Chapter 7
Using the Theory of Practice Architectures to Explore VET in Schools Teachers' Pedagogy

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Abstract The focus in this chapter is on the teaching practices of novice Vocational Education and Training (VET) teachers in Australian schools. An Australian case illuminates the local practice architectures that shape teachers' vocation and their ways of working, the ways practice architectures constrain and enable their practice, and the ways these teachers respond to challenges they perceive in the school as a workplace. The case examines the practices of newly qualified Australian VET in Schools teachers with extensive industry experience gained in their previous occupations.

This chapter explores a curious situation. On the surface, to other teachers and members of their school's executive group, Vocational Education and Training in Schools (VETiS) teachers in Australian secondary schools frequently appear compliant, conforming, and enthusiastically helpful in a variety of tasks that might be described as 'corporate citizenship'. They are often the ones who volunteer to drive the bus, to build the new school barbeque area, or to arrange the Christmas party. They are often prominent consumers of professional development offered in or by the school – or elsewhere – yet can appear as though they would rather spend their morning tea and lunch breaks in their specialist rooms (the wood workshop, for example), chatting and working with students, than join the other adults in the

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staffroom. As a result, they sometimes give the impression that they are secretive about their pedagogy.

Beneath this impression, however, there is a more sophisticated and complex story to be told about the practice of certain VETiS teachers. These particular VETiS teachers come from industry backgrounds with forms of vocational practice that cause them to disrupt the modes of teaching they experienced when they were students in school. At one level, VETiS teachers are unreconstructed constructivists; their teaching is almost entirely activity-based because their experience has been in the working world where jobs are hands-on and where developing problem-solving skills is a key to success. Also, as is largely the case with their own preferred modes of learning, their preferred mode of teaching is to offer opportunities for learning by doing. At another level, there is evidence that VETiS teachers from industry backgrounds have a particular kind of hybrid identity as teachers, partly formed from their industry experience, including their responsibilities for overseeing apprentices and trainees in the workplace, and partly through their formation as teachers in their teacher education program. They commonly see themselves as different from their colleagues. They relate to students in the same way they related to young people and co-workers they encountered on the job as tradespeople. Many VETiS teachers practise what numerous textbooks preach, but find themselves oddly at odds with some other secondary teachers who follow more traditional conventions of secondary teaching. In this chapter, we want to explore this situation as an example of contestation over ways of being a teacher – and of ways of enacting a teaching identity. We use the theory of practice architectures to tease out what this contestation is over or about, and how it is realised in particular forms of resistance by the VET teachers.

In order to tell this story, the chapter is organised in the following way. First, we briefly describe the context of VET in Schools in Australia. Second, we provide a brief synopsis of a longitudinal study of twelve novice VETiS and technology teachers in rural Australian secondary schools and highlight some of its main findings. Here, we sketch some of the features of the way these teachers operate, occasionally distinguishing their ways of working from the ways some other teachers work. Third, we outline how the contestation between these new VETiS teachers' and others' practices can be seen in the day-to-day life of their schools. Fourth, we indicate how this contestation can be understood in terms of (a) different ways of understanding the world, which can be noticed by what these VETiS teachers say, and the cultural-discursive arrangements that make their sayings possible; (b) different ways of enacting teaching illustrated through their work practices and pedagogies in the material-economic aspects of their work; and (c) different ways of relating to students and other adults in the school, and responding to social-political arrangements. To interpret these differences, we explore the particular ways these teachers practise, based on the life experiences that have formed them, culturally, economically, and socially. Finally, we draw the chapter to a conclusion by summarising our central argument and showing how the resources of the theory of practice architectures make it possible to show what contestation – in this case – is over or about, and how it reveals different ways of living the profession of teaching.

VET in Schools in Australia

To understand the hybrid context of VETiS in Australia, we need to examine both Vocational Education and Training (VET) in the post school environment and the world of schools, each with its own context and cultures. VET is a form of educational provision that is regularly delivered in VET institutions, by other providers, and in workplace settings. Since the 1990s (Cranston et al. 2010), a new senior curriculum in all states and territory education systems has included VETiS courses for senior secondary students. Typically, a VET curriculum is enacted as an accredited program leading to a qualification, and integrates periods of learning in educational institutions supplemented with training and learning experiences in workplaces.

Regardless of where VET is delivered, the site of each VET practice is prefigured and shaped by unique sets of practice architectures, composed of cultural-discursive, material-economic, and social-political arrangements present in or brought to the site (cf. Mahon et al. 2017, Chapter 1, this volume). Fundamentally, VET practice is prefigured by the traditions of specific vocations. Just as the distinct knowledge, skills, and tools for vocations (e.g., construction, hospitality, information technology and agriculture) have evolved over time and continue to be transformed in response to contemporary changes in occupational practices and in the kinds of arrangements (e.g., technologies) that support these practices, so too VET practice continues to be transformed in order to meet education and training requirements of a diverse range of vocations and industries. Furthermore, VET practice is prefigured by the economic conditions of educational institutions and workplaces, as well as "shaped by the interactional capacities of the people involved" (Kemmis et al. 2014, p. 97). At the overarching governance level, VET practice is prefigured by discursive regulations such as standards, qualification frameworks, curriculum, syllabuses and assessment guidelines; by national, state, and private organisational (material-economic) arrangements for VET provision; and by the social and political arrangements that enable and constrain particular kinds of relationships of power and solidarity among the different kinds of people (policy-makers, administrators, industry participants, teachers, VET students, and many others). In this vast territory, there is always room for contestation over language and ideas (for example, about how VET work is to be understood and talked about in educational terms, industry terms, and in classrooms); over forms of work and activity (for example, the work of policy-makers, industry partners, VET administrators, and teachers and students); and over power and solidarity (issues of power, like who can oblige, with whom to comply, policies or rules or regulations; and issues of solidarity, like who sticks together with whom in different kinds of situations when power is being exercised).

