Chapter 2
The Purpose of Education, and of Teachers

Outline

This chapter sets out some of the nobler aims of teaching. It is anticipated that the chapter may provide inspiration to aspirant teachers, and reinvigoration to current teachers, about education, its contributions and its capacity for value-adding to individuals' lives—including teachers themselves—and to the societies they serve. It intertwines discussions of the demands of teaching, and on teachers, and teacher morale and retention/attrition, informed by related literature. More specifically, it introduces some ways in which teacher education authorities have set out to ensure that teachers and aspirant teachers embody qualities commensurate with the professional and personal demands assumed of them, and some potential-associated pitfalls. It includes some autobiographical illustrations and some personal testimonials (to which the reader might bring their own) illustrating the benefits of education, direct and indirect. The chapter presents implications for teacher education and teacher professional development.

Proclaim *vb* 1 to announce publicly; declare

3 to praise or extol

HarperCollins 1999, p. 1232

Think back to the note in Chap. 1, the quote attributed to Degas, about painting only being difficult for those who know how.

Picture This

Modern art has lost control, has lost its way, has lost its meaning. As a result, new rules have been instituted to standardise artworks:

All art must demonstrably resemble what it purports to represent. If I can't recognise it, and more seriously, if I don't know which way is up, then what is the point of it? Similarly, all colours must be representative of what they portray. Roses, for example, are to be rendered red. Numbers will be assigned to the permissible colours. These colours will be strictly adhered to. To avoid confusion, there will be one, standard, skin tone. Don't go outside the lines.

The above is, I trust, risible in theory, and, in parts at least, offensive were it to be implemented. And yet, as with other aspects of education, we often set out to standardise teachers and teaching. This, and the associated possibilities of, and limitations placed on, teaching, will form the backdrop for some of the discussion in this and subsequent chapters. If my education is a leading-out where is it leading me (from and to)?

Introduction

You may have heard the one about the golfer who steps up to the tee, unwraps a brand new golf ball, hits it and slices it into the forest, never to be seen again. He[1] then unwraps another brand new ball, then hooks it into the lake. At this stage, a player behind him asks "why don't you use old golf balls?" He responds, "I've never owned one".

I sometimes wonder if that's the way we treat teachers—churn'em out, burn'em out and turn'em out (into another profession). Of course, that's an exaggeration—many teachers enjoy varying levels of professional satisfaction. But many others do not, and many don't stay the course, so to speak. I hope to explore some of the causes of this dissatisfaction, and possible responses, in this chapter and elsewhere in the book.

Attrition from the teaching workforce is a considerable problem, and a significant symptom of other problems. Sutcher et al. (2016) cite an annual attrition rate among teachers of eight per cent in the US, and rates are high elsewhere in the developed world (Buchanan, Prescott, Schuck, Aubusson, Burke, & Louviere, 2013). Attrition is almost certainly a result, at least in part, of dissatisfaction or demoralisation, and may well, in turn, feed into the demoralisation of, and cynicism among, school students and their communities. In some ways, attrition from the teaching workforce should not be surprising, given that we appear to accept career change as the norm of late. On the other hand, job mobility means that teaching needs to retain any competitive advantage it might have vis-à-vis other professions, in terms of salary, workload and demands, respect/prestige and working conditions.

The previous chapter discussed what makes a profession, and, it is hoped, established that teaching qualifies as such. This chapter will pursue the questions of what is education, and what it is for. As part of that question, it will explore the role that teachers play in providing a good education. A premise or problematic that arose implicitly from Chap. 1, and becomes more explicit in this chapter, is.

If teaching is as complex as this, good teachers must be hard to find, or to make, and then easily lost to other professions.

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[1]Or she.

What Good is an Education?

It is a grand thing that education sets out to achieve. In 1900, Dewey observed,

> What the best and wisest parent wants for his[2] own child, that must the [global?] community want for all of its children. Any other ideal for our schools is narrow and unlovely; acted upon, it destroys our democracy. All that society has accomplished for itself it put, through the agency of the school, at the disposal of its future members. All its better thoughts of itself it hopes to realize through the new possibilities thus opened to its future self (p. 19).

School is how society presents itself to our young. I've sometimes asked undergraduate classes of mine, and other groups in more or less formal or informal situations, "do you ever wish you were less educated than you are?" Perhaps this reflects the circles I mix in, but the answer is usually a resounding "no", or a resounding silence. One time a 9-year-old kid put up his hand in response to the question and said, "yeah, I'll be right thanks". When the rest of the group laughed (with him, not at him, I think) he also laughed. I didn't quite catch what he then said, but he made a gesture as if to wave away the comment, suggesting "just kidding". In some ways, I was probably that kid several decades earlier. I didn't necessarily feel the love during a postprandial double maths period. I was fortunate to be in that place, even though it didn't feel particularly privileged at the time. Apologies to the maths teachers I've just offended and off-sided above—yes, I know, you've suffered enough.

