

How Novice Vocational Education and Training Teachers Learn to Become Teachers

Susanne Francisco

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for the degree of Doctor of Philosophy
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Certificate of Authorship / Originality

I certify that the work in this thesis has not been previously submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Date: _____

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Abbreviations

ABS	Australian Bureau of Statistics
Cert IV TAA	Certificate IV in Training and Assessment
HoS	Head of School
TAFE	Technical and Further Education
VET	Vocational Education and Training

Abstract

Expectations of the vocational education and training (VET) sector continue to increase as governments, industry, and the community see vocational education and training as an answer to a range of issues. Meeting these expectations and providing quality VET requires VET teachers with a high level of skills and abilities. At the same time, in Australia, many VET teachers begin teaching with little or no prior experience or educational qualifications related to teaching. This thesis addresses the question of how novice vocational education and training teachers learn to undertake the teaching role. Specifically, it considers,

- How novice VET teachers learn to become teachers through undertaking the teaching role;
- How novice VET teachers learn to become teachers through practices additional to the teaching role;
- What novice VET teachers learn; and
- What enables and constrains novice VET teacher learning.

Nine novice teachers, in eight different teaching areas, and across four campuses, participated in the longitudinal multi-case study undertaken over two years. A practice theory framework was used to design the research and to analyse the data.

The research found that there was considerable variation in the practices that novice teachers undertook as part of their role as a teacher. For instance, 'teaching' involved different practices in each site. There was also variation in what each teacher needed to learn to undertake that role. The

research found that practices associated with undertaking the teaching role were more influential in supporting teacher learning than practices additional to the teaching role. In some sites, a trellis of interconnected practices that supported learning (PSLs) was developed. A trellis is made up of interconnected components that help support growth in a particular direction. In sites where a trellis of PSLs was developed, it provided greater support for novice teacher learning to undertake their role than in sites where PSLs were not interconnected. The thesis identifies the key arrangements in each site that enabled and constrained novice teacher learning.

Keywords: Workbased Learning; Practice Architectures; Trellis; Practices that Support Learning; Teacher Learning; Mentoring; VET Teachers

Glossary of Terms

The Australian VET system has an array of terms that can become confusing. The glossary below serves two purposes. It provides definitions for some of these terms. It also outlines some choices that I have made in using particular terms in this thesis.

Term Used	Definition
Certificate IV in Training and Assessment	Abbreviated throughout as Cert IV TAA. This includes the Training Package qualification Cert IV TAA and the more recent version of the qualification, the Cert IV TAE. The Cert IV TAA is the qualification that all VET teachers are meant to complete.
Competency	A competency identifies the skills and knowledge that a learner needs to be competent in to achieve the competency. It does not provide information about how to support students to become competent.
Industry	In the Australian VET system the term 'industry' is often used to refer to the occupation that teachers are teaching about. For instance, the automotive industry, the beauty therapy industry or the sport and fitness industry. The term is also used more broadly such as 'industry consultation'.

Teacher	Many terms are used to refer to the person who supports the learning of a group of people. These include teacher, facilitator, trainer and VET practitioner. Throughout this thesis I use the term 'teacher'.
Time release	Time release refers to a reduction in the time expected to be given to teaching duties to enable a teacher to undertake other roles such as mentoring or resource development.
Training Package	In Australia, most VET qualifications are encapsulated in nationally recognised Training Packages. Each Training Package is made up of a number of qualifications, which in turn are made up of a number of competencies. For each industry, a Training Package outlines the competencies that students need to meet for each VET qualification.

Chapter 1

Introduction to How Novice VET Teachers Learn to Become Teachers

After teaching Vocational Education and Training (VET) teachers for a number of years across a range of qualification levels, it became clear to me that much of the learning that VET teachers do does not take place as a result of formal qualifications. Despite extensive reading of relevant literature it became apparent that there has been limited research into the ways in which Australian VET teachers, and particularly novice VET teachers, learn how to undertake the role of a teacher, outside of formal qualifications. This thesis explores how novice VET teachers, and particularly Technical and Further Education (TAFE) teachers in Australia, learn how to become teachers. This chapter begins with an introduction to the research topic, including a brief introduction to the VET sector in Australia, and an overview of the context in which TAFE teachers operate. I then introduce the research questions and discuss the reasons why this is an important area for research. After briefly outlining my own interest in this topic, the relevant literature as well as the theoretical framework that I have used to shape and analyse my research is also introduced. The final section of the chapter outlines the thesis structure, providing a brief overview of the following chapters.

1.1 VET teachers and the Australian VET sector

The VET sector in Australia is large and is made up of four distinct groups of providers, all of which are licensed as Registered Training Organisations (RTOs): Institutes of Technical and Further Education (TAFEs); RTOs which are set up within an enterprise to meet the training needs of that enterprise (known as Enterprise RTOs); VET in Schools; and other private RTOs. VET is largely funded through government training subsidies, student fees, and private funding. Both Commonwealth and State governments provide funding for VET provision. Over the last two decades a succession of Commonwealth and State governments have "...incrementally and increasingly" (Korbel & Misko, 2016 p. 7) implemented policies of increasing competition for publicly subsidised VET funding, resulting in a highly competitive VET system (Brennan-Kemmis, 2008).

Historically, TAFEs have been the provider of VET in Australia (Brennan-Kemmis, 2008), and at the time of this research, TAFEs were still the largest group in the Australian VET sector (Wheelahan & Moodie, 2011), with 1.9 million students enrolled in TAFE in 2011 (National Council for Vocational Education Research, 2012). At that time more than two thirds of all VET was undertaken through TAFEs or other public providers (National Council for Vocational Education Research, 2012). As of 2014 this figure had changed so that it was closer to half rather than two-thirds (National Council for Vocational Education Research, 2015).

The VET sector is complex, and this complexity is likely to continue and to increase (B. Clayton, 2009; Wheelahan & Moodie, 2011). The complexities of the VET environment at a broad level include: the

implications of globalisation and internationalisation including workforce skill requirements; increasingly sophisticated expectations from both industry and the community; and ongoing changes to Commonwealth and State government policies related to VET, including an increasingly competitive market (Mitchell, Chappell, Bateman, & Roy, 2006; Wheelahan, 2010).

The expectations of, and demands on, VET teachers can be high. Wheelahan and Curtin (2010) note: “There is widespread recognition that achievement of government objectives for the growth of VET, increasing the workforce’s skills, social inclusion, and specific participation and equity targets requires highly skilled VET teachers” (p. 62). VET teachers work with diverse student groups with a wide range of needs and abilities. Students can be aged anywhere from fifteen to seventy years of age or more; have various ethnic backgrounds and levels of English language skills; have a history of educational and social disadvantage; be highly skilled professionals; be unemployed; have a range of skill levels in relation to literacy and numeracy; and have a range of prior learning experiences and learning skills.

Wheelahan notes that “Sometimes these categories of students overlap – and sometimes they do so in the one program and the one classroom or learning site” (2010, pp. 10-11). VET teachers also operate in a range of learning environments including, the students’ workplace; traditional classrooms; online learning environments; lecture theatres; environments such as simulated hospitals using simulated patients; and locations such as gyms or restaurants which are simultaneously teaching environments and commercial entities with clients. The ability to be able to support learning in each of these complex conditions requires high-level skills.

While the demands on VET teachers are recognised as complex, and high-level skills are required, the large majority of TAFE teachers begin teaching as casual teachers, and in many cases they begin to teach with no formal education or other preparation about how to teach (Wheelahan & Moodie, 2011). Casualisation of the TAFE teacher workforce has been increasing since the early 1990s (Nechvoglod, Mlotkowski, & Guthrie, 2010) and casual teachers currently make up a large proportion of the TAFE teacher workforce (Simons, Harris, Pudney, & Clayton, 2009). While the proportion varies across Australia, the percentage of TAFE teachers employed casually is more than 50 percent nationally, and much higher than this in some States (Nechvoglod, Mlotkowski, & Guthrie, 2010; Simons et al., 2009). The Productivity Commission (2011) estimated that about 60 percent of all TAFE teachers were employed on a casual basis in 2010. This is more than three times the rate of casualisation for the Australian workforce as a whole which in 2011 stood at nineteen percent (Australian Bureau of Statistics, 2012). This casualisation of the TAFE teacher workforce is occurring against a background of workforce change, demographic change, an increasingly globalised economy, and a consequent increase in expectations in relation to VET provision (Guthrie, Perkins, & Nguyen, 2006; Wheelahan, 2010; Wheelahan & Moodie, 2011). Information about teacher casualisation in other VET providers is not available, however Guthrie (2010a) notes in relation to the whole VET sector “Whatever the level of casualisation, a key issue is that they generally have less access both to ongoing support from other VET staff and to professional development opportunities” (p.10). VET teachers then often commence as casual teachers with little or no experience or qualifications in teaching, and once they

commence they often have limited access to support or professional development to enable them to develop those skills.

There are a number of terms used to name the people who support learning in VET, including teacher, trainer, lecturer, practitioner, and facilitator. Moodie and Wheelahan (2012) found, in their research into the quality of teaching in VET, that the name used to describe people who teach “was the most controversial part of the project” (p. 322). Throughout my research I used the term that each participant was most comfortable with. For the purposes of this thesis, and in keeping with much of the literature in the area (for instance, Wheelahan, 2010), I use the term ‘teacher’ to encompass all of these. Also, throughout this thesis I refer to VET teachers and to TAFE teachers. VET teachers are all teachers who teach in VET. The TAFE teachers that I refer to are also VET teachers, and therefore form a subset of all VET teachers. When I use the term TAFE teachers I refer only to those teachers who teach VET in TAFE. When I refer to VET teachers I refer to all teachers who teach VET, including in TAFE and all other provider groups.

I use the term ‘role’ throughout this thesis. In discussing roles and identity, Schatzki (2002) argues against theorists such as Foucault, who he contends focus too heavily on a linguistic understanding of a role and associated positioning. He maintains that “the meanings of people should not be collapsed into words ... Rather it is constituted in the full range of actions that he or she performs or that are performed toward him or her” (pp. 50-51). In referring to the roles that novice teachers undertake, I use the term as a shorthand for everything that a teacher needs to do to embody their duties and understandings about being a teacher. It includes what they do, what they say, and the relationships that they engage in as a result of

being a teacher. Throughout this thesis I refer to novice teachers becoming teachers. While they are in one sense teachers as soon as they are employed in that role, they are also learning to undertake the role of a teacher. They are learning to become teachers.

1.2 Where are the gaps?

There are significant gaps in our knowledge of the Australian VET teacher workforce (Guthrie, McNaughton, & Gamlin, 2011; Simons et al., 2009). One of the important gaps relates to what the work role of VET teachers encompasses and how novice VET teachers learn to undertake the work of a teacher. While there has been research exploring the Certificate IV in Training and Assessment (for instance, B. Clayton, 2009; B. Clayton, Meyers, Bateman, & Bluer, 2010), which is the formal qualification required for beginning VET teachers, there has been little work on other influences on their learning, including the learning that they do through undertaking their work role. Clayton (2009) notes that there is “little research existing in Australia into the initial preparation of VET practitioners, and virtually none that includes direct accounts drawn from the experiences of beginning teachers and trainers” (p. 14). This research addresses this gap.

Because many novice VET teachers begin teaching without any prior experience or qualifications related to teaching, their learning in the workplace where they are employed as teachers becomes an important component of the development of their skills, knowledge and understanding about teaching and their role as a teacher. Guthrie and Clayton (2010) have argued that “More needs to be understood about the work TAFE staff do” (p.

27). In calling for “more attention and resources (to be) devoted to work design and workforce development” in TAFE, Tom Karmel notes that “The professional nature of the work TAFE practitioners do is not sufficiently well understood or appreciated” (in Guthrie & Clayton, 2010, p. 4). The research reported in this thesis provides some illumination of this work and how the teachers learn to do it.

Guthrie (2010b) has identified a decrease in the numbers of VET teachers undertaking formal qualifications. He suggests a range of reasons for this, including “the greater focus on the workplace, rather than the classroom or training institution, as a site of learning” (p. 12). With this greater focus on VET teachers learning in the workplace where they are employed as teachers, there has not been a focus on how they are learning in the workplace, or what it is that they are learning. This research addresses this gap also.

This research contributes to the literature related to workplace learning, VET teacher learning, and practice theory.

1.3 The research questions

The requirement for TAFE to provide quality education and training within the context of ongoing socio-economic change, combined with an increasingly sophisticated clientele with clear expectations related to quality and flexibility of VET provision (Guthrie et al., 2006), has implications for the skills required of VET teachers. The impetus for my research has been the seeming mismatch between the need for VET teachers with high-level skills to support student learning, and the high rate of casualisation of the TAFE

teacher workforce. Most TAFE teachers commence teaching with no qualifications related to teaching and yet, as Wheelahan (2010) notes, “School teachers must have four years’ pre-service training, either in a 4-year education degree, or a 3-year discipline degree and a 1-year education graduate diploma. Higher education teachers are at least degree qualified but a research higher degree is regarded as the key qualification ... VET teachers are required to have a relevant occupational qualification at the same level or above the level at which they are teaching, plus a Certificate IV TAA as their teaching qualification, which might take from three to six months” (p. 11). How then do these teachers learn to become a teacher?

Research has shown that casual TAFE teachers undertake less professional development than permanent TAFE teachers (Francisco, 2008; Guthrie & Clayton, 2010). So not only do teachers usually begin working in TAFE as casual employees, often with commitments to other employers (Simons et al., 2009), they have high expectations placed on them to provide good quality and flexible VET. Many have not accessed formal support or training in how to support student learning prior to commencing teaching, and they are also less likely to undertake professional development than other teachers. My research explores how novice teachers learn to become teachers. The four questions that the study addresses are:

- How do novice VET teachers learn to become teachers through undertaking the teaching role?
- How do novice VET teachers learn to become teachers through practices additional to the teaching role?
- What do novice VET teachers learn?

- What enables and constrains novice VET teacher learning?

1.4 Learning in the workplace

Much of the learning that novice VET teachers do in relation to teaching and to undertaking their roles as teachers, is likely to take place after commencing work as a teacher and as a result of undertaking that role.

Wheelahan and Curtin (2010) acknowledge this when they argue: “Support for new teachers must be embedded in institutional structures so that VET takes the same level of responsibility for supporting new entrants as do other professions” (p. 62).

As a result of his research on learning in the workplace, Billett (2001) argues that the workplace is a crucial place for learning and for some workers it can be the only place for learning related to their work role. He notes that learning can be understood as “being the product of participation in social practice through engagement in the activities and access to support and guidance” (Billett, 2001, p.2). He also argues that learning in the workplace does not happen merely through undertaking the job. He identifies the allocation of a workplace guide to support learning as an important component of successful workplace learning. Workplace learning in the VET sector is crucial for novice VET teachers to enable them to successfully undertake their role as a teacher.

Based on empirical research into the workbased learning of workers in four companies in the United Kingdom, Fuller and Unwin (2004) developed a framework to support organisations to develop their workplaces as ‘expansive’ learning environments. This relates to the extent to which a

workplace supports or restricts employee learning. They identify two broad categories within this framework: organisational context and culture (which includes job design and work organisation); and understandings of learning through participation (p. 132). They also argue that workers identifying, and being identified by the organisation, as learners, is important. The workbased learning of novice VET teachers is likely to be influenced by the extent to which their workplace provides an expansive or restrictive workplace environment.

This thesis deliberately foregrounds the site based learning of novice VET teachers. To my knowledge, the workbased learning practices of these teachers has not been the focus of extensive research in Australia prior to this research. Many novice VET teachers work in the VET workplace and at least one other workplace. Throughout this thesis, where I discuss workplace learning I refer to learning in the VET workplace, unless explicitly identifying another workplace.

1.5 The conceptual background

Learning in the workplace is embedded in practice where learning and doing occur together. Novices might come to a workplace with knowledge and skills relevant to the occupation/profession however these are developed and transformed through use in the work environment. Learning is contextualised in practice with people learning what is required in that environment at that time.

Practice theories have been identified as relevant to learning in the professional fields including (but not limited to) teaching, nursing, other

health professions, and farming (see for instance, Green, 2009; Hager, Lee, & Reich, 2012; Kemmis, 2010). Nicolini (2012) argues that practice theories offer a “distinctive contribution to the study of work and organisation” (p.1).

Practice theories have increasingly been seen as informing organisational and work-related research over recent years (Gherardi, 2009).

In this research I use a practice approach to explore the learning that the novice teachers do. There are a range of practice theories emanating from a number of theoretical traditions. In this research I have been informed by Schatzki’s practice theory (Schatzki, 2001, 2002, 2005, 2006, 2010, 2012) and particularly the theory of practice architectures (Kemmis, 2009; Kemmis, Edwards-Groves, Wilkinson, & Hardy, 2012a; Kemmis & Grootenboer, 2008; Kemmis, Wilkinson, et al., 2014). Practice theories, particularly Schatzki’s practice theory and the theory of practice architectures, foreground practice at the same time as acknowledging human agency. This allows a focus on the sites where teachers learn to become teachers and the affordances of these sites in enabling and constraining teacher learning while at the same time having an awareness of the motivations and dispositions of the teachers who are learning.

1.6 The study and scope of the research

This research involved a two-year longitudinal study of how nine novice VET teachers working in a large TAFE organisation learnt how to undertake the role of a teacher in the first two years of employment as a teacher. The research was undertaken as eight different case studies (two of the teachers

were in the same teaching department), and each focuses on the perspective of the novice teacher operating in a specific site.

I have chosen to conduct the research in a TAFE environment. When this research commenced about two-thirds of all VET was undertaken through TAFEs or other public providers (National Council for Vocational Education Research, 2012), and while there is no clear data on VET teachers in each of the different sectors of VET, at that time TAFE teachers formed the majority of VET teachers in Australia (Wheelahan, 2010). I am also very familiar with this environment, and when I commenced the research I was working in the TAFE where I undertook the study.

The research deliberately focuses on the practice arrangements as understood by the novice teachers. I sought to gain the perspective of novice teachers by interviewing them over a period of two years. I did this because I wanted to look at the 'practice arrangements' (this term is discussed in more detail in the 'theorising practice' section of Chapter 2) that the novice teachers experienced. I hypothesised that this may be different to an understanding developed by looking at the practice arrangements as experienced by more senior teachers and managers for example. Clayton et al.'s (2008) research into the cultures of Australian RTOs supports this possibility, showing that "In the seven TAFE institutes there was uniformly a disjunction between the experience of organisational culture at the work team level and that at the management level, even in the most unified and harmonious of institutes" (p. 27). Although I do not suggest that practice arrangements and organisational culture are the same thing, Clayton et al.'s findings indicate different understandings and experiences of an

organisation – and, I suggest, the experience of becoming a teacher – from different perspectives.

At this point I should say that I quite deliberately do not attempt to measure teaching quality in this research, instead focusing on the practices that the teachers undertake. In addition, my research does not:

- Aim to explicitly address the Certificate IV in Training and Assessment, which is the minimum qualification expected of VET teachers, except where it was raised explicitly by the participants in the research or it became apparent through the content of their discussions or actions.
- Address any other educational qualifications unless raised by the research participants. Lack of other educational qualifications was one of the criteria that I used to determine who would be involved in the research. I did this because I wanted to focus on the learning of novice VET teachers once they began as teachers.
- Explore the learning of VET teachers in enterprise RTOs or in private RTOs. I chose to do a longitudinal and in-depth multi-case study in one organisation rather than a broader study. Because the majority of VET teachers worked within a TAFE at the time the research was undertaken, and because this is the background and area where I have experience, I chose to focus the research in a large TAFE.

1.7 Introducing myself and my relationship to the research

I am not a disinterested researcher. At the time of commencing my research I worked in the Teacher Education department of the TAFE in which I undertook the research, and had worked in Teacher Education for VET teachers for some years. I have been involved in quite a number of educational projects, including teaching courses that result in teacher qualifications at the Masters, Graduate Diploma, Graduate Certificate, Bachelor, Associate Degree, Advanced Diploma, Diploma and Certificate IV levels; teaching short courses; designing workplace learning strategies; designing, developing and coordinating a mentoring program; coordinating a teacher network to support teachers' professional development; and developing hard copy and online resources to support teacher learning about teaching.

I have thus been working for many years to support TAFE and other VET teachers in learning how to become teachers. While I was teaching in, and/or managing the Teacher Education department during the time that the research was undertaken, at no time did I teach the compulsory Certificate IV in Training and Assessment that the participants undertook. Also, I did not discuss my research in any specific detail with the teachers who were teaching this qualification.

As a teacher of VET teachers I am interested in learning and teaching, and how learning can be supported. Despite having worked in Teacher Education for many years when I commenced my research, it was still not clear to me how VET teachers learn to teach and to undertake the role of a teacher. There are components of this learning that are clearer (including

formal courses such as the Bachelor of Adult Education, the Certificate IV in Training and Assessment, and short workshops), but these are not the only (and probably not the main) influence on teacher learning. I thus came to this research with a history of understandings and beliefs in relation to the issue of VET teachers' learning. This will, and has, influenced my approach to the research that I undertake and the interpretations that I make of the results of the research. As Crotty (1998) has noted, "meanings are constructed by human beings as they engage with the world they are interpreting" (p. 43), and "when we narrate something, even in telling our own story, it is ... the voice of our culture – it's many voices, in fact – that is heard in what we say" (p. 64). By using a reflexive approach to my involvement in the research, and by focusing very deliberately on the experiences of the novice teachers within the sites in which they operated, I have tried to ensure that these prior understandings did not unduly impact on the research.

In developing my research I expected to find that TAFE teachers would learn a lot about teaching by doing teaching: they would try a particular teaching approach, and if it "worked" – however they might judge that – they were likely to continue with that approach, and if it did not work they might alter it or just not use it again. I also made the assumption that learning about teaching does not just occur in the TAFE workplace in which they are currently operating. My research thus explored what influences impacted on TAFE teachers learning to become teachers. I was expecting these to include networks that they are part of within their industry (e.g. hairdressers, mechanics) as well as professional bodies related to their industry, trade journals and so on. As many novice VET teachers are employed casually and continue other work in the industry in which they're

teaching while beginning as a teacher (Simons et al., 2009), I anticipated that learning through their work in the non-teaching workplace may also inform their learning about undertaking their role as a teacher. I also hypothesised that other influences which might inform and support teacher learning could include family, friends, the media, short courses, and study that leads to teaching qualifications. These expectations influenced the research that I undertook.

1.8 Organisation of this thesis

Chapter 2 – VET Teachers, Learning and Practice Theory

To set the context for the study Chapter 2 engages with the literature related to VET teachers, including, who VET teachers are; why people might choose VET teaching; what VET teachers need to know and to do; and casualisation of the VET teaching workforce. This chapter positions my research in relation to the literature on workbased learning. It also positions my research in relation to the theoretical framework of practice theory, including Schatzki's site based practice theory (1996; 2002; 2005; 2006; 2010), and especially the theory of practice architectures and the subsidiary theory of ecologies of practices (Kemmis & Grootenboer, 2008; Kemmis, 2009; Kemmis et al., 2014).

Chapter 3 – Researching the Learning of Novice VET Teachers: Methodology and Methods

Chapter 3 outlines the methodology that frames the research, and discusses the longitudinal multi-case studies that I undertook. This chapter positions my study within a practice theory frame and outlines the data collection methods as well as approaches to analysis of the data. The chapter discusses

my approach to reflexivity throughout the research, and also outlines ethical approaches and issues. In this chapter I also discuss issues associated with being both an insider and an outsider in the sites where I undertook the research.

Chapters 4 and 5 – Being Stirred Into Practice: Learning to Become Teachers

These relatively larger chapters provide case studies of each of the sites where novice VET teachers were employed. In a sense they tell the story of how each of the teachers participating in this research learnt to become a teacher. Chapter 4 provides case studies of those teachers who were employed on a casual basis throughout the period of the research. Chapter 5 provides case studies of novice VET teachers who were employed on a contract or permanent basis for the majority of the two years of the research. These chapters include an overview of the projects and the substantive practices that the novice teacher undertook in each site, as well as the practices that supported their learning to become a teacher. Each case then includes an overview of the key practice architectures that enabled and constrained novice teacher learning.

Chapter 6 – Learning How to Go On: Cross Case Findings

This chapter draws together the findings from the case studies to explicitly address the first three research questions:

- How do novice VET teachers learn to become teachers through undertaking the teaching role?
- How do novice VET teachers learn to become teachers through practices additional to the teaching role?

- What do novice VET teachers learn?

Chapter 7 – What Enabled and Constrained Novice VET Teacher Learning?

This chapter draws together the findings of the case studies to answer the final research question: What enables and constrains novice teacher learning?

Chapter 8 – Synthesis, Implications, and Further Research

Chapter 8 concludes the thesis. It does this by summarising the findings for each of the research questions, outlining some of the implications of these findings, and suggesting future directions for research.

1.9 Conclusion

This chapter has provided an introduction to the learning of novice teachers, and to some of the issues that impact on that learning by outlining a rationale for the research that is taken up further in Chapter 2. It has identified the questions that the research addressed, and introduced the approach that I have taken to address these questions. The scope of the research has been identified, and my own relationship to the research has been introduced.

Chapter 2

VET Teachers, Learning and Practice Theory

This review of the literature outlines key issues that assist in better understanding the research problem being addressed, as well as the approach used to address it. The chapter is made up of three main sections. The first section establishes the national context in which the learning of Australian VET teachers is placed. It focusses on VET teachers, including Technical and Further Education (TAFE) teachers, and discusses who VET teachers are, what they need to know and to do, and the broader issues that might impact on how they learn to become teachers. In section two, literature relevant to how VET teachers learn to become teachers is considered, including discussion of teacher learning and specifically of workbased learning, focusing on the workbased learning of VET teachers. Section three introduces practice theories, and argues that practice theories are valuable for studying the work-related learning of VET teachers. This section particularly focusses on the theory of practice architectures and the subsidiary theory of ecologies of practice, both of which I have used as the theoretical lens through which to analyse how VET teachers learn; what they learn; and what enables, and constrains, VET teacher learning. Finally, the chapter revisits the concept of learning, drawing on understandings developed in the second and third sections of the chapter to clarify the understanding of learning that I have used throughout this research.

2.1 Vocational Education and Training (VET) teachers

To enable the exploration of the question of how VET teachers learn to become teachers, it is useful to consider what the literature says about who VET teachers are, why they choose to become VET teachers and what it is that others think they need to learn. This section begins with an overview of who VET teachers are. Next is a discussion of the casualisation of the VET teacher workforce, followed by a discussion of why VET teachers might choose teaching. Finally, there is a discussion of the literature related to what teachers need to know and to do to carry out their jobs. In exploring these issues, I also consider the circumstances for VET teachers internationally, focusing primarily on the European Union and the United Kingdom. As noted, I do not use the terms VET and TAFE interchangeably. Much of the literature that I discuss in this chapter relates to all VET teachers. Where the discussion or data relates specifically to the subset of teachers who are TAFE teachers I explicitly identify this.

