

Submission: Quality Teacher Education Review

What changes to admissions and degree requirements would best attract and support professionals to transition into the profession of teaching?

What more can be done to address issues of workforce supply for quality teaching, particularly of mathematics, in our schools?

My views on these questions have been shaped by my own experience. My circumstances were:

- Ten years after graduating in law, I decided to become a Maths teacher. I had a BA/LLB (including some university-level mathematics), a Masters in Law and outstanding academic results, including a Rhodes Scholarship.
- I had a secure job as an academic, teaching and doing scholarly work in a G08 university
- I had two young children, and my husband was settled into his career.
- I contacted the NSW Department of Education and was told that it would take several years of further study without income before I could teach in NSW public schools, and that I could be assigned to a school anywhere in New South Wales.
- With a mortgage, childcare and a husband's career to consider, this was not feasible. I wrote to three independent schools and was immediately offered a teaching position as a Maths teacher. This entailed a 30% drop in salary from my university job, but I wanted to teach at high school level.
- I started teaching in that independent school and have been teaching ever since. I completed my GradDipEd online (part-time over the first two years, the minimum time). My school employed me full-time, and I benefitted from a policy allocating newly qualified teachers a 0.8FTE teaching load in the first year.
- My DipEd program allowed me to count my teaching for the practicum component.
- I completed my DipEd and then undertook two years' further study of university-level mathematics, to strengthen my understanding of the subject.

This pathway for professionals to transition to secondary teaching in the high-priority area of Mathematics is no longer available because:

- Training time has doubled as the one-year DipEd has been replaced with a two-year MTeach.
- Mid-career professionals typically have mortgages and children and cannot afford to go two years without earning, while also incurring tuition fees. This means part-time study, which now takes **4 years**, is usually the only viable option.
- But the accreditation requirements for NSW teachers have also been revised so that a new teacher can start teaching without a full qualification **only if they will complete their qualification within 12 months**. This time frame decreases the likelihood of either beginning or completing the study necessary for transition.
- Faculties of Education no longer permit employed teachers completing teaching qualifications to count their teaching experience in their own schools as a practicum. People retraining to teach are required to negotiate with their employer to take leave for 6-8 weeks (disrupting their classes) to teach at another school, foregoing their salary and teaching for free in another school. This is an unattractive option for schools and professionals trying to transition into teaching.

Each of these barriers to entry might be justified if they contributed to better quality teaching and improved outcomes for students. Despite many years of research into whether particular qualifications produce better teachers, there remains no evidence of such benefit. Yet these barriers remain significant deterrents to established professionals retraining for teaching.

As someone who has made the career change into teaching, I am often contacted by those contemplating the move for themselves. Of the many I have advised, only one has followed through. Considering those cases:

- All understood that the transition would involve a significant pay cut and tuition fees. They were not deterred by that prospect; they wanted to teach.
- All were willing to undertake further study but found the four-year time frame a major deterrent, as mentioned above.
- Even for those willing to embark on four years of study, the delay of at least three years before they could start teaching was a major deterrent. This delay was often decisive.

- All were established professionals, with good opportunities where they were. They wanted to teach but the barriers to transition to teaching were, for most, simply unacceptable.
- Once employed as a teacher and finalising their degree, the prospect of doing a practicum in a different school was an unnecessary stress, especially financially. In one case with which I am familiar, this was the last straw. That individual, with several successful years of experience teaching mathematics (with conditional accreditation – under the less restrictive, older requirements) decided to leave teaching, even though he was only three months away from full qualification.
- Another significant barrier for transition to teaching mathematics is the difficulty mid-career professionals experience gaining recognition of their mathematical expertise recognised for their teaching qualification. Candidates for Maths teaching are likely to be excluded from the MTeach if they have followed anything but a conventional pathway. The background shortage is well known: the Australian Mathematical Sciences Institute reported in 2018 that 76% of Australian students in Years 7-10 will be taught Maths by a teacher without Maths qualifications at least for one year, 35% of students for 2 years and 8% for all four years.¹ Nevertheless, those setting entry requirements for Maths teaching qualifications take a narrow view of what mathematical courses are required for prospective teachers. Examples from my own experience:
 - An actuary wishing to enrol in an MTeach for Maths was told that his actuarial degree had too much statistics and not enough pure mathematics. Perhaps. But any actuarial graduate is a high-achiever² with significant mathematical capability, and better able than most to extend her/his knowledge.³
 - A highly accomplished professional with nearly ten years in top management consulting firms and high-level policy-for-government experience was told she could not enrol for an MTeach in Maths because her Economics degree (majoring in **econometrics**) was insufficient. She inquired with education faculties at several universities; all declined to look at the content of the courses she studied and told her that only university courses with a 'MATH' code would count. Her courses were coded 'ECMT' and that was that.