In this vast and contested territory, VET teachers' work is distinctly complex and multifarious, given that VET teachers are required to facilitate learning in diverse workplace settings that are subject to on-going transformation (Brennan Kemmis and Green 2013). The changing nature of work and work practices, as well as the ongoing configuration of particular practice settings, means that teachers need to

operate across numerous boundaries, yet within a regulatory environment governed by national organisational imperatives. While these enable many aspects of their practice, teachers often confront structures and compliance regimes that challenge their concepts of praxis[1] because they are required to balance three main practice sites with different practice traditions and landscapes – the institutional environment, the occupational field (comprising different vocations and diversity within these vocations), and the work sites where they facilitate learning for their students. Teachers' practice is thus influenced and mediated by a range of factors within and between the different sites in which they work.

The point made here is that, in every site, distinctive cultural-discursive, material-economic, and social-political arrangements prefigure, enable, and constrain VET teachers' practices. For instance, the culture and discourses of VET practice are reflected in the functional operations of VET institutions, occupational fields, and workplaces; the discourses of competency based teaching and assessment; the particular discourses of the worksite and work groups; the culture of work groups, students, and workers; and the status of the particular trade, the way it is regarded socially, and the way it is talked about.

For vocational teachers, successful teaching depends on their understanding of the workplace culture and environment, their response to demands on time and energy, their ability to schedule work to suit requirements at the site, their ability to deal with reluctant/resistant learners (e.g., being flexible and patient in their forms of relating to learners); and their ability to customise materials to be relevant to particular worksites. VET teachers need to understand what counts as work practice or vocation, as well as what kinds of activity and interaction enable learning, if they are to organise appropriate pedagogical strategies to facilitate learning. It is their intersubjective encounters with workplace supervisors, students, workers, and clients in work sites that help them realise the enacted curriculum for their students. Essentially, VET teachers construct their practice in a kind of reciprocal interdependence with other stakeholders within their educational institutions, those in the workplace, and their occupational field. It is mandatory for them, as VETiS teachers, to maintain industry currency.

In the case of VET in Schools, the traditions, culture, and practices of secondary schools also become part of the practice architectures for VETiS teachers and teaching. As VETiS teachers from industry backgrounds make the transition from industry to become teachers, they must learn to work in and with the practice architectures of the secondary school. As we shall see, however, some VETiS teachers are not only shaped by these practice architectures, they also shape them to meet the needs of industry and different vocations, the needs of VETiS pedagogies, and their own expectations about learning and teaching in VETiS subjects. Unlike their colleagues who have trained principally as school teachers, VETiS teachers from industry backgrounds have constructed a particular kind of hybrid identity which is founded on

[1] Kemmis and Smith (2008) define praxis as "action that is *morally-committed, and oriented and informed by traditions in a field*" (p. 4), and Kemmis (2010) also describes it as "history making action" (p. 9).

distinct industry experiences, including responsibilities for overseeing apprentices and trainees in the workplace. They do not see themselves just as teachers who completed a teacher education program designed for career changers (Allen 2007). They perceive themselves as agents of change in the life worlds of young people. Their new identity as teachers is primarily shaped by an amalgam of practice architectures of their past workplaces and those of the schools where they currently practise.

An Australian Case: Teachers from Industry Making the Transition to Becoming School Teachers

Until the 1990s, practices surrounding senior schooling in Australia have been concerned with academic subjects and pathways to higher education. Now, contemporary curriculum for senior secondary schooling offers vocational as well as academic pathways, which has led to an increase in the number of students enrolled in entry level vocational courses (Polesel et al. 2004). There is a continuing short supply of adequately trained VETiS teachers to implement the senior secondary VET curriculum. One approach to address this deficit is to attract and train experienced workers as teachers. This leads experienced workers from trade and industry into a new career: teaching.

The case presented here is intended to illustrate and explore the challenges facing newly qualified VETiS teachers in their chosen vocational or industry areas as they transition into their new careers. The case is based on a longitudinal study undertaken by one of the authors (Green 2012), following twelve newly qualified teachers who had successfully completed a university degree at a rural university specifically designed for career change teachers,[2] and who had taken up positions in twelve different rural schools in New South Wales (NSW), Australia. The twelve teachers had extensive experiences (at least 10 years for most) in trades including hospitality, construction, agriculture, horticulture, electrical, and information technology.

In the study, the majority of the data were derived from interviews, emails, site visits, and discussions with VETiS teachers themselves, with only a few interviews with other teachers and principals in each school. The study did not concern itself with other kinds of new teachers. The data were analysed using discourse analysis strategies (Fairclough 1992, 2003) as well as qualitative analysis (Creswell 2008; Denzin and Lincoln 2011; Gummerson 2007; Jager and Maier 2009).

In this chapter, we present a retrospective analysis using the lens of the theory of practice architectures of the school sites included in the longitudinal study[3] – with

[2] Similar pre-service VETiS teacher training courses are also offered by other universities across Australia.

