidates into primary teacher education programs that is the problem. And as I have argued here, it is also a problem for us in Australia—with effects that serve to categorise all teacher education as less than desirable as an academic project.

But I want to focus, finally, on the difficult claim in Levine’s stinging critique of teacher education institutions: that there is a major slip between the rhetoric of social justice and access and the reality of what teacher education can provide. This is where the question of inter-generational justice becomes paramount, and where we start to isolate the really hard issue that is both a practical and a research problem for teacher education—how can we actually and properly and with our hand on our hearts say that we value-add (with standards and rigour)?

My final story is from a newspaper (Cobbold 2010)—and in its entirety provides a strong illustration of the way in which numbers are used rhetorically to stand in as truth and provide claims that are difficult to refute because of their reduced complexity. Consider the rhetoric of the ‘gap’ that needs to be bridged here, and the baldness of the figures used by *Sydney Morning Herald* commentator Trevor Cobbold to argue the need for improved funding for public schools:

**Story 4: We have to put an end to this funding farce** *IT IS no exaggeration to say that the future of Australia’s education system is in the hands of the Gonski committee, currently reviewing school funding. It is clear that a fundamental change in government funding priorities is required but it remains to be seen whether the Gonski committee, with its unbalanced representation, is up to the task. The greatest challenge facing Australia’s education system is to reduce the large achievement gaps between rich and poor.*

*Students from low socio-economic status (SES) families are, on average, two years to 2½ years behind high-SES students in learning. Low-SES students enrolled in schools with a high proportion of students from low-SES families are almost four years behind students from high-income families in high-SES schools.*

*Indigenous students are 3½ years behind high-SES students. Remote-area students are two years to 2½ years behind and provincial students are 18 months behind.*

*The demands on government schools are especially great. They enrol the vast majority of educationally disadvantaged students. About 80 per cent of low-income, indigenous, remote-area and disability students attend government schools, and more than 70 per cent of provincial students do so.*

*These students comprise a much larger proportion of government school enrolments than in private schools. For example, low-income students comprise 40 per cent of government school enrolments, compared with only 22 per cent of independent school enrolments and 25 per cent in Catholic schools (Cobbold 2010).*

This article addresses two areas of my own research that intersect teacher education—Indigenous education and rural schooling.

In a 2002–2005 ARC Discovery Grant research project with Ninetta Santoro, in which we studied the career pathways of Indigenous teachers, the lived effects of inadequate teacher education in relation to Indigenous education on the lives of Indigenous children first became clear to me. At that time we noted the continuing failure of the government school system to improve the life chances of Indigenous Australians (RCADIC 1991). The implication of teacher education in this failure was stressed in a number of submissions, both to the 2000 Ramsey Review of Teacher Education in NSW, and to the Report of the Independent Inquiry into Public Education in New South Wales (Vinson 2002). They expressed dissatisfaction with the preparation of teachers for rural and disadvantaged schools and urged the inclusion of compulsory study of Indigenous culture in all preparation for the teaching profession.

The effects of the Ramsey Review (2000) in the subsequent formation of the NSW Institute of Teachers, and its work to produce a set of teaching standards have had significant impact on my work practice ever since. Back in 2004, we welcomed this outcome as a means of ensuring that universities—all universities—would be required to include attention to Indigenous issues in their pre-service teacher education curriculum.

We argued at that time, and it is clear that little has changed since then, that Indigenous Australian children remain the most disadvantaged students in the country, despite numerous policy initiatives to ‘close the gap’. For me, this is tied inextricably to questions of place—to location, and as I have already suggested earlier, to a politics of locational justice, and attention to the growing implications of close attention to place as implicated in, not just a context for, educational work. As the work of researchers such as Green (2008) makes clear, place matters. Place makes us who we are. My current research on teacher education for rural and regional sustainability (TERRAnova, Reid et al. 2010), builds on the work of place theorists to highlight issues of space and equity in and for education, and causes me to return to the issue of the intersection of race, space and equity as a key concern for teacher education.