¹ AMSI (2018), *Occasional Paper 1: Crunching the Numbers on Out-of-Field Teaching*.

² ATARs for actuarial studies are typically in the 95-98 range.

³ Extension 1 or 2 Maths required for entry into the course and significant mathematical content over four years in the course itself.

- These two people were sufficiently motivated to consider qualifying as, say, Business Studies or Economics teachers and then relying on the shortage of Maths teachers to facilitate a sideways move once in the system.

There are several ironies here. A puzzlingly high bar has been set, which prevents entry of gifted individuals into the profession, but that bar is simply dropped for those inside the system. A teacher qualified to teach Geography or History is permitted to teach Mathematics, but someone with high mathematical capability and significant study of econometrics or statistics is not permitted, let alone helped, to enter the profession. Meanwhile, those really determined to qualify as Maths teachers are forced to qualify to teach a different subject, with the hope of becoming a Maths teacher, through a back door.

Turning away highly able candidates with substantial mathematical background and capability might be understandable in a system with a surfeit of qualified Maths teachers. That is not Australia's position. The two candidates above, if permitted to teach, would be better qualified than thousands of teachers currently teaching Mathematics to the best of their ability, but without higher mathematical studies to support them.

Two more examples of counter-productive bureaucracy:

- A teacher of 30 years' experience, including as Head of Maths at a high-performing independent school in Sydney, offered after her retirement to give professional support in a disadvantaged public school. She planned to work pro bono, covering classes for Maths teachers and the Head of Department so as to allow them time to complete professional development and engage in lesson observations. She applied to the Department of Education, which refused to recognise her Maths qualifications and ruled her ineligible to teach in NSW public schools.
- After working as a teacher for several years and achieving proficient accreditation, I worked in the UK for seven years, at two internationally respected schools. On my return, I asked to have my NSW teaching accreditation reactivated and was told that it had been too long since I taught in a NSW school. I offered to provide a full log of my professional development over the years of absence, and references from the world-class schools in which I had taught. These were not accepted. I was told I would have to begin my accreditation again from scratch, as if I were a newly qualified teacher. At this stage I had four university degrees and nearly ten years of teaching experience. The NSW Education Standards Authority official told me that, had I done **one day of casual teaching** during my years of absence, my accreditation could have been reactivated but seven years of

full-time teaching, professional learning and experience did not meet their requirements.

The barriers for professionals and even experienced teachers seeking to teach at secondary level in Australia are significant, damaging and unnecessary.

Recommendations:

For the reasons above I recommend:

- The one-year Diploma of Education should be reintroduced.
- Faculties of Education, NESA and the Department of Education should take a more flexible view of what mathematical studies are required for Maths teachers. In cases of doubt, candidates could be required to pass a Maths exam completed prior to commencing teaching. This would be a straightforward, cost-effective and rigorous determination of the matter.
- The accreditation system should be amended to permit those enrolled in a teaching qualification to commence teaching. I hope that state systems might in future be more willing to take on talented candidates prior to completion, but independent schools would certainly be willing to do so. Either way, a deeper pool of good teachers would be created, for the benefit of students in all sectors.
- Teachers who are completing their DipEd should be able to count their current employment towards the practicum component of their qualification. Removing this barrier would be of great value – especially in high-priority areas such as STEM.

What more can we do to ensure that ITE curriculum is evidence-based and all future teachers are equipped to implement evidence-based teaching practices?

I note that the following comments consider options for the education of secondary teachers.

With rare exceptions, the pathway into teaching runs through the university. Universities deliver a range of professional degrees such as law, accounting, engineering and medicine, but teaching is different from other professional degrees in several significant ways.

First, there is no body of pedagogical knowledge which absolutely must be acquired prior to commencing teaching. Some people will be highly effective in the classroom without a teaching qualification of any kind. One cannot say this of law, accounting, engineering or medicine.

Secondly, the newly-qualified teacher's responsibilities are substantially the same as for teachers with decades of experience. This contrasts with other professions where newly qualified lawyers, accountants, engineers, doctors work in defined

junior roles, with limited responsibilities and close supervision, for years before being permitted to take full responsibility for any significant matter.