2.1.1 Who VET teachers are

There has been a dearth of information about Australian VET teachers including who they are and what they do (Mlotkowski & Guthrie, 2010; Simons et al., 2009; Wheelahan, 2010). What we do know needs to be interpreted through the lens of estimates based on variable data. Slightly more is known about TAFE teachers, but the available data is drawn from a range of diverse sources, is incomplete, and should be approached with

caution (Mlotkowski & Guthrie 2010). Even the number of people who are VET teachers is unclear. Simons et al. (2009) note:

Estimates of the size of the VET workforce are difficult to make. Current figures, dependent on the method by which they are estimated, vary from 17 400 to 71 300 for VET professionals (staff employed directly in training and assessment and those who provide leadership, support and management) and 39,000 to 94,000 for the VET workforce as a whole (VET professionals and those employed in 'generic roles' within the sector) (p. 12).

Even this very broad estimate combines VET teachers with other groups whose role is to support or to manage them. The Productivity Commission (2011) similarly combined VET teachers with other groups when it estimated that in 2010 there were about "73 400 [TAFE] employees. It is estimated that about another 150, 000 workers are involved in VET delivery by non-TAFE providers, but higher numbers have been suggested by others" (p. 31). Thus there is thus no clear evidence of how many people are involved in VET teaching in Australia.

Other figures related to VET teachers are similarly derived from estimates based on incomplete data. Mlotkowski and Guthrie (2010) used Australian Bureau of Statistics data to show that there are slightly more women than men who identify their main job as that of VET practitioner. They also show that men are more likely than women to hold permanent positions as VET practitioners. This data relates only to the main job that the person holds, so is necessarily incomplete. Data for age at which teachers begin in TAFE or in VET more generally are also not available. Because VET teachers almost invariably come to teaching after some years in industry, they are on average older than the general workforce (Wheelahan, 2010). The Productivity Commission (2011) found that in 2010 the average TAFE teacher

was 49 years old (p. 44). It also found that in 2010 47.6 percent of all TAFE teachers were over 50 years old (p. 361). Guthrie and Clayton (2010) note that the “impending retirement of many [TAFE teachers] increasingly looms as an issue requiring attention” (p. 21). With the anticipated retirement of a large number of experienced teachers, the retention of those teachers who do not retire, and the supporting of newcomers becomes important.

2.1.2 Casualisation of the Australian VET teacher workforce

VET teachers are employed permanently, on contract, or on a casual basis. A casual teacher is usually employed to teach a certain number of hours throughout a semester. For instance, they might be employed every Tuesday and Thursday from 3.00 to 5.00. They are paid on the basis of their teaching time, but additional work including class preparation, assessment preparation and marking are usually also required. Sick leave, recreation leave, and long service leave is usually not available to casual teachers. Like so much about the VET workforce, and despite calls for more extensive data to be collected, relevant data about the casualisation of the VET workforce remains limited (Guthrie 2011; IBSA 2014; Wheelahan and Moodie 2011). We do know that career opportunities for VET teachers continue to decline. Casualisation of the VET teacher workforce has been increasing since the early 1990s (Nechvoglod et al., 2010; Wheelahan, 2010). Simons et al. (2009) found that the majority of beginning VET teachers were employed on a casual basis, and that it is increasingly less likely for VET teachers to begin teaching in a permanent position (Simons et al., 2009). The usual way for VET teachers to gain permanent positions is by beginning as a casual teacher,

then gaining a contract and, for a minority of them, to then gain a permanent position (Simons et al., 2009). There is no data available on the retention rates of casual VET teachers, or of the rate of progression from casual to contract and then to permanent employment. However in their research involving 44 VET organisations, Simons et al. (2009) found that the number of people progressing to permanent positions was decreasing. This has implications for the expectations that VET teachers have about their future in VET. In earlier research (Francisco, 2008), I found some teachers in my study entered VET teaching with the goal of gaining permanent employment, but altered this goal because their experience working in VET showed them that only a minority of casual teachers gain permanent employment.

The high levels of casualisation of the VET teacher workforce is persistently framed by governments and employers (see for instance, Productivity Commission, 2011) as meeting needs for flexibility. The language that we use supports and shapes particular ways of seeing the world (Kemmis, Wilkinson, et al., 2014), and the term ‘increasing flexibility’ is commonly understood as a positive framing of this phenomenon of high levels of teacher casualisation. Interestingly, general staff and management staff in the VET workforce “more frequently commence in permanent and full-time roles” (Simons et al., 2009, p. 8). While high levels of casualisation of the VET teacher workforce are justified through arguments related to the need for flexibility, similar arguments are not made for administrative or managerial positions within VET, and in these positions casualisation of the workforce is lower (Simons et al., 2009). VET teaching requires highly experienced workers, and if we are to aim for quality teaching in VET (IBSA,

2015), then we need to question the employment practices that result in high levels of casualisation of the VET teacher workforce.

One consequence of the high levels of casualisation is the development of what has been called a core and a peripheral workforce of VET teachers, with contract and casual staff characterised as 'peripheral' and permanently employed staff as 'core' (Dickie, Eccles, FitzGerald, & McDonald, 2004; Harris, Simons, & Clayton, 2005). With an ongoing increase in the number of casually employed teachers, the ratio of 'peripheral' staff to 'core' staff continues to increase. Wheelahan (2010) notes, "While there is a need for organisational agility, it is also important to build a core teaching workforce ... much of the knowledge and skills unique to VET are vested in the permanent teacher workforce" (p. 14). A consequence of the increasing levels of casualisation is likely to be that the smaller core of permanent teachers will be increasingly less available to support the growing periphery of casual and contract teachers.

In Australia, teacher input into broader policy decisions and approaches to what VET students need to learn, and how they learn it, can be seen as limited compared to experiences in Europe (Harris, Simons, & Maher, 2009). Harris et al. argue that, since the 1990s, Australian VET teachers have been "largely excluded from reform processes" (p. 29).

Brennan Kemmis (2008) argues:

[In the] current Australian context of high levels of government regulation of the VET sector, where national organisational imperatives are shaping practice in VET, teachers and trainers are confronted by structures and compliance routines that threaten their concept of praxis (p. 196).

She also argues that,

In the highly rationalized world of Training Packages, where the skills are highly regulated and specified, there is no explicit and official role for the teacher ... Teachers have no documented role in any other responsibility area other than to facilitate or perhaps to guide the acquisition of the required skills in their students...Training Packages are free of pedagogy and free of curriculum (p. 206).

Seddon (2009) notes "It seems that agencies responsible for governing VET have failed to recognise the contribution that the teaching occupation makes to skill building" (p. 60). It is perhaps in this climate that high levels of casualisation have been able to take place. What novice teachers learn is also likely to be impacted by this broader policy and ideological environment.

The extent to which teachers see VET teaching as their primary job may also impact on their preparedness, and the time that they have available, to learn about the job. Guthrie et al. (2011) note that casual teachers have "varying degrees of attachment to the VET sector and the teaching role" (2011 p. 17). Wheelahan and Moodie (2011) note that there is no information available about the proportion of casual teachers who see teaching as their main work, and the proportion who see it as an addition to their main work. Initial intentions may impact on what they feel they need to learn and even how they learn it (Guthrie & Clayton, 2010).

2.1.3 Attracting teachers: Why VET teachers choose teaching

A number of researchers warn of an impending workforce 'crisis' in Australia related to the expected retirement of a sizeable proportion of the permanent VET teaching workforce, further exacerbated by ongoing high rates of casualisation (Guthrie & Clayton, 2010; Wheelahan & Curtin, 2010). It is within this broader environment that the reasons people make decisions

about becoming a VET teacher is of especial interest. Further, it is possible that what VET teachers learn may be influenced by their motivation for becoming VET teachers (Guthrie & Clayton, 2010).

Consistent with the fact that data about who it is that makes up the VET teaching workforce is both limited and unclear, information related to the reasons that Australian VET teachers choose to be teachers is also not available. There is likely to be a variety of reasons why people choose to be VET teachers, and Guthrie (2010a) notes that because data has not been collected in this area a comprehensive overview of these reasons is not available for Australian VET teachers. He goes on to guess at a number of possible reasons for becoming a VET teacher, acknowledging that these guesses were neither comprehensive nor based on evidence. In research into the careers of VET staff, including VET teachers, Simons et al. (2009) found that the two areas that VET staff saw as most important in relation to their careers in VET were job satisfaction, and security of tenure. This research looked at VET staff more broadly rather than just the teachers, and at staff who had been employed at the time of the survey.

In the absence of clear Australian data about why VET teachers might be attracted to teaching, research undertaken in Switzerland by Berger and D'Ascoli (2012) and Berger and Giradet (2015) might be useful in providing an insight into the motivation of Australian VET teachers. These Swiss researchers (2012; 2015) found the motivations that were the most important influences for being a VET teacher were "personal utility value" (which includes a range of factors such as job security, income and how it fits in with other aspects of their life); "intrinsic career value" (finding it an interesting and attractive career – job satisfaction is likely to fit within this category);

“perceived teaching ability”; and “opportunity” (a job became available) (Berger & D’Ascoli, 2012; pp. 235-236). I suggest that these motivations might also influence Australian VET teachers, and I now discuss what we know about these factors in the Australian context.

Two key aspects of the “personal utility value’ (Berger & D’Ascoli, 2012, p. 228) of VET teaching are job security and income. The previous section on the casualisation of the VET teacher workforce makes clear that job security is not a characteristic of the VET teaching profession. Evidence shows that the income that teachers achieve if they are able to gain a permanent or contract position does not compensate for this insecurity of tenure (Simons et al., 2009; Wheelahan, 2010). With most VET teachers having extensive industry experience prior to beginning as a VET teacher (Guthrie et al., 2011), they are clearly not newcomers to the workforce, and they are likely to have strong skills relevant to their industry. The vast majority then can be expected to be highly employable in their industry. In addition, even permanent salaries for VET teachers can be considerably below what the same person could earn in industry (Harris et al., 2005). Simons et al. (2009) note that “Large gaps in salaries, combined with other working conditions (such as expectations that teachers have to fund their own professional development) can affect the number and quality of people applying for positions” (p. 15). Wheelahan (2010) argues that “A key problem in recruiting from the trades is that most tradies can earn more in their trade than they can teaching” (p. 31). Thus, expected income from teaching, even when employed permanently, is thus likely to be lower for many teachers than they might achieve in their other industry. The question

of why people choose to become VET teachers has to be asked against this background.

The value and prestige associated with being a teacher is likely to impact on the 'intrinsic career value' (Berger & D'Ascoli, 2012 p.235) of VET teaching and consequent motivation for choosing to work in that profession. In Australia there continues to be a difference in esteem between school teachers, higher education teachers and those teaching in VET, with teaching in VET considered the least prestigious (Guthrie, 2010a). It is likely that the level of qualification required to be a VET teacher may impact on the perceived professionalism of the workforce (Bathmaker & Avis, 2013) and consequently the esteem in which VET teaching is held (Wheelahan, 2010). The qualifications expected of Australian VET teachers will be discussed shortly. The attractiveness of VET teaching as a profession may also be impacted by the quality of VET teaching.

There has been concern from a number of areas about the quality of VET teaching in Australia (Moodie & Wheelahan, 2012). In its 2013 *National workforce development strategy*, the Australian Workforce and Productivity Agency (2013) argues that "Quality remains a concern in the VET sector, where there has been a persistent decline in funding per annual student hour, and where total funding is failing to keep pace with the substantial growth in full-time equivalent students" (p. 15). Similarly, the National Skills Standards Council (2013) note that "the quality of training and assessment was also the main area identified in the review process as needing significant reform" (p. 11). This is also the case in the European Union (Volmari & Marsh, 2010), with Misko (2015) noting, "The need to improve the quality of

VET teachers has been a concern of governments and educators in EU member states, including the United Kingdom” (p. 36).

The final two key areas of motivation for becoming a VET teacher as identified by Berger and D’Ascoli, (2012) are “perceived teaching ability”, and “a job becoming available” (pp. 235-236). These factors may explain why people choose to become VET teachers in Australia. With the dearth of information about who VET teachers are, it is difficult to determine what proportion of teachers see themselves as having an ability to teach prior to commencing in a teaching position. High levels of casualisation is likely to mean that casual positions regularly become available. A look at TAFE websites suggest that, at least for TAFE teachers, that is the case. For instance, the NSW Government website regularly has a range of positions available for casual TAFE teachers.

Perhaps part of the answer to why VET teachers might be attracted to teaching is that it can be seen at one level as an extension of their work in their industry sector. In effect they can be seen to have a dual identity (Roberston, 2008). Teachers begin teaching as both a novice and an experienced worker. Prior to being employed as a teacher (and often concurrent with being employed as a teacher), VET teachers also have extensive experience in the industry they are teaching about. When initially employed most teachers have a strong industry background, but lack teaching skills (Simons et al., 2009). Thus their industry knowledge and experience is highly valued, and is often privileged over their teaching skills by students, peers, industry, local employers, and by the teachers themselves (Simons et al., 2009). This strong identification with the VET teacher’s industry is not limited to Australian VET teachers. In researching VET

teachers in Finland, Filander (2009) found they “identified themselves as skilled and experienced workers more often than teachers” (p. 77). This privileging of industry skills over teaching ability is not limited to initial employment, with strong links to the industry that they are teaching about being an important part of their credibility as a teacher throughout their teaching career (Simons et al., 2009).

2.1.4 What VET teachers need to know and to do

To provide a foundation from which to ask the questions associated with how VET teachers learn to become teachers, this section outlines broadly what VET teachers do, including what they teach, where they teach, and who they teach. This is followed by a brief overview of the Australian VET Practitioner Capability Framework (IBSA, 2013) which was developed to identify what teachers need to know and to do. Finally, this Capability Framework is compared with the Competence Framework for the VET Professions developed for the European Union (EU).

The increasing expectations of VET in Australia from the government, industry, the community, and individuals, together with the increasing complexity of the work that VET teachers do, means that the skills and abilities they need are also increasing (Harris et al., 2005; Wheelahan & Moodie, 2011). Harris et al. (2005) argue:

Changes have fundamentally transformed VET’s orientation from education to business and service, and shifted the VET teacher along a continuum from an emphasis on teaching and creating curriculum, towards entrepreneurial brokering and delivery of competencies within prepackaged modules in a climate of intense market competition (p. 20).

Similarly, Elliott (2013) notes that the post-compulsory education sector in England “is recognised as challenging, complex, at times hostile, and one that involves a great deal of diversity of learners and range of teaching contexts” (p. 328). The range and depth of skills and knowledge that VET teachers require are extensive, with Wheelahan (2010) arguing “The contexts VET teachers work in, the students they teach, and the qualifications they deliver are more diverse than those in higher education or schools” (2010, p.9) and “the demands on VET teachers are more complex than either schools or higher education” (2010, p. 11).

Guthrie (2010a) notes that there has been an expansion in the role of a VET teacher, as well as an increase in the dilemmas and tensions inherent in a VET teacher’s work (p. 11). Australia is not alone in having high expectations for VET teachers. The OECD (2014) also notes

Vocational teachers and lecturers have jobs that in many ways are more demanding than those of academic teachers. They not only need to have knowledge and experience of the diverse package of skills required in particular professions, they also need to know how to convey those skills to others (p. 60).

VET teachers teach a range of qualifications, in a range of contexts, to a broad variety of people, addressing the needs of an array of organisations, governments and individuals. In Australia, VET qualifications are offered at Certificate 1, Certificate II, Certificate III, Certificate IV, Diploma, Advanced Diploma¹, and more recently, Graduate Certificate and Graduate Diploma levels (although offerings of the latter two are less common than the other qualification levels). The content, teaching and learning approaches, and

¹ There are similarities between these qualifications and qualifications in other countries. The relationship between these varies, and is not relevant to this argument.

assessment approaches vary for each of these levels of qualification. These qualifications are taught in a range of environments, including online, workshops within workplaces, classrooms, prisons, community centres, and learners' workplaces such as factories, gardens, clubs, business offices and so on. Many qualifications are taught in more than one of these environments, and different skills and knowledge are required for teaching in each environment.

VET teachers support the learning of students from diverse populations and backgrounds. Student learning needs, and the support they require, also varies. Students come from a range of: ages; prior educational experiences; work experiences; English language skills; literacy skills; numeracy skills; motivations for engaging in learning; and willingness to engage in learning. They can be people who: have completed secondary schooling, and those who are still attending school; are working, and those who are not; are highly skilled workers and those who have limited or no workplace experience; are migrants or refugees; have completed university level qualifications and those who have left school early; have Indigenous backgrounds; come from low socio-economic backgrounds and those who come from more privileged backgrounds (Wheelahan, 2010).

Each time a VET teacher is supporting student learning, they will be working with at least one of these groups, and mostly they will be working with people from more than one group. Sometimes they will be working with people from a broad range of these groups in the same place and at the same time. The IBSA (2013) Environmental Scan for 2013 notes that student numbers will continue to increase, and this increase will include an increase

in the number of disadvantaged students and those from regional and remote areas (that is, students who do not reside in the main metropolitan areas where most Australians live) (p. 15). The IBSA Environmental Scan for 2015 notes continuing increases in students retraining after becoming unemployed as well as expected increases in international students due to the declining Australian dollar.

At the same time as VET is experiencing both an increase in casualisation of its teacher workforce, and an increase in expectations related to what VET teachers do and how they do it, there is also a concern about the ability of VET teachers to meet the demands placed on them. The Productivity Commission (2011) recognises that “casual employment might, at times, reduce the quality of the teaching or learning experience in VET, and restrict opportunities to develop teaching and assessment ability” (p. xxxv). Harris (2015) argues that the link between the quality of education and the quality of teachers is supported by “considerable research” (p. 30). Guthrie et al. (2011) note that inadequate initial training and support of VET teachers “will have personal consequences but, more importantly, consequences for their students” (p. 40). Wheelahan and Moodie (2011) argue that “the VET workforce ... will play a critical role in helping Australia increase workforce participation, productivity, skills and social inclusion” (p. 13). VET teacher learning is therefore not only important for the teachers and VET organisations involved, but it has far broader implications for the workforce as a whole (Seddon, 2009).

What is it then that VET teachers need to know and to do to meet the expectations of employers, industry more broadly, governments and individual learners? The VET Practitioner Capability Framework (2013)

developed by Innovation and Business Skills Australia (IBSA), until recently the Industry Skills Council responsible for the development and maintenance of Training Packages related to the area of vocational education and training, is arguably the most extensive, as well as the most recent, of a number of frameworks developed to clarify what is expected of Australian VET teachers (Guthrie & Every, 2013). This framework identifies three levels of VET practitioner capability. Across each of these three levels the framework identifies four domains of capability. These are teaching, assessment, industry collaboration, and systems and compliance. Within each of these domains there are four areas of capability. There are also six skill areas. These are teamwork and communication, leadership, ethics, cultural competence, innovation, and evidence based practice and research. Table 2.1 provides an overview of VET capability domains and capability areas for a level 1 practitioner.

Teaching			
Learning theories	Design	Facilitation	Evaluation
Demonstrates awareness of basic educational theories; determines applicability of theories to the learning needs of individuals and groups.	Contributes to development of resources and programs that generate authentic learning experiences; contributes to the design of flexible learning strategies.	Uses strategies and skills to ensure learner engagement and achievement of learning outcomes; creates supportive learner inter-relationships; uses a range of technologies effectively.	Contributes to program evaluation; seeks regular feedback to evaluate own performance and plan for improvements.
Assessment			
Assessment Theories	Products	Processes	Validation
Demonstrates understanding of the principles of assessment and the rules of evidence.	Contributes to the development of assessment tools, or modifies existing ones, to suit client needs and specified context.	Employs a range of methods to ensure validity and reliability in assessment decisions.	Participates in assessment validation processes.
Industry and Community Collaboration			
Engagement	Networks	Vocational Competence	Workforce development
Liaises with enterprises to ensure teaching and assessment reflects current industry practices.	Participates in enterprise networks to enhance own knowledge and skills.	Maintains vocational competency relevant to own subject area and works with others to maintain that competency; uses a range of methods to keep up-to-date with industry changes.	Contextualises program content and adapts teaching practices to suit specified enterprise needs.
Systems and Compliance			
Systems	System stakeholders	Products	Processes
Understands VET standards and relevant legislation and ensures compliance in own work practices.	Develops own knowledge of key stakeholders such as state training authorities, industry skills councils, VET regulators and licensing bodies.	Uses current training packages and accredited courses, and supporting tools and resources, to support training and assessment practices.	Ensures work practices comply with organisational policies and procedures; maintains accurate and up-to-date records.

Table 2.1: VET Practitioner Capability Level 1

Table adapted from VET Practitioner Capability Framework (2013)

It is not clear where novice teachers fit within this framework. Are they expected to operate at level 1, or to aspire to operate at level 1? And what of those teachers who teach only a few hours a week? Are they expected to operate at level 1 across each of the domains? Certainly, the framework does not specify that those at the first level of this framework should be employed full time. One of the case studies in the implementation guide for the framework is of a casual employee who is operating at the second level (with higher expectations than those identified in Table 2.1 above) in a number of capabilities. This suggests that these high expectations are knowingly combined with ongoing expectations of a highly casualised workforce.

Comparing the VET Practitioner Capability Framework with the Competence Framework for the VET Professions developed for the European Centre for the Development of Vocational Training (Volmari, Helakorpi, & Frimodt, 2009) shows that there are similar expectations for VET teachers in the EU. The competencies that teachers require are divided into four key areas: administration; training; development and quality assurance; and networking. Administration is divided into: organisation and planning; and project management. Training is divided into: planning; facilitation of learning; and assessment and evaluation. Development and quality assurance is divided into: developing oneself; developing the institution; and quality assurance. Networking is divided into internal and external networking (pp. 22-29). Volmari et al. clearly note that “VET professionals need to be supported, either through pre-service and in-service training or resourcing” (p. 50). Further, they argue for an understanding of “distributed expertise”(p.50) where these competencies are held by a team of people,

rather than by each individual. While it is noted that in some EU countries teachers learn to teach while undertaking the role of a teacher, the expectation of pre-service training becomes clear through a number of references throughout the document.

The expectations of VET, and of VET teachers, are extensive, and fulfilling them requires high level skills, knowledge and abilities. While the Australian VET Practitioner Capability Framework and the European Union Competence Framework for the VET Professions focus primarily on the teaching and learning associated skills required of VET teachers, industry expertise also remains important (Wheelahan & Curtin, 2010). VET teachers need to be dual professionals (Guthrie et al., 2011; Wheelahan & Curtin, 2010), able to develop strong pedagogical skills as well as maintaining currency in their industry knowledge and connections. This is not limited to Australian VET teachers but can be seen in expectations of VET teachers in England and the rest of the EU (Elliott, 2013; OECD, 2014; Volmari et al, 2009). In Australia however, these high expectations also occur in an environment of casualisation that is approximately three times the national level, and where “the levels of teacher preparation and the extent of professional development have been progressively undermined” (Harris et al., 2009, p. 29). It is in this context that this research explores how VET teachers learn to teach.

2.2 Learning how to be a VET teacher

Novice teachers, coming from an industry background, and often without prior teaching experience, clearly need to be supported in their learning

about how to undertake the role of a teacher (Wheelahan & Moodie, 2011). This section begins by considering broader expectations about initial learning for a profession, and the specific learning of VET teachers. Following this is a discussion of workbased learning, focusing on the workbased learning of novice VET teachers. It is not my intention to consider the many different perspectives on learning that could be taken. Instead, I adopt a specific understanding of learning that is consistent with a practice theory approach. Section 2.4 explicitly addresses the understanding of learning that I have used throughout this research and this thesis.

2.2.1 Qualifications

The focus in relation to the initial learning of people in the professional fields is often concentrated on university level educational qualifications. For instance, for school teachers, accountants, nurses, and engineers in Australia, a minimum of a three year Bachelor degree is required. For Australian VET teachers there is not a requirement for a Bachelor level qualification. The qualification (Certificate IV in Training and Assessment) that is required can be undertaken in a matter of weeks, and there are reports of it being undertaken in a number of days (B. Clayton, 2009). Most VET teachers begin their working lives in vocational occupations such as plumbing or electrical, where a lower level qualification is considered appropriate. In these occupations an apprenticeship, usually lasting for three to four years, and based on an integrated arrangement of workbased learning and off-site learning is required. Over this period, apprentices have a designated workplace supervisor to support learning in the workplace. However when people begin as VET teachers not only is there no requirement for a

university level qualification, but there is also no systematic arrangement to support the workbased learning of VET teachers.

In discussing the English Further Education sector, Bathmaker and Avis (2013) argue that the sector was “professionalized through the introduction of mandatory teaching qualifications” (p. 732). In the Australian context, Guthrie (2010b) notes that “It is hard to understand the rationale for the move during the 1990s from a higher level of mandated qualification to a minimalist one, with apparently no single reason for the reduction in qualification requirements for VET teachers” (p. 12). This move can be seen to serve to deprofessionalise the VET teaching workforce. Perhaps more critical than the move away from a Bachelor degree being the expected level of educational qualification for VET teachers, is that it took place without any widespread or systematic approach to supporting teacher learning in the workplace where they were employed as teachers.

In exploring the learning of Australian VET teachers much of the research has been focused on the Certificate IV in Training and Assessment (Cert IV TAA) (B. Clayton, 2009; B. Clayton et al., 2010). While the Cert IV TAA has been identified as both the initial and the minimum qualification for VET teachers (Guthrie et al., 2011), there is no general requirement for VET teachers to have this qualification prior to commencing work as a teacher (Wheelahan & Curtin, 2010). Wheelahan and Curtin note that “Most States require teachers to obtain the Certificate IV within the first one or two years (depending on the State)” (2010 p.33). In relation to educational qualifications held by VET teachers, the data available is incomplete and even less clear than data available for other characteristics of the VET workforce. The Productivity Commission (2011) has noted that the number

of VET teachers who do not hold the Certificate IV in TAA “could be as high as 40 per cent in the TAFE sector, and is likely to be higher still in the non-TAFE sector” (2011, p. xlii). Others have argued that the percentage of VET teachers without an educational qualification is likely to be even higher than this (Mlotkowski & Guthrie 2010; Wheelahan 2010). Innovation and Business Skills Australia (IBSA), the Industry Skills Council which until recently was responsible for the ongoing development of the Cert IV TAA qualification notes that “we still do not have decent information about the make-up of the VET workforce, including background and qualifications of practitioners. To some extent we are ‘flying blind’ when designing policy solutions” (2014, p. 5). Nonetheless, in its 2015 Environmental Scan, IBSA (2015) refers to the Training Package that includes the Cert IV TAA as “the primary influencer on the quality of VET in Australia” (p.3). This needs to be questioned in light of the information that a high proportion of VET teachers do not have the Cert IV TAA, and many novice VET teachers begin teaching without the qualification. While VET teachers may (or may not) undertake a Cert IV TAA, a large proportion of their learning is unlikely to come from that qualification. Research into the initial learning of VET teachers in the workplace where they are employed as teachers, such as that provided by the research reported in this thesis, is likely to provide some illumination to better inform policy decisions so that they do not continue to be made while ‘flying blind’.