I hope you'll forgive a personal anecdote, or triptych, here (or at least that you'll ignore it and resume reading at the next section—but the illustrations do have some bearing on the discussion at hand).

Three Personal Snapshots

Parker Palmer (1998) wrote about the courage to teach. I'm not sure that teaching was a courageous, much less noble, career choice for me in the first instance. It was perhaps the only career that I felt I had observed for long enough to claim that I knew how to do it. I was wrong, of course; I knew nothing about teaching. The job seemed much less foreign, unfamiliar and daunting than working on the 27th floor of a downtown office building, doing, or pretending to busy myself with, I didn't know what, and hoping not to be exposed as knowing nothing. I still remember walking into my first classroom at university. There were seats arranged not unlike at my school, in rows – it was back in the day - and a teacher's desk and chalkboard (how quaint) at the front. The momentary feeling of disappointment at the prospect of 'more of the same' was more than compensated by the comforting feeling of familiarity; 'I think I know how to do this'.

Going back a step further, I certainly wasn't a stellar student at school. I'm forever grateful, though, that education didn't spit me out, but gave me second and subsequent chances, as I gained the wherewithal to appreciate, then love it, and to leverage it better for my good and, hopefully, others'. I'm perhaps sounding somewhat zealous and evangelical there, having personified if not deified Education. As I said above, though, I usually find others in agreement as they look back on their own lives and reflect on the education they've had. Few people I know seem to see their education as burdensome – even though education does indeed bear with it a burden.

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[2]I have no reason to believe that mothers, any less than fathers, want what is best for their children, even though some parents appear to favour their sons over their daughters, education-wise.

Going back further again, in kindergarten (the first of the compulsory years of education where I went to school), we occasionally used to sing. If we were well behaved – it didn't often happen to me; did I mention my stellar school career? – we were invited to conduct the singing. 'Conducting' meant waving your hands in a shallow 'w' fashion, potentially in synch with the piano, and possibly in time with one or two of the singers. Possibly. Some time soon afterward I saw a band with a conductor. This person was paid - *paid* – to *conduct*. This was another job I knew how to do.

The third snapshot above, trivial and superficial though it is, illustrates—perhaps because of its triviality and superficiality—how outsiders might view teaching; a view which dangerously underestimates and seriously under-problematises the complexity of teaching and learning. The view is not dissimilar to the prevailing one for much of human history (see Chap. 1) that teaching comprises knowing then telling, then, perhaps—not always—checking that the learner can parrot what you told them. As I disclosed in the first snapshot, I thought that, through observing, I knew how to teach. I suspect that my school friends who didn't proceed into teaching, still nurse the pretence that they understand what teaching is about, I can only assume, falsely.

The Twenty-First Century School and Its Staff: Qualities Required of Teachers

Global trends in the workforce, as well as life's increasing complexity, have resulted in an increasing demand on the education sector and, in particular, schools and their teachers, to equip students with life and career skills for their beyond-school worlds, prompting the need for highly qualified teachers to meet this demand. Employers require the future workforce to demonstrate skills in, *inter alia*, critical thinking, collaboration and enterprise, which has prompted local and national education authorities to consider mandating these types of skills in student syllabus documents.

To date, schools have tended to concentrate on knowledge, and knowledge about— that is, on "knowing stuff". Current and future work and social circumstances are more likely to demand knowing how to access and evaluate knowledge with regard to aspects such as bias, authenticity and the evidence base for any claims made; in short, to be "data literate" (Mandinach & Gummer, 2016). The workplace is probably also increasingly looking for skills in problem-solving, teamwork, interpersonal skills and the like. The knowledge economy is transmuting into the know-how economy. This change probably makes it even harder to define the qualities that indwell a successful school graduate, or an effective teacher. Stronge (2018, p. 4) claims with some confidence, "in addition to being uncertain how to define effectiveness, we will vacillate on just how to refer to successful teachers". Snyder (2009, p. 7) draws attention to the difficulty in defining good teaching, observing that some have argued that "the 'it' of teaching cannot be defined with sufficient clarity to be assessed".

Various researchers and organisations have enumerated the skills and attributes they see as most valuable in schools and their staff. Three key ingredients of a twenty-first-century school, according to the OECD (2019, p. 9), are "teachers who are *confident* in their ability to teach, a willingness to *innovate*, and strong school leaders who establish the conditions in their schools that enable the former two ingredients to flourish" (emphases added). The importance of good leadership is explicit here. More specifically, the OECD report advocates positive relationships, collaboration, release time for planning and, particularly, a role for teachers in decision-making.