These two features underline the point that teaching relies less than other professions on pedagogical theory, and far more on practice. (This is always assuming mastery of the discipline to be taught.)

Another significant reality is that teachers are not the gatekeepers for their own profession. In the law, for instance, university courses must meet content requirements imposed by professional bodies such as the Law Society of NSW. Similar professional bodies approve the curricula in accounting, engineering and medicine ultimately. Not so in teaching, where there is no direct means by which representatives of the profession can influence, let alone determine, the prerequisites for effective practice.

In addition, governments have a central role in all regulatory aspects of education. There may be many reasons teaching is not permitted the self-regulation allowed in other professions but this is another factor which increases the distance between accreditation and practice.

Similarly, too many academics in Faculties of Education have less practical experience of school teaching than the teachers whose progress they control. Universities are well adapted to delivering large bodies of knowledge (as required in other professions) but less well adapted for the development of craft and practice.

For these reasons, it is worth considering an alternative pathway outside the university. What might that look like?

Most teachers will affirm that their practicum provided by far the best preparation for the classroom. Many will share my own experience of finding the university courses they must take heavy on theory (eg Vygotsky, Piaget, Dewey – all seminal but superseded) and ideology (eg constructivism) but light on content which is based on up-to-date research (eg phonics, cognitive load theory) or has immediate practical application (eg behaviour management).

Following the lead of other jurisdictions and some smaller programs in Australia, an alternative teaching credential could be offered outside the university system. The theoretical content could be pared back to focus on that which has high practical relevance and a robust evidence base, with more time allocated to practical experience in an apprentice-style mode. The theoretical content could be delivered through flexible, online learning, now an increasingly popular mode of study and particularly suited to mid-career professionals considering a career change. The accompanying increase in emphasis on practice would provide a thorough preparation for the classroom.

More Good Teachers

It is getting harder to recruit the most able candidates into teaching. The introduction of basic literacy and numeracy requirements was an important step to set a floor on future teachers' minimum capability. It is not, however, realistic to think that Australia can substantially improve the quality of its teachers simply through recruitment.

The point was forcefully made by Wiliam (2010), who was writing from the UK context:

In some countries, ...teaching is such a high-status occupation that recruitment into the profession is highly selective. For countries in this position, the quality of teacher preparation, and the quality of continuing professional development is almost irrelevant. If you can persuade the smartest people in the country to want to be teachers, you will have a great education system.

For countries not in this position, efforts to raise the status of the profession are essential, but changes in the entrants to a profession take a very long time—typically of the order of thirty years—to work through, and are of limited impact. For example, suppose we could immediately raise the threshold for entry into teaching so that from now on, only those who are better than the lowest performing one-third of current entrants were able to become teachers. Suppose further that despite this raising of the threshold for entry into the profession, we were still able to recruit as many teachers as we needed. The effect of this—over thirty years—would be to increase teacher quality by just 20% of the current gap between teacher quality in Finland and teacher quality in the UK. In terms of exam results, this would result in just one extra student per class passing an exam every three years.

This would be a step change of unprecedented size in terms of the recruitment to the profession, and yet it hardly makes a dent in the challenge. Our future economic prosperity therefore requires that as well as improving the quality of entrants to the teaching profession, we have to make the teachers we have better—what I call the “love the one you're with” strategy.⁴

There have been moves to acknowledge superior practitioners with high remuneration and use them to provide mentoring to younger teachers, which I believe to be a positive direction but is not currently effective. In New South Wales there are currently around 123,000 primary and secondary teachers and, while it is difficult to ascertain numbers, I understand that there ten years after introduction, there are still fewer than 300 Highly Accomplished and Lead Teachers. If correct,

⁴ Wiliam, D (2010), *Teacher quality: why it matters, and how to get more of it*, retrieved 11 July 2021 from https://www.dylanwiliam.org/Dylan_Wiliams_website/Papers_files/Spectator%20talk.doc.

this is approximately one potential mentor for every 10 schools in New South Wales. However able these teachers are, this will not make more than the smallest dent.

Developing high quality professional learning opportunities for teachers and creating the time for such learning to be digested and implemented will be important to improve the quality of teaching delivered every day in Australian classrooms. For new teachers, however, we should ensure that they enter the profession in schools with positive cultures and effective discipline. They should also have a reduced teaching load in their first year to allow them time to acclimatise, collaborate with more experienced colleagues and develop the resources they will need to see them through.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]