A focus primarily on training and qualifications when considering the learning of workers rather than consideration of workbased learning is consistent with findings from research undertaken by Billett and Choy et al. (2014) across four different industries. They found that “the manager’s view

of assistance for learning is largely comprising training programs” (Billett et al., 2014 p. 22). Focusing our understanding of learning on that which was developed through formal education limits how we understand learning at work (Hager, 2003). Eraut (2004) goes further, and argues that there is a level of “ignorance about how much learning does (and how much more learning might) take place on the job” (p. 271). In supporting the learning of novice VET teachers, an understanding of, and focus on, learning that extends beyond qualifications or training courses is needed. The workplace learning literature provides a broader understanding of what that learning encompasses.

2.2.2 Workbased learning

Workbased learning is a large field of research that is undertaken across a range of disciplines. These include, but are not limited to, research in the fields of adult education, management and organisational studies, and VET. In considering research that might form a basis for our understanding of the workbased learning of novice VET teachers, research from each of these fields provides some insight. As might be expected from such a broad field of research, theoretical perspectives, terms, and meaning, are both varied and contested (Fenwick, 2008; Hager, 2011; Price, Johnsson, Scheeres, Boud, & Solomon, 2012; Sawchuk, 2010). In this section, rather than providing a general overview of the extensive workbased learning literature, I outline two broad themes in relation to the workbased learning of VET teachers: learning through undertaking the practices associated with the job; and learning through activities additional to doing the job, focusing more explicitly on guided learning at work and mentoring. Next, the highly

casualised nature of the VET teaching workforce is discussed in relation to these broad themes. Perhaps not surprisingly, within the workbased learning literature understandings of the concept of learning vary considerably.

Further, some researchers take the concept of learning as unproblematic, and do not clearly outline what they understand it to mean (Fenwick, 2008). The understanding of learning that I use for the research reported in this thesis is outlined in the final section of this chapter.

Learning through undertaking the practices associated with the job.

Much of the learning that novice VET teachers do is likely to be undertaken in the workplace where they are employed as teachers, or while undertaking practices such as class preparation. Eraut (2011) found that most learning takes place at work. Teachers, unlike other professionals such as nurses and engineers, are likely to undertake a portion of their work, such as marking or class preparation, outside the teaching workplace. I consider this to be also part of an understanding of 'workplace learning'. Eraut (2004) envisages learning as taking place on a continuum, with informal learning at one end of the continuum, and formal learning at the other. For Eraut, approaches such as mentoring and coaching sit in the middle of this continuum. Here I separate these learning practices so that they are addressed as additional to practices associated with 'doing the job'. Eraut characterises informal learning as "implicit, unintended, opportunistic, and unstructured learning" (p. 250). I note here that I agree with Billett's (2002) argument that the concept of informal learning can serve to restrict understanding of a pedagogy of workplace learning, or even the notion of structured learning at work, and I do not use this term to describe learning in the workplace.

Nonetheless, Eraut's (2011) findings, based on extensive research on learning in the workplace, are illuminating. He found that "over a wide range of professions and workplaces, informal workplace activities provided between 70-90 percent of the learning" p. 12). Billet et al.'s (2014) research involving four industry sectors similarly found that learning in the workplace was the most reported source of worker learning.

In Eraut's (2011) studies of the workbased learning of nurses, accountants and engineers in their first three years of work, he identified learning that was part of undertaking the work, and learning that was additional to the work. Of the different practices that he identified as related to undertaking the work itself, a number of them involved interacting with others. These were "participation in group processes; working alongside others, [and] consultation" (p. 9). Other work practices that supported worker learning were "tackling challenging tasks and roles; problem solving; trying things out; consolidating, extending and refining skills; and working with clients" (p. 9). The first three of these relate to interacting with colleagues or supervisors. If the learning of VET teachers is similarly heavily influenced by interactions with supervisors and colleagues, the increasing casualisation of the workforce identified as 'peripheral' and the resulting lower ratio of core to peripheral workers, is likely to impact on a range of factors. These include the workload of permanent teachers, the extent to which permanent teachers are willing and able to support the learning of casual teachers, and ultimately the quality of VET teaching.

In the VET literature, the value of developing workplace structures and strategies to support VET teacher learning have been identified by a number of researchers (Chappell & Hawke, 2008; Lucas & Unwin, 2009;

Wheelahan & Curtin, 2010). Chappell and Hawke (2008) have identified a broad range of learning and development activities undertaken by VET teachers in the workplace where they are employed as teachers. These include mentoring, action research, project based learning, reflective practice, and learning from colleagues. They note that “there are factors in the specific nature of the work that each worker engages in as well as factors that relate to the organisation and structure of the workplace and to the interpersonal relationships that, deliberately or otherwise, operate in the workplace” (p. 15). These factors can enhance or limit learning in the workplace.

Fuller and Unwin (2004) have developed and used an ‘expansive-restrictive’ framework to investigate the extent to which an organisation supports workbased learning. They identify two broad groups of workbased arrangements that can result in expansive or restrictive workplace conditions for learning. These are “[those associated with the] organizational context and culture (e.g. work organization, job design, control and distribution of knowledge and skills) and those relating to understandings of how employees learn (through engaging in different forms of participation)” (p. 132). In this framework restrictive workplace strategies and structures are those that limit learning, including lack of, or limited, professional development opportunities, and little autonomy in the roles that workers undertake. An expansive workplace environment includes the design of jobs so that there is greater worker autonomy and discretion; involvement in the development of the organisation that they are working for; and access to communities of practices, preferably more than one.

In their research looking at the workplace learning of novice Further Education teachers in the UK, using Fuller and Unwin’s (2004) restrictive-

expansive framework, Lucas and Unwin (2009) found poor organisational support for trainee teachers. Similarly, in studies of English Further Education teachers, Bathmaker and Avis (2005) and Simmons and Orr (2010; 2011) found lack of support for trainee teachers in Further Education colleges. The trainee teachers that were participants in these UK studies were undertaking university level educational qualifications as well as working as teachers. Nonetheless, the findings are relevant in that they explore the workbased practices and strategies which supported (or failed to support) the learning of the trainee teachers.

No discussion of workbased learning literature would be complete without including the ground breaking work of Lave and Wenger (1991). The ideas that Lave and Wenger (1991) raised with the publication of *Situated learning: Legitimate peripheral participation*, has changed thinking about how people learn. Jewson (2007) argues that these ideas “played a key role in shifting metaphors of learning, from passive acquisition of knowledge to active participation in practices that generate identity and meanings” (p. 68). Their research, based on five case studies of ‘apprentices’, used an understanding of learning that was social rather than focused on individual cognition. Also, learning was understood as being situated, and taking place through legitimate peripheral participation in practices. The understandings, world view and concepts developed by Lave and Wenger have influenced many researchers (for instance, Engestrom, 2007; Gherardi, 2006; Jewson, 2007). The expansive-restrictive concept that Fuller and Unwin developed (2004) includes access to communities of practice as one of the important components of an expansive workplace environment.

An important criticism of Lave and Wenger's research is that the impact of power relationships on workbased learning is not adequately addressed (Hughes, Jewson, & Unwin, 2007). Indeed, Lave and Wenger (1991) themselves raise this point (p. 87). A framework to explore the learning of VET teachers should ideally have the capacity to address issues of power. This is addressed further in the discussion of the theory of practice architectures later in this chapter.

Learning through practices additional to 'doing the job'.

Workplace learning strategies that are additional to undertaking the job include induction processes, mentoring, short courses, coaching, and shadowing of experienced teachers (Eraut, 2007; Mitchell et al., 2006; Wheelahan & Curtin, 2010). A number of approaches combine workplace learning while doing the job, and practices additional to doing the job. For teachers, these are likely to include team teaching, being involved in relevant networks, and communities of practice. Many of these could be understood as "guided learning at work" (Billett, 2001 p. 140).

Billett (2001), in arguing that "the kinds of expert guidance provided to less experienced workers will have a direct influence on the quality of learning in the workplace" (2001 p.140), makes a strong case for guided learning at work. Similarly, in later work Billett et al. (2014) found that, in addition to undertaking work tasks and training, guidance by "more knowledgeable and locally informed partners" (p. 8) at work was consistently identified as important to learning. The more knowledgeable partners could be colleagues, outside experts or supervisors.

In calling for the VET sector to develop a clear approach to supporting novice VET teacher learning, Wheelahan and Curtin (2010) suggest models from other professions that use a variety of mentoring approaches such as nursing, school teaching, law, and architecture. They suggest that the supervised practicum approach that is used in schoolteacher training and nursing is one possible model. Another model is the use of restricted licenses such as that used in law and architecture where novices are able to practise under the close guidance and mentoring of a supervising practitioner.

Mentoring as a strategy to support school teachers is widespread, and the literature on the mentoring of teachers, including school teachers, is extensive (see for instance, Cunningham, 2011; Fletcher, 2012; Francisco & Darwin, 2007; Hankey, 2004; Ingersoll & Strong, 2011; Kemmis, Heikkinen, Fransson, Aspfors, & Edwards-Groves, 2014; Langelotz, 2013). However, what mentoring of teachers involves is contested (Kemmis, Heikkinen, et al., 2014), and a range of mentoring approaches are used (Lane, 2004). There has been little research reported in relation to mentoring of novice VET teachers in Australia. Where mentoring is discussed, it is often focused on suggesting that mentoring be used to support teacher learning (see for instance Guthrie et al., 2011) rather than reporting on mentoring research. There is some literature from the UK related to the mentoring of novice Further Education teachers, however, much of this literature looks at mentoring as part of an initial teacher training program and focuses primarily on the broader program (see for instance Lahiff, 2015; Lucas, 2013). Wheelahan and Curtin (2010) argue that “the extensive research on mentoring be used in considering appropriate approaches” (p. 58) for supporting the learning of novice VET teachers. They argue that mentoring “requires a ‘pedagogy of the

workplace' which means that mentoring is structured and intrinsic to the work of institutions" (p. 58).

In their report on the quality of VET teaching Wheelahan and Moodie (2011) recommend a three-stage approach to ensuring that novice VET teacher learning is supported. This provides a framework that could systematically support novice teacher learning. Stage 1 is for organisations registered to undertake VET teaching to "be encouraged to establish institutional strategies to support new teachers and trainers" (p. 40) with the existence of the support strategies to be reported publicly by each organisation. Stage 2 involves the possibility of funding (the Quality Skills Fund) to be tied to the existence of institutional support strategies for novice teachers, and at a State or Territory level the support programs be extended to include novice VET teachers. Stage 3 would mandate new teacher support programs for organisations of a certain size, as well as a program to be developed by a VET teacher professional body. Wheelahan and Moodie (2011) maintain that this novice teacher support should be "institutionalised, resourced and evaluated" (p. 39) and that variations of a mentoring approach are valuable. Wheelahan and Curtin (2010) note that establishing an effective mentoring program to support new teachers "is not straightforward" (p. 58). There are likely to be barriers to successful implementation.

While strategies to support learning that are additional to a teacher's workload, such as mentoring, shadowing, and short courses have positive aspects, there are also barriers to learning through these approaches. The most obvious barrier, especially for casual workers, is that engagement in these learning approaches requires time that is in addition to the day-to-day

work for which they are paid. Research, undertaken in the same TAFE as the present research, explored what professional development casual TAFE teachers wanted. It found that participants wanted short courses, a mentoring program, formal courses, a teacher network, and online resources (Francisco, 2008). While these were all available at the TAFE where the participants were employed, there were barriers to the participants accessing this professional development. One barrier was that many teachers did not know about the support that was available. Importantly, more than half of the participants had primary employment or commitments elsewhere, with teaching as a secondary commitment. Also, teachers were paid only for the time that they were teaching, and so any additional time taken was at their own cost. Time available to engage in professional development activities was the largest barrier for casual teachers (Francisco, 2008).

Because the VET sector is highly casualised (Simons et al., 2009), supporting VET teacher learning is more complex than supporting learning might be in other sectors that have lower levels of casualisation. In discussing the Cert IV TAA Clayton (2009) argues that “Extreme diversity and complexity ensure that a ‘one size fits all’ approach to teacher education in the sector is unlikely to work” (pp. 9-10). This diversity and complexity also has implications for the workplace learning strategies that are established to support novice teacher learning. In expressing a concern about the quality of teaching and learning in VET, especially as a result of increasing casualisation of the sector, the Productivity Commission (2011) notes that there is a need for “adequate professional development for casual and other non-permanent staff” (p. xxxv).

VET teachers are a diverse group, with diverse needs. Beginning VET teachers can be working in that role as little as two hours a week, and sometimes they can be teaching more hours than a permanent employee does. Guthrie et al. (2011) note that there might be a need for a variety of strategies for initial teacher training for different groups of VET teachers based on the teachers' motivations for being VET teachers including

differences in their self-perceived identity; for example, whether they see themselves as a teacher, or retain more of their original vocational identity, that is, a 'plumber who teaches', as distinct from a 'teacher of plumbing' (p. 17).

Guthrie et al. (2011) argue that the level of commitment that VET teachers have to VET teaching will impact on the training that they are prepared to undertake as well as the level of training that they perceive that they require. Approaches that are incorporated into organisational structure, and additional strategies to support learning are likely to be differently available to, and experienced by, teachers in different sites. Even for those teachers in the same physical sites, organisational structures that support novice teacher learning are likely to be impacted by factors such as the number of weekly hours of teaching, and the basis on which the teacher is employed.

In investigating the learning of novice teachers, work based learning is likely to be crucial. It is in the workplace that novice teachers learn the practices that they undertake to do their job. Practice theories are increasingly used to better understand social life. In the study referred to earlier in which Fenwick (2008) and her team analysed a broad range of workplace learning articles, they found that "practice-based theories were prominent across the [nine] journals" (p. 231). The practice turn in

contemporary theory has been identified by Shatzki (2001) in a book of the same name. Other theorists have also identified this increased focus on practice as the basis for investigating social life, including Kemmis (2009), Gherardi (2009), Corradi, Gherardi and Verzelloni (2010) and Nicolini (2012). The next section introduces practice theories, including Schatzki's practice theory, the theory of practice architectures and the subsidiary theory of ecologies of practice, which I have used as the theoretical framework for the research reported in this thesis.

2.3 Theorising practice

In this section I introduce the broad field of practice theories. I briefly outline Schatzki's practice theory, and the theory of practice architectures, and I discuss how these theories are placed within the broader field of practice theories. The usefulness of the theory of practice architectures for supporting the development of greater insight into the learning of novice teachers is identified, and an overview of this theory is provided. The section finishes by introducing the subsidiary theory of ecologies of practices.

Practice has been theorised using a range of traditions (Hager, 2012; Kemmis, 2009; Nicolini, 2012). These traditions include those informed by Marx, Heidegger, Wittgenstein, and the theoretical understandings of pragmatism and symbolic interactionism (Nicolini, 2012). Arising from these very different underpinnings, practice theories necessarily took different directions, and practice theorists encompass a broad range of theoretical approaches. In other words, there is no one 'practice theory' (Nicolini, 2012). Further, definitions of the term 'practice' vary between theories. Gherardi

(2009) notes, "In both scientific and ordinary language, the term 'practice' relates to a plurality of semantic fields" (p. 116). Instead of providing a definition of practice here, I outline some of the similarities between practice theories, and provide a definition of practice as it is understood within the theory of practice architectures later in this section.

While practice theories have been developed from a diverse base, and the field of practice theories is broad, there are areas of similarity between the theories. Nicolini (2012) identifies five areas of similarity among practice theories. First, he notes that practice theories foreground "activity, performance and work in the creation and perpetuation of social life" (p. 3). He also notes that "practice theories are inherently relational and see the world as a seamless assemblage, nexus, or confederation of practices" (p. 3). This interrelationship of practices is taken up later in this chapter in my overview of the theory of ecologies of practice (Kemmis et al., 2012). The second area of similarity between practice theories is that they "bring to the fore the critical role of the body and material things in all social affairs" (Nicolini, 2012, p. 4). Third, these theories "carve a space for individual agency and agents" (p. 4), although practice theories vary in the extent to which they acknowledge human agency. This third aspect of practice theories makes them particularly valuable in exploring the workbased learning of novice VET teachers. It enables the foregrounding of practices that the novice teachers engage in to learn to become teachers without losing sight of the agency of the teachers.

The fourth area of similarity between practice theories identified by Nicolini (2012) is that

knowledge is conceived largely as a form of mastery that is expressed in the capacity to carry out a social and material activity. Knowledge is thus always a way of knowing shared with others, a set of practical methods acquired through learning, inscribed in objects, embodied and only partially articulated in discourse (p. 5).

The fifth and final major area of similarity between practice theories is that they all “foreground the centrality of interest in all human matters and therefore put emphasis on the importance of power, conflict and politics as constitutive elements of the social reality we experience” (p. 6). The extent to which practice theories deliberately attend to power varies considerably, with some theorists doing so very deliberately and at length (for instance Foucault; Kemmis) and others identifying it but not concentrating on it (for instance Schatzki).

The initial data collection for this research was designed using Schatzki’s site ontological practice theory (Schatzki, 2002, 2005, 2006, 2010, 2012). Schatzki (2006) conceptualises organisations as “bundle(s) of practices and material arrangements” (p.1863). Material arrangements include “persons, artifacts, organisms and things” (p.1864). Schatzki (2006) argues that a practice is made up of “actions and structure” (p. 1864) with the structure involving four key elements: know how; rules; teleological affective structuring; and general understandings. Each occupation/profession is made up of bundles of practices. For instance the role of a TAFE teacher might include tasks such as teaching, assessing, pastoral care, and liaison with employers. Each of these broader practices is made up of a sub-set of smaller practices. Schatzki (2006) explains the four elements of a practice further as:

1. Understandings of (complexes of know-hows regarding) the actions constituting the practice;
2. Rules, by which I mean explicit directives, admonishments, or instructions that participants in the practice observe or disregard;
3. A teleological affective structuring, which encompasses a range of ends, projects, actions, maybe emotions, and end-project-action combinations (teleological orderings) that are acceptable for or enjoined of participants to pursue and realize;
4. General understandings (2006, p.1864)

To translate these elements into what teachers engage in as part of being a teacher, the first element, 'know-how' relates to knowing how to undertake the relevant practices required in the site where they are employed as a teacher. A teacher needs to learn how to do things that a teacher does. This is likely to be somewhat different from one teaching area (for instance, beauty therapy) to another (for example, horticulture) and yet to have similarities. Knowing how to undertake the role of a teacher also involves learning the 'rules' that operate in the area in which they are teaching as well as knowing the purpose or end toward which they're working, and general understandings about the practice of teaching. In learning about know-how, rules, teleological affective structuring, and general understandings related to the role of a TAFE teacher, teachers are also learning the actions, the doings, sayings and relatings, of undertaking that role. Some of these would be very similar to those undertaken in their other occupation (for instance being an electrician or hairdresser) and others quite different.

While valuable in many ways, after undertaking initial analysis using Schatzki's practice theory, I was not able to clearly answer the question of what enabled and constrained the learning of the novice teachers. However,

the theory of practice architectures, which draws some of its understanding from Schatzki's practice theory, provides a theoretical and analytical framework for studying teacher learning, and what enables and constrains that learning.

2.3.1 The theory of practice architectures

The theory of practice architectures, initially outlined by Kemmis and Grootenboer (2008) and further developed by Kemmis and others (Kemmis, 2009; Kemmis, Wilkinson, et al., 2014; Kemmis, Wilkinson, & Edwards Groves, 2017) has informed and guided the analysis of the data for this research. The theory of practice architectures draws on Schatzki's practice theory and posits that practices are prefigured – but not pre-determined – by pre-existing arrangements that are present in the site where the practice is undertaken. The theory enables an account of a practice within a particular site and it can be used to highlight various arrangements that enable and constrain particular practices. Using this theory for the study of the learning of novice VET teachers has enabled an exploration of the practices that they undertake as teachers, what they learn, the practices that they undertake as learners, and the arrangements that enable and constrain particular practices.

The theory of practice architectures is a relatively new theory. It has nonetheless been used by a number of researchers across a range of discipline areas and a number of countries. It has been used in a number of research projects in literacy education (Edwards-Groves & Grootenboer, 2015; Hardy, 2013); nursing (Hopwood, 2013); leadership (Bristol, Brown, & Esnard, 2014; Edwards-Groves & Rönnerman, 2013; Salo, Nylund, &

Stjernstrøm, 2014; Wilkinson & Kemmis, 2014; Wilkinson, Olin, Lund, & Stjernstrom, 2013); mathematics education (Grootenboer, 2013); inclusive education (Hemmings, Kemmis, & Reupert, 2013; Wilkinson & Langat, 2012); higher education (Hardy, 2010; Mahon and Galloway, 2017); mentoring (Kemmis, Heikkinen, et al., 2014; Pennanen, Bristol, Wilkinson, & Heikkinen, 2016); professional development (Hardy, Rönnerman, Moksnes Furu, Salo, & Forsman, 2010; Lange & Meaney, 2013; Langelotz, 2013) and in VET (Brennan Kemmis & Green, 2013).

In choosing a practice theory as the theoretical framework for this study, and as a result foregrounding practice, I was also mindful of the important role of human agency. Unlike some practice theorists - such as Bourdieu and Giddens (Nicolini 2012), Schatzki (2002, p. 75) identifies humans as active, intelligent agents ('action intelligibility'). While conditions might prefigure human actions, they do not predetermine them. Schatzki sees practices as the 'site of the social' (2002). Similarly, the theory of practice architectures acknowledges human agency, and holds that "the disposition or habitus which individuals bring to a site is crucial" (Kemmis et al., 2017 p. 9). Thus, the theory does not overlook the agency of the individual, but rather foregrounds the site and the practice architectures that prefigure the practices and the actions that are undertaken in that site. As Kemmis et al. (2014) argue "We think practices are organised *both* by people's interactional capacities *and* by material arrangements in the form of practice architectures and sites" (p. 97 emphasis in original). The theory of practice architectures explicitly recognises that people's agency is enabled or constrained by different practice architectures. It also recognises that different people's agency can be enabled and constrained in different ways.

While recognising human agency, a practice architectures lens also recognises that practices “are not dependent solely on the experience, intentions and actions of individuals ... they are also shaped and conditioned by arrangements, circumstances and conditions beyond each person as an individual agent or actor” (Kemmis & Grootenboer, 2008, p. 37). Kemmis and Grootenboer (2008) identify three dimensions which make up practice architectures; the cultural-discursive, the material-economic, and the social-political. These dimensions impact on the actions – the doings, sayings and relatings – that individual actors engage in. “Particular kinds of discursive, material, economic, and social arrangements always already enable and constrain the conduct of any practice” (Kemmis, 2009, p. 32). These arrangements form the practice architectures which prefigure the actions undertaken, making certain practices possible, and shaping what the practice is and how it is undertaken (Kemmis, Wilkinson, et al., 2014). The cultural-discursive arrangements of a practice shape what is said and thought in and about the practice (the sayings), the material-economic arrangements shape what is done in the practice (the doings), and the social-political arrangements shape the relationships that occur in, and in relation to, the practice (the relatings) (Kemmis, Wilkinson, et al., 2014). These doings, sayings and relatings ‘hang together’ (Schatzki, 2010, pp. 66-67) within the practice. That is, they are interrelated and they influence each other. A novice VET teacher’s teaching practices will be enabled or constrained by the cultural-discursive, the material-economic and the social-political arrangements that occur in, or are brought into, the sites of their practices related to their teaching role. The cultural-discursive, material-economic and social-political dimensions of a practice do not occur separately but are

always interwoven (Kemmis, Wilkinson, et al., 2014). Each of these arrangements is outlined in more detail below, but first I define a number of key terms used within the theory.

Key concepts in the theory of practice architectures

Practice theories take practice as the focus for analysis, and what constitutes a practice is defined differently by different practice theorists. Within the theory of practice architectures a practice is defined as

a socially established co-operative human activity involving utterances and forms of understandings (sayings), modes of action (doings), and ways in which people relate to one another and the world (relatings) that 'hang together' in characteristic ways in a distinctive 'project' (Mahon, Kemmis, Francisco, & Lloyd, 2017, pp 7-8).

In this thesis I distinguish practices as substantive practices (Kemmis, Wilkinson et al., p. 113) or practices that support learning (PSLs). I interpret substantive practices as those practices that teachers are undertaking as part of their role as a teacher. A PSL includes practices that are deliberately undertaken for the purposes of learning, as well as practices that result in learning. Often a substantive practice is also a PSL. Identifying these two types of practices in this way assists with clarity and enables me to focus attention on practices that support learning at the same time as recognising that other practices are also being undertaken (see Kemmis et al., 2014). Substantive practices and PSLs can be integrative or dispersed practices. Integrative practices (Schatzki, 2002 p. 88) usually encompass a number of smaller practices that, following Schatzki (2002) I refer to as dispersed practices. So for instance, the integrative practice of teaching includes the dispersed practice of communicating with students.

In his book, *The site of the social*, Schatzki (2002) argues that “to theorise sociality through the concept of a social site is to hold that the character and transformation of life are both intrinsically and decisively rooted in the site where it takes place” (p. xi). Similarly, the theory of practice architectures uses a site ontological view of practice (Kemmis, Wilkinson, et al., 2014). On this view, a site is more than the physical arrangements at a particular place. As Schatzki (2003) argues, a site of a practice is “that realm or set of phenomena (if any) of which it is intrinsically a part” (p. 176).

For Kemmis, Wilkinson, et al. (2014), the practice architectures of a practice are brought together in projects. They use the term ‘project’ to encompass the ends, tasks, and projects that Schatzki identifies as the teleological affective structure. Projects can be of varying sizes and levels of complexity. Kemmis, Wilkinson, et al. (2014) distinguish between projects as large or small. For instance, the project of teaching Tuesday’s class is a small project that is a subset of the larger project of teaching horticulture. Both might be a subset of an even broader project of guiding the next generation of horticulturalists. For the purposes of this research I have sought to identify the broader projects that framed what each of the novice teachers did in their work as teachers.