The qualities and attributes required of teachers are myriad. Thompson (2018) lists 20 qualities of effective teachers, most of them amalgams of qualities (pp. 37–38). These include respect and patience, being calm and approachable, clarity of instruction, maintaining high expectations of themselves and their students, passion for teaching, positivity, energy and spirit, building trust, amid realistic and consistent behaviour management, ability to promote lively discussion to advance student learning, explaining in diverse ways to meet all students' needs and presentation of difficult topics in such a way as to promote self-inquiry and self-reflection, humour. Thompson speaks of "*growing* effective teachers" (p. 35, emphasis added)—an apt, nurture-some metaphor. More difficult to discern, though, is the extent to which some of these attributes can be taught or cultured, if they are not pre-indwelling (prospective) teachers.

The NSW Department of Education (2017, p. 3) cites nine key twenty-first-century skills: critical thinking, creativity, metacognition, problem-solving, collaboration, motivation, self-efficacy, conscientiousness and grit or perseverance. I presume that there is no inherent assumption here that such skills or attributes were unimportant in previous centuries. On the one hand, this raises a valid question: what really is new in the twenty-first century (given that we're now about a fifth of the way though it at the time of writing)? In response, however, the "know-how economy", above, could be cited as an important game changer in recent times. In former times, there were relatively few sources of information available, and publication processes provided some assurance (but no guarantee) of the quality and precision of the information. It is likely that any current lists of essential twenty-first-century skills may appear quaint by the close of the century, such is the pace of change. This is not to be critical of the lists or the aims in compiling them. They can serve as helpful signposts.

Mohamed, Valcke and De Wever (2016) synthesised teacher competency frameworks internationally into the following 17, in six domains. They refer to these as International Teacher Competencies (ITCs). The list is lengthy, but is worthy of inclusion. The competencies are paraphrased here.

Knowledge and instructional expertise

   Curriculum and subject matter knowledge;
   Knowledge of the dis/advantages of pedagogical models;
   Instructional strategies and planning;
   Using teaching materials to effectively facilitate student learning;
   Commitment to promote learning for all students;

Monitoring and evaluation of student learning and development and assessment.

Organisation/management—pedagogical expertise

Management of students and the learning environment and
Provision of quality co-curricular activities.

Diversity

Knowledge of diverse students and special needs, and appropriate learning approaches and
Adapting teaching to the needs and strengths of all learners.

Partnering with parents, colleagues and the community

Effective collegial collaboration and partnership with parents and community organisations.

Professional development attitude

Demonstration of good written and oral communication, and negotiating skills;
Professional growth and development;
Resilience and adaptability;
Self-efficacy reflection, metacognition, interpersonal skills and
Willingness to experiment with new ideas and strategies.

Ethical stand

Personal integrity, enacting statutory responsibilities.

While this list might just as appropriately be placed in Chap. 7, on teacher standards, it is included here as an illustration of the complexity of teaching and the demands made of teachers.

A Personal Vignette 'Education for the 21st Century' makes me reflect, how (if at all) did my education in the 1960s and '70s prepare me for the world of today, about half a century later. In terms of providing me with the basic skills of literacy and numeracy, I think my school performed quite admirably. If anything, it may have overachieved on these two fundamentals. I seem to recall pages and pages of addition and subtraction, and thinking at the time – 'I know this'. I now recognise, though, the value of constant practice, and that lack of practice in mental arithmetic has made me rusty, and yet more dependent on calculators – the initial cause of my rustiness. Moreover, my knowledge of grammar gives me a sense of confidence and control when negotiating with the language and with its other users. In terms of piquing my curiosity and nurturing my instincts for questioning and critiquing, I think my schooling performed less well. It tended to tell me how the world was, and how it had been, and that's that. Then again, my education may have been a case of pearls before swine – I simply wasn't ripe at the time to identify, much less question, my and others' assumptions and blindspots, much less still the

privileged shelf-place I occupied globally at my humble-looking state school. My schooling certainly couldn't have been expected to predict, much less prepare us all for, the knowledge-world and know-how (and know-why/not) mirror-maze of a world I try to navigate today.[3] And yet, we are asking this of today's schools, in a context of much more accelerated current and anticipated change. This is perhaps why, despite a rhetoric of 21st Century skills and the like, schools and systems tend to cleave still to basic skills. They're safer, more familiar, more measurable terrain (see Alismail & McGuire, 2015).