[3] Throughout the chapter, 'the case' refers to the retrospective analysis presented here, using the lens of practice architectures. The empirical material was drawn from Green's (2012) doctoral study (referred to as 'the study' or 'the longitudinal study'), which did not use the theory of practice architectures.

their different 'ways of doing things around here' – to show how the distinctive *sayings*, *doings*, and *relatings* of the new VETiS teachers differed from those of their colleagues. The theory of practice architectures pointed us, through the distinctive sayings, doings, and relatings of these teachers (as evidenced in interviews, site visits, life histories and observation), to the cultural-discursive, material-economic, and social-political arrangements that made their distinctive practices possible. The theory also made clear to us that, through their *sayings*, *doings*, and *relatings*, these new teachers created alternative practice architectures in the school sites.

Unlike the situation in many other professions, new teachers are expected to perform all the roles and functions of experienced teachers from their first day on the job (Le Maistre and Paré 2011). The new VETiS teachers in the study were not an exception to this. They had to quickly find ways to operate within the rules, curriculum, and structures of their schools, and they were expected to immediately develop new vocational identities as school teachers. This was made more challenging by the reality of being in rural schools, where teachers generally have less support from colleagues and mentors – mainly because of the small staff size – and where there are more demands on new teachers who are the only ones teaching in their curriculum area (Haggard, Slostad, and Winterton 2006); i.e., they are required to be multi-skilled.

A further challenge stemmed from the VETiS teachers' discomfort in the 'world' of the school. Ten of the twelve VETiS teachers had not experienced senior academic school pathways themselves. All but three had left school at 15 years of age: one left to become the family's bread-winner during Year 9 after his father's death in an accident; most left during Year 10; only two completed Year 12, one badly, failing to get into a teacher education course. The other started a university course but left in first year to become an apprentice electrician. Also, many had been reluctant learners (or even 'the naughty kids') in school settings, so their experiences of school were not necessarily positive. Thus a main challenge for the new VETiS teachers resided in crossing the boundary between the practice architectures of their earlier career and the kinds of practice architectures they encountered in school sites when they were secondary school students many years before.

The VETiS teachers managed many of the challenges they faced by reinterpreting the sayings, doings, and relatings of the practices in their previous vocations to adapt to the needs of practice in the school sites. This is not surprising. Etherington (2009) found that "second careerists draw heavily on their experiences from first careers and these experiences continue to shape their interpretations, attitudes and beliefs about teaching" (p. 39). In the next section, we consider how this was so for the VETiS teachers in the study, focussing on how they practised differently from other teachers, and discussing the differences in terms of contestation between the practices of the VETiS teachers and the non-vocational teachers in their schools.

Contested Approaches to and Views on Teaching

When the new VETiS teachers commenced their new careers, they appeared to conform to existing practices in their schools. However, they quickly developed strategies to accommodate the changes. These accommodations included bringing into their classrooms relevant sayings, doings, and relatings that had been established during their lengthy periods of trade practice. Consequently, there were many observable differences between the sayings, doings, and relatings (and the project of the practice within which they hung together) of the VETiS teachers relative to the other teachers in their schools.

Myron, a VETiS teacher at a large inland NSW state high school, exemplifies some of the differences well. Myron is a former mechanic and car dealer, and, at the time of the study, was a teacher of Information Technologies. Like most of the industry transition teachers, he is a mature man with definite ideas about his role as a teacher: to ensure students learn enough to make them socially and economically capable citizens who will contribute to society when they finish school. During a school visit by the researcher, Myron was observed walking into his school site one morning. He looked at every student, greeting them with a comment or question for each one. These students were the 'early birds', first to school. Like them, Myron was usually the first teacher to arrive in the mornings. His tone and stance were casual and warm, as he kept moving through the grounds and corridors, like most people arriving at their workplace. Myron's tone, language, and deportment as he greeted the students were no different from his manner in greeting other adults and general staff. He was different, in this respect from other teachers in his school who adopted an observably distinct 'teacher voice' when interacting with students as opposed to other adults (although similar to most of the other VETiS teachers in the study). Nevertheless, the contents of his tiny conversations with students were diverse and very personal to each one, showing the knowledge Myron had gathered in the relationships he had deliberately built with as many students as he could.

Myron believes that the key to behaviour management is *relating* and connecting with the students he teaches and those he will probably teach in the future. His warm attitude to his students (whom he treats as young workers) was demonstrated in the first class on the same day when a Year 9 boy came to him with a 'Behaviour card'. Myron was supposed to sign and make comments on the card at the end of the class. "This is strange, Ben," he said, looking surprised. "I can't imagine why you would have this," he added. He threw the card on the table and moved into the activities of the day. As in a trade workshop, most of the students knew where they were in terms of their 'jobs': making scraps of metal into 'tribal jewellery'. Myron moved around the classroom continually, like a foreman, assisting people when required. In a Year 11 Information Technology class later in the day, he introduced the researcher as one of his former university teachers and challenged the students to "find her online". They were immediately engaged in finding the university and the researcher in several locations. They then moved on to the portfolio resume documents they were compiling for themselves. The recess bell went, but a number of students

chose to spend their recess time in the classroom completing items. Myron later explained he spent this time each week with a rotation of students.

The *project* of VETiS teachers' practice, including Mryon's, appeared to be slightly different from what is common among secondary school teachers. While most teachers want their students to do well in the subjects they teach, the VETiS teachers specifically wanted their students to do well in the world of work – a world very familiar to them. This was to be expected, as many graduates of career changing courses, such as the one from which these new teachers graduated, report that they enter teaching primarily to pass on their trade knowledge and to prepare excellent, job-ready school leavers (see Allen 2007; Anthony and Ord 2008; Etherington 2009; Halladay 2008; Lee 2011; Wilson and Deaney 2010). Also, as a group, the VETiS teachers were eager to make school different for 'less academic' students, even if that meant creating some kind of hybrid model of pedagogy in their own classrooms.