In undertaking a practice, people are undertaking *actions*. The concept of activity is one that is used by all practice theories (Nicolini, 2012). The theory of practice architectures define these actions as what people do, what they say, and how they relate with others: the doings, the sayings and the relatings (Kemmis & Grootenboer, 2008). The theory of practice architectures understands doings, sayings and relatings to be prefigured by the practice architectures of the site where the action is taking place. As Kemmis et al.

(2017) argue, “We do not come to the world as an open field in which anything is possible; we come to a world always and already populated with conditions that make some things more possible than others” (p. 4).

Similarly, Schatzki (2012) notes,

Whenever a person acts, she is always already immersed in particular situations, in the context of which she acts. What she does is sensitive to, responsive to, and reflective of, these situations, or rather, of particular aspects of them. These aspects are givens, from which she departs in acting: they are what matters to her in the situation (p. 19).

Note that Schatzki argues that it is “what matters to her in the situation”. In different circumstances different practice architectures will “matter” and thus impact on actions.

The theory of practice architectures identifies the concept of practice landscapes. Practice landscapes are the settings “where multiple kinds of different practices occur, and in which there may be multiple and overlapping sites of practice” (Mahon et al., 2017, n.p.). The practice landscapes discussed in this thesis are those associated with each of the teaching areas that form the basis of the case studies.

The concept of being stirred into a practice (Kemmis, Wilkinson, et al., 2014) relates to becoming increasingly familiar with a practice through engaging in the practice. For instance, in participating in a practice such as preparing lesson plans, a teacher is being stirred into the practice of lesson preparation. Kemmis, Wilkinson, et al. (2014), describe ‘being stirred into practice’ as

where people, perhaps tentatively or as novices, enter the sayings, doings and relatings that hang together in the project of a language game, an activity, a way of relating to others and the world, or a practice and, by practising, explore the

enablers of and constraints on interaction characteristic of that language game, activity, way of relating, or practice, and become more adept in interacting with others and with objects in the world through it (p. 59).

While the term 'being stirred in' suggests an actor who is doing the stirring, this could equally be a colleague, a supervisor, or the teacher themselves.

Having identified some key terms within the theory of practice architectures, I next outline the cultural-discursive, the material-economic and the social-political arrangements that the theory of practice architectures holds prefigure the doings, sayings and relating of practices.

Cultural-discursive arrangements

The cultural-discursive arrangements of a practice enable and constrain the sayings of a practice (Kemmis, Wilkinson, et al., 2014), including what is characteristically said within – and also about – the practice as well as the characteristic ways in which it is said or indicated. They occur in “the medium of language and in the dimension of semantic space” (Kemmis, Wilkinson, et al., 2014 p. 26). While the term cultural is often understood to include a range of things such as dress, relationships between people, and material artefacts, in the theory of practice architectures these understandings are instead developed within the concepts of material-economic and social-political arrangements. The theory of practice architectures reserves the term 'cultural' to refer only to the semantic understanding of the term (Kemmis et al., 2017). In the context of the VET environment, the cultural-discursive arrangements include such things as: the language the students and the teacher are accustomed to using; the language that the teacher uses to interact with the students; the text that learners might be using; the curriculum document guiding the content of the

subject; and the language of the media reports related to quality teaching in VET. The characteristic sayings in a trade teaching area such as Building and Construction are likely to be different to those in a Business Administration teaching area. That is, what is relevant to be said and the ways in which it is said, or thought about, is likely to be different in each of these practice sites. Sayings need not rely on language, but can also include other ways of conveying meaning such as a nod or a wink (Schatzki, 2002).

In learning how to become a teacher one of the things that a novice learns are the language games (Kemmis, Wilkinson, et al., 2014; Schatzki, 1996) that take place in their work as a teacher. The concept of a language game relates to the shared meaning making that people engage in as they communicate verbally. People come to use particular words and phrases to refer to what they assume to be agreed understandings. In theorising the concept of language games, Wittgenstein (2009) notes, "In the practice of the use of language ...the whole, consisting of language and the activities into which it is woven (is) a language game" (2009 p. 8). For Wittgenstein, "the speaking of language is part of an activity, or a form of life" (2009 p. 15). The language games that new teachers learn are not straight forward. They vary depending on who is engaged in the sayings, the interaction of the sayings and what is being done, as well as the relatings interwoven within the language games. It includes (but is not limited to) the sayings that are used between teachers generally, between horticulture teachers (for instance), between teachers and students, between horticulture teachers and people who employ horticulture students, between horticulture teachers and teacher educators, between horticulture teachers and the manager of a centre that employs horticulture teachers and so on. Learning how to make meaning

through these language games is an important component of the learning of a novice.

The learning of the language games associated with being a teacher is not an individual achievement. Language games are not static but dynamic and constantly changing. In engaging in a language game, novices begin to use the language, bringing their own understandings and prior experiences to the language game. "Through language games, we learn how to use language to orient ourselves and others to the world in what appears to be the same way. It is not that we know we are attaching the same words to refer to exactly the same real-world referents, but using words (and phrases and sentences) in what appear to us to be the same ways" (Kemmis, 2013, personal communication). As Kemmis, Wilkinson et al. (2014) argue "learning or mastering a language is not a solitary, cognitive achievement; on the contrary, like language itself, learning or mastering a language is a shared, collective, and intersubjective achievement" (pp. 23-24). So for instance, a horticulture teacher facilitating a practical session in the gardens will engage in language games when interacting with the students. She might direct them to a particular plant, asking them to tell her their views on the health of a particular callistemon. Calling that particular plant a callistemon is part of the cultural-discursive arrangements of the horticulture teaching area, based on the history of that particular site and extending to a range of horticulture and other sites locally, nationally and internationally. Through her actions in engaging with the callistemon it will be apparent to most students which plant that she is referring to. Some of the students may know the plant as a callistemon, others may know it by its more common name as a bottlebrush, and others may not know the plant at all. The

cultural-discursive arrangements of this site (as well as the material-economic and the social-political arrangements) make it likely that students will come to refer to the plant as a callistemon in this site and at this time. This does not preclude them from referring to the plant in a different circumstance as a bottlebrush – for instance when telling their mother about what they did that day. It may be that in another class a novice teacher refers to the plant as a bottlebrush. Students may accommodate this term, or may tell the novice teacher that they know it as a callistemon. Or they could simply refer to it as a callistemon when discussing it. For a novice teacher to use the term ‘bottlebrush’ he may be inadvertently conveying to some of the students that his knowledge of plants is not extensive. All of these things, and others not discussed here can be part of the language game engaged in when the teacher asked the students their view of the health of the callistemon.

The cultural-discursive arrangements that enable and constrain a practice can be seen as giving the practice its meaning (Kemmis, Wilkinson, et al., 2014). In learning the sayings associated with being a VET teacher it can be said that teachers develop cognitive knowledge about teaching (Kemmis, Wilkinson, et al., 2014 p. 32). They are learning the knowledge that is agreed upon in that practice that enables them to go on in the practice.

Material-economic arrangements

The material-economic arrangements of a practice enable and constrain what is characteristically done in the practice (the doings). They occur in “the medium of activity and work, in the dimension of physical space-time” (Kemmis, Wilkinson, et al., 2014, p. 26). They include objects and physical set ups in a site that allow particular activities to be undertaken at that site, as

well as relevant economic arrangements. In learning the doings associated with being a teacher, it can be said that teachers learn the skills and capabilities of the job (Kemmis, Wilkinson, et al., 2014 p. 32).

The material-economic arrangements in a teaching site are various and might include physical set-ups such as; the layout of the furniture; the lighting in the room; the existence, or lack of, an electronic whiteboard in the room. In the example of a site where a horticulture lesson is taking place, the material economic arrangements in a standard classroom are likely to be different to the material-economic arrangements of a lesson taking place in a garden, where the arrangements could include whole plants, soil, bees, and so on. These arrangements will enable and constrain what takes place in that site at that time. For instance, during a lesson that takes place in a classroom where students are confined to chairs and desks, the actions that they engage in are likely to be different to the actions engaged in in a garden.

The material-economic arrangements impacting on the project of a horticulture lesson could also include the terms of employment for the teacher as well as the salary she is paid. If, as is the case for some of the participants in this study and for many casual VET teachers, they need to take on a range of jobs to survive financially, or if teaching is something that they do at night after a day working in another job, this is likely to impact on what they do, including the time and energy they have available to prepare their lessons.

Returning to the example of the horticulture lesson taking place in a garden, the material-economic arrangements could include the plants, the bees, the soil, the siting of the garden in relation to the sun and so on. This might differ to the material-economic arrangements in a traditional

classroom which might include chairs, doors, desks, benches, computers, plants in pots, or plant cuttings, pictures of plants, or of parts of plants, and so on. In discussing the health of a plant, the students in the garden are able to see the plant in the place where it has been growing. They can see the environment that might impact on the plant, for instance a larger tree that might be blocking the light and draining the soil of nutrients. If it is a particularly hot, or cold, or windy day this could also impact on the way the class is conducted in the gardens. Other material-economic arrangements that might impact on the practices undertaken in a classroom include the timetabling, so that classes that take place on a Friday afternoon are likely to differ from those that are timetabled at other times. Thus the material-economic arrangements enable and constrain what is done in a particular practice at a particular time.

Social-political arrangements

Relationships of solidarity and power are an inherent part of working in organisations. The social-political arrangements of a practice shape the relationships between people, and between people and objects, that characteristically take place in, and in relation to, the practice. They occur in “the medium of power and solidarity and in the dimension of social space” (Kemmis, Wilkinson, et al., 2014 p. 26). They enable and constrain the relationships that occur in the VET environment. In learning the relatings of being a VET teacher, novices learn the ways in which it is expected that they will engage with others, both internal and external to the organisation. They learn the norms and the values (Kemmis, Wilkinson, et al., 2014) of a VET

teacher. The concept of social-political arrangements is valuable in that it allows a focus on the social arrangements including solidarity and power.

In VET, the social-political arrangements include the relationships that are associated with the practice of VET. This includes: the relationships the students engage in with the teacher, with their employer, and with each other; the relationships the teacher has with her students and colleagues; her industry and her manager. It also includes the hierarchical relationships within the organisation that the VET teacher is employed by. To take up one of these as an example, we return to the horticulture class in the gardens. The social-political arrangements position the teacher in a particular relationship with her students. It is interesting to consider this positioning in relation to the positioning, say, of a mathematics teacher standing in front of a whiteboard and writing things for her students to copy. Now consider one student asking another student about the health of a callistemon. In considering these different positionings, I am drawing on broader understandings of relationships between teachers and students in the Western world. These understandings prefigure, but do not predetermine, relationships between teachers and students.

A criticism of some practice theories is that they do not address, or do not adequately address, issues of power (Hughes et al., 2007). This is also a criticism sometimes made in relation to research related to teachers and teaching (Seddon & Palmieri, 2009). Rainbird, Munro, and Holly (2004) argue that “the workplace is an important site of learning, but it needs to be understood in the context of power relations which characterise the employment relationship” (p. 38). Similarly, Evans et al. (2006) argue that “the employment relationship is significant to workbased learning because

the workplace is a site where workers experience the unequal power relationship between themselves and the employer” (p. 5). They argue that a true understanding of workplace learning cannot be gained without attention to this power imbalance. Brennan Kemmis (2008) argues

In VET in Australia in recent years, both pedagogical practice and the practitioner have occupied a very lonely position. Those with political power and influence have had their eyes firmly focused on the structures and procedures that maintain a highly regulated system. This focus has meant that many aspects of the work of VET practitioners have been obscured (2008, p. 212).

The social-political dimension identified in the theory of practice architectures enables explicit focus on issues of power and solidarity, and for a highly casualised workforce this is especially valuable.

In our horticulture example the relationships of power and solidarity between the teacher and students are prefigured, but not predetermined, by broader expectations related to teacher-student relationships. As an indication of the enmeshment between the cultural-discursive, the material-economic and the social-political arrangements, these relationships, and the relatings that happen ‘in the moment’ will also be prefigured by the material-economic arrangements such as whether a class takes place in the garden or in a classroom; and the cultural-discursive arrangements such as whether the class involves the teacher introducing Latin as a way to better understand the naming of plants, or talking about the impact of regular watering on a callistemon using language that the students are likely to be more familiar with.

While in this section I have defined the cultural-discursive, the material-economic and the social-political separately, as the horticulture

example shows, they are in reality interrelated. Figure 2.1 below, from Kemmis, Wilkinson, et al. (2014) provides a diagrammatic representation of the theory of practice architectures. The infinity symbol across the diagram represents this interrelationship (Kemmis, Wilkinson et al., 2014). In this diagram it can be seen that the theory of practice architectures recognises that the practitioner has agency to act. On the right side of the diagram the practice architectures are outlined, and on the left side the actions of the practitioner – the doings, sayings and relatings – are outlined. As the diagram notes, practices occur within the project of the practice and are influenced by the dispositions of the practitioners. Each of the arrangements take place in inter-subjective space. Cultural-discursive arrangements take place in semantic space, material-economic arrangements take place in physical space-time, and social-political arrangements take place in social space. The practice architectures are ‘bundled together’ (Schatzki 2002) in practice landscapes and practice traditions.

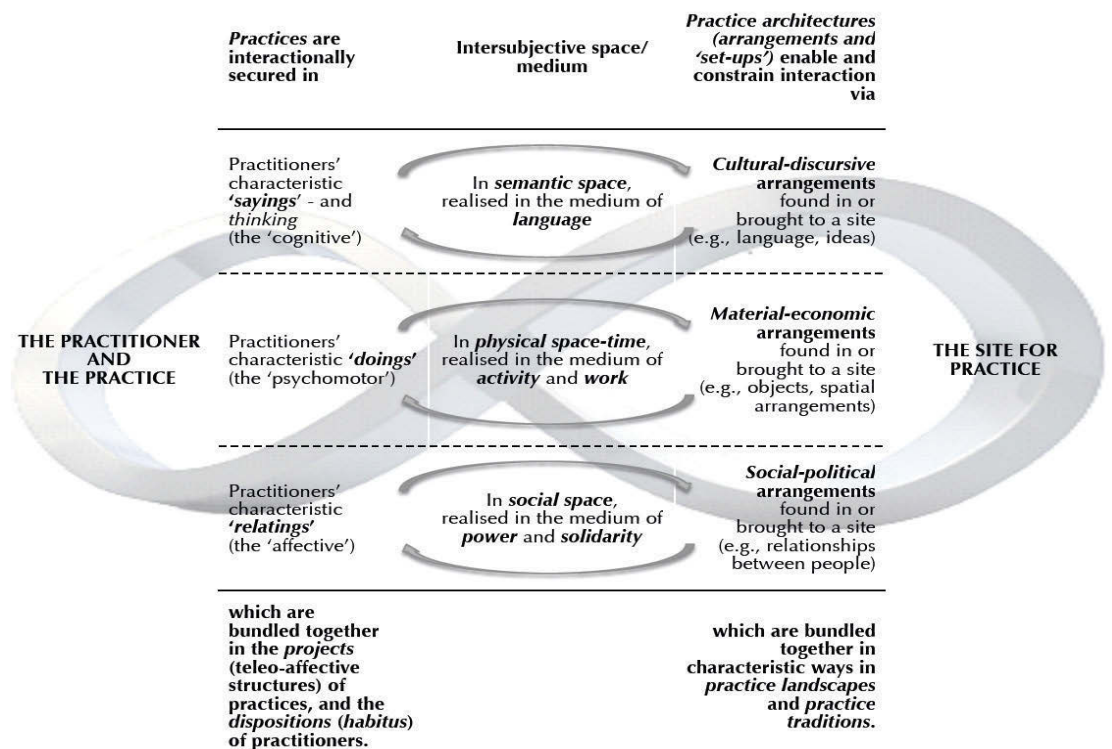


Figure 2.1 The theory of practice architectures.

From Kemmis, Wilkinson et al., 2014, p.38. Reproduced with permission of the authors.

The theory of practice architectures, and the valuable concepts of cultural-discursive, material-economic and social-political arrangements, provide both a theoretical and an analytical resource through which to investigate the learning of novice VET teachers.

The theory of ecologies of practices

The theory of ecologies of practices can be understood as a subsidiary theory to the more extensive theory of practice architectures (Kemmis et al., 2017). It is a relational theory that holds that certain practices interact with each other, with some practices forming the practice architectures that enable or constrain other practices (Kemmis, Wilkinson, et al., 2014). The theory

considers the ways in which “practices coexist and are connected with one another in complexes of practices in which each adapts and evolves in relation to the others” (Kemmis et al., 2012a, p. 37). This theory interacts with the theory of practice architectures in that it uses all of the same concepts as the theory of practice architectures. The use of the theory of ecologies of practices in exploring the learning of novice teachers has allowed an explicit consideration of the relationships between particular practices that support learning.

2.4 Revisiting learning

In exploring the learning of novice VET teachers I use an understanding of learning that considers learning as ‘knowing how to go on’. This concept, used in the theory of practice architectures, comes originally from Wittgenstein. Wittgenstein (2009) urges the reader to consider “in what sort of case, in what kind of circumstances, do we say “Now I know how to go on?” (Wittgenstein, pp. 66). He goes further to write:

If he suddenly knew how to go on, if he understood the system, then he may have had a distinctive experience – and if he is asked: ‘What was it? What took place when you suddenly grasped the system?’, perhaps he will describe it ... [in a particular way] – but for us it is the circumstances under which he had such an experience that warrant him saying in such a case that he understands, that he knows how to go on (2009, p. 67).

However, knowing how to go on doesn’t just happen. In considering what practices novice teachers undertake that support their learning, many of these practices are related to their work, and in this way work and learning take place together.

More specifically, I use the following understanding of learning as outlined by Kemmis, Wilkinson et al. (2014):

Learning is the process through which people, perhaps tentatively or as novices, enter the sayings, doings and relatings that hang together in the project of a practice and, by practising, explore the enablements of and constraints on interaction characteristic of that practice, and become more adept in interacting with others and with objects in the world through it ... learning is *always* and *only* a process of being stirred in to practices, even when a learner is learning alone or from participation with others in shared activities. We learn not only knowledge, embodied in our minds, bodies and feelings, but how to interact with others and the world; our learning is not only epistemologically secured (as cognitive knowledge) but also interactionally secured in sayings, doings and relatings that take place amid the cultural-discursive, material-economic and social-political arrangements that pertain in the settings we inhabit. Our learning is bigger than us; it always positions and orients us in a shared, three-dimensional – semantic, material and social – world (pp. 59-60).

Learning then, involves knowing how to go on. It is a process of being stirred into practices, and it takes place within, and is enabled and constrained by, cultural-discursive, material-economic and social-political arrangements.

What is it that novice VET teachers learn? At a very basic level, the answer to this question is clear – they learn to do their job, they learn how to go on. Kemmis et al. (2014) argue that learners also learn “dispositions that include ‘knowledge’, ‘skills’ and ‘values’ that hang together always and only in the practising of a practice to which they are relevant and in which they play a part” (p. 60). From the perspective of a VET teacher, the knowledge they learn is related to the sayings that take place in their practice and to the cultural-discursive resources that are present at the site of the practice, or brought to the practice. The skills they learn are related to what they do in

the practice, and to the material-economic resources that are present in the practice or brought to the practice. The values they learn are associated with the relations of the practice and the social-political resources that are present in the site or that are brought to the site.

2.5 Conclusion

This chapter has outlined the current context in which novice Australian VET teachers are learning to become teachers. In doing so, it has discussed what is expected of Australian VET teachers at a broad level, and compared this with similar expectations of VET teachers in the EU. Notably it has shown that these expectations of Australian VET teachers are held at the same time as levels of casualisation that are roughly more than three times the level of casualisation of the workforce more generally. The possible reasons why people might choose to become VET teachers is considered, showing that concern that there might be a crisis in the VET teacher workforce might be justified. Further it has shown that the information about who Australian VET teachers are is limited.

Next, the existing literature related to how it is that novice VET teachers learn was considered. This section argued that while in some areas there remains an understanding of learning as being related to studying qualifications at educational institutions, the extensive literature on workbased learning shows that a large proportion of learning occurs at work. It showed that while Australian VET teachers must necessarily undertake most of their learning at work, there is limited research into how that learning takes place, and no evidence of a systematic approach to supporting that learning.

The chapter also provides an overview of the framework that is used to analyse the data in this research: the theory of practice architectures and the associated theory of ecologies of practices. Four of the reasons highlighted for using this theory rather than other practice theories are: its explicit attention to matters of power; the clear acknowledgement of human agency while simultaneously foregrounding practice; the well-developed conceptualization of the arrangements that prefigure actions; and the value of using the theory to better understand what enables and constrains novice VET teacher learning. Finally, I revisit the understanding of learning that I have used in undertaking this research, and in this thesis.

Chapter 3

Researching the Learning of Novice VET Teachers: Methodology and Methods

In Chapters 1 and 2 I have discussed the broader context in which this research is set, including a discussion of VET in Australia; workbased learning; and the theoretical framework of practice theory, and specifically the theory of practice architectures. Chapter 2 shows that, in Australia, the VET teacher workforce is under-researched, with decisions based on limited data being made at a broader policy level. It also argues that workbased learning is an important component, and sometimes the only source, of novice teacher learning.

Framed by the theory of practice architectures, this research draws on case study methodology. This chapter outlines this methodological approach as well as the specific methods used to better understand how VET teachers learn to become teachers, what they learn, and what enables and constrains that learning. The chapter begins by briefly outlining the methodological journey that I undertook prior to identifying the methodological approach that I have used for this research. I then outline the methods I used in undertaking the research, and the ethical issues associated with it. The chapter finishes with an outline of the analytical processes that I used.

As discussed in Chapter 1, this thesis explores the following questions:

- How do novice VET teachers learn to become teachers through undertaking the teaching role?
- How do novice VET teachers learn to become teachers through practices additional to the teaching role?
- What do novice VET teachers learn?
- What enables and constrains novice VET teacher learning?

3.1 Methodological journey

This research explores questions that I developed over a number of years in my role as a teacher educator for VET teachers within a TAFE organisation. The methodology that I would use to explore these questions was somewhat more elusive and led me on something of a methodological journey during which I explored a range of options. The broad methodological territory that I would traverse - using a qualitative study - became apparent early in the journey. The research questions, related to how VET teachers learn how to teach, were deserving of an inquiry that would provide a “complex, holistic picture” (Cresswell, 2007, p. 249) of the experiences of novice VET teachers, as is possible through qualitative research. Also, the capacity of qualitative research to provide “fidelity to phenomena, respect for the life world, and attention to the fine details of daily life” (Schwandt, 2003, p. 294) was an important prerequisite for researching the learning of this inadequately investigated group of professionals. Also important was a methodology that acknowledges researcher bias and would require me, as the researcher, to situate myself within the world and to clearly and deliberately locate myself in relation to the research (Denzin and Lincoln 2003). At a broad level then, a

qualitative approach was one that would help to answer the complex questions I wanted to ask.

I then began an intellectual journey to identify the most appropriate qualitative methodology with which to explore the research questions. In doing so, I stopped along the way to explore a number of theories and approaches that I might use to frame the research. At each stopover, while I eventually chose not to use the theory as a framework for the research, I suspect that some of the spirit of the methodology came with me when I moved on. At one informative stop on my journey I considered phenomenology, which focuses on everyday experiences (Crotty, 1998). The benefits of a phenomenological approach include an acknowledgement of the subjectivity of research, with the subjectivity of the researcher explicitly identified and explored, as is the subjectivity of the experiences of the participants in the research. In wanting to better understand the everyday world of teacher learning, I found this approach attractive. Another factor in its favour was that the researcher aims to suspend taken-for-granted assumptions about a phenomenon. The word *epoché* is sometimes used to refer to this process. Moustakas (1994) argues that "In the *Epoché*, the everyday understandings, judgements, and knowings are set aside, and phenomena are revisited, freshly, naively, in a wide open sense, from the vantage point of a pure of transcendental ego" (1994 p. 32). Each of these characteristics of phenomenology pointed to this being an appropriate methodology to frame my research.

After consideration however I found that one of these characteristics of phenomenology was also a reason for not using it. This characteristic was

the important phenomenological concept of 'bracketing'. Phenomenologists argue that the researcher needs to bracket prior beliefs and understandings. While I believe that humans are able to reflect upon their own biases and belief systems, I found that I was not able to entirely put them aside or overcome them because the research was to be undertaken in an area that I am committed to and that I had worked in for many years - teacher learning. My beliefs and understandings about the field of teacher learning had become an integral part of me. I could not conceive of 'bracketing' them entirely in the way that a phenomenological approach argues is possible (Cresswell, 2007; Crotty, 1998) because it is difficult to see where these understandings begin and end.

Despite choosing not to use a phenomenological approach for this research, from my stopover with phenomenology, and my work to identify how it might help me answer the research questions, I took with me two important concepts: an understanding of the critical importance of reflexivity in my research; and the need to focus on the 'everyday', on what it was that teachers were doing rather than on what others thought they were doing. Regular discussions with senior managers of the organisation prior to the beginning of the research highlighted for me that what senior managers see as taking place in the organisation can be very different to what a novice teacher might be experiencing. This also reinforced for me that my own perspective was likely to be very different to what a novice teacher might be seeing. It was this understanding, together with an appreciation of the importance of the 'everyday' of what teachers were doing, that led me to focus on the practices and the perspectives of the novice teacher in relation to their learning, rather than seeking the perspectives of, for instance, education

managers or more experienced teachers. My reasoning for this is that even if something is available to support novice teacher learning, if novice teachers cannot access it because they do not know about it, then it is effectively unavailable to them. An example might be a fund for attending conferences that a teacher has not been told about.

Following a number of other brief stops on my methodological journey, I explored the broader field of practice theories. This investigation was to be about the site based learning that teachers undertook. The broad question that I began this research project with was: How do novice VET teachers learn to become teachers? Having been a teacher educator for some years, I knew that while teachers learnt a lot as a result of formal study, much of their learning had to take place outside of this. Practice theories were attractive because they focus on the activities and the practices that are undertaken in a particular site. Especially attractive was the site ontological practice theory of Theodore Schatzki (2002). Schatzki (2005) notes:

Site ontologies maintain that social life, by which I mean human coexistence, is inherently tied to a kind of context in which it transpires ... This thesis, in turn, implies that a certain type of context is central to analysing and explaining social phenomena (p. 467)

It became apparent that through focusing on the day to day practices that teachers undertake in their local site, a practice theory framework provided the best approach to address the research question of how novice VET teachers learn to become teachers. Further, the theory of practice architectures enabled a deeper focus on what teachers learnt, and what enabled and constrained that learning.