Stronge (2018) outlines six domains in which teachers need to demonstrate and exercise excellence. These comprise: professional knowledge; instructional planning; instructional delivery; assessment; learning environment, and; professionalism, (p. 12). Stronge identifies precipitates of each, as follows:

- Professional knowledge–knowledge; verbal ability; preparation and certification; and experience (p. 15);
- Instructional planning: three key questions concerning what to teach, and how to teach it, and how to know if students have learnt it; focusing on instruction; optimising instructional time; setting learning objectives, and; using student learning data (p. 54);
- Instructional delivery: using a variety of instructional strategies; differentiating instruction; communicating high expectations; promoting complex and higher-order thinking; using high-quality questioning, and; supporting student engagement in learning (p. 92);
- Assessment: designing assessments; using assessment data; encouraging student self-assessment; providing meaningful feedback, and; homework (p. 135);
- [Developing and maintaining a] learning environment: classroom management; elements of organization; disciplining students, and a; positive and supportive learning environment (p. 179);
- Professionalism: caring; fairness and respect; interactions with students; enthusiasm and motivation to learn; attitude toward teaching; reflective practice, and; collaboration and communication (p. 213). Some of the preceding, such as homework, appear to me as less crucial to good teaching than others—although I concede that Stronge highlights parental partnership in homework and support for their children's learning. Suffice it to say that this presents a complex and demanding assemblage of skills, attributes and qualities on the part of an effective teacher.

Other researchers (e.g. Soulé & Warrick, 2015) refer to the four Cs: creativity, communication, collaboration and critical thinking Van Laar, van Deursen, van Dijk and de Haan (2018) confined their systematic literature review to twenty-first-century digital skills, and distilled the following six: information, communication, collaboration, critical thinking, creativity and problem-solving. Their study was not teacher-specific; instead, it referred to all professions for which teachers prepare students. Arguably, many of their skills correspond to the Australian Curriculum's general

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[3]Nevertheless, I recall having to learn the vocative case of the noun "Jupiter" in Latin, so they must have anticipated interplanetary travel?

capabilities such as critical and creative thinking, personal and social capability and, of course, ICT capability (Australian Curriculum, n.d.). Some researchers (e.g. Eguchi, 2016; Qian & Clark, 2016) have coalesced some of these skills under the heading of game-based learning, whether formal or informal.

More broadly, modes of information transmission have become more varied, with the introduction of digital and virtual technologies. Kelentrić, Helland and Arstorp (2018) have developed a Professional Digital Competence Framework for teachers, with seven components, while the European Framework for the Digital Competence of Educators (Redecker, 2017) comprises a total of 22 digital competencies within six areas in digital literacy education. These and other frameworks are discussed in further detail in Chap. 10. Suffice it to say, however, that the introduction of newer technologies has made education, as well as classroom management and on-task behaviour, more complex for teachers.

Significantly, many of the above qualities are personal rather than exclusively professional in nature; "teacher-as-person" skills, as Stronge (2018, p. 212) coins them. These include flexibility and adaptability, care and compassion, high expectations, and a willingness to search for what works. Apart from equipping teachers well for their work, such attributes are worthy of emulation by their students. They are, however, very difficult to assess and, possibly, quite difficult to culture or synthesise.

Of course, while dealing with all the above, teachers implement a curriculum, or curricula. Given current trends, demands and complexities, a siloed, subject-knowledge-based curriculum is coming under increasing scrutiny, criticism and pressure, and may need to be supplemented, if not supplanted, by other curricular structures. It may need supplementing with cross-disciplinary or transdisciplinary structures, incorporating, for example, problem-based learning, service learning or project learning, to reflect the challenges that face the workplace, the people and the planet. Curriculum will be discussed in more detail in Chap. 5.

As I cast my eye back over the above expectations, it comes as no surprise that teachers may be weary after maintaining all the above, sometimes with little support or affirmation, and in the face of occasional if not unrelenting indifference, ingratitude or resistance. I reflect back on my 5-year-old or 15-year-old self, and dealing with 25 of that for 40 years.

Implications for Teacher Retention and Morale

If whitegoods or other appliances routinely ceased working (effectively) after about 5 years, or sometimes after 6 months, we would probably place the blame on built-in obsolescence, or a mix of abuse and neglect. Teachers take more time and money to produce than whitegoods, even if you experiment with fast, cheap teacher-production methods. As with whitegoods, the disposal of teachers also has inherent problems. Moreover, unlike whitegoods, teachers are sentient, adding to the cost of their disposal. Discuss.

"It was an ordinary moment, the moment I knew I was finished; that I knew I had to walk away. A Thursday afternoon", recounts Stroud (2018, p. 325). The lead-up to this turning away from teaching makes for less cheery reading, however. Her story might be more easily dismissed were it less common. When Stroud tendered her letter of resignation, her principal responded "I think I might be next" (p. 331). Stroud concludes (p. 332) "I don't believe that I left teaching. Teaching left me". Numbers of (ex-)teachers refer to the job being different from what they had prepared for. There are no doubt implications here for teacher education institutions. But it does underscore the premise that teaching, once you start, is more complicated than it looks from a spectator's vantage point. The exhilaration of a teaching appointment can all-too-rapidly morph into a disappointment (Buchanan, 2011). Bahr and Ferreira (2018) outline seven reasons for teaching's fading beauty: fixation on competency, obsession with standardised testing, removal of autonomy, workload, poor public image, disdain for teachers and poor salaries.