The VETis teachers' pedagogical approaches were accordingly oriented towards particular vocations and aligned with life beyond school. Their pedagogies, as exemplified by the description of Myron's practice, were project-based, and often quite different from more teacher-centred, text-based, and conventional pedagogies. The VETiS teachers demanded active rather than passive learning, and learning experiences were 'hands on'. Their expectations were clear to the learners and the observer. Their approaches drew on their experiences in assisting apprentices and trainees in their previous careers. Myron's foreman-like stance in the lesson while students undertook independent tasks is illustrative of this. The time Myron, and other VETiS spent with students in workshops outside of scheduled class time, for instance, further highlights this vocational orientation.

The VETiS teachers' ways of relating to students were an important and distinctive part of their practice. Myron explained how he related to students: "I tend to treat people … even though I understand they're adolescents and that sort of stuff … I try to treat them as I would if it [sic] were one of my employees." The tone of voice, the knowledge of the students both in and beyond the school and classroom, and the responses from most of the students themselves attested to this different way of relating, illustrated by Myron, but repeated among all the VETiS teachers in this study. The centrality, to the VETiS teachers in this study, of the *relatings* of their teaching practice goes some way towards explaining why these novice teachers reported (and their principals observed) very few instances of discipline and behaviour management problems during the 3 year research period. Relatings with colleagues was a different matter for the VETiS teachers. Outside of scheduled classes, they mostly kept to themselves, or spent time with their students. Many worked in relative isolation from their school colleagues and kept their practice private.

The differences between the practices of the VETis teachers and the practices of their non-VET colleagues can be understood as a contestation over ways of being a teacher. This contestation was particularly evident in the views the VETiS teachers' and other teachers expressed about their own and/or each other's practices. All twelve of the novice VETiS teachers in this study, although rather nervous about

commenting on more experienced 'traditional' teachers, described themselves as being very different from other teachers in terms of distinct VET pedagogies they applied, and with which they believed their colleagues were unfamiliar. To the VETiS teachers, approaches of the non-VET teachers seemed to reproduce old ways of working that did not appear to be useful as preparation for work, life, and society. One VETiS teacher, *Ralph*, for instance, contrasted his own practice with more transmissive approaches: "I am confident that I now have enough understanding of the ways we learn to not try and push ideas down the throats of my students. Instead, I lead them to learning". Non-VETiS teachers, on the other hand, viewed VETiS teachers as underqualified in terms of secondary and university education, having completed 2 years of teacher education (on top of their industry qualifications) instead of the more typical 4 year degree followed by or combined with teacher education. Contested views about approaches to teaching and what counts as good practice are further exemplified in the following description involving *Martha*, another of the VETiS teachers who participated in the study.

Martha was a novice VETiS teacher in her second year, following multiple careers in hospitality, 'dressmaking', and horticulture. She worked closely with Mary, an experienced non-VETiS teacher in the Food Technology department. Martha was observed by the researcher when teaching Food Technology to Year 10 boys. She explained that the boys signed up for Food Technology because they "like to eat". She understood well the boys' interests and crafted interesting stories during her classes to sustain their engagement, and to maintain strict workplace standards and practices. In successfully enacting the curriculum to appropriately and fully engage students in learning, she did not seem to have any particular problems. Her senior teacher, Mary, on the other hand, expressed concerns about Martha's general literacy. In particular, Mary was fearful of Martha making spelling errors on student reports. She also believed that Martha had issues with the level of reading required in a senior subject called *Family and Community Studies.* Martha's and Mary's measures of quality teaching were also contested: Mary focused more on academic literacy and exam preparation while Martha focused on student engagement. Mary's measures reflected the social-political arrangements widely accepted among the non-vocational teachers in the school. Her measures have a historical basis on which the secondary school curriculum is founded: literacy and academic English are standard measures of student success in schools, across all subjects. Novice VETiS teacher Martha was aware of Mary's view of the primacy of literacy in academic English, and confessed that she hated teaching *Family and Community Studies*, which was not part of her degree or experience. She believed that her survival as a teacher rested on maximising her teaching load in VETiS and Food Technology, because those subjects fitted her knowledge and skills base. She had also negotiated to complete an upgrade in her qualifications so she could teach textiles. To prevent errors on reports, Martha modelled her feedback to students on examples of 'prepared' comment sheets. Mary had kindly offered to check her reports for her so she was able to comfortably practise VETiS in the practice architectures of assessment and reporting in the rest of the school.

While Mary observed certain limitations in Martha's teaching practices, the school Principal had fewer reservations. Indeed, he said that he wanted all of his newly qualified teachers to be more like Martha because she experienced no behaviour management issues and quickly won over students with challenging behaviours. He valued her industry experience and described her as a natural leader within the VETiS team. He applauded her maturity and calm nature and acknowledged Martha's contributions as the head of the Occupational Health and Safety Committee.[4] The Principal also noted that Martha was using her dress making skills to prepare costumes for the school musical. In sum, while the Principal acknowledged Martha's success as being shaped by her effective use of VET pedagogies, and by the formation of her identity specifically as a VETiS teacher in his school, other teachers like Mary saw Martha in a different way. Martha was aware of these two contrasting views of her as a teacher and appeared to negotiate these differences adeptly in order to remain an active and constructive contributor to the school community.