The research was set up with a practice theory frame. Initial analysis of the first set of data was undertaken using Schatzki's practice theory as the framework. Schatzki does not do empirical work, and his theoretical writings have not been explicit about how his philosophical theories might be used in empirical research. After using Schatzki's theory to frame the research, I later chose to use a different practice theory instead: the theory of practice architectures. This theory is informed by Schatzki's practice theory, and has been developed by teacher educators to provide a clear frame for empirical research in education and professional learning.

Later research design and (eventually) all of the analysis was framed using the theory of practice architectures and the subsidiary theory of ecologies of practices. These are outlined in Chapter 2. Briefly, the theory of practice architectures, like Schatzki's practice theory, posits that practices are prefigured – but not pre-determined – by the practice architectures of the site where the practices are undertaken. Practice architectures are the cultural-discursive, material-economic, and social-political arrangements that prefigure actions – the sayings, the doings, and the relatings – that occur as part of practices.

Importantly, as well as being a theoretical frame, the theory of practice architectures also serves as an analytical frame. The theory of practice architectures has been influenced by Schatzki's practice theory and shares many of the same characteristics (Kemmis, Wilkinson, et al., 2014). Several aspects of the theory of practice architectures differ from Schatzki's practice theory however, and were important for my research. Firstly, the theory of practice architectures clearly identifies three types of arrangements that are

present in a site: cultural-discursive arrangements that are apparent in semantic space; material-economic arrangements that are apparent in physical space-time; and social-political arrangements that are apparent in social space (Kemmis, Wilkinson et al., 2014, p. 38). Next, the theory includes the addition of 'relatings' to the actions of 'doings and sayings'. This allows the explicit focus on relationships, and I found this particularly valuable in my research. The theory also explicitly considers enabling and constraining factors that impact on practices. This supported the explicit analysis of enabling and constraining arrangements that impacted on novice teacher learning. Finally, in looking at the social-political arrangements that are found at a site, the theory provides an explicit foregrounding of power relationships within a site that might impact on the practices that are enabled and constrained in the site. Data analysis using the theory of practice architectures thus better enabled me to address the research questions.

3.2 Case study methodology

My purpose in this study was to explore the learning that novice teachers undertake. Having chosen the broad field of practice theories as the frame for the research, it became apparent that an in-depth study, undertaken over time, and investigating what happens in particular sites, was needed. As a result, I chose to use a longitudinal case study methodology to allow the study of the range of influences that impact on how novice teachers learn to teach (Cresswell, 2007; Merriam, 1998). Cresswell (2007) argues that the use of case studies has a "long, distinguished history across many disciplines" (p. 72), and it is a methodological approach that is often used in education. Like

any well-established research approach, there has been much written on the value of case studies as well as criticisms (see for instance Flyvberg, 2006; Merriam, 1998; Stake, 2006; Yin, 2009). A case study involves the gathering of multiple sources of data to result in a rich, thick description of a phenomena (Merriam, 1998; Yin, 2009). As Kemmis (2009) notes,

The study of a practice as complex as the practice of education ... is a study of connections – of many different kinds of communicative, productive and organisational relationships between people in socially, historically, and discursively constituted media of language (discourse), work and power – all of which must be understood dynamically and relationally (p. 24).

A case study approach, especially when undertaken over a period of years, allows for the study and exploration of this complexity.

Cresswell (2007) identifies three broad types of case study. He calls these instrumental, collective, and intrinsic case studies (p. 74). An instrumental case study focusses just on one issue, and chooses one case to illustrate this issue. A collective case study is similar to an instrumental case study, except that a number of cases are used. This is also called a multi-case study. An intrinsic case study arises out of a particular situation such as an evaluation of a particular program (Cresswell, 2007, p. 74). For the purposes of studying the learning of novice VET teachers, I chose a multi-case study of novice teachers within the one organisation as the most appropriate of these three types of case study. To avoid many of the criticisms of case study research, especially those related to rigor, I developed a clearly designed study that incorporated explicit research questions, a clear theoretical framework, and a range of data collection methods.

3.3 Dimensions of the research

An important characteristic of a case study is that it has boundaries (Cresswell, 2007; Merriam, 1998). The boundedness of my case study methodology is the individual novice teacher. The period of the research provided another boundary. The research was undertaken over the first two years of participants' employment as a teacher, or the period of time within that two years in which they were employed.

The research was undertaken in a large, well respected, Technical and Further Education (TAFE) college that operates across four main campuses in Eastern Australia. I have called this organisation Golden Towers TAFE. I chose to undertake the research in a TAFE primarily because TAFE colleges have the "highest single concentration of student enrolments (Innovation and Business Skills Australia, 2015 p. 6) in the VET sector. I specifically selected Golden Towers TAFE because I was working there at the time I commenced the research and had been doing so for some years. The research took place over a two-year period between 2010 and 2015; explicit years are not provided to protect the anonymity of participants. When the main research commenced, there were almost 30 000 students enrolled to study at Golden Towers TAFE (Golden Towers Annual Report, date withheld).

All novice teachers who began teaching at Golden Towers TAFE in a particular semester were invited to be part of this research. New teachers in this organisation usually include people who have been TAFE teachers in the past, a small number who have undergraduate or post graduate

qualifications in teaching, and novice teachers who have no prior experience of teaching. Because I am interested in the learning of novice teachers, it is from the latter group that I chose the research participants.

This research is grounded in the sites where novice teachers learn to become teachers. In education it can sometimes be difficult to identify what is a 'work practice' and what is outside a work practice. Teachers work in many places, including classrooms, workshops, staffrooms, coffee shops, offices, or their homes. They also work all hours of the day and night – preparing classes, marking papers, and so on. So identifying what is part of undertaking the role of a teacher and what is outside of this is not as simple as identifying what happens in the workplace where teachers are employed to be teachers. For the purposes of this research, I have identified anything that is related to the participants' role as a teacher as part of their substantive work practices, no matter where it takes place. Similarly, anything that leads to teacher learning, no matter where it takes place, is identified as part of a practice that supports learning.

3.4 Being an insider/outsider

When I commenced the research I had a strong familiarity with the research sites because I had worked at Golden Towers TAFE for more than 15 years, and had been working in teacher education for seven of those years. During that time I had been based at three of its four campuses for a minimum of five years each, and had worked on all campuses facilitating classes, workshops and meetings and working individually with teachers and managers. I was

thus familiar with the physical set-ups of each of the campuses, and most of the rooms within the campuses.

As a result of my day-to-day work throughout much of the data collection period of the research, I was involved on a regular basis in some way with all of the sites where the research took place. As Brannick and Coghlan (2007) argue, "Data gathering does not occur only through the detached observational role but through the subjectively immersed role as well" (p. 66). I was able to observe what was happening in the environments in which the participants were operating. Some participants I saw in passing at least weekly, and others less frequently. While I did not see all participants weekly, as part of my work, my networks, and my friendship groups I would meet with others who worked with them. I would meet with others in participants' staffrooms and their common rooms. I had coffee in the same coffee shops, parked in the same car parks, and attended some of the same meetings. In some instances I even facilitated workshops in the rooms that they taught in. I knew all of the people managing the teaching areas that participants worked in, and had worked with many of these managers to either support the learning of their staff and/or to support their own learning. I had also attended a variety of meetings with the managers (as part of my role as the Head of School for the department of Teacher Education) and some of them I considered close colleagues. As a result, while no one knew for certain which practice environments I was researching, or who my participants were (apart from the participants themselves), and because I did not discuss my research except in very broad terms, I would hear about what was happening in each of the sites, and what the issues were from an organisational perspective.

I did not keep field notes about the things that I learnt outside of the participant interviews and the associated campus visits. Even so, it would not have been possible to entirely distance myself from this knowledge and understanding. And while I did keep notes in my reflection journal in relation to some of the issues that this experience raised, I did not explicitly use knowledge gained in this way in the analysis. Reflection did however allow me alternative perspectives into what I was seeing and the experiences that participants were telling me about. For instance, I was able to follow up some comments that participants made during interviews that an outsider may not have recognised as important.

In undertaking this research I was both an insider and an outsider. Kemmis (2010) suggests that insiders have privileged access to practice. Brannick and Coghlan (2007) identify insiders as full members of the organisation in which they are doing the research, and they argue that insider researchers can provide important knowledge and understanding that researchers from outside the organization do not have access to. By this definition I am an insider researcher for the purpose of this research. At the same time, I could be perceived as an outsider by many of the participants in the research because I have not worked in the industry areas that they taught about, and therefore I do not have the required industry knowledge and experience to be able to teach in their teaching areas. I consider this insider/outsider status to be valuable in that participants trusted me as a fellow VET teacher and member of their organisation and at the same time were aware that I did not have extensive knowledge or understanding of their particular areas of teaching. My aim was to use the value of my insider

knowledge to gain an insight into the learning that the novice teachers did while trying not to impinge on their learning to become a teacher.

Arguments have been made in relation to both the positive and the negative aspects of insider research. Brannick and Coghlan (2007) have identified four key areas of challenges and benefits associated with being an insider: access, pre-understanding, role duality, and organizational politics. I now address each of these in relation to this research.

Access

As a full member of the TAFE organisation where I was researching I was able to have extensive access throughout the organisation. I received ethical approval from the Research Ethics committee of the organisation where I carried out the research, and at one level this gave me access to the organisation to undertake research. Brannick and Coghlan (2007) distinguish between primary and secondary access. Primary access is the access that a person has to a site by being a member of the organisation, and in my case I would add to this the approval by the organisation's Research Ethics committee. Secondary access includes access that may not be available to people who are not members of the organisation. It might include access to physical parts of the organisation that may not be available to outside researchers, or to meetings or committees that outsiders may not be welcome to attend (Brannick & Coghlan, 2007).

Gaining secondary access contributed positively to my research. For instance, prior to commencing the research I was invited to provide Heads of School (HoS) with an overview of my planned research at the monthly HoS meeting. At that time I also sought their support in identifying potential

participants. In relation to this research it would have been very difficult (even impossible) to access novice teachers in a timely way without access to the HoS who employed them. Because I had attended these meetings in the past, I was welcomed as a peer rather than an outsider. I suggest then that another form of secondary access could result from organisational and individual willingness to more fully support the research of a member of the organisation in ways that may not be as forthcoming to outsiders.

Preunderstanding

Preunderstanding refers to the knowledge and experience that a researcher has about the organisation they are employed by and researching, and to the understanding the researcher has about how the organisation operates – its “lived experience” (Brannick & Coghlan, 2007 p. 69). According to Brannick and Coghlan (2007), preunderstanding could include knowledge of: organisational jargon; the issues that are of interest or concern to the organisation and its members; informal networks and how they operate; key contacts that can provide particular information; and important documents used within the organisation. In undertaking this research I was able to use this preunderstanding in a range of ways, including knowing when departments were busy or not so busy and thus when participants were likely to respond to emails or be available for interviews; using appropriate jargon in relation to the work that they were carrying out; knowing, broadly, how each participant’s particular area operated; and knowing the people that participants interacted with. Such preunderstandings allowed me to ask

follow up questions, or to delve into participants' responses to gather deeper, richer data.

Preunderstandings can also be a disadvantage in undertaking research if the researcher is not particularly careful of their assumptions (Brannick & Coghlan, 2007). There is a danger of assuming that you know more about the area that you are researching than you actually do and therefore making inaccurate interpretations, and not probing further. Throughout the research I remained aware of the danger of assuming that I knew what the participants' lived experiences were and therefore aimed in interviews to follow up issues even when I thought I knew what participants meant. I was also very careful to try not to assume that I knew what participants were saying just because I had heard a version of the same thing elsewhere. This did however allow me to ask more insightful questions. Another danger to consider is that prior relationships or expectations of other organisational members may restrict an insider in the way that they may not restrict an outsider. To the best of my knowledge, in this instance my insider status and preunderstandings worked in a positive way and did not result in restricted access.

Neither Schatzki nor Kemmis and colleagues dwell on the insider-outsider status of researchers, but in outlining Schatzki's practice theory, Nicolini (2012) argues:

To understand social life as it happens, it is not enough to grasp its real-time happening. One also has to grasp what is not happening. This means, firstly, that understanding a practice (or an organisation) as it happens requires a considerable grasp of its past. Secondly, this means that to understand what is happening here and now requires to some extent what else could have happened (pp. 167-168).

In this sense then, my prior experience in the organisation where I undertook the research can be seen to be an advantage. Further, this suggests that a multi-case study methodology that allows the consideration of the learning of novice teachers in a number of sites is likely to be of value in allowing a consideration of practices undertaken in different sites. This was my experience in this research, with some absences in one site becoming apparent only after they were identified in other sites.

Role duality

A researcher in the organisation in which they are also an employee necessarily undertakes two roles. A possible benefit of this role duality is an increased motivation to continue with the research, while the possible challenges associated with it include: conflicts between what is best for the organisation and what is best for the research; relationship issues with colleagues either throughout the research or at the completion of the research; and pre-existing relationships and networks impacting on choices made by the researcher (Brannick & Coghlan, 2007). Brannick and Coghlan even suggest the possibility of researchers “doctoring their results to keep their job” (p. 70). An increased motivation to continue with the research is a possible benefit of being an insider (Brannick & Coghlan, 2007). To the best of my knowledge, in this instance the dual roles of being both a researcher and a member of the organisation worked in a positive way and did not result in any of the possible challenges discussed above. I had left the organisation prior to the end of the data collection phase of the research, and thus any possible issues associated with role duality (that I may not have been consciously aware of) were further reduced.

Organisational politics

My research had support from senior and middle managers and was looked upon positively within the organisation. Final data collection and much of the data analysis were undertaken after I had left the organisation. Although Brannick and Coghlan (2007) argue that “undertaking a research project in one’s own organization is political and might even be considered subversive” (p. 70), to the best of my knowledge organisational politics did not impact negatively on the research.

3.5 Methods

The methods I used to explore how participants in this research learnt how to teach, what they learnt, and what enabled and constrained their learning, were consistent with a practice theory approach, and a case study methodology. I describe these in the following sections.

3.5.1 Research sites

The participants were all employed as teachers on at least one of the four main campuses of a large, multi-campus TAFE organisation, which I call here Golden Towers TAFE. There was one participant from each of the following teaching departments: Horticulture; Business Administration; Building Design; Refrigeration and Air Conditioning; Sport and Recreation; Community Services; Beauty Therapy; and Electronics. There were two participants from the Electronics teaching department.

3.5.2 Recruitment of participants

My goal was to invite every new teacher to the TAFE in the first semester of a particular year to participate in the research. In this organisation it is rare for a new teacher to be 'on the system' (including being paid, having access to the staff information system and the library, or having contact details available) in less than seven weeks. For some this can take even longer.

Therefore getting access to the new teachers was available only through their HoS, their colleagues, or through notices that they might see. To recruit participants I undertook a range of strategies. I spoke at the monthly HoS meeting, where there was much interest in the research. I also sent emails to all HoS in the December prior to commencement of the research, and again in the following January, letting them know about my research and asking them to provide my details to any new teachers that they were to employ in the first semester of that year, or to provide me with the contact details for these novice teachers. I contacted the HoS again in April and received more names at that time. I also put notices in staffrooms across the institute asking for participants. All participants were contacted as a result of HoS responding to my emails, or to my presentation at the HOS meeting, and providing the name and contact details of a new staff member. I then emailed the novice teachers, outlining my research and inviting them to be involved.

Potential participants in the research were novice VET teachers employed by Golden Towers TAFE in a particular year, apart from the two pilot participants who had been employed in the final semester of the previous year. Eligible participants were those novice teachers without university-level teaching qualifications and who had not previously been employed as a teacher. In the year in which I began the main research there

were seven eligible participants (one of these had actually commenced in the final term of the previous year, but still met the criteria). I invited each of these teachers to join the study, and all seven people agreed to be involved. In addition, two teachers took part in a pilot (discussed in the next section), which resulted in nine teachers participating in the research.

Schatzki (2005) argues that a site is “composed of nexuses of practices and material arrangements” (p.471) and it is these practices and material arrangements that are the sites of this research. Each of the case studies related to a practice ‘site’ where a novice teacher was employed. Because two of the novice teachers were employed in the same teaching department there were therefore eight cases as part of this multi-case research.

Some potential participants were willing to be involved but their attachment to the organisation was so tenuous that it did not happen. For example, James agreed to be part of the research, and we arranged an interview. He had worked as a casual teacher for five weeks, and was told that there was likely to be ongoing work. He planned to move his family to the city where the TAFE was if there was an expectation of ongoing work over a number of months. After five weeks of teaching there was no teaching work for a number of weeks, but there was a possibility of work later in the semester. We agreed that when he returned to the city to teach I would interview him about his teaching. It eventuated that there was only limited further work for him that semester, and with a family to support James found work elsewhere. There was another potential participant that I was advised about who had a similar story to James in that he also did not get enough ongoing work and eventually found work elsewhere instead. It is likely that there were others in this situation that I was not advised about.

For instance, one of the people who became a participant in my research had been working as a casual teacher in term 1, and I was only advised about him by his HoS in term 2 when he had received an 18 month contract.

3.5.3 Pilot

I began two pilot case studies prior to undertaking the main research. Participants were recruited as a result of the presentation I gave to the HoS meeting mentioned earlier in this chapter. The purpose of the pilot was to identify any data collection issues and to trial interview questions, with the expectation that if problems were found, changes could be made. I also sought to understand the pilot participants' acceptance or otherwise of the identity of "learner" in relation to teaching. Boud and Solomon (2003) found that the TAFE workers that they interviewed did not take on the identity of a learner, and that to a greater or lesser degree, depending on their role in the organisation, identifying as a learner had implications of lack of competence in their role. In the pilot study I was interested to find if this might be the case among novice TAFE teachers in this organisation seven years after the publication of Boud and Solomon's research. If so, it would have influenced the questions that I chose to ask participants in the interviews and emails.

With these two participants recruited, I commenced the pilot research in the term prior to the main research involving the other seven participants. The pilot research showed that the participants readily identified as learners in their role as a teacher and that no significant aspects of the research required changing. Thereafter the pilot was considered as the first phase of

the research and the data gathered was analysed together with the data gathered for all other practice sites.

3.5.4 Data collection methods

Data collection methods were informed by Schatzki's practice theory (1996; 2002; 2005; 2006), Kemmis and Grootenboer's (2008) practice architectures framework, and case study methodology. That is, they focused on the practices and the actions that took place in each particular site. Methods included interviews with novice teachers and associated site visits; field notes; participant journals and emails; participant sketches; publicly available relevant documents; and documents that participants developed for their teaching. Schatzki's practice theory and the theory of practice architectures (Kemmis et al. 2014) are site specific, and require attention to the particular practices that are undertaken at particular sites. In designing the data collection tools, I was focussed on determining what actions the teachers were undertaking over a two year period, and the practice architectures in each local site that enabled or constrained particular actions. These data collection methods enabled me to do that.

For this research I made the judgement not to explicitly observe the participants while they were teaching or while they were undertaking any of the other tasks associated with their role as a teacher. There are a number of reasons for this decision. In my role as a teacher educator I have worked for many years with novice teachers, including observing their teaching. As a result of this experience I am aware that teachers, and especially novice teachers, are uncomfortable and sometimes stressed about being observed

while they are teaching. Also, I had come to believe that the teaching that a novice teacher does when they are observed is not the same as what they would do without an observer; and also that an observer could be seen to undermine the novice teacher's authority in the classroom. Because I was working in teacher education I felt that this would especially be an issue. This decision was reinforced for me when one of the participants talked about her expectation that someone would be observing her when she first began teaching, and her anxiety about that. When she discovered that she would not be observed in her teaching (in this case, by her supervisor or colleagues) her response was one of relief:

I honestly thought [a colleague or the Head of School] or somebody was going to come in, and I was worried I was going to be observed. I was nervous you know. But there was no one there. And I just felt so comfortable, cause I wasn't being observed, I could be myself. (Sarah Interview 2)

In early discussions of my research, the HoS had thought I would be supporting the learning of the novice teachers, but this was not my intention. I did not want to be in a position where I would be expected to provide advice to the new teachers about their teaching because I wanted the results to be as free from my interference as possible (although I am aware that just by doing the research — interviewing the participants and asking them to think about their learning — I will have impacted on that learning).

My decision to rely on methods other than observation, to gather data was also informed by Schatzki's (1996) argument:

When we ask someone what he (sic) is doing, just as when we ask him what he believes, intends, feels, hopes for, or loves, we are asking him to tell us something about his life, about what is going on or how things stand with him. All in all, it is

doubtful that there is any significant division between the realms of mind and action (p. 39).

I therefore chose to rely primarily on participants' reports of their learning. I was careful to construct interview questions so that participants focused clearly on the practices that they were undertaking in their role as a teacher, and in their learning to become a teacher. A summary of the data collection methods used, in order of influence on the research, is provided in Table 3.1. Next I discuss each of these methods in more detail.

Table 3.1: Summary of Data Collection Methods

Data Collection methods	Summary of data collection methods
Semi-structured Interviews	<p>Up to three interviews of one to two hours duration were held with each novice teacher over the two years of the study. The first interview was held within the first semester of teaching, the second interview at the end of the first year of teaching and the third interview at the end of the second year of teaching.</p> <p>All interviews were transcribed for analysis.</p>
Field notes associated with the interviews	Field notes taken after each interview, as well as during campus visits.
Novice teacher responses to regular emails	Emails asked one or two questions about participants' learning to become teachers in the previous month. These were spasmodically responded to.
Participant journals/notes about their teaching and their learning to teach.	All novice teachers agreed to keep a journal in relation to their learning to become teachers. In practice one teacher did keep an electronic journal for the first nine months of the study and another participant provided some journal entries.
Regular campus visits	Included visits to the teaching areas, staffrooms, coffee shops and other environments where the teachers were operating. It did not include deliberate or detailed observation of their learning. I visited each campus at least monthly.
Participant sketches of their teaching context	In the second and third interviews participants were invited to draw a sketch of the environment where they teach.
Participant documents	These included copies of lesson plans and class handouts developed by teachers. I did not ask for these, but took them when they were offered.
Publicly available documents	These included annual reports and other relevant publicly available documents.
Photographs of the sites	I took photographs of the sites where the teachers were teaching and the staffrooms. The TAFE Research Ethics Committee asked me not to use these in any way except as something to remind me of the sites and I have complied with this request.

Interviewing

I have used interviews and field notes as the primary sources of data.

Interviews allow for detailed responses as well as providing the opportunity for delving further into relevant issues raised (Denscombe, 2006).

Participants were asked to tell me how they were learning. In starting my research I made the assumption that learning to become a teacher happens in many places, including the classroom, the corridors, the staffroom, over the kitchen table where class preparation is taking place for the next day, over a beer with friends, in a second or third job and so on. Semi-structured interviews were between one and two hours each. In each interview I had with me a list of interview questions that I planned to ask as appropriate. These questions for the first, second and third interviews are at Appendices B1, B2 and B3. Questions were open ended, and many comments by participants led to further questions and requests for expansion and clarification. In exploring the research questions I asked participants to work with me to determine their lived experiences and understandings of how they learnt to become teachers.

The research questions for the first interviews were framed using Schatzki's practice theory (1996; 2002; 2005; 2006). Later research questions were also influenced by the theory of practice architectures as well as by the analysis of the first set of data. I asked the participants to tell me about their everyday activities; the doings, sayings and relatings that they engaged in through their work as a teacher, and in their learning to become a teacher. In keeping with the practice theory framework I was careful to develop the interview and email questions so that they largely related to actual instances of practice. For example, I asked questions such as 'What did you

take into the classroom with you?' 'What relationships do you try to develop with your students?' 'Who do you talk to about your teaching?'. See questions at appendices B1, B2 and B3. In developing the questions I also aimed to have the participants provide little stories in response to my questions rather than short responses.

The research was undertaken over a two year timeframe. The intention was to conduct three interviews with all participants where possible. Interviews were to be undertaken in the first semester of their employment, with a second interview scheduled after two semesters of working as a teacher, and the final interview was conducted in the fourth semester of employment for those participants still employed as a teacher at that time. This timetable was generally followed, although minor differences did occur as a result of participant availability and other logistical factors. Table 3.2 below provides a summary of the number of interviews with each participant, and indicates whether they were still teaching at the end of the research period.

Table 3.2: Interviews

Teacher	Interviews	Comments
Grant	3	Still teaching after three years.
Sarah	3	Left teaching after 20 months. Third interview three months after left teaching.
Alice	3	Still teaching after two years. Had left teaching after two and a half years.
Ewan	3	Moved to another TAFE after second interview.
Sam	2	I interviewed Sam four months after he commenced, and then again two years after he began teaching. Despite a number of requests for an interview after one year of teaching Sam was not available. He now lives in another country and is uncertain whether he will seek further teaching work with this TAFE on his return.
Simon	3	Still teaching after two years. Left teaching after three years of teaching.
Trevor	3	Still teaching after three years of teaching.
Michael	2	Left teaching after one year.
Tabitha	2	Left teaching after one year.

Interviews were transcribed verbatim, either by me or another person. The transcripts of the first interviews were sent electronically to each participant and they were invited to add to it, or change it as appropriate. Despite a number of invitations to do so, no participants chose to make any changes to the transcripts or to discuss them in any detail. In subsequent interviews I offered to send copies of the transcripts, but no one wanted this.

Field Notes

Throughout the research process I wrote field notes after the interviews and after visiting the campuses where participants worked. I often wrote two layers of field notes after interviews. The first layer, written immediately

after the interview, was brief and designed to capture things such as the participant's mood, and any thoughts I had had in relation to the interview or the environment. I also wrote up what I was surprised by. This allowed me to 'hunt my assumptions'. Brookfield (1995), identifies assumptions as "the taken for granted beliefs about the world, and our place within it, that seem so obvious to us as not to need to be stated explicitly" (p. 2). There were some things I hadn't realised I had been assuming until I was surprised by a different response to what I had been expecting. Often I added to these field notes later on the same day or the following day, when I had more time and had gained a bit more reflective distance.

Visiting the Sites

The work sites of the participants were also my own work sites. I would therefore visit the sites regularly for purposes other than the research: to attend meetings; to visit colleagues; and to teach. All interviews were conducted on the campus where the participant was a teacher, and in the place of their choosing – the back room of a coffee shop; meeting rooms; or classrooms – except for three interviews undertaken after the participant was no longer employed by the TAFE. Descriptions of these environments were included in my field notes. In taking notes about the sites where the novice teachers worked – the classrooms, the staffrooms and the coffee shops – my aim was, as much as possible, to see the environments through the eyes of the novice teachers. What was important to them? What was barely noticed?

Sketches

To enable me to gain more insight into what the teachers were focusing on in their teaching environment, during the second and third interviews I asked

each participant to sketch their main teaching environment. As they sketched I asked them to describe what they were sketching, what they did in the teaching environment the last time that they taught there, and what the students did. While I was familiar with what their teaching environments looked like (and had taken photographs to remind me), my aim was to see what the participants identified in their environment rather than to rely on what I saw there.