Means of teacher production (pre-service education) will be discussed in subsequent chapters. To extend the whitegoods/appliances analogy above, though, there are reasons to applaud efforts by industry bodies to tighten entry into teacher education, to ensure the best raw materials. Similarly, quality-controlling the production process, in this case teacher education, has a crucial role to play in ensuring the highest quality finished product, even though a teacher is never "finished", except, perhaps in the sense that Stroud (2018), above, was, one Thursday; there is a risk, if the process of quality assurance and product testing becomes overly rigorous and Darwinian that it might actually finish, or destroy, the teacher in the process. Like any sophisticated product, teachers can sustain damage easily. Moreover, it is much more difficult to identify and define, much less imbue, the qualities of an effective teacher, making the quality assurance process more evasive and troublesome. I also acknowledge the awkwardness of "whitegoods", given the documented whiteness of the teacher profession vis-à-vis the students they teach (e.g. Sleeter, 2016, 2017; Walton et al., 2018). I've perhaps wrung out the analogy about as far as possible.

Schools in rural, regional and remote areas, lower socioeconomic communities, and in some teaching areas, such as maths and science, are particularly challenged with significant difficulties in attracting and retaining qualified teachers. These schools are the most difficult to staff for a number of reasons—they can be the most challenging postings for teachers, both professionally and personally. I observe with some sadness that beginning teachers—those with the least experience—are more likely to find themselves teaching in such schools, possibly replacing a recently departed, possibly scorch-marked, beginning teacher. This appears to be a wicked problem with no obvious solution in sight, and a dynamic that generates disillusionment—disillusionment with the profession by the teacher, and disillusionment with the "blow-in" teacher by the students and the community. For such schools and communities, this dynamic risks perpetuating a cycle of short-term deployment of inexperienced teachers, understandably generating cynicism among these schools' students and communities. For the teachers concerned, it risks exacerbating disillusionment with the profession and its employing bodies, and contributing to teacher attrition. In such circumstances and elsewhere, gifted and talented students may

remain unidentified and their needs unmet. It would be regrettable if we required such students to "act out" before granting them attention.

The Complexity of Teaching

Dateline: 1997, New York. A world chess champion, Garry Kasparov, is beaten at chess for the first time by a computer, Deep Blue.

I occasionally muse about an automaton trying to teach Vicky Pollard a thing or two. Vicky Pollard is a recalcitrant school student character in a British comedy sketch show titled*Little Britain* (Walliams & Lucas, 2003). One of her catchphrases in response to teacher requests or admonitions is to ask, "do I look bovvered?", which she repeats in rapid-fire succession, preventing the teacher from responding to her rhetorical question. In fairness, let's presume that the robot is programmed not to deploy its tasers or other weapons as part of its pedagogical panoply. The scenario illustrates for me of the complexity of teaching, which I find reassuring. If someone were to ask me if a robot could take over my teaching job, part of my response would be "it depends on what the robot is passionate about". That Vicky Pollard-esque, "do I look bovvered?" response on my part may look very hollow one day. I hope not—at least not for some time to come. Chess is so much more reassuringly and comfortingly structured, strictured, predictable and scriptable than is teaching, with as few as 10^{120} possible outcomes (if Wikipedia (2019) and Claude Shannon (1988) are correct),[4] even though some would lessen teaching to a chess game. It strikes me that scripting teaching is akin to advising a chess player of each move to make, before the start of the game, and disregarding the other player's moves. And a chess player only has to take into account the thinking of one other person, while a teacher deals with 25 or so students and their thinking, or perchance their unthinking.

One proxy of the complexity of teaching is the extent to which it could be undertaken, or overtaken, by a robot. Of course, the future is good at mocking predictions made of itself, and there are various figures outlining the proportion of a teacher's work that could be delegated to an automaton. Nevertheless, teaching appears to be among the professions safest from automation. According to a study by Oxford University (Scott, 2017), the likelihood of teaching being automated is a mere 0.4%, the same figure as for doctors. According to a World Economic Forum report (WEF, 2018), automation will result in a net job increase in the education sector. Another WEF report (2016) ranked skills in terms of their usefulness in the workplace in the near future. These, in descending order of the proportion of jobs that will require them, are complex problem-solving; social skills; process skills, systems skills, resource

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[4]For those who are interested, 10^{120} is 10 with 119 zeroes after it, and looks like this if *my* maths is correct: 1,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000, 000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000. Happy counting.

management; technical skills, cognitive abilities; content skills and physical abilities. While the skills near the top of the list affirm those that I try to bring to my teaching, and that I try to develop in my students, this means that those with typical teacher-skills will be in sought-after elsewhere in the workforce. I think the word "automaton", above, is telling. Teaching is so context-dependent and complex that it cannot be scripted and rehearsed.