As the following graph of population distribution by remoteness area and Indigenous status illustrates, the further away from metropolitan areas that you live

and work, the higher the proportion of Indigenous children you will be teaching—and the higher the need for high quality attention to Indigenous studies and Indigenous education in your initial teacher education (Fig. 1).

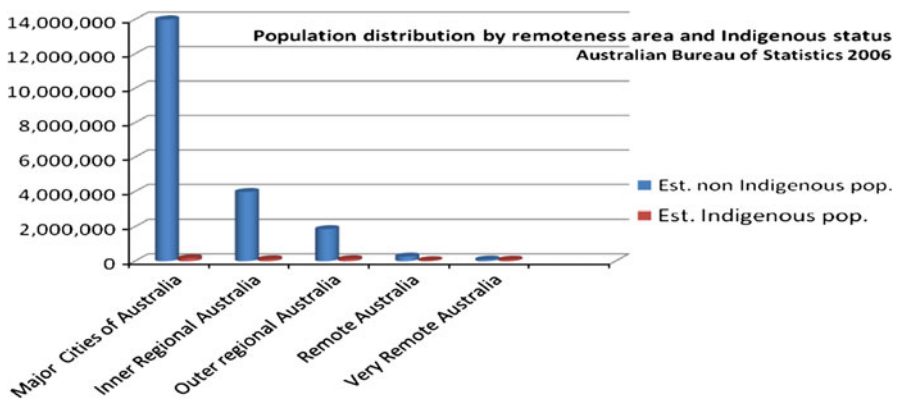
Another significant strategy for the improvement of Indigenous education, used internationally, such as in Canada and New Zealand, has been to attract more Indigenous teachers to the teaching profession. Yet this has been extraordinarily unsuccessful as a strategy in Australia. Indeed, the Ramsey Review of teacher education in New South Wales called for the development of ‘pathways programs into teaching for talented and suitable Indigenous people’ (2000, p. 219).

As Ramsey noted:

The issue of increasing the number of indigenous teachers is long-standing. The figures [for Aboriginal and Torres Strait Islander (ATSI) people newly employed as teachers within the Department of Education and Training since 1994] are well below the number needed for proper representation of Aboriginal teachers within the profession, given that the [ATSI] population in government schools is approximately 3.7 per cent. [...] Issues of critical importance in Aboriginal education will not be addressed appropriately until this level of entry into teaching is increased substantially in both government and non-government schools (Ramsey 2000, p. 47).

Australian teacher education programmes are notorious for lack of inclusion of pre-service candidates from Aboriginal, immigrant and non-English-speaking (as first language) groups, and there have been generally poor success rates for students from these groups who do gain access to teacher education.

The numbers of Indigenous teachers in Australian schools are still very small. Paul Hughes’ famously optimistic goal of ‘1 000 teachers by 1990’ (Hughes and Willmot 1982) was aimed at retraining Aboriginal Education Assistants (AEAs) already working in schools. But this target was not achieved. As Bin-Sallick (1991, p. 41) notes, Aboriginal teacher education policy formulated in 1979 meant that Aboriginal students were ‘encouraged to enrol in pre-existing white-oriented teacher training



**Fig. 1** Population distribution by remoteness and Indigenous status

courses', as this approach required 'very little academic effort on the part of institutions'. And as our research has shown, many Indigenous teachers graduated from 'Indigenous Teacher Education' with a clear sense that they were somehow, still, 'not quite white'. As Jude (1998, p. 16) wrote: 'They are still battling with the perception that their training and experience is inferior to their non-Aboriginal counterparts and they are faced with problems of such overwhelming magnitude that their unrealistic workloads often render them ineffective' (Jude 1998, p. 16).

Over twenty years past Hughes' target date, even acknowledging the number of successful enclave programs that were subsequently established for Indigenous teachers,<sup>2</sup> and the increases in scholarship support for Indigenous people entering teacher education, there were just 1,871 Indigenous teachers in Australian schools (including only 126 in Catholic schools) by 2007 (DEEWR 2009, pp. 6–14). The number of Indigenous teaching staff as a proportion of all teaching staff in government schools has remained only 1% over this time, while in the Catholic system the proportion is far smaller (0.3% in 2009). As the number of Indigenous children of school age increases, this situation becomes even more problematic—and the challenge for teacher education and teacher education research becomes more immediate.