Participant journals and emails

I invited all participants to keep a journal about their learning to become a teacher. Most participants did not keep a journal, however one person kept a journal for about nine months, and another person provided me with a few journal entries from time to time.

I emailed participants regularly – approximately once a month during term time – with questions related to their teaching and to their learning to become a teacher. All participants responded to at least one of these emails, and most participants responded to more than three. While the data from some of these sources provided some insight, participant responses were irregular and limited. As noted above, the interviews and associated field notes were the primary data collected for this longitudinal study. These relatively limited responses to the regular emails and to keeping a journal were not unexpected, and did not change my study.

Documents

A range of documents were also used as data. These included documents used by participants in their teaching such as lesson plans and the student handouts that they had developed themselves. In addition I drew on other

publicly available documents related to Golden Towers TAFE including its annual reports for the organisation for 2010; 2011; 2012 and 2013; its mentoring handbook; the report of a governmental enquiry related to an issue that occurred during the time of the research; and the organisation wide performance criteria it then had for its teachers.

3.6 Ethics and reflexivity

An ethical approach to the research was important throughout all stages of the research process. I applied for and received ethics approval from the Human Research Ethics Committee of the University of Technology, Sydney (UTS) (see Appendix A1). I also received the following approval from the Research Ethics committee of the institution where I undertook the research “Your request to conduct research as outlined in your research proposal with novice teachers has been approved by the Chief Executive.” However, I am aware that following pre-arranged processes is a very narrow understanding of an ethical approach to research (K. Clayton, 2013). I have already identified some elements of an ethical approach to the research in the earlier section of this chapter related to my role as an insider/outside researcher. An ethical approach to the research was important throughout all stages of the research process. I also found useful Kvale and Brinkman’s (2009) seven stages of a research project in which ethical concerns need to be addressed. Below I discuss each of these seven stages in relation to my own research.

Purpose of the study

Usefulness of the research was identified by Kvale and Brinkman (2009) as an important ethical issue, arguing that in asking participants to engage in

research that ultimately would not be of use is unethical. The aim of my research was to identify ways that novice VET teachers learn how to teach. The results of this research will be able to be used in the future to better support the learning of novice VET teachers.

Design issues

Design issues relate to informed consent, confidentiality and consequences for participants. Informed consent was especially important in this research because participants were accessed through their supervisors. I sought and received informed consent for all participants prior to undertaking the research in various ways: via email prior to meeting potential participants (to allow them time to read and think through the agreement that they were making); verbally in a discussion prior to them engaging in the research; and in writing when they signed the consent form at the first interview. A copy of this consent form can be found at Appendix A2. As a teacher educator in the organisation throughout most of the data collection phase of the research, I was careful of the need to very deliberately ensure that teachers did not feel in any way that they were obliged to become participants in the study, or that participation or non-participation would impact on them in a negative way. I did this in writing as well as verbally and through an attitudinal approach. I was also very careful to ensure that participants understood that they could withdraw from the study at any time; and prior to each interview I verbally reinforced the voluntary nature of their involvement in the research.

At each interview with participants I discussed confidentiality. I mentioned that while I would use pseudonyms and aim to keep participants identities anonymous, it was still possible that with a small sample,

undertaken in one organisation, that they could be identified. I informed participants that in my thesis, journal articles and conference papers I will be identifying the area in which participants teach (for instance, horticulture). It is conceivable that if a participant tells people that they are involved in my research and if they are the only participant who works in a particular area others may be able to deduce their identity. I advised participants of this at the beginning of the research. All participants said that they were not concerned in relation to their anonymity even if, despite my best efforts, they were identified as being involved in the research.

I aimed to ensure confidentiality as much as possible through:

- immediately allocating a pseudonym for each participant and using that pseudonym in all material related to that participant, except the interactions with the participant;
- not sharing information about participants with others within the organisation;
- ensuring the person transcribing many of the interviews knew the participants only by pseudonyms;
- ensuring that while I was working in the organisation where I was undertaking the research, all material related to the participants was initially kept only on my computer at home and in a filing cabinet in my home office. Once I began working in another organisation I kept copies of the data on my personal, password-protected drive at work.

Consequences

This research could possibly have had both positive and negative consequences for participants. A possible positive consequence for

participants relates to the learning they might do as a result of discussion about their learning over the time of the research. Shown below are possible negative consequences and how I dealt with them:

- The participant finds all the different types of data collection too onerous. All participants were able to leave the study at any time if they felt this way. I made this clear to participants at the beginning of the research process, verbally, attitudinally and in writing.
- The small number of people involved in the research, and the fact that it was undertaken in one organisation, could mean that a participant's identity might become known. I discussed this with participants in the first interview.

Interviewing

Kvale and Brinkman (2009) warn that possible stress for the participant during or as a result of an interview or changes in self-understanding needs to be taken into account. I maintained an awareness of this possibility throughout the research. My initial awareness was that if a participant did not already see themselves as a learner prior to becoming a participant (Boud & Solomon, 2003), one of the outcomes of being involved in my study was the likelihood that participants might come to see themselves as learners. Initial interviews showed that the participants comfortably identified as learners.

Transcribing

Transcription of interviews was undertaken by me and one other person. The other transcriber knew each participant by their pseudonym only, and deleted the electronic copy of each transcript once she had provided it to me.

On receiving these transcripts I read each one while listening to the recorded interview and made any changes required to ensure accuracy. Participants were asked if they would like to read the transcripts of their interviews and were invited to make any changes to ensure accuracy, remove anything that they were not comfortable with, and to add further explanation or discussion if they so chose.

Verification

Kvale and Brinkman (2009) argue that the researcher needs, as much as possible, to be able to verify the information gained, raising issues of how critically a participant can be interviewed. Some of the questions that I asked at each interview were similar, and at other times I asked participants to reflect on earlier understandings or experiences of learning to become a teacher. It is possible that participants may have interpreted an experience, event, or way of doing things differently in the light of future understandings and experience. In these circumstances I have not interpreted the first response as inaccurate or misleading, but instead as their understanding of it at the time. It is also possible that a participant may have knowingly misled me. My preunderstanding of the organisation and of the departments in which the novice teachers worked allowed me to delve more deeply if information provided by participants required verification. Sensitively teasing apart issues that do not seem entirely likely, and

discussing them in some depth was one strategy that I used to ensure information was useful.

Reporting

Again, confidentiality and impact on participants are important in reporting. The issues that I have addressed above are equally relevant in the reporting phase of the research, that is, in the thesis, journal articles, conference papers or any other publications related to the study. In writing up information related to participants, I remain aware of the possible consequences for participants if they are recognised.

Reflexivity

Lichtman (2010) argues that there are many definitions of reflexivity, and so I begin this section with a brief overview of what I understand by the concept. Reflexivity refers to the ongoing interaction between the research and the researcher. It requires ongoing questioning of how the researcher's own world view impacts on all aspects of the research. It cannot just be ticked off as part of the ethics approval process and forgotten about (K. Clayton, 2013).

As noted earlier, I am not a disinterested researcher. Throughout most of the data collection phase of the research I was working as a teacher educator in the TAFE where I undertook the research. The practice theory framework that I used to design and analyse the research establishes a clear bias of searching for learning through the practices that novice teachers are engaged in. My position as an insider and an outsider, my prior and ongoing knowledge of the sites and my interactions with them, and my relationships with other teachers, and with the HoS that the novice teachers worked with,

were all issues that I needed to deal with on an ongoing basis. I believe they also served to increase my knowledge and benefit my research.

To avoid my own biases impacting negatively on the research, I have as much as possible made them explicit, outlined the data collection approaches clearly, and attempted throughout all phases of the research to keep an open mind. My aim has been to approach the research with an attitude of curiosity, rather than seeking to reinforce my own assumptions and expectations.

As already mentioned, one important tool that I used in maintaining a reflexive approach to the research was keeping a journal throughout the research process. In this journal I reflected on all aspects associated with the research, including the data, the interviews and my understanding of how teachers were learning to become teachers. The journal contains my reflections about all aspects of the research including, but not limited to, my reactions to interviews or other information provided by participants; reflections related to the data I was gathering; the methodological approach; and the analysis. I also reflected on matters that I was familiar with in my role as an insider in the organisation, even though they did not become apparent in the research data. Two outcomes of this reflexivity are my decisions to stop using the NVIVO program for data analysis, and a year into the research, to use the theory of practice architectures rather than Schatzki's practice theory (both discussed later in this chapter).

Another example of this reflexivity resulted in deeper analysis of the interview data related to my understanding of the learning of one of the participants. From his first interview at the beginning of his second term of teaching (about three months after he commenced), this teacher was

confident about his teaching approaches. This was very different to the other teachers I interviewed, and I initially made the incorrect judgement that he was overconfident. By the second interview, he was identifying changes that needed to be made to the program he was teaching, and the teaching area more broadly. Again this was at odds with the interviews I was having with other participants and, yet again, I made the judgement that he was being overconfident. Through ongoing reflection, interspersed with revisiting the transcripts with a different focus, it became apparent after further analysis, that this teacher was very well supported in his learning and my initial judgements were inaccurate. This reflexivity, interspersed with ongoing analysis, eventually led to my development of the concept of a trellis of 'practices that supported learning', which is outlined in Chapter 7.

3.7 Analysis of data

Data analysis was an iterative process that occurred both deliberately and, to some extent, through circumstances. The study took place over a period of about two and a half years (taking into account the pilot study and a late interview for one of the participants), and for the initial analysis of each set of data my purpose was to identify the themes that emerged from the data. I worked with the data in a range of ways, with the initial objective of becoming familiar with it (Kvale & Brinkman, 2009). For the analysis of the first set of data, which comprised the first interviews, the emails, and journal notes provided by the novice teachers in the first year of teaching, publicly available documents that outline expectations of teachers in this organisation, and my field notes from that time I used a combination of

continually working through the data with pens and highlighters to develop a broader understanding of the data, followed by coding using the NVIVO data analysis software. The NVIVO software allows the allocation of items, quotes, and so on that are associated with the same theme or attribute to a particular 'node'. I began by including the themes that had emerged as nodes, together with the doings and sayings that appeared to be related to novice teacher learning. I also included Schatzki's four elements of the structure of a practice – general understandings, rules, teleological effective structure and specific understandings – as a framework. As other themes arose in the data these were added to the nodes. With the nodes expanding with each transcript or associated field note, a final run through all data was required to ensure that all information relating to each node was included. At times something already identified in one transcript became apparent by its absence in another transcript. As the process progressed I was able to develop hierarchies of nodes with some nodes forming subsets of others. At the end of this process (which took place over a period of five months) I had 87 nodes and 21 'parent nodes', that is, the overarching themes that included a number of subsets below them. Even so, I had little understanding of what the data meant in relation to how novice teachers learnt how to teach or what enabled or constrained that learning. Despite persevering for some time with the NVIVO program, and becoming confident with using the program, I found that I was not able to get a 'feel' for the results using this approach. I then made the decision not to use the NVIVO program for analysis of the second set of data knowing that I needed to find another approach that allowed the development of a bigger picture than I felt I could develop with NVIVO.

At this time, I also determined that while Schatzki's practice theory was valuable, it did not provide as clear a framework as I needed to better understand how novice VET teachers learn how to become teachers and what enabled and constrained that learning. It then became clear that the theory of practice architectures would provide a clearer framework with which to explore the learning of novice teachers.

For the second set of data, which was made up of transcripts from the second interviews; associated field notes; responses to monthly emails; and a participant journal, analysis began with an initial sweep through of the data. This involved reading each piece of data at least four times, identifying key themes and considering the data in relation to the first set of data. I then analysed the data using the theory of practice architectures and subsequently used this theoretical approach to analyse all data, including re-analysing the first set of data.

Nicolini (2012) invites us to "zoom in on the details of the accomplishments of a practice in a specific place to make sense of the local accomplishment of the practice and the other more or less distant activities" (p. 219). The framework provided by the theory of practice architectures allowed the zooming in required to gain a deeper understanding of the practice architectures that prefigured, and enabled and constrained, the learning of the participants. It became very apparent during this analytical process – and Kemmis, Wilkinson et al., (2014) also make this point – that while analytically it can be valuable to consider each of the cultural-discursive, material-economic, and social-political arrangements separately, in reality they are intertwined.

The next level of analysis occurred through writing the case studies, which were initially more extensive than those now presented in this thesis. This was followed by the final level of analysis reported in the cross case chapters, Chapters 6 and 7. Despite having worked extensively with the transcripts and other data prior to doing this writing, I found that the process of presenting the results through case studies and cross case studies allowed me to consider the data at another level of analysis. It was during this process that the interrelationships between the learning practices that the teachers were engaged in became apparent. This is consistent with Nicolini's (2012) argument that zooming in needs to be "followed by, and alternated with, a zooming out movement through which we expand the scope of the observation following the trails of connections between practices and their products" (p. 219). It was through the analysis undertaken as part of the writing of the case studies that I was able to more clearly see the ecologies of practices that supported learning, and to develop the concept of a trellis of practices that supported learning as outlined in Chapter 7.

3.8 Conclusion

In exploring how novice VET teachers learn to teach, a longitudinal case study methodology has allowed the gathering of rich, thick data over an extended period of time. Consistent with a case study methodology, I used a range of data collection methods. Data analysis was iterative and I began it by identifying themes that emerged in the data. The framework provided by

the theory of practice architectures (Kemmis et al., 2014) then allowed me to develop answers to the research questions.

Chapter 4

Being Stirred into Practices: Casual Teachers Learning to Become Teachers

It's just that things happened so fast. It's just like all of a sudden you are in deep water and then you're swimming ... Michael, Horticulture teacher

It was almost like learning by being in the trenches. Grant, Fitness teacher

Right now, given I'm in a new area, it's a bit like sink or swim, and fend for yourself.

Sarah, Business Administration teacher

4.1 Chapter overview

This chapter is the first of two chapters where, on a case by case basis, each of the research sites are introduced, drawing attention to the practice landscapes of each site. This is followed by an introduction of the novice teacher in each site and then an outline of the substantive projects and practices (that is projects and practices that were part of their work role), that each teacher engaged in. Next, through a discussion of the interplay of the social site and the novice teacher, the practices that each teacher needed to learn are outlined, and the practices that supported the learning of each teacher are identified. This is followed by an analysis of the practice architectures that enabled and constrained novice teacher learning in each site.

While this chapter addresses the teachers who were employed as casual teachers throughout the time that they were teaching, Chapter 5 does the same work for those teachers who were employed on contract or as a permanent teacher for most of the time that they were teaching. Chapters 6 and 7 then zoom out to answer the research questions across the cases.

For the purposes of the case studies and of the cross case discussion I have focused on the broader practices that teachers engaged with. There are of course other practices that together form the larger practices that I have focused on. For instance, many of the teachers photocopied handouts for students. In the analysis I have included this smaller practice as a part of the broader practice of class preparation except in one instance where it illustrated the results of a lack of support and advice for a casual teacher (see the Horticulture case study in Chapter 4).

In this chapter, and in Chapter 6, each teacher's practices that supported their learning (PSLs), are outlined separately in each case study. In day-to-day work these different PSLs were often interrelated. For instance the practice of team teaching with an experienced teacher is discussed as a standalone PSL, and to some extent that is true. However, in this research I found that team teaching was always combined with support and advice from the experienced teacher. This interaction between practices is discussed further in Chapter 6.

4.2 Being stirred into practice

The novice teachers in this study can be seen to have been – to a greater or lesser extent – ‘stirred in’ to the practices involved in being a teacher (Kemmis et al., 2014, p. 93). Being stirred in to practices involves engaging in the actions – the doings, sayings and relatings – of the practice. Through being stirred in to practices, novice teachers can be seen to be ‘learning how to go on’ in practices (Kemmis et al., 2014, p. 57). Learning ‘how to go on’ in a practice is learning that results in the learner being able to say “Now I know how to go on” (Wittgenstein 2009, p.66). These concepts are addressed in more detailed in the literature review chapter.

In this study the actions associated with the overarching practices of teaching and assessment varied between sites. For VET teachers, learning the practices involved in teaching about a particular field has the added complexity of the teachers being skilled and knowledgeable about the field, or particular sections of the field, that they are teaching. As a result some of the actions undertaken in the teaching site are very familiar to them because they are the actions that are used within the industry. Other substantive practices and actions are less familiar and need more focused learning practices. The following case studies explore what ‘learning how to go on’ in each of the research sites involved for the casual teachers who participated in this research. These are, respectively, the teaching departments of Sport and Fitness; Horticulture; Business; and Beauty Therapy. The cases differ in length. The first case is longer because a number of concepts are introduced as part of this case that do not need further explanation in subsequent cases. The Beauty Therapy case is shorter, and the reasons for this become apparent within the case.

4.3 Learning 'how to go on' as a teacher in Sport and Fitness

4.3.1 Practice landscape

As you enter the Sport and Fitness teaching area of the TAFE it is apparent that this is an area devoted to fitness. The area immediately accessible to students and the public is a working gym, and visitors are expected to show their gym membership to someone on the front desk as they walk in. To the casual observer, it is set up in a professional looking manner and, apart from being located within a TAFE it is like any other gym that they might be a member of. There is a wide range of gym equipment, a change room, and people using the gym. Clients include staff and students from the TAFE as well as other members of the public. Clients pay a reduced rate to use a gym where Sports and Fitness students are being trained. A close observer might notice that one of the people on the front desk is a student who is learning the administrative tasks associated with a gym, and that there are other students throughout the gym working individually or in small groups with an instructor who will both assess them and support them to develop their skills and knowledge. The gym is usually abuzz with students, clients, teachers and assessors going about their tasks of exercising, learning, supporting the learning of others, and assessing.

Historically, teaching in this Sport and Fitness department used to take place only in classrooms. The creation of a gym to serve as a teaching environment took place about a decade ago. Some years later this first gym was moved to make way for another department. The use of contemporary colours and equipment in the relocated gym served to smooth the way for

the relocation of teachers, managers, students and clients. As a result the gym that Grant, the novice teacher who was a research participant, was working in during the period of this research had the fresh look and feel of a contemporary gym.

In the Sport and Fitness site during the period of the research, teaching took place in two main environments, with online learning used as a third environment. The two main environments were standard classrooms and the gym, with online learning also available for some subjects. Many of the practical components of the course, including much of the assessment, took place in the gym.

The classrooms are located on the floor above the gym. They are large rooms with rows of desks and chairs facing a whiteboard and an electronic whiteboard which is attached to a computer. The only indication that these classrooms are used to teach Sport and Fitness is a replica of a human skeleton standing beside one of the whiteboards. Easily accessed from the classrooms, is the fitness assessment room set up for fitness tests. This room has 12 assessment bays, each with an exercise bike, a desk, a chair, equipment to take blood pressure, and various other pieces of equipment.

The staffroom is in the same corridor as the classrooms and fitness assessment room. The entrance to this area is taken up by a reception desk, and entrance to the staffrooms is only with the implicit permission of the receptionist. A wall separates the reception desk from a small galley kitchen where staff can make their lunch, or prepare tea and coffee. The kitchen is small and not suitable for more than two people at a time. In front of the reception desk is a meeting room with no windows. This room has a square

table and chairs and is stark and uninviting. Not surprisingly, it is used only for formal meetings. A corridor to the right of the meeting room provides access to the staff offices. This is a large area with natural light. One of the four offices with glass walls has a desk with a computer that is used by casual teachers. Past the offices the room opens out into a room that is the size of two offices and the corridor. There are shelves across the length of this room with books and sports equipment. A table is also in this area, but it is usually loaded with materials and equipment and does not provide an inviting place to sit and interact with other teachers. This is reinforced by the lack of chairs at the table.

4.3.2 Novice teacher

When first meeting Grant, it is immediately clear that fitness is important to him. He embodies fitness and athleticism through the clothes he wears, the way he holds himself, and the way he walks. It's not surprising then on further investigation, to find that he is a personal trainer. Grant had undertaken his first qualification in the school where he was subsequently employed as a teacher. After completing his initial qualifications at the TAFE he had gone on to complete a Bachelor's degree in the same field at university. Prior to being employed as a casual teacher, Grant had been working as a casual General Services Officer (GSO) in the gym where he was now teaching. He continued his GSO work throughout the period of the research. Table 4.1 provides an overview of Grant's qualifications, his work

experience, and the basis of his employment as a teacher in each semester of the study.

Table 4.1: Sport and Fitness Novice Teacher: Grant

Teacher	Details	Comments
Employment basis	Casual throughout	Assessment-only in first semester of teaching. Employed casually second semester to teach a full time load. Return of a permanent teacher resulted in less teaching and assessing (five hours a week) in second year of teaching.
Specific field of expertise	Personal training	More than five years industry experience when initially employed as a teacher.
Qualifications	Bachelor Degree. Cert IV in Fitness Cert IV in Marketing Cert IV TAE	Completed some years prior to employment as a teacher. Undertaken more than five years prior to employment as a teacher at the TAFE where he is now a teacher. Achieved by end of first semester of employment as a teacher.
Other work	Part time GSO at the TAFE gym Personal training work Personal Training Manager	GSO work for some years prior to employment as a teacher and continued throughout the study period. For many years prior to employment as a teacher as well as throughout the two years of the study. In the last semester of the research, Grant had a permanent full time job in another organisation.

At the first interview for this study Grant had been employed as a casual teacher. However the work he undertook in the first semester was as an assessor. The physical site in which he undertook student assessment was

the gym where he worked individually with each student. In his second semester of employment as a casual teacher Grant taught the equivalent of full-time hours, and during that time he taught in the gym, in classrooms, and in the fitness assessment room, and he also facilitated one online subject. Throughout the four semesters of the study, this was the only semester when Grant was teaching in a classroom or online. In his third semester Grant was employed as a casual teacher for five hours a week: a three hour teaching shift in the gym which involved assessing students; and leading two group exercise classes a week in the gym. In the final semester of the study, in addition to maintaining the five hours of teaching similar to the third semester, Grant had; a full time permanent job elsewhere; and a weekly four-hour shift in the gym as a GSO.

At the first interview the only experience that Grant had had in a traditional classroom was as a student some years previously. Some of his teachers from that time were still teaching when he commenced as a casual teacher. He also had a relationship with the students and the teachers as a GSO on the front desk in the gym.

4.3.3 Projects

The concept of a project as understood through a practice architectures lens encompasses the purpose of a practice or a series of practices, the activities of the practices and the ends that are being worked towards (Kemmis & Wilkinson et al., 2014). Within the theory of practice architectures projects can be large and encompassing, such as supporting students to learn to live a good life, or small such as preparing for a class. In the next four chapters I

discuss the larger projects that each novice teacher was engaged with. Each of the teachers identified different projects that guided how they undertook their role as a teacher.

Grant's main focus was the fitness industry, and he saw the preparation of professionals for the fitness industry through his teaching and assessment work as an extension of his role in that industry. While in some of the other cases novice teachers engaged in a number of substantive projects, for Grant this broad project of preparation of professionals for the fitness industry remained his focus throughout the study.

4.3.4 Learning substantive practices

The key substantive practices that Grant engaged in through his role as a teacher were assessing, teaching, lesson preparation, leading group exercise classes, and administration. Grant's initial employment as an assessor in the gym, where he was familiar with the environment and many of the practices, did not require a great deal of learning for him to be able to undertake the practices involved. He saw the practices that he undertook in this role as having a lot of similarity to those he undertook in his role as a personal trainer. He also saw the practices that he was already undertaking as a GSO as being very similar to those involved in individual assessment of student learning:

I don't look at it as a big difference because when I was on the desk I was doing a lot of that anyway, just not assessing them. So really all that's happened is a slightly higher level of responsibility is how I look at it. (Interview 1)

At this early stage of his work as a teacher, the level of responsibility for making decisions about student competency was the key change that Grant identified.

The need for learning of the substantive practices associated with being a teacher in this site became more obvious in the second semester when Grant undertook a heavier load that included classroom teaching and higher-level subjects. Taking on this more demanding load occurred with only two days' notice. At the end of the second semester he noted:

I had a couple of instances [where] I ... tried something ... [it] didn't work, and then tried to work out why it didn't work, and a lot of that funnily enough happened with the most theoretical class I had which was the diploma guys. The first class especially, it was sort of like, here's two days notice, you've got to teach this class, and it's like 'ah OK'. So, obviously the first class was not real flash, but after that, once I sort of started getting the wheels rolling it picked up. (Interview 2)

For Grant, teaching in the classroom was more removed from other practices that he was familiar with and required more deliberate learning of the associated practices and actions than his previous assessment work had needed.

Some elements of classroom teaching in particular were of concern to Grant. In each interview I asked Grant to describe in detail the most recent teaching that he had done. For instance, on one occasion when Grant had been teaching for a year, after providing details of the class, what he had done, and what the students had done, he went on to say, unprompted:

The only issue that I had with it was just the fact that there was only one of me, and you know there might be 20 students I had to try and get through, and it's really hard cause it takes at least five minutes for someone to take a blood pressure reading. So if you're doing that with a pair, you know there's ten minutes, so you

tend to run really short on time. So that's something that I'd look at in the future, about how to set that out better. Whether organising tutorial times or something like that. (Interview 2)

He can be seen to have facilitated this class of 20 students in the same way that he had previously worked with individuals or small groups. The experience of running out of time during this class led to him identifying why this had happened, and to consider future changes he could make to avoid this problem.

Grant, like almost all of the teachers in this research, identified going over time in a class or not having prepared sufficient work for a class and finishing early as concerns. Timing remained an issue for Grant throughout the two years of this research, however his strategies for addressing this became more sophisticated and incorporated an understanding of how best to support student learning.

Timing of assessment was also an issue throughout the time of this research. Grant worked on how best to manage this. For instance, after he had been teaching for two years, when asked if he was happy with some recent assessment that his students had undertaken, he outlined the changes that he was planning for the next time he took that class. He planned to set up ten-minute blocks of time that students could book in for at the beginning of the assessment period. His aim was to identify those students who were likely to be competent and to finalise their assessment early, which in turn allowed him to give more time to those who needed more support. This approach can be seen to contrast with the approach that he discussed in the earlier interview (see previous quote) in that it focuses on the students rather than just on his own concern with managing to get all the assessment done.