Clearly, there was a disparity between the views of Martha, Mary, and the school Principal about what counted as important in being a teacher in this school. As we saw, there were some tensions between Matha's *thinking* and *sayings* about what was important in her practices and the *thinking* and *sayings* emphasised by other more 'traditional' secondary school teachers (represented by Mary). Mary evaluated Martha's work in terms of academic literacy, while Martha's focus was on preparing students for a particular vocation. Each also had her own way of *doing* teaching in the same school, evidenced in the respective pedagogical approaches: Martha's more activity-based, and Mary's more oriented to texts. The Principal's observations highlighted Martha's *relatings* with students, which were effective in 'winning over' students with challenging behaviours.

We might reasonably conclude that Martha's practice as a VETiS teacher was influenced by experience in her previous careers which led her to interact with young people as if they were young adults in the workplace – trainees or apprentices. Living this as an approach to teaching, however, did not necessarily sit easily with the practice architectures of her school, which emphasised academic learning, working on 'academic' tasks, and a hierarchical power relationship in which teachers instruct and students comply (and sometimes resist). Yet there is evidence that Martha was also able to influence the existing architectures and arrangements of her school – including the arrangements in, and setups of, her own classes – to successfully achieve her teaching goals as a teacher focused on preparing students for the world of work. This theme is developed further in the next section.

Our examples highlight significant tensions regarding conceptions of teaching and learning and ways of being a teacher within the VETiS teachers' new schools. It is clear from Myron's, Martha's, and Ralph's practices, experiences, and/or comments that VETiS teachers' conceptions appeared to be at odds with those of their colleagues in terms of how learners learn (e.g., through exposure to texts; learning

[4] Interestingly, nine out of the twelve new VETiS teachers were managing Occupational Health and Safety Committees despite being new teachers.

by doing); what counts as good teaching (e.g., leading students into learning; modelling academic literacy) and how a good teacher is measured (e.g., experience; qualifications); how best to relate to students (e.g., treating students as apprentices/less experienced workers and young adults; treating students as children); how student success is measured (e.g., literacy standards; job readiness; contribution to society); and the project of teaching as a practice. Instead of amending their practices to align with the accepted academic practices in their schools, the VETiS teachers practised differently, drawing on their experiences and their workplace-based practice to adapt to their new environment, their new profession, and their new project. They re-engineered and enacted their own ways of being a teacher, and in the process, created their identities as VETiS teachers.

Practice Architectures That Hold These Contested Approaches in Place

In this fourth section, we indicate how the contested conceptions, and the contested approaches we have described so far, can be understood as VETiS teachers' responses to tensions between practice architectures encountered in school sites and practice architectures of their former workplaces and careers. In the discussion, we simultaneously explore the practice architectures that shaped and made possible the distinctive practices of the VETiS teachers; some of the tensions between key school practice architectures versus former workplace and vocation-specific practice architectures; and particular ways in which the VETiS teachers responded to such tensions.

Of particular relevance to the VETiS teachers' practice were the practice architectures of the *senior secondary school*. Since all but two of the twelve VETiS teachers who participated in this study had not completed senior secondary school themselves, they sometimes struggled with the ethos and traditional practice architectures in the senior school where most non-vocational teachers are intensely involved in preparing students for the NSW High School Certificate (HSC) examinations. VETiS subjects are dual accredited which means students may sit an examination in a VET course. They often choose not to sit the VET exam as they may not be interested in an academic pathway. Instead they see value in the nationally recognised Certificate I or II in the vocational field they have chosen. Non-vocational and VETiS teachers appeared to value and work towards separate sets of goals: non-vocational teachers worked towards students' academic achievements, and VETiS teachers worked with students on their vocational knowledge, skills, and values. Effectively, contested notions of the *project* of the teaching practice in the senior school were being legitimised and/or challenged by practice architectures related to the senior curriculum (e.g., examination discourses, exam preparation procedures, and external assessment regulations), and the ways that teachers' negotiated and responded to these arrangements depended on their past experiences.

The following comment by Myron reflects the tensions between his past experiences, examination-related practice architectures, and the project of his practice:

> I believe my past experience allows me to see beyond school. Unlike many teachers I had at school – and still appear to be around – I am not interested in educating the students only to pass exams. I want them to learn things that will help them all their life; if they pass an exam it's a bonus. It is a bit like a driving instructor. They can teach you to drive, or they can teach you to pass the driving test. My aim is to instil in the students a work and social ethic that regardless of what career path they follow, they will be useful members of society.

Myron's beliefs (sayings/thinkings) about educating students for life rather than for exams – which were influenced, he suggested, by his previous career experiences – were in direct conflict with defining practice architectures within the senior school.

Past experiences in former workplaces and vocations evidently played a key role in terms of *cultural-discursive arrangements* that shaped the VETiS teachers' sayings. VETiS teachers used languages and specialist discourses in their everyday interactions with students that reflected the cultural-discursive arrangements of their former vocations. Discourse analysis of all data also showed that the participants used general job-related words such as *job, work, sacked*, and *training* in every interview and during classes. Teaching was aligned with terms such as *learning, skills*, and *projects*. Tellingly, on only one occasion was the word *children* used by a VETiS teacher in an interview. Martha used workplace language to explain her expectations. In one instance, she told a student who was not compliant about assessment work: "If you can't be bothered getting your assignment in, I wouldn't employ you". These cautions worked for her. She felt this was partly because the students could relate well to the workplace language, and partly because of the positive relationship she had with the students.