## Conclusion

In conclusion, I have made the argument here that there is an increasingly urgent need for a strong theoretical re-conceptualisation of teacher education curriculum and pedagogy, practice and policy. This is essential if we are to effectively support the next generation of teachers (and teacher educators) as they deal with the continuing effects of increasingly complex and performative educational spaces. Rather than the accumulation of evidence of meeting standards for beginning teachers, I would prefer for teacher education curriculum and pedagogy to be re-conceived as the discursive production of certain sorts of 'teaching subjects', through the capacities and dispositions performed and practised in and through the teacher education process (Reid 2007). Such conceptual models work within situated, historical frameworks and traditions within teacher education but, importantly, they work with an assumption that knowledge about, and for, teaching is always 'difficult knowledge' (Britzman 1998; Labaree 1998). It cannot be rendered simple, or tabularised, as a set of paint by numbers frameworks for the production of teachers.

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<sup>2</sup> Over this period a number of strategies were put in place to encourage Indigenous people to become teachers. These included the establishment of programs at Batchelor College in the Northern Territory, which by this time had already begun training Aboriginal teachers' aides and assistants. The Remote Area Teacher Education (RATE) program began at Batchelor in 1976; the Deakin-Batchelor initiative (D-BATE) began in 1986 and operated until the end of 1988; and there were several other 'enclave' programs such as UniSA's ATEP program (1980), the Aboriginal Rural Education Program (AREP) at Macarthur Institute in Sydney (1984), Deakin's Koori Teacher Education Program [KTEP] (1986), ACU's Indigenous Education Program (1989) and the Remote Aboriginal Teacher Education Program [RATEP] at James Cook University in North Queensland in 1990. Although these represent significant and successful attempts to increase the numbers of Indigenous teachers, it is clear overall that Indigenous teacher education has only a 'very short history' (Grant 1996, p. 94).

This knowledge is difficult because of its inherent reference and response to the difference, diversity, instability and always-situated (embodied and emplaced) nature of the practice that is teaching. But as I stated at the outset, working with the complexity of difference in knowledges (and forms of knowledge) about teaching, may prove productive for re-thinking and re-creating forms and practices of teacher education that can challenge dominant constructs and specifications of the teacher as a universal, standardised social subject.

Research into teacher education that really seeks to study teaching, positions us all, researchers and teachers alike, as students—focussed on the everyday practices of schools and classrooms in this case, though I certainly do not see it as limited to this. We have seen Groundwater-Smith and Mockler's (2006) reminder that teacher education still sits on the horns of a dilemma that needs to be resolved in the interests of scholarship in teaching:

Often [practitioner research] is seen as a significant form of teacher professional development, and it is. [But] teacher research undertaken with academic colleagues is also a significant form of academic professional development. Seen as such, academics can learn a great deal which contributes to the broader goal of improving their own practice and also that of their students, many of whom will become the next generation of teachers (Sachs 2000, cited in Groundwater-Smith and Mockler 2006, p. 110).

However, if we see ourselves as researchers in the field, we may well benefit in quite different ways. To end here, I quote Judith Sachs again, when she argues:

Similarly, professional development opportunities for academics emerge as they become involved in understanding the nature of life in schools. By engaging in collaborative work with teachers, their own academic and 'everyday' 'theories' come to be debated and challenged. New and more challenging forms of professional association will begin to emerge as a result of this joint work and inquiry. Knowledge starts to be constructed collaboratively by teachers, students, administrators, parents, and academics (Sachs 2000, p. 91).

What I have tried to point to here is the challenge this gives us to reposition the field of teacher education research and its relationship to policy and practice, so that we can acknowledge the areas for building rather than lament the areas of weakness. Educational research in and for teacher education needs to develop forms of research that value the practices of teachers and teacher education, that include but go beyond status-bound practices in the university, to ensure justice for the generations of Australian students, irrespective of class, race or location.

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