Throughout the two years of the study, Grant discussed the issue of disruptive students unprompted, and he continued to develop ways to manage this issue. For instance,

But the ones that would irritate me were the ones that would just sit there, and hide up the back, but they'd talk... again I sort of came up with some ways to deal with that, so to start with I just sort of jumped on them, but then later on I said 'OK well that's not working' so I invited them to come up and teach, and that generally shut them up pretty quickly. (Interview 2)

At no point did Grant indicate that he felt that by setting the classes up in the way that he had (for instance classes where he was working closely with only one to three students while the others had to wait for their turn), may have contributed to the unwanted behaviour that he was experiencing. However by the end of the second year of teaching, Grant had developed a range of strategies to manage student behaviour. The approach previously identified of finalising the assessment of those students who were competent in order to allow more time for those who needed more support, was one of these. Another strategy involved the rearrangement of desks in the classroom:

I'd probably look to change it just to effectively break up some of the really loud groups, they'll sort of all get around one table, if you could break the desks up a bit, it might just make it a little bit easier to control them. (Interview 3)

Nonetheless, what he considered to be management of students continued to be a work in progress.

During the time of this research the Sport and Fitness teaching department was at an early stage in the use of online teaching to support learning. As a result the work that Grant did in this area was very basic and included responding to student emails and ensuring resources were online.

He did not report any expectation of himself, or others, that he would do more than this.

Grant identified the teaching of group exercise classes as a complex practice. Class participants were clients of the gym as well as students enrolled in the Group Exercises class. Grant's work involved leading the classes in the way that an aerobics instructor would do, ensuring each participant was able to do the associated exercises correctly and safely. At the same time he was supporting the students to learn how to lead a class of their own. The other teacher who taught this class did all of this to timed music. The approaches that Grant used to learn this, and other practices, is discussed in the next section.

4.3.5 Practices that supported learning

This section outlines the practices that Grant undertook to support his learning to undertake the role of a teacher. Practices that support learning (PSLs) include practices deliberately undertaken for the purpose of learning, as well as substantive practices that result in learning.

Feedback and guidance from colleagues and the Head of School (HoS) were important in supporting Grant's learning. Grant can be seen to have had a number of informal mentors during the two years of this research. His colleagues and his HoS took an interest in supporting his ongoing learning:

I learnt a lot of the importance of the admin side from my [HoS] as he would often take the time to discuss these things with me so that, in his words, I wouldn't fall into the same traps he did when he started teaching. (Email toward end of second semester of teaching)

At the end of his second semester of teaching Grant missed out on a short-term contract. In providing feedback on why he missed out on the position, the HoS advised Grant to seek a formal mentor through the organisation wide mentoring program. After Grant had been teaching for two years, he identified the support of more experienced others as very important in his learning:

When I was a student that's the sort of feedback that I was getting, and even out in industry it was the same kind of thing. So I'd sort of attach myself to someone who was a much more experienced trainer than me, and I asked them, can you give me any feedback, and it was the same kind of thing. And I just found for me that worked pretty well, and it's worked pretty well for me as a teacher as well.

(Interview 3)

He thus saw the practice of seeking advice from more experienced others as a learning practice that he had engaged in across a range of environments.

Working in the gym as a GSO and as an assessor, Grant was able to observe other teachers' approaches to assessing and supporting student learning. He identified these observations as being important in supporting the development of his own assessment of individuals in the gym. His use of observation and modelling to support the development of his teaching practices was also clear in his learning to teach group aerobics. Another teacher regularly facilitated these classes and he observed her practices. In developing his own teaching, he found that the combination of leading the class, ensuring participants were doing the exercises correctly and safely, and supporting the students to learn to present these classes themselves, the added complication of timed music was too much. When he began facilitating these classes he chose different music so that his actions were not as time sensitive. Even when he became confident in teaching the group

classes he continued with this approach of using music that was unlinked to specific exercises.

At the end of the two years of the research when Grant was asked if there was anything else that he thought he still needed to learn about teaching, his response was “how to do it well”. When asked what strategies he planned to use to do that he said,

I'd like to sit in with other teachers who are more experienced, see how they do things, and whether or not with my teaching style, how I could apply it or adapt that. (Interview 3)

He clearly saw observation, modelling and the modification of the practices of others so that they fitted with his own approach, as components of this learning practice.

Grant described learning through “doing” regularly over the two years of the study. At the end of his first year of employment as a casual teacher, he identified doing the work as the main influence contributing to his learning to become a teacher:

Getting in there and actually getting a chance to do it was the big one, and then learning as I went, and you know obviously I made a few errors, it's what we all do. (Interview 2)

Learning through doing was the approach that he used particularly for classroom teaching and in the relative absence of other PSLs. Learning through doing was also informed by previous learning and experiences. When asked how he knew what to do in order to assess students, Grant responded:

I've done that subject before as a student, so I had a bit of an idea of what they were required to do. Also talking with the teacher whose class it was to find out exactly

what they wanted. And as far as learning those skills, what I've learnt in the Cert IV in Training and Assessment and how to go about it. (Interview 1)

So while Grant did learn by doing, this learning was underpinned by prior experiences, by studying the Certificate IV in Training and Assessment (Cert IV TAA), and through discussions with other teachers. Grant also identified previous teachers and coaches as important influences on his teaching.

Grant began the Cert IV TAA prior to being employed as a casual teacher and had completed it before the end of his first year of teaching. In discussing how he knew what to do as a teacher four weeks after he was employed in that role, Grant mentioned a range of influences, including his own prior experience as a student, discussions with other teachers, and finally he referred to the competencies that he was assessing. He noted:

I've also had to read quite a lot of those documents for the Cert IV so that gives an idea of what you need to be training the students in. (Interview 1)

While he had been exposed to the content of the subjects he was assessing through other means, he accessed the full competencies as part of his learning in the Cert IV TAA. Grant made no other reference to the Cert IV TAA as an influence on his learning to undertake the role of a teacher. For some of the teachers in this research the influence of their learning in the Cert IV TAA became apparent through other matters that they would discuss. This was not the case with Grant.

Grant identified positive feedback to students as part of the culture of the Sport and Fitness teaching area. He also benefitted from the positive culture of the site, a pattern that was evident in Grant's own learning to become a teacher. A number of times he discussed the positive feedback that he received from the students in relation to his role as a teacher. Grant also

relied on other forms of student feedback both verbal and non-verbal to influence his teaching. For instance:

[When leaving the class students might say] 'I didn't quite understand this' ... and then you'd get others who you could tell didn't understand it but they wouldn't come up and say anything, so what I would generally do is cover that ground at the start of the next lesson. (Interview 2)

Perhaps influenced by discussions with colleagues, he noted that sometimes student feedback about what they wanted was not always the best information to support good teaching. He thus tempered student feedback with feedback from other teachers.

Reflection on his teaching and his learning to become a teacher seemed to be an important learning practice for Grant. Certainly some of the questions that I asked him prompted reflection, but his responses to even very practical questions such as "What did you do then?" often included reflection on changes he would make in the future. He articulated his use of reflection as a learning practice in an email during his second semester of teaching:

My learning has changed in that I am much more inclined to reflect on the class after it has concluded in an effort to improve future classes. This was not as big an issue in the workplace environment as I was much more comfortable with that and was more able to adapt on the fly. Also having 3 or 4 students to work with in the gym as opposed to 50 in the classroom/gym was much easier logistically. (Email)

This suggests that he found reflection a particularly useful approach when he was undertaking more complex practices, or practices that were new to him.

At the third interview Grant was also able to articulate a change in the way he was now learning compared to when he first began teaching:

When I first started I was so hard pressed just getting everything together, I didn't have a lot of time to actually sit down and ask questions. So it was ... almost like learning by being in the trenches. (Interview 3)

This recognition of his need to seek support for his learning of practices that he was less familiar with was tempered by a lack of time to seek this advice. This in turn resulted in him returning to his original approach of learning by doing. However in the circumstances of a busy and demanding workload this sometimes felt like "being in the trenches". This metaphor of being in a dangerous situation is akin to the sink or swim metaphor used by a number of the other novice teachers.

4.3.6 Practice Architectures of the Sport and Fitness teaching department that enabled and constrained novice teacher learning

In this section I explore the key practice architectures of the Sport and Fitness teaching department that appeared to prefigure, or enable and constrain, the practices and the actions that the novice teacher was likely to engage in to learn how to become a teacher. Here I largely address cultural-discursive, material-economic and social-political arrangements separately. In reality, they occur together. For each of the case studies I also address employment arrangements in advance of the other practice architectures that enabled and constrained novice teacher learning, because across all cases employment

arrangements created strong practice architectures that prefigured teacher learning.

Employment arrangements

The employment arrangements for Grant provided strong practice architectures that enabled and constrained his learning. His initial employment as a casual teacher to undertake assessments in the gym had strong connections with the work that he had been doing for many years as a GSO in the gym. This initial employment to undertake assessment can be seen to provide some of the practice architectures to gently stir him in to undertaking the role of a teacher.

Being employed to undertake a full teaching workload in his second semester of teaching with only two days' notice, led to much greater changes. With the employment continuing on a casual basis, Grant needed to maintain his other personal training and GSO work in case the teaching was not available in future semesters (which was what did happen). He was thus working much more than a full-time load, and at the same time had a steep learning curve in his teaching work. He was surprised by the additional work related to teaching in the classroom which he referred to as administrative work:

The administrative side of teaching is more full-on than I thought it would be and I am spending up to an extra 15 – 20 hours per week working on lesson plans, marking and dealing with student e-mails. (Email second semester of teaching)

This was when Grant felt like he was “learning by being in the trenches”.

This heavy load is likely to have constrained his learning in some ways and to have enabled it in others.

Being employed to teach a full load is likely to have enabled learning through providing more opportunity for Grant to be stirred in to the practices of the teaching area. This increased involvement in the broader practices of the department (teaching, forms of assessment in addition to the practical assessment, curriculum development and administrative tasks) also allowed for increased involvement with other activities of the teaching department, including attending staff meetings. For Grant this was marked by being consulted about issues associated with the practices of the teaching department and having his opinion heard:

I got involved a lot more with staff meetings and the goings on, more so than I was previously which was kind of nice actually to have an opinion, or have an opinion and get it listened to! Yeah and you know also just being asked what I thought about certain things, where you're just in that GSO role – and it's not the fault of the teachers or anything – but you're sort of not included in a lot of that, until there's a really really big problem. (Interview 2)

In cultural-discursive terms, he was more engaged with the decision making and the deliberations about future directions of the teaching department. In material-economic terms he was more engaged with the doings of the department, and in social-political terms his opinions were more likely to be listened to and valued by other teachers and by the HoS. Grant saw himself as more confident in his teaching role after teaching full time for one semester, and his confident discussion of the teaching and assessing that he did supported this judgement. It can thus be seen that this combination of influences served to increase his confidence in his work as a teacher.

Cultural-discursive arrangements

Because he had worked as a GSO for some years prior to being employed as a casual teacher, the language of teaching and learning in the gym was familiar to Grant. The sayings that he engaged in changed little from the work that he did as a GSO. The difference was in the language of assessment. Learning the language of assessment was supported through ongoing discussions that Grant had with the teachers whose students he was assessing. These arrangements served to stir Grant in to the language and the practices of practical assessment. During these discussions, which were an inherent part of his role, he was also gently further stirred into the language of teaching as teachers explained what they wanted him to do and why.

The cultural-discursive arrangements associated with classroom teaching became more apparent to Grant in the second semester of the research when he was teaching a full load, much of it in the classroom. As a result of being more involved in teaching discussions with other teachers during this time he was also more immersed in the language of teaching. Grant also realised that the language that he used in his teaching could influence the learning of his students. In saying what he thought a good teacher does his response included discussion of the language used:

They're able to impart that knowledge in a language that the students can understand and they can get. You know it's all well and good to have all the knowledge, but if you can't get it across to people, you're not going to be a good teacher. (Interview 3)

This understanding had been developed after being employed as a teacher for two years.

Social-political arrangements

The social-political arrangements, and the consequent relatings that Grant had with other teachers, his HoS, and students, had a number of layers that were influenced by the range of roles that he held within the department. Grant was a teacher, and assessor (the only case in this research where these roles were separated), a former student, an industry expert, and had been working as a GSO for seven years. This range of roles impacted on his relationships with both students and teachers.

Grant's relatings with some of the teachers changed somewhat because now he was assessing some of their students. These arrangements also served to support Grant in learning how to undertake practical assessments. He had ongoing contact with the teachers whose students he was assessing and was therefore able to ask questions, and discuss with them any concerns that he might have had as part of his work. As well as being supported by the other teachers in this way, Grant also identified the reciprocal trust that he had with the teachers that he was doing assessments for:

With the work skills and things like that we pretty much just trust each other's judgement. (Interview 1)

It can be seen that the teachers trusted Grant's competence in relation to work skills and also supported his learning in other areas.

The 'social space' dimension of the Sport and Fitness teaching department can be seen to influence the learning of novice teachers within the department. An expectation and a willingness to support teacher learning among experienced staff can be seen to be an extension of the approach taken within the department of supporting student learning. This

positive approach to learning appeared to be combined with an understanding that by trying new things mistakes will be made, and that this is part of the learning process. It can be seen that these social-political arrangements served to support Grant's learning to become a teacher through feedback from teachers and students as well as Grant's willingness to learn through trial and error.

Relationships with students were influenced by the range of roles Grant undertook. In his administrative role as a GSO in the gym he often provided one-on-one guidance and support to students who were doing gym shifts as a component of their learning. He was a personal trainer and working in the industry many of the students were preparing for. He was a classroom teacher and assessor of the theoretical and practical understanding and skills of his own students as well as the practical competency of the students of other teachers. These range of roles and responsibilities resulted in various relationships with students.

I try to keep things pretty relaxed, but try to just establish, you know. Not that, you know, you're like the authority figure, but like, 'I have this knowledge, you guys are coming here to get that', so almost like putting myself in that kind of position. But at the same time, you know, I still want them to feel like if they've got any questions that I'm pretty approachable. (Interview 3)

A number of times Grant raised the issue, in passing rather than directly, of this balance that he was striving for between being approachable and being in control. His ongoing discussions about student behaviour related to these issues.

Material-economic arrangements

In the Sport and Fitness teaching department a substantial proportion of the teaching and the assessment of student competence took place in the gym. This allowed others to observe easily what teachers do and how they do it in this environment. When asked how he might have been influenced by his colleagues in the teaching that he does, Grant noted that observing their teaching had been an influence:

Some of them I've had a chance to observe, like [colleague C]. I observed her doing the practical stuff in the group instruction. We run group classes for the public but there's still a learning thing for the students, so I've seen that side of her teaching. I've seen a lot of the teaching in the gym, and then I've had the chance to sit in on one of [colleague B's] classes because I did a guest presentation for him. (Interview 2)

Learning through observing and modelling is consistent with the cultural-discursive arrangements of the fitness industry where personal trainers model an exercise and then ask clients to do the exercise themselves. From a material-economic perspective the layout of the gym and its accessibility to observation can be seen to enable the learning of novice teachers.

Grant had ready access to the gym and the teaching that took place in the gym while he was a casual teacher as well as in his GSO role. However, his access to the classrooms and to the staffroom was more restricted. Because the staffroom was on a separate floor and in a different section of the building to the gym, in the three semesters when he was not classroom teaching Grant also had less access to the staffroom and the casual discussions that may have been held there between teachers. While undertaking the heavier workload in the second semester, Grant was able to

use the desks and computers available to casual teachers for preparing classes, resources, and assessment tasks. In all other semesters there was little reason for him to be in the staffroom. In walking into the staffroom a visitor must walk past the receptionist who asks who the visitor is looking for. Apart from the desks that are used by casual teachers to prepare a class, there is no other inviting place for a casual teacher to be without a specific purpose. 'Hanging out', with experienced teachers in this environment, even if Grant had time for this, was thus not invited by the physical arrangements. It is likely that this resulted in less access to the discussions and sharing of classroom teaching approaches of more experienced teachers.

When asked explicitly about what influenced how he was teaching in the classroom Grant identified prior experiences of being a student as being influential:

I think the biggest influences I had was when I was studying. It was well ... what sort of teachers did I respond to the best? And tried to bring some of that into the actual teaching. Then if I saw that wasn't working, ok well what can I do to get these guys interested, or to at least get them to shut up while others are learning.

(Interview 2)

This referral back to his experiences as a student is quite different to the influences related to his assessment and teaching in the gym. In these latter cases the influences included discussions with more experienced teachers, as well as observation of other teachers:

I think the biggest influence for me is talking with the other teachers, they're really influencing what I do mostly because a lot of what I'm doing is based off their subjects. (Interview 1)

It is possible that more extensive access to the doings, sayings and relatings of more experienced teachers in the classroom would have better enabled Grant's learning.

In the first semester of teaching, the assessments that Grant undertook were ones that had been developed by the teachers whose students he was assessing. Even in later semesters, when he was responsible for the teaching as well as assessing particular classes, he used assessment tasks that had been developed by the previous teacher. Through following the assessments as had been designed by others, and in engaging in discussions with the teachers who had designed them, Grant was learning how to assess students.

Similarly, learning materials and other artefacts developed by more experienced teachers were also available to support Grant's classroom teaching. He used already developed artefacts such as lesson plans and teaching resources as the basis for what he did, and where appropriate modified them to better meet his preferred approach.

4.3.7 Concluding remarks

Grant learnt to undertake practical assessments in the gym. He also learnt to facilitate group exercise classes as well as to teach students to facilitate group exercise classes. In learning to do this the key PSLs were observation and modelling, undertaking the role, and support of colleagues. These approaches were enabled by the layout of the gym where he was easily able to observe and interact with other teachers.

Grant also learnt to teach in a classroom. This learning was largely supported by just doing it. Grant's learning of the practices related to

teaching and assessing in the classroom was constrained by a heavy workload in the semester that he was teaching primarily in the classroom. It was further constrained by the lack of opportunity to observe and model the classroom practices of other teachers. As a result he continued to use teaching practices that were informed by his own experiences as a student some time ago, and assessment practices that were successful when working with individuals.

4.4 Learning 'how to go on' as a teacher in Horticulture

4.4.1 Practice landscape

The Horticulture teaching department can be found at the opposite end of the campus from the Sport and Fitness teaching department, and the casual visitor could easily assume that they are in different organisations entirely. As you walk down the stairs and then enter a corridor, neither of which are inviting, you might think the shiny gym that you just left was a figment of your imagination.

Entering the staffroom your immediate focus is on a large table in the centre of the staff area where teachers gather most mornings for morning tea. There are three casual teachers' desks just in front of the central table, and one of these desks has a computer on it. To the right of the central table is a photocopier. In addition to the big central table there is a smaller round table. Permanent staff offices with glass front walls facing into the central staff area are around one side of the staffroom. For a Horticulture teaching department, it is surprising to find the staffroom is completely internal, with no windows. Well-resourced classrooms, with electronic whiteboards, and plants, that are mainly used by the permanent teachers, are in the same building as the staffroom.

From here, a three-minute walk takes you to the heart of the horticulture teaching area, the glasshouses and sheds. There are four well stocked glasshouses, each used for different types of plants. Opening the door to one of the glasshouses is a sensory experience. The smell of plants,

soil, and sometimes flowers, combine in the warmth of the well-lit glasshouse. A close observer might notice the wide spaces between the benches in the glasshouses that provide space to allow groups of students to observe or listen to a teacher. But the glasshouses are not where most of the action is.

Walking through an open covered area with neatly stacked and raked remnants of the tiles and sand from the last paving class, takes you to two classrooms. One of these classrooms has wooden benches instead of desks. This large shed-like room has no chairs, and students stand to work at the benches. There are no computers in this room, but the front wall has a large green blackboard. One wall comprises a bank of windows with a low level stone wall that serves to hold the heat from the sun in the winter and keep the cavernous room warm and pleasant. The other room looks more like a lab with high benches and stools. This room has a whiteboard at the front of the room with the screen of an electronic whiteboard above it that is attached to a computer. Both of these rooms have benches against one wall where specimens, usually plants, are displayed and made available for students to work on.

Beyond these classrooms you see a large pond that is used to water the plants on the whole ten acre bush landscape campus. Beside the pond you find soil plots with lawn in various stages of development. These plots are covered to provide protection from the ducks that persist in coming over from the nearby pond to feast on the lawn seed.

This brief journey that has taken us to the classrooms, the glasshouses, the sheds, the pond, and part of the external campus, makes it apparent that the campus incorporates a number of teaching environments and resources.

Standing by the pond to look back over the ten-acre bush campus, it is easy to see why the Horticulture department considers the whole campus as its teaching site.

4.4.2 Novice teacher

When you first meet Michael the impression that you get is that he is articulate and philosophical. It is therefore not a surprise when you learn that he holds two Bachelor degrees, and a Masters in Horticulture (from a European university). When discussion turns to horticulture, as it often does when you are in Michael's company, his passion is apparent in his voice and his body language.

Michael had been working in the horticulture and landscaping industry for more than 20 years when he began teaching. He has broad experience in this industry, having worked in nurseries, landscaping businesses, large private gardens in Europe, large public gardens, and government landscaping departments. He had also supported the learning of more than a hundred apprentices during this time. Table 4.2 provides an overview of Michael's qualifications, his work experience, and the basis of his employment in each semester that he worked as a teacher.

Table 4.2: Horticulture Novice Teacher: Michael

Teacher	Details	Comments
Employment basis	Casual - six hours a week	Left after two semesters of teaching.
Specific field of expertise	Horticulture	More than 20 years industry experience when initially employed as a teacher.
Qualifications	Two Bachelor degrees Masters degree Cert IV TAA	Achieved by end of first semester of employment.
Other work	An increasing number of horticulture jobs as time went on to provide income.	

When first employed as a teacher Michael’s only experience of teaching had been as a student himself, and then as a supervisor of apprentices.

4.4.3 Projects

In discussion with Michael, three broad substantive projects became apparent. These are interrelated, as well as being clearly articulated as separate projects. These projects, not listed in order of importance, were first, to teach well, second prepare students as professionals to do well in a business of their own or in working for others, and third, to prepare students to be fulfilled and happy in their work. Michael saw the last of these as being strongly influenced by the second, and he felt a strong responsibility to do

the first to provide the groundwork for the second and third. This is encapsulated in his comment:

When they go out in the world and enjoy their job, and consequently I would dare say are being good at their job, this is when I would [say that] I've done an okay job.
(Interview 1)

Michael more richly articulates these projects when he says that he sees his role being:

to enable people to be good horticulturalists, in any possible way that they would be employed and in the future this could mean as a nursery man, [being] self-employed, working as part of a public garden, any of those scenarios and many more ... I want to give them as much as I can so they could go out confidently in any one of those areas and do a great job and be fulfilled and happy. (Interview 2)

He was thus very clear about his end goals for his teaching and he referred to these regularly.

4.4.4 Learning substantive practices

The key substantive practices that Michael engaged in through his role as a teacher were lesson preparation, teaching, assessment preparation, and assessing. Interestingly, while most of the casual teachers in this study noted that they had to do considerable work to further update or develop their content knowledge prior to teaching it, Michael seemed to be relatively confident in his content knowledge. With a Masters degree in Horticulture and 20 years industry experience across a range of horticultural and landscaping roles, this is not surprising.

The structuring of learning experiences at the level of an individual lesson was one of the substantive practices that Michael worked on

developing. At a lesson-by-lesson level, Michael had two clear goals that he aimed to achieve. One goal was for students to have a clear 'take home' message when the class was over (such as what fertilizer the succulents needed), and the other was to have something practical as the outcome of the lesson (such as repotting the succulents that were held in the school). He also aimed to take difficult concepts and make them easily accessible for his students. He worked to integrate theory and practice, aiming to include both in every teaching session. In explaining how he prepared for one particular lesson Michael gave details of his lesson preparation and then finished by saying,

I knew the academic background but not how to get it across. (Interview 1)

The learning that Michael focused on in lesson preparation related to how to prepare the class to best meet learner needs.

Michael also discussed timing a number of times in relation to his lessons, noting that sometimes the class would go overtime or he would not cover everything he had planned. Connected with that, he noted that he needed to learn how to structure not only a lesson, but also an entire year of classes. Structuring of individual lessons, as well as structuring of content over a semester, were practices that Michael worked on learning in his first year of teaching.

Michael saw the entire 10-acre bush campus (and beyond) as part of his teaching site. He deliberately worked to become familiar with the external campus and to determine how he could use it to support student learning. In discussing his lesson preparation he noted:

A big part of that is just spending time here, and just see on site what we have as material available. Because I [know], by practical experience, there's always a discrepancy between real life and the theory. [You can prepare the theory section of the lesson] but if you don't have the materials or the things on site, it just looks completely different or it doesn't work out, then it's of no use and it can be frustrating for students. It always needs to relate here to what's on the ground ... So, I found that I just had to spend a lot of time just matching those two things up.
(Interview 1)

By the end of his first year of teaching Michael had developed a good familiarity with the campus and how he could use its resources to support his teaching.

As well as coming to know the external site, and what it offered to support student learning, Michael also needed to learn what facilities were available to him, and how to access these. He also needed to learn what he was expected to provide himself, and what was provided by the TAFE. For instance, he did not know how to arrange printing of the resources that he developed for his classes. As a result, for the first four weeks he was printing all of the handouts that he developed for his students on his home printer at his own cost. For the first few months he was also bringing in other resources from home to use with students because he did not know if they were available at the TAFE. He had learnt these things by the end of his first year of teaching. However in the first few months it was costly and confusing.

The development of appropriate assessment tasks was another practice that Michael worked at learning during the year he was teaching. As with lesson preparation, broad goals and philosophical beliefs informed the approach that he took in this practice. Timing of assessment tasks was also an issue for Michael. At the end of the year he identified that if the

assessment tasks had been spread more evenly both he and the students would have had less stress. Thus, by the end of his first year of teaching Michael felt that he had developed appropriate assessment tasks and was also able to identify some areas where he had learnt that changes were needed.

At the time of this research online learning was not widely used in the Horticulture department. One teacher, considered an early adopter, did provide well-developed online learning options for students, but it was not expected of casual teachers. Michael was expected to make the handouts that he developed for his classes available for students to access electronically. He saw this as an administrative task rather than a pedagogical one and used a step-by-step guide to undertake the task.

4.4.5 Practices that supported learning

In his first semester of teaching Michael used assessment tasks that had been developed by previous teachers as a guide for developing his own tasks. Occasionally he used them as they were, but mostly he used them as a model for the development of new assessment tasks. These were available in filing cabinets in the staffroom.

I searched through last year's files at the quizzes and things that they have done and I found this a very helpful source of information ... I took some home for the weekend. Just to see and get a bit of orientation for myself. Some direction.

(Interview 1)

In addition to the assessment tasks available in the filing cabinets, Michael also referred to assessment tasks that he had kept from his own apprenticeship more than 20 years ago as models for the development of

new assessment tasks. By the second semester Michael was confident in his ability to develop appropriate assessment tasks and was writing his own without direct reference to these models.

Michael would also have like to have access to lesson plans from previous teachers:

So I did make this up in a way. I mean I did have this practical experience from a lot of practices in the job, but a lesson plan, or many lesson plans would have been fabulous, because the subject expertise you bring in a way with you already.