From my preliminary reading, it appears that a robot can make and programme a rocket. I accept that it would be laughable to pretend that I have anything approaching the mathematical expertise of a rocket scientist, or the medical know-how to help people see, hear or walk; I'm simply (oversimply?) asserting that the variables of teaching can be harder to predict. My hope in raising this is that those outside of teaching will also recognise this pedagogical professional complexity. Wahl (2017, p. 510) noted that "teaching is by its nature an uncertain endeavor with no identifiable 'answers'". She adds that, "knowledge is elusive and…teachers develop not through the acquisition of best practices but through cultivating dispositions that are responsive to this uncertainty" (p. 511). Sinnema, Meyer and Aitken, (2017, p. 9) observe that teaching is "complex, situated and active" (I would add "potentially volatile").

Returning to Palmer (p. 10), "good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher". He describes this as "a secret hidden in plain sight". As the previous chapter asserted, this secret seems to have escaped the notice of some non-teachers. The essence of good teaching, for Palmer, is his ability to connect with his students, and connect them with the subject matter at hand. This, in turn, derives from "the degree to which I know and trust my selfhood—and am willing to make it available and vulnerable in the service of learning" (p. 10). Connecting with students, and connecting them with one another and with the world—both in terms of interpreting the world and explaining to the world, often through the appropriation of technologies—is probably akin to Koehler and Mishra's (2009) TPACK—technological pedagogical content knowledge. It's also, as Palmer suggests, a strategy laced with vulnerability.

In my view, learning is the most important, the most vital and most essential endeavour that we undertake as a species. That being the case, teaching is probably the second most important thing that we humans do, after parenting. And parenting only takes the edge because of its educational role. This, in turn, makes teachers among our most valuable people.

The Standardisation of Teaching

Teacher Professional Standards are another teacher-tightening strategy in response to sluggish student performance. In their defence, they are also designed to raise the status of the profession. Nevertheless, they have attracted some criticism in the literature. Kincheloe (2003, p. 6) asserts that, "public discussion of the purpose of

education in a democratic society or inquiries into the relationship between contemporary social problems and schooling are rarely heard in [the] Disney world of standards".

The Australian Institute for Teaching and School Leadership (AITSL, 2017c) recently published a set of mandatory professional standards for teachers. In order to graduate, and to attain and retain accreditation, teachers need to provide evidence with regard to meeting each standard. The seven standards are listed below:

- Know students and how they learn,
- Know the content and how to teach it,
- Plan for and implement effective teaching and learning,
- Create and maintain supportive and safe learning environments,
- Assess, provide feedback and report on student learning,
- Engage in professional learning and
- Engage professionally with colleagues, parents/carers and the community.

These standards are sound starting points. It would probably be churlish to take exception with any of them prima facie. And yet, there is scope for their improvement (Buchanan, 2017). The first, "know students and how they learn", lacks a personal dimension. It does not mandate "know *your* students", even though this is plausibly inherent in, and a subsumption of, the Standard. Naturally, the Standard can really only be evidenced with regard to one's own students. At its essence, this standard requires teachers to demonstrate their knowledge of learning, how it operates and the circumstances under which it operates optimally. As asserted above, this is a noble pedagogical goal. Nevertheless, the inclusion of a personal dimension might make the standard more attractive and conceptually attainable. Curiously, the word "quality" does not appear in the Graduate level of the standards. Nor do the words "create" or "critical" (Buchanan, 2017). Each of these standards has subsections, known as "elements" of which there are 37 in total. These can be found in their entirety at AITSL (2017c).

While these standards and elements represent a gallant attempt to capture the complexity that is teaching, beginning teachers, in particular, may find them overwhelming. A more appropriate term than "standards" or, in school, "basic skills" might be "threshold concepts"; the threshold metaphor suggests transcendence, not mere attainment of, such competencies. This transcendent nature is arguably implicit, in that the Standards progress beyond graduate level, which will be discussed in a subsequent section. Many of the above initiatives have the potential to do good per se, and are certainly intended to be beneficial. The Standards and their impact are discussed in more detail in Chap. 7.

Teaching Performance Assessment

Another hurdle for prospective teachers in Australia is the Teaching Performance Assessment (TPA). In order to graduate, all prospective teachers must complete

a culminating Teaching Performance Assessment task or suite of tasks. During their final professional experience, all Education students must demonstrate their capacities in:

- planning;
- organisation and delivery;
- assessment, evaluation and reflection on/identification of their impact of their teaching, with regard to their students' learning (see Darling-Hammond, 2006).

The TPA is framed within the Standards. TPAs have been criticised on several grounds. They have been critiqued as a high-stakes snapshot that may reject some candidates who could otherwise be effective teachers (Goldhaber, Cowan, & Theobald, 2017; Greenblatt, 2018), or may fail to identify and exclude some teachers who are unsuited to teaching for various reasons. They may also fail to capture the complexity that is teaching, and the diverse, complex contexts and dynamics of classrooms and learners (Buchanan, 2017; Buchanan & Schuck, 2016; Lewthwaite et al. 2015; Schuck, Aubusson, Buchanan, & Russell, 2012).