The VETiS teachers also continued to use the type of voice and conversational style reminiscent of their previous vocations, and this was generally different from the style used by other teachers in their schools. In essence, they spoke very informally, using a style and tone of voice which was usually much quieter than that of many teachers. Their voices did not change because they were in a classroom. They spoke to their students as if they were less experienced fellow workers under their supervision who were nevertheless individuals worthy of respect. When they wanted the attention of the whole class, they rarely raised their voices; rather, they moved to a central position and waited until they gained everyone's attention. So, instead of using voice as an instrument of power, VETiS teachers connected with students in other ways.

This conversation style is not attributable solely to the practice architectures of previous careers. Most believed that they would not have been like this if they had begun teaching at a younger age, like the majority of their non-vocational teaching colleagues who went from school to university and teacher education straight after completing high school, and who then returned to classrooms to teach. One of Myron's more supportive colleagues said, "It is the difference between those teachers who have never known life without 'Little Lunch' [a colloquial word for morning recess] and those who have spent their lives in the world of work". Martha, in

contrast, attributed her quieter voice in her teaching to her negative experiences as a school student: "I hate raised voices – my memories of school are dominated by teachers yelling at me to 'get out now'". She deliberately decided to not have conflict in her classrooms if this could possibly be avoided and instead spoke to students in quiet tones and a friendly manner.

The VETiS teachers in the study were challenged by some of the *material-economic arrangements* of the schools such as the practical learning spaces. In most cases, the new teachers from industry reconfigured the fabric of the school to afford opportunities for learning in workplace or workplace-like settings, thereby offering their students authentic experiences. Their intentions were to ensure that the activities and material setups of the workplace settings could support and enable relevant vocational practices. For example, as soon as *Mick* was appointed to his first school, he decided to launch the senior Primary Industries classes into a market garden enterprise. The Principal allocated an extensive area of the school ground for the project. Unfortunately, the river, which is a dominant feature of the town, broke its banks following heavy rain and caused unprecedented flooding just as the market garden was coming up for autumn harvest. The flood ruined Mick's project, but he – and his students – accepted this as a reality that local farmers experience. Although Mick was disappointed that all the efforts of students were destroyed, it did not stop him from starting an alternative project, as farmers tend to do. The harsh climate meant that learning was authentic; these Primary Industries students experienced the devastation caused by the flood as part of the highs and lows of agricultural life. Mick and his students immediately started a salad and herb garden in a higher section of the school grounds and went back to rebuilding the enterprise. Mick used the flood "as a big teaching aid" and implemented a more environmentally appropriate approach to the next garden project. He and his students supplied fresh produce to teachers, local enterprises, and of course to themselves: they thus became part of a real economy, doing work valued for itself rather than just as a project in the Primary Industries course.

Mick also arranged for students to volunteer to help local farmers at harvest time under an arrangement where the farmers 'paid' the school in kind: in grain, and in hay to feed animals raised at the school. The Head Teacher of Mathematics, who was Mick's immediate supervisor, was aghast at this entrepreneurial practice and complained to the Principal, who disallowed the practice, much to Mick's and the students' chagrin. The practice was stopped because it contravened the usual *social-political arrangements* governing school practice. This is a good example of how VETiS teachers' attempts at site-based education development (Kemmis et al. 2014) may be constrained by contrary social-political arrangements. The rules of the school constrained Mick's attempts to teach students within a barter system that is a normal practice in farming communities, even if sometimes at odds with tax law. It certainly turned out to be at odds with the social-political arrangements of the school. We return to social-political arrangements shortly.

Another example of changing the fabric of the school included rebuilding a storage shed as a welding space by *Lauder*, who taught in a small school in a town with unusually high numbers of unemployed people. This arrangement was highly

successful and Lauder soon found himself offering adult classes in Metals and Engineering to unemployed local adults in the evenings. The learning experiences gained in Lauder's welding shed fitted well within the school plans and he received accolades from the Principal.

In terms of the *social-political arrangements* in the school sites, the VETiS teachers were novices in the social space of the staff, and hence felt less 'powerful' in terms of the hierarchies in the site. Also, in some ways, the new teachers were challenged by fear of being regarded as 'inferior' by other colleagues on the basis of their being different from other teachers. VET in Schools has, from its inception, struggled with a lack of 'parity of esteem' (Billett 2004) compared with senior academic studies, and this was echoed to some extent in the concerns of the new VETiS teachers. Despite these new VETiS teachers being mature and highly-experienced in terms of their trade vocations, and in many cases holding senior positions or owning businesses prior to becoming teachers, their contributions and status were contested in the practice architectures of the schools, where VETiS teachers remained a minority.

This may partly explain why the career change teachers spent most of their school day either in the workshops or class areas or in the playgrounds, more or less consciously avoiding interactions with colleagues from other discipline areas. This was described as "retreating to their island of practice" and implied that opportunities to learn from and work with colleagues were missed. Mick explained that he did not interact with other teachers because he did not like to hear negative comments about students. He liked to make his own judgements. Paul was concerned that his colleagues might mock his enthusiasm for his classes and his new career. Myron explained that he did not like to speak in front of his colleagues as they thought he was a 'try hard' and his enthusiasm was often dampened by negative attitudes to his practice and his evident liking of the students.