(Interview 2)

Unfortunately these plans were not available to him. Michael did however access some resources previously developed by other teachers and available in hard copy in the filing cabinet, and he used some of these as models for developing his own resources. He combined this with using books as a reference for how he might present information and ideas to students. After each class he would evaluate each resource he had developed in relation to how successfully it supported student learning. On occasions this prompted him to develop another resource to better support student learning. This evaluation was strongly influenced by the students' response to the resource.

Michael relied on both active and passive feedback from his students. He explains this in his first interview after having been teaching for only four weeks:

Feedback ... how [students] respond to what we discussed, and even more so when they can actually get to the practical task and they can do that I then see okay, that's well understood...or this is something they're unsure about ... both active feedback by them telling me or asking me, and also passive feedback by me observing what they are capable of. (Interview 1)

Michael used this feedback to develop future lessons to meet learner needs. He also reported asking students for advice about administrative and other processes.

Learning through trying something and seeing what happens, that is, learning through doing, was a strategy that Michael used regularly. For instance, in preparing for a lesson on grafting, his plan was for students to use the plants that were in the glasshouses to do the practical work. He had expected that there would be sufficient materials available for students however this proved not to be the case:

There wasn't enough material there and there wasn't enough time so I would set up the lesson a little bit differently. But I couldn't really know this beforehand. You need to find out and see. 'Okay we need more time to explain this'. (Interview 1)

Learning about what the bush landscape of the campus, as well as the glasshouses and sheds could offer and integrating this into his lesson plans was also something that Michael learnt by doing.

When he was unsure how to proceed, Michael used a deliberate and active process to access his intuition about the choices he should make. The prior experiences that he had as a student, and as a supervisor of apprentices, were influential in developing his intuition. For instance, after outlining the class that he had just taught, and the process that he had used to prepare the class, I asked him how he knew to prepare a class like that. He responded:

This is more still a little bit like gut feeling from my teaching apprentices in my previous life, and also I know from own experience from school there's only so much theory you can take, you need to break that a little bit up, and you need both, you need the balance with the theoretical knowledge and the practical feel of something. (Interview 2)

At times he was able to be explicit about the prior experiences that he referred to in informing his teaching, and at other times he just saw it as his intuition. These prior experiences served as a basis to guide his learning through doing.

Michael undertook an active and deliberate process of written reflection after each lesson to support ongoing improvement in his teaching.

Every lesson I have notes for preparation, and then later how the lesson went. Good, or what would I change ... that's how I teach myself 'okay, that didn't work so well' or 'I need to be longer here', 'I need to take less time here', and so on. (Interview 1)

Reflection seemed to be an important practice for Michael in supporting his learning. He also reflected in discussions with me about his teaching.

Michael completed the Cert IV TAA during his first semester of teaching. He noted:

The Cert IV ... is more an administrative thing ... how to have competencies and how that falls into the system. It doesn't teach you how to teach. This is what I actually was looking forward to. So it doesn't give you .. I mean I had to give them some lesson plans that I have made up, but ... I was actually looking forward to being taught how to teach ... It just hinted at some things, that I, that you can really figure out anyway. (Interview 2)

He found that it gave him a broad understanding of competencies, but he had hoped that it would better support his learning to teach.

When explicitly asked how he knew what to do in his teaching after he had been teaching for four weeks, Michael responded:

I don't, and this is my biggest problem ... This is for me today, and was at the very beginning, the big unknown, and I think it is where guidance of a teaching institution would be provided for a completely untrained teacher. Some teachers

before they begin teaching they have a teaching qualification. They do training so they know that. I'm coming from a working background, also managing background. But I have no idea really ... (Interview 1)

When asked the same question after he had been teaching for two semesters Michael referred to his previous experience as informing what he did in his teaching:

Most of the time I didn't really know exactly, it was just a gut feeling. The background I have, I've got to give them something so they can go out in the world and to an employer or to a workplace and do something that they love doing and can make a living off. This is the big picture and I did the structure, everything I had on how I thought they could get to that. I mean the role models I had in my own apprenticeship, in my own learning in school, or later, studies at Uni. (Interview 2)

Michael would like to have had a more explicit introduction to the organisation and to the expectations of the teaching area.

4.4.6 Practice Architectures of the Horticulture teaching department that enabled and constrained novice teacher learning

Employment arrangements

Throughout his time as a casual teacher in the Horticulture department, Michael was employed to teach six hours a week. This resulted in him having to access additional employment. Michael believed that employers in the horticulture industry were unlikely to employ him except on a short-term casual basis, or full-time. The times that he was teaching meant that he was unable to both teach and undertake a full-time job. This casual employment

became an arrangement that influenced many of the practice architectures related to Michael's learning to become a teacher.

The arrangement that Golden Towers TAFE makes for teaching is that the hourly rate for casual teaching is expected to also cover additional work such as lesson preparation, resource development, assessment and student feedback, and course related administrative tasks. Michael spent many hours undertaking these additional tasks and found them to be time consuming. He also noted:

It's draining and exhausting, but in a positive way. I want to do it and also get through this stage of it being so hard. (Interview 1)

The cultural-discursive arrangements in the horticulture teaching area included the expectation that working as a teacher is initially very demanding. Michael said that he had discussed the time consuming demands of the work involved with his HoS, who said:

'Yes, it is like a marathon and this is normal'. (Interview 1)

Thus Michael received a clear message that his heavy workload in addition to actual teaching was what was expected.

The administrative processes associated with employment of casual teachers at Golden Towers TAFE resulted in casual teachers not being added to the administrative and human resources system for many weeks after they began teaching. This material-economic arrangement is likely to have constrained Michael's learning to become a teacher. Eight weeks after he began teaching Michael was still not "on the system". In addition to not being paid, this also meant not having access to many of the facilities including the departmental computer network and the resources stored there

such as borrowing privileges at the library and the online staff information system. This is likely to have constrained Michael's use of the library and departmental resources that might have supported him in being a teacher. These are discussed in more detail later in this section.

In the second semester of teaching, Michael's ability to be on campus as often as in the first semester was limited. After teaching for a year, he noted that the other work that he did to earn an income meant he was only able to be on campus during the times that he was teaching. His preference was to have been able to be on campus more than this:

If I could have been at the school more, but for making the money business, then I would have accessed all those experienced people, cause there's a wealth of knowledge there. And they could probably just throw stuff at me, or just give so much. But this was just the length of time that I can be here. The minimum amount of time, then I have to race at night to this job or then very early in the morning do something here or there. Otherwise I would have chosen to be here a lot more and hence would have shared a lot more. (Interview 2)

Thus Michael's access to the expectations, advice and support of other horticulture teachers became more limited due to his other requirements for earning a living.

Michael would like to have been a permanent teacher, and had hoped that he would be able to work casually for a while until a permanent position became available. Unfortunately the time that he needed to work casually was too long for him to be able to survive financially. His partner had become ill and was no longer able to support him in establishing himself as a teacher. In the quote below Michael explains why he was leaving teaching:

I'm doing the six hours, and it's just not enough. My partner's now so ill that I just have to produce somehow more income, [especially because] in the holidays I don't

get any money. So I'm holding down five more jobs but like two hours here, three hours there ... it's also, just on the verge, just on the edge of money, and sometimes the car breaks down and that throws things over and you don't have enough to eat, so I'm ... looking out for something else ... [I've applied for] a position in a nursery somewhere that would just produce ... a regular income and I just have to probably take this. It is a shame because it's been, I mean one of the best. I would have been a teacher for all my life if I'd known how nice and intellectually stimulating it is. The people are great, and people make places ... then such things come [the car breaking down] and if I did have a regular income that wouldn't be a problem but anything that happens just sets us back. Like a couple of times we didn't have enough to eat and we couldn't afford her medication, that meant that she was going backwards and, so ... its stressful, and not knowing [when a contract or more permanent employment might become available]. They would keep me casual for the next semester, which I would have loved and eventually I know after so and so, many years that I could become a permanent teacher which would have been the dream but I just can't do that so long, the uncertainty gets to me. (Interview 2)

The limited number of teaching hours available, the lack of income for the 16 weeks a year when classes were not held, especially for the seven weeks over the Christmas period, and the anticipated wait of some years before a permanent position was likely to become available meant that after teaching for 12 months Michael reluctantly had to leave teaching. While his partner's illness contributed to the financial difficulties that they faced, the employment arrangements in this teaching area also contributed to this extreme situation.

Cultural-discursive and Social-political arrangements

The Horticulture teaching department had a regular morning tea each working day. This was held at a large table that dominated the middle of the staffroom. From a material-economic perspective this table provided

physical arrangements that enabled teacher collaboration and novice teacher support. Michael valued the access to other teachers that the morning tea time provided:

I make a big effort to be here for the morning tea break even if I'm not teaching at those times. Just to hear what they are doing. What's difficult for them. What they find nice. All their good and bad stories. (Interview 1)

Thus, the regular morning tea provided good access to other teachers and their anecdotes about teaching. These stories formed part of the cultural-discursive arrangements of the Horticulture department and served to assist Michael to become familiar with the expectations, the practices and the language of the department. Michael's attendance at these morning teas signalled to other teachers, as well as to Michael, that he was part of the teaching team. From a social-political perspective this communal morning tea provided an experience of solidarity. Unfortunately, Michael's ability to be on campus outside the times when he was teaching, and his consequent attendance at the morning teas, decreased during his second semester of teaching.

Before Michael began teaching his HoS arranged for him to meet with the previous teacher prior to her moving interstate. While this was useful in the short term, it did not provide any ongoing support for Michael within his department. Instead, Michael had ad hoc interactions with his HoS. If Michael knew that he needed something in particular, such as paperwork for an excursion, he would speak with the HoS to get access to the appropriate forms. He also received some advice in passing from her when they happened to be in the staffroom at the same time. For instance, because Michael did not have system access for many weeks after he began teaching,

he was not able to use the photocopier in the staffroom. As a result, he printed all student resources on his home printer for the first four weeks of teaching. A chance meeting with his HoS in the staffroom led to him becoming aware of the TAFE wide printing facility that he was able to use without system access. As Michael noted:

If you don't have the time to discuss it, you cannot, neither know from management that I don't know, nor can I know what is actually there, and I just start doing things.
(Interview 1)

Michael did not appear to have had easy access to ongoing support in learning to become a teacher.

Michael appeared to have a mutually respectful relationship with his students. Especially in his second semester of teaching, this relationship with his students supported him in his learning. In the absence of regular access to experienced teachers in the second semester of teaching, Michael got some of his advice about how the TAFE worked from his students. For instance when he wanted to arrange an excursion his students provided him with the information about the paperwork and administrative arrangements that he needed to do to arrange this. While Michael's relationship with his students was valuable in supporting his learning to teach and, more broadly, learning to become a teacher, his limited time on campus resulted in this being his main source of social interaction in the second semester.

Material-economic arrangements

The physical set up of the staffroom provided a good framework for Michael's learning in the first semester of teaching when he was able to be on campus more often. The communal table provided a good space for accessing other teachers and the regular morning tea meant Michael knew

when these teachers were likely to be there. This communal table was close to the three casual teacher workstations and this proximity enabled casual teachers easy access to those experienced teachers who sat at the communal table outside morning tea times. Unfortunately, because Michael did not have access to the departmental computer network for at least the first eight weeks of teaching he did not use these computers during this time and did all his class preparation at home.

For Michael, the external campus was an important component of the teaching environment. He spent time becoming familiar with this environment and used it as an integral component of his teaching. Michael was able to access the resources available in the external campus (plants, soil, etc.) just by spending time walking around the bush landscape. For a newcomer to the environment, and particularly for Michael who was very knowledgeable about landscaping and horticulture, this was more accessible than other resources such as stationary, fertiliser, or printing that he needed to rely on other people to tell him were available.

Much of Michael's teaching took place in the teaching rooms and other buildings that were a few minutes' walk from the staffroom, while most of the teaching that the permanent teachers did took place in the classrooms near the staffroom. In the first semester when Michael was able to be on campus more regularly, this physical set up did not interfere with Michael's interaction with other teachers or access to the staffroom and the resources that were available there. However, in the second semester when Michael was primarily on campus only when he was teaching, this separation of his teaching environment from the staffroom and the classrooms used mostly by the permanent teachers meant that he was less

likely to interact with other teachers on an ad hoc basis, and less likely to access resources that were in the staffroom.

Michael accessed existing assessment tasks, and supported his learning by using these as a model to create new assessment tasks. He also used broad course outlines developed by the previous teacher as a guide to what to include in his lessons. These existing resources were available in hard copy in filing cabinets in the staffroom.

When asked what challenges he was facing as a teacher, Michael noted that he would like to have more information about what was expected of him as a teacher, and about how things operate at Golden Towers TAFE:

So the orientation for myself, what I'd like, performance criteria, at the end of the semester, the year, and also simply to find out how [Golden Towers] works, how to organise things. Like, just how do I order and organise materials. What do I need to bring myself from home, I brought a lot of the stuff. (Interview 1)

Associated with this lack of an orientation as to what was expected of him, Michael spent many hours each week developing resources for each of his classes, while similar resources had already been developed by previous teachers. While the resources that he developed were of high quality, if he had access to other resources that were accessible through the internal computer network, he may have been able to alter these existing resources rather than to completely create each resource himself. Lack of initial access to resources that were available on the departmental computer network meant that Michael's learning through using existing resources as models was confined to those resources and assessment tasks that were printed and placed in the filing cabinets. Access to the resources stored on the computer network would likely have saved Michael the time that he instead used to

develop his own resources. It might also have enhanced Michael's learning about teaching and assessment in the Horticulture department. For instance, one of the assessment tasks that Michael set was for students to write up all of their 'pracs' in a book throughout the semester. I asked him how he came to use this assessment task, and he responded:

Accidentally, and this is a thing that could be improved by the institution because there was no guide or anything ... I discovered it before teaching because students approached me as a future teacher and [asked for their prac book from last year]... And then they asked me 'Do we have to do one this year too'? (Interview 2)

This serendipitous meeting with a prior student had led Michael to develop a similar assessment task for his students.

Another PSL that Michael used was reading books and using books as models for presenting information. Lack of borrowing rights at the library meant that he relied heavily on his own books. This lack of access to computer-based resources and borrowing rights at the library for an extended period of time is likely to have constrained Michael's learning.

With practice architectures that served to limit the influence of the Horticulture department where he was teaching, Michael's development as a teacher was heavily informed by his prior experiences. Nonetheless, these prior experiences served him and his students well. From early in his teaching work, Michael's focus was on learning how to best structure a lesson and prepare resources to engage students and support their learning.

4.4.7 Concluding remarks

The basis on which Michael was employed impacted heavily on his learning to become a teacher, particularly in his second – and final – semester of teaching. Michael was keen to become a full-time teacher, but was employed to teach six hours a week. This limited his access to many PSLs, and especially the support and advice of experienced colleagues. Michael learnt largely through undertaking the role, and drew heavily on his own prior experiences as a student and as an employer of apprentices. When he was able to attend, the daily morning tea which was held at a large communal table in the centre of the staffroom, and to which all staff were welcomed, was an important contributor to Michael's learning.

4.5 Learning 'how to go on' as a teacher in Business

4.5.1 Practice landscape

Because the novice Business teacher in this study worked in one teaching department of the Business faculty in the first year of teaching, and another department based on a different campus in the second year of teaching, this section addresses a broader practice landscape than the other cases. The Business faculty operates across four campuses as well as offering workshops and other learning support in the workplace. Most of the teaching takes place across two campuses, and these are the main sites that the novice teacher worked in and are therefore the focus of this aspect of the research. On the first campus, the novice teacher worked as a teacher in a Flexible Learning Centre (FLC), and on the second campus her teaching was for the Business Administration department, which took place primarily in a standard classroom. It is these two sites that I describe in this section.

The FLC is integrated with the campus library. As you walk into the library the reception and borrowing desk is on your left. Further into the vast library, past Areas 1, 2 and 3, is Area 4. It is in Area 4 that core sessions for flexible learning students are held. Areas 1, 2 and 3 are open to all students studying at the TAFE, and at any time of the day or night you can find students working in there. Many of the students using these areas are those studying flexibly and working individually through the self-paced modules.

Area 4 holds four rows of desks with computers, resulting in 20 work stations. Flexible learning students are invited to attend core timetabled

sessions each week. It is not compulsory to attend these sessions and attendance rates vary considerably. Because attendance is not required, many students only attend when they need support. While it is more usual to have six to ten students in the core sessions, it is possible, although rare, for one teacher to have 20 people in a session working on 20 different competencies, all needing teacher support to move forward. Teachers have developed a system to manage this, not unlike that used in the delicatessen section of large supermarkets, where students take a number and the teacher works with them one number at a time. A teacher can be working with one student who needs support with learning an Excel program, for instance, and then move to another who needs support with preparing brochures.

Turning left out of the building where the FLC is located, a few minutes' walk and a flight of stairs takes you to the staffroom for the casual teachers who work in the FLC. This room has one workstation, six four-drawer filing cabinets and some tables for papers. A small, stark galley kitchen is available a few metres from this office for teachers to make tea and coffee or to heat their lunch. It was rare for there to be more than one casual teacher in this room at any time.

The offices for the contract and permanent teachers are in another building. Taking the FLC as our starting point again, turning right out of the FLC, a few minutes' walk up two flights of stairs takes the visitor to the building where the permanent teacher coordinating the flexible learning courses has an office. All other teaching offices for this department are on the floor below this one. Thus the casual teachers' staffroom is a considerable distance from the permanent and contract teachers.

The second site that the novice teacher worked in had two staffrooms for the Business Administration department, and the room that the novice teacher occupied was the smaller of these. This room had four workstations, each claiming a corner of the room. Permanent and contract teachers, and those casual teachers who spend more than a few hours a week on campus, all have their own workstation. Classrooms can be accessed from the corridor opposite the staffrooms, with other classrooms a short walk away.

4.5.2 Novice teacher

Sarah, the novice teacher in the Business faculty is a garrulous and vivacious woman, always keen to chat. Sarah grew up as the translator for her migrant parents. As a result she had developed an understanding of the migrant experience and skills in supporting the learning of people whose first language is not English. Sarah worked for 20 years doing administration work in the Commonwealth Public Service. During that time she chose to train new staff in her area by working one-on-one with them.

While studying for a Certificate III in Business, Sarah supported fellow students who were migrants when she saw that they needed help. Teachers in the program noticed the valuable and sensitive support that Sarah provided for migrant students, and asked her to do some casual teaching. This had a strong influence on her sense of identity:

I'm not just a public servant anymore. I'm not just a stay-at-home mum anymore. So all of a sudden from being a single mum ... After 20 years of working, single mum, didn't work for two years, and now three years of study and then getting into this, I'm proud. I'm really proud that I've been able to get to this point. (Interview 1)

Sarah saw being a teacher as an important achievement in her life.

Sarah began teaching two hours a week about six months prior to my first meeting with her. This first teaching work involved team teaching with an experienced teacher in the FLC. The students were a group of recently arrived migrants and refugees. These students were developing basic skills in business administration at the same time as learning how to operate in Australia.

Sarah had begun teaching on her own three weeks prior to our first meeting. At this time she was teaching mainstream core sessions in the FLC. She was teaching one three-hour session a week, and was available to fill in on other sessions to replace teachers who were sick or otherwise unable to teach. This work required her to be familiar with more than 20 different competencies – some that she had studied herself, or that she was very familiar with because of prior experiences, and some that she had little knowledge about. At this time she was teaching at the Certificate I, II, III and IV levels, and was also completing her final competency in the Certificate III in Business. Table 4.3 below provides an overview of Sarah's work experience, her qualifications, and her basis of employment in each semester of her teaching.

Table 4.3: Business Novice Teacher: Sarah

Teacher	Details	Comments
Employment basis	Casual throughout. First semester 2 hours a week team teaching Second semester three hours a week plus relief teaching Third & fourth semester 10-12 hours teaching a week	Team teaching two hours a week in FLC. Began teaching alone part-way through the second semester. Moved to another campus and another teaching team in second year of teaching. Left teaching at end of second year of teaching.
Specific field of expertise	Administration	More than twenty years industry experience.
Qualifications	Cert III in Business Cert IV TAE	Completed after commencing as a teacher. Achieved by end of first year of employment as a teacher.
Other work	No other paid work. Single parent of a young child	

At the beginning of her second year of teaching, Sarah was advised that as a result of the employment of permanent teachers, and other changes, there would not be any teaching available for her in the FLC. Seeking work, she contacted a number of teaching areas, and began the teaching year as a classroom teacher in the Business Administration department on another campus.

At the end of her second year of teaching Sarah felt that all of the unpaid additional work that she did in her role as a casual teacher was no

longer acceptable. For this reason, and her belief that she was doing more work than some permanent teachers and not being fully recognised for this, she left teaching and sought work elsewhere.

4.5.3 Projects

Unlike the other novice teachers in this research, Sarah did not exhibit a strong industry connection. She had ceased working in administration about five years prior to being employed as a teacher. It is likely that this contributed to the projects that she worked to achieve being somewhat different to those of the other participants in this research. In her first year of teaching, Sarah's key project was supporting migrant learning. This project could be seen as the continuation of her support of fellow students and, prior to that supporting her parents to adjust to a new country. Across both years of teaching, learning to be a good teacher, and particularly being valued for her work by both students and teachers, was an important project for Sarah.

4.5.4 Learning substantive practices

The substantive practices that Sarah engaged in were different in each of the two years that she worked as a teacher. In the FLC the primary substantive practices that Sarah undertook were supporting students individually and assessing student learning. She also undertook a range of more administrative practices related to maintaining student records. In her second year the practices that Sarah engaged in were classroom teaching, some lesson preparation, assessment, coordination of subjects, and organising her folders for each group of students. While usually this final

practice would be seen as a task that was part of one of the other practices, for Sarah this was an important practice. She saw it as an indication of her competence as a teacher, and judged others as less than skilled teachers if they did not have an equally organised folder. She purchased the folders herself, feeling that those available at the TAFE were not as suitable or as attractive.

The teaching that Sarah was doing in the FLC was supporting individuals one-on-one, and this is the type of teaching that she had been doing informally much of her life. In the FLC her work involved supporting a range of students with different learning needs. Collectively, these students were also learning a large number of competencies. In her journal, written about a month after she began teaching on her own, Sarah noted:

Realising that a flexible session is like conducting six different sessions to six different learners. From here, to there, to there, back to this one, over to that one, repeating what I just told this one, putting out fires with that one, encouraging this one, going over same stuff (again) with this one ... meeting a new learner, and wondering if she'll "like" my style of teaching.

Learning how to manage this range of content and diversity in student need was an important focus of Sarah's learning in her first year of teaching.

When Sarah began classroom teaching in the Business Administration department, it was as though she had begun an entirely new job. Many of the practices associated with teaching, and with her teaching role more broadly, were quite different. As a casual teacher in the Business Administration department, Sarah was teaching about 10 to 12 hours a week. Some of these hours were relief work replacing other teachers, often with very little notice. This ability to teach a variety of classes, occasionally including unfamiliar content, was something that Sarah needed to learn. She felt that she needed

to develop strategies so that students were not aware that she was unfamiliar with particular content that she was asked to teach at short notice:

I've learnt a lot about how you need to sort of pick up on classes on a whim, even though you've never studied the class, you've never taught the class. I've also learnt how to answer questions in a way that you sound like you know what you're talking about. So, there's a knack to it. (Interview 2)

Her earlier work in the FLC helped her to develop this ability.

Sarah also identified the need to learn site based administrative processes. In the FLC she specifically identified:

Processes. [Golden Towers TAFE] ways. Policies. Protocols, what can you do. What can't you do. (Interview 1)

The processes and protocols that she referred to were mainly those related to the FLC rather than broader organisation-wide ones. Moving to the second department required her to learn another set of administrative processes.

Like Grant and Michael, Sarah needed to learn a range of skills associated with timing. When she was teaching in the FLC she saw the issue of the time that was appropriate to spend with each student as an administrative rather than a pedagogical matter.

Just how long is long enough and how long is too long to spend with learners I ask myself? (Journal entry)

Over time she developed her own response to this question based on her understanding of student needs, and advice from her mentor. When she first began classroom teaching, timing of lessons became something that Sarah identified as an issue to address:

I do get a little worried about getting through the allocated class time with the amount of work we have to do. (Journal entry)

This was something that most of the novice teachers identified as a concern.

In the Faculty of Business the teaching of Business Administration was to some extent standardised across both of the departments that were teaching it. This involved one teacher working as the coordinator of each subject (which was made up of one or more competencies). The subject coordinator was expected to: create a subject plan; create or evaluate existing assessment tasks; either find a relevant textbook to form the basis for the subject, or ensure that the previous textbook was still relevant; prepare Power Point presentations; identify other relevant resources; and ensure that all of the information is available to students online if they want to access it that way. Students studying the subject flexibly would work through the subject plan, and teachers teaching the subject in a classroom would use this as the basis for their lessons. In her second year of teaching Sarah was the coordinator for a number of subjects. Sarah identified the work associated with coordination as something that she had to learn. Until her second year of teaching this work had been done by others. Up to four teachers taught the subjects that Sarah coordinated, and Sarah also taught subjects that were coordinated by other teachers.

The content of some of the subjects that Sarah was teaching was also something that she identified as needing to learn. She had recently studied some of these, but others were quite new to her.

4.5.5 Practices that supported learning

In her second year of teaching Sarah described her usual learning practices as:

Try to find the information myself first. Then to back up what I think needs to be done, I'll ask somebody that I know knows ... People around you. Watching. Reading. Just observing. (Interview 2)

Unlike many of the other teachers in this research, this espoused understanding of her preferred learning practices appears to have also been the actual practices that she used to support her learning much of the time.

In her first year of teaching, observing and modelling her mentor, with whom she was also team teaching, supported Sarah's learning. Sarah also took opportunities to observe the teaching of other teachers when they became available. One of the assignments for the Cert IV TAA required the observation of an experienced teacher. Sarah valued the learning that she did as a result of this assignment, and she arranged other opportunities to observe experienced teachers throughout her two years of teaching,

Sarah observed and learnt from the teaching of her own teachers. Because she was still finalising her Certificate III in Business when she began teaching, Sarah observed the teachers of her final subjects with the perspective of a teacher as well as that of a student. In one instance she used the learning from this experience to identify a number of approaches that she would *not* use in her teaching. Sarah also observed the teaching strategies and approaches used by the Cert IV TAA teachers and chose to model at least one of these strategies in her classroom teaching.

In her second year of teaching, even though the practices that she undertook were quite different to those in the first year, Sarah was no longer

considered a novice teacher, and was not provided with a mentor. In discussing how she knows what to do in her classroom teaching, Sarah said:

It's sink or swim. Unless you