In a recent study of the implementation of a TPA in NSW (Buchanan, Harb & Fitzgerald, accepted), several potential-associated problems emerged. While the TPA is conducted within a school, it is assessed at university. University staff may be unfamiliar with the discipline knowledge of the teaching and learning being assessed—a science teacher educator assessing a TPA of an art teacher, for example. More disconcertingly, the assessor of the TPA embarks on the assessment task with little knowledge of the context in which the TPA was undertaken. Associated variables include the level of support offered by the supervising teacher and the school, the school's academic culture, the behaviour and attitudes of the students, resources available and the like. Moreover, the circumstances in which the TPA was undertaken cannot be replicated, and repeating a lengthy professional experience would be an expensive endeavour for the teacher education student concerned. Practice teaching and internships are typically undertaken without pay in Australia. AITSL has indicated that all TPAs will need to be moderated across institutions, but the abovementioned differences, among others, make the task of moderation problematic even within any one institution. The TPA and its impact are discussed further in Chap. 8.

More broadly, assessment typically asks what a learner knows and can do. Perhaps a better assessment task for education is to ask what kind of people it produces. The same could be asked of teacher preparation—alongside the importance of what they know and can do is the essential heart of what kind of people these teachers are. This is difficult to assess. Also, if the essence of teaching is knowing *your* students, how well do the Standards' authors know their students, the teach-force.

Before proceeding, I'll present another brief vignette, of my entry into the teaching workforce.

When I completed secondary school, there was a shortage of teachers. During my own secondary schooling, large numbers of American and other teachers were brought to Australia to address the shortage. From memory, I had a brief chat with my school Principal, to determine my suitability for a Teachers' College Scholarship. Apparently I was suitable; I'm not sure what, based on this interview, would have made me unsuitable. The Scholarship's purpose was

not to offset University fees – there were none at the time, apart from minimal administration fees. The purpose of the scholarship was simply to attract more teachers. You didn't even have to be particularly scholarly – did I mention my less-than-stellar school career[5]? At this point, when telling the story, I entreat my students not to despise me. The only 'catch' was that, if you were four-year trained, you were committed to teach for the state's Department of Education for four years, or you would forfeit and be required to return the scholarship money. That means I was guaranteed a job for four years, during which time, with minimal requirements (an observation of a lesson by the school Principal being the main one), I could achieve permanency. I didn't have to undertake an interview to obtain a teaching position. The world has changed. As a further example of world-change, I was notified of my first teaching appointment by receipt of a telegram (look it up).

Some of the current "entrance hurdles" outlined earlier are no doubt designed to make the profession more exclusive. This is a reasonable and noble pursuit, and may well serve the profession favourably. It could make the profession more attractive through exclusivity, and may, in turn, lend more prestige and cachet to the profession and its members. Such strategies, however, present a potentially high-risk tactic. Combined with the ever-increasing cognitive and other demands placed on teachers, and other issues such as (perceptions of) modest remuneration, particularly after the initial years of teaching, these approaches may dissuade the best and most capable from considering teaching. As suggested above, though, the "best and most capable" teachers might not be those who are most adept at passing tests. This may offer further justification for the new interventions and restrictions—and perhaps alternative pathways? Time will tell whether the strategies contribute to attracting or repelling, and who is attracted (and acceptable) or repelled. The procedures by which I was accepted into teaching were by no means rigorous. But they were attractive—they were devised in the context of a teacher shortage. And that attraction may have sorted the market to some extent.

Predictions of a widespread teacher shortage have yet to come to pass—or perhaps education jurisdictions have heeded earlier warnings by researchers (see, for example, Lonsdale and Ingvarson, 2003). Nevertheless, several current circumstances appear to be operating in concert to precipitate a shortage of teachers: There is currently a population bulge among school-aged students in Australia; large numbers of "baby boomer" teachers are reaching retirement age, and fewer applicants appear to be choosing teaching as a career and teacher attrition appears to remain high. Weldon (2015, p. 1) forecasts an increase in New South Wales (NSW) school students of 92,000 by the end of the decade. He conceded, however, that this is in the context of a current oversupply of generalist primary teachers and some subject area secondary teachers. In a US context, Sutcher, Darling-Hammond and Carver-Thomas (2016) use a tenfold proliferation of related media articles as a proxy for evidence of a looming teacher shortage. They cite mathematics, science and special education as areas of particular concern. Clandinin et al. (2015) cite a number of factors governing teacher attrition; support, identity and workload appear to be among the major factors

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[5]Nevertheless, I required a minimum matriculation mark for entry into my undergraduate degree and subsequent teacher education programme. This perhaps speaks to the standard needed for such entry.

governing intentions to stay or leave among their cohort of 40 s and third-year teachers. In Australia, one factor may mitigate any teacher shortage: a proposed reduction in intake of migrants (Smyth, 2019) or refugees (Greene, 2019). Many developed countries, however, are either welcoming of or are unable to stem the flow of refugees and migrants.

It is curious that teacher supply is so volatile, given that it takes almost 5 years to produce a school student from the time of birth, and 4 years at most to produce a teacher. Then again, education jurisdictions may have little control over some aspects of teacher supply, such as retirements or resignations, or some issues that govern "student supply" (a crude term), such as changes in refugee or immigration policy.

The Intellectual and Emotional Work of Teaching

In a discussion of the pedagogical dimension of teaching, it is important not to lose sight of the other aspects—teaching as an intellectual work and process. One way forward for the teaching profession may be to elevate it towards more of a research process, to promote schools as sites of knowledge creation as well as knowledge consumption and dissemination. Some schools might be insulted by that call; happily, research is already happening in increasing numbers of schools. Student work is being seen and interpreted increasingly as data. While this is valuable, it is only part of the picture. In the final section, I will outline how and why schools might be increasingly seen as the research hubs of their communities, where teachers, students and possibly partnered outsiders, routinely gather, analyse and report data of various types. This too is already happening in increasing numbers of schools.

Neither should the emotional work of teachers be overlooked, either in terms of its capacity to value-add to learners (Conners-Burrow, Patrick, Kyzer, & McKelvey, 2017), or for what it demands of and from teachers (Day & Hong, 2016; Skaalvik & Skaalvik, 2016). Twenty-five Vicky Pollards, or a classful of mes, is sufficient reminder.

Postnote: Winter is Coming?

A recent Productivity Commission Report on Schools Workforce (Australian Government, 2012) proposed strategies designed to reduce teacher shortages and improve teacher quality (see p. iii). As mentioned in Chap. 1 (security guard versus security blanket), these two might be at odds. Drawing on the work of the Report asserted that the best preparation for beginning teachers was provided by courses that, "required a capstone project (typically a portfolio of work done in classrooms with students)" (p. 124). This became the Teaching Performance Assessment (see, for example, Stacey, Talbot, Buchanan, & Mayer, 2019). The Report added that Boyd

et al. had conceded that their "results were exploratory and that more research in this area is needed". While both forms of security (blanket and guard) may offer some benefits (as well as limitations), vigilance may be of the essence. A security guard clad in a security blanket does not cease to be a security guard. Some may say that a security guard is of more use in the current educational climate. But in the absence of teacher support, the guard may be redundant, if no one is at the gates trying to get in.

One recommendation of the Productivity Commission Report was the establishment of Graduate Teacher Standards (p. 28). The Report recommends that teachers would be certified accordingly "if found competent" (p. 32). I'm possibly being picky here, but if competence is all they are willing or able to concede, that strikes me as underwhelming for the profession and its members. Drawing on Mockler's work, Churchward and Willis (2019) contend that "the focus on teacher quality can give rise to measurable, standardised technical and procedural processes that distract from the complexity, variety and extent of practices that broadly define good teaching" (p. 253). Naturally, the Report is just part of the storm that was building—and, of course, any storm can deliver life-giving rain, not just destruction or damage. The chapter and the section that follow will discuss some of the consequences of the associated strategies, and some of the secondary outcomes thereof.

It is trite to claim that education is such a powerful force. As one of Quinn and Buchanan's (in preparation) Timorese teacher respondents noted, "many children know your name until they die".[6] Teaching must not and cannot be relegated to a series of safe, simple steps—to do so is to fail to value the invaluable. As Dewey noted, "were all instructors [and instructors' instructors] to realize the quality of mental process, not the production of correct answers, is the measure of educative growth, something hardly less than a revolution…would be worked" (p. 183). The ellipsis in Dewey's quote above replaces the words "in teaching". But the potential for revolution expands far beyond schools and schooling. Revolution is scary business for those of us (who want to be) in control—whether teacher, bureaucrat or politician.

Amidst some of the gloom, there is hope. In an international review of teacher education, Darling-Hammond (2017) identified some promising strategies with regard to improving teachers' teaching and learning (pp. 306–307). These include supportive induction models; opportunities for teachers to learn from and with one another; connection of practice and theory; attracting the ablest candidates through, inter alia, financial incentives and pan-professional capacity-building.

Returning to the anecdote at the beginning of this chapter, I hope that we can find ways to diminish teacher attrition, and the dissatisfaction on which it feeds. Those golf balls are easy to lose, and expensive to replace.

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[6]Kindergarten/year one teachers, there's a good chance you know some of your ex-students' passwords. Just saying.

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