While relationships of solidarity and power among the school staff (relatings) were difficult for an outsider researcher to explore, during school visits it was apparent that the types of relationships that career change teachers were developing with their students were not only quite different from those of other teachers in secondary schools as discussed, and thereby setting them apart from other teachers, the relationships had the positive effect of sustaining their efforts as teachers. This is reflected in Ralph's reasons for not interacting more with his colleagues: he wanted to spend time with those enthusiastic students who wanted to work on their projects during breaks. This sustaining effect is consistent with other research findings. In a study by Allen (2007) designed to examine acculturation of second career teachers to the school context, "career changers reported that the most important consideration in identifying as a teacher is the relationship with the students – positive student interactions led to satisfaction with one's position as a teacher" (p. 7). An Australian study by Richardson and Watt (2005) similarly found this to be a major feature, demonstrated by both career changers' practices and their reflections when asked what aspects of their new careers were most important to them.

Tess's introduction of a Cattle Club in her school is an interesting example of how VETiS teachers created arrangements that made possible particular kinds of relationships and relatings between teachers and students and between students and students. Students with reputations for poor behaviour often attended the Cattle Club. These students saw it as a privilege to be able to join because they had to demonstrate commitment and a good attitude before being invited to participate. A science teacher concurred that many of the 'very troublesome' students in the Cattle Club enjoyed the experience, and that their attitudes and attendance at school had improved over time. Tess's classroom was full of displays of medals and trophies that the classes generally, and the Cattle Club specifically, had won at agricultural shows, including a Reserve Champion ribbon from a large town nearby. Tess thus made her classroom a space of recognition, as well as one of belonging (via 'earned' membership into the club). This example shows that specific practices of *relating* can be a motivational factor for students, creating learning opportunities, and that Tess developed the Cattle Club specifically as a practice architecture that would privilege pursuits complementary to the syllabus. It also illustrates successful development of external links to industry and the community whilst supporting Tess's practice as an agriculture teacher.

As the stories discussed here show, what the VETiS teachers ended up doing during their first 3 years was creating the practice architectures of a workplace learning environment in their own classrooms and workshops. By "bringing the world of work into school" (as the Principal of Martha's school described it) in this way, these new teachers constructed 'islands of vocational practice' in their schools. They actually transformed their classrooms and workshops into authentic workplaces (Green 2015).

Conclusion: Different Ways of Living the Teaching Profession

As has been pointed out in earlier VET research, the educational practice of VET entails significant tensions for the VET teachers (Brennan Kemmis 2008). These tensions are between a strong national regulatory framework for VET (Wheelahan 2015), on the one hand, and, on the other, the traditions, histories, and practices of the different trades (Ray 2001). Brennan Kemmis (2008) points out that the traditions of excellence in work in the trades are powerful guides for the professionalism of people in the trades, and powerful motivators for experienced tradespeople to become vocational educators, both in the workplace and in VET and VETiS settings.

There is also an enduring tension between the regulatory frameworks of VET and other secondary curriculum requirements in Australia, and the specific needs of different groups of young people (Smith 2004) – a tension between the demands of teaching the curriculum and teaching the learners that is as old as education itself. VETiS teachers meet young people at crucial moments in their lives and their identity-formation, and the evidence of this study shows that they are extremely

sensitive about adopting teaching strategies that will respond to students' needs as the students develop their own vocational practice through their learning practices.

The Australian case cited in this chapter shows how the practice architectures of VETiS are composed of national institutionalised cultural-discursive, material-economic, and socio-political arrangements as well as arrangements that are to be found (and sometimes created) at each school site, and in each community. While it would be easy to caricature these differences, we have shown how those national and local arrangements shape VETiS teaching (both by individuals and in the collective practice of the VETiS teachers observed in this study) as rather distinctive: it is influenced by ideas, activities, and forms of relationship between people ordinarily found in workplaces and social settings. It takes very seriously the development of young adults in terms of preparation for the world of work through adapting vocational practices. As also shown, VET teachers draw directly on their previous experiences in their vocational areas when they enter the world of teaching. These personal and vocational experiences make up a strong foundation for VET practices whilst at times sitting awkwardly in the traditions and cultures of senior secondary education.

Put another way, in this chapter, we have seen the interplay between *learning at work*, (both for students on workplace-like tasks in schools and in their communities, and for teachers drawing on their own workplace experiences), *learning about work* (for example, from the VETiS curriculum and from the experiences recounted by these novice VETiS teachers), and *learning through work* (for example, in the project work of the students in these VETiS subjects, in these novice VETiS teachers' classrooms and workshops). We have explored this interplay using the lens of the theory of practice architectures. As we saw, VETiS teachers interviewed for this study drew on their industry knowledge and experiences to integrate the world of work into the formal educational curriculum. As new teachers, they were sometimes constrained by the existing practice architectures of their schools, but they also drew on their experience to create other practice architectures that would enable them to realise their view of what vocational education and training should be for the young people they encountered. And they learned to steer clear of some of the practice architectures of their schools that they believed might constrain their approaches to teaching or their views of the young people they taught – like avoiding the staff-room, and sticking with the students in the workshop or playground during recess and lunch breaks.

The case in this chapter shows that VETiS teachers often confront structures and compliance regimes that challenge their concepts of *praxis* because they are required to balance three main practice sites with different practice traditions and landscapes: the secondary school, the vocational or occupational field, and the workplace. Yet these VETiS teachers sustained a commitment to praxis both as "morally-committed, and oriented and informed by traditions in a field" (Kemmis and Smith 2008, p. 4) and as "history making action" (Kemmis 2010, p. 9). They did their best to honour the traditions of their vocations, and vocational education, and they did their best to prepare students with the knowledge, skills, and values to contribute to their own wellbeing as well as the wellbeing of their families, communities, and society.

The teaching practices of these VETiS teachers were formed not only by their teacher education, but also by their own school experiences, their own vocational experiences, and their own experiences in vocational education. The practice architectures of those settings shaped their practices, but their practices also produced new practice architectures that would permit them to practise their teaching as praxis.

References

Allen, S. (2007). *Joining school communities of practice: Career changer teacher identity transitions*. ProQuest dissertations and theses. Baltimore County: University of Maryland. Retrieved from http://ezproxy.library.usyd.edu.au/login?url=http://search.proquest.com/docview/304758425?accountid=14757.

Anthony, G., & Ord, K. (2008). Change-of- career secondary teachers: Motivations, expectations and intentions. *Asia-Pacific Journal of Teacher Education, 36*(4), 359–376.

Billett, S. (2004). Workplace participatory practices: Conceptualising workplaces as learning environments. *Journal of Workplace Learning, 16*(5/6), 312–324.

Brennan Kemmis, R. (2008). Freedom for praxis: An unburied and unforgotten tradition. In S. Kemmis & T. J. Smith (Eds.), *Enabling praxis: Challenges for education* (pp. 195–215). Rotterdam: Sense.

Brennan Kemmis, R., & Green, A. (2013). Vocational education and training teachers' perceptions of their pedagogy. *International Journal of Training Research, 11*(2), 101–121.

Cranston, N., Kimber, M., Mulford, B., Reid, A., & Keating, J. (2010). Politics and school education in Australia: A case of shifting purposes. *Journal of Educational Administration, 48*(2), 182–195.

Creswell, J. W. (2008). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River: Pearson/Merrill Prentice Hall.

Denzin, N. K., & Lincoln, Y. S. (2011). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (4th ed., pp. 1–21). Thousand Oaks: Sage.

Etherington, M. (2009). Swapping the boardroom for the classroom. *Australian Journal of Teacher Education, 34*(4), 39–59. Retrieved from http://ro.ecu.edu.au/ajte/vol34/iss4/4.

Fairclough, N. (1992). *Discourse and social change*. Cambridge: Polity Press.

Fairclough, N. (2003). *Analysing discourse: Textual analysis for social research*. London: Routledge.

Green, A. (2012). *Bridging two worlds: From industry to schools*. Doctoral thesis, University of Sydney.

Green, A. (2015). Teacher induction, identity and pedagogy: Hearing the voices of mature early career teachers from an industry background. *Asia-Pacific Journal of Teacher Education, 43*(1), 49–60.

Gummerson, E. (2007). Case study research. In B. Gustavsson (Ed.), *The principles of knowledge creation: Research methods in the social sciences* (pp. 87–110). Northampton: Edward Elgar.

Haggard, C., Slostad, F., & Winterton, S. (2006). Transition to the school as workplace: Challenges of second career teachers. *Teaching Education, 17*(4), 317–327.

Halladay, P. (2008). *Mid-career changers: An investigation of non-traditional entrants into teaching.* ProQuest dissertations and theses. Michigan State University. Retrieved from http://ezproxy.library.usyd.edu.au/login?url=http://search.proqiest.com/docview/304577560?accountid=14757.

Jager, S., & Maier, F. (2009). Theoretical and methodological aspects of Foucauldian critical discourse analysis and dispositive analysis. In R. Wodak & M. Meyer (Eds.), *Methods of critical discourse analysis* (pp. 34–61). Thousand Oaks: Sage.

Kemmis, S. (2010). Research for praxis: Knowing doing. *Pedagogy, Culture and Society, 18*(1), 9–27. doi:10.1080/14681360903556756.

Kemmis, S., & Smith, T. (2008). Praxis and praxis development: About this book. In S. Kemmis & T. J. Smith (Eds.), *Enabling praxis: Challenges for education* (pp. 3–13). Rotterdam: Sense.

Kemmis, S., Wilkinson, J., Edwards-Groves, C., Hardy, I., Grootenboer, P., & Bristol, L. (2014). *Changing practices, changing education*. Singapore: Springer.

Le Maistre, C., & Paré, A. (2011). Whatever it takes: How beginning teachers learn to survive. *Teaching and Teacher Education, 26*(3), 559–564.

Lee, D. (2011). Changing course: Reflections of second career teachers. *Current Issues in Education, 14*(2), 1–17.

Mahon, K., Kemmis. S., Francisco, S. & Lloyd, A. (2017). Introduction: Practice theory and the theory of practice architectures. In K. Mahon, S. Francisco, & S. Kemmis (Eds.), *Exploring education and professional practice* (pp. 1–30). Singapore: Springer.

Polesel, J., Helme, S., Davies, M., Teese, R., Nicholas, T., & Vickers, M. (2004). *VET in schools: A post-compulsory education perspective*. Adelaide: National Centre for Vocational Education Research.

Ray, J. (2001). *Apprenticeship in Australia: An historical snapshot*. Adelaide: National Centre for Vocational Education Research.

Richardson, P. W., & Watt, H. M. (2005). 'I've decided to become a teacher': Influences on career change. *Teacher and Teacher Education, 21*(5), 475–489.

Smith, E. (2004). Vocational education and training in schools in Australia: What are the consequences of moving from margins to mainstream? *Journal of Vocational Education and Training, 56*(4), 559–581.

Wheelahan, L. (2015). The future of Australian vocational education qualifications depends on a new social settlement. *Journal of Education and Work, 28*(2), 126–146.

Wilson, E., & Deaney, R. (2010). Changing career and changing identity: How do teacher career changers exercise agency in identity construction? *Social Psychology of Education: An International Journal, 13*(2), 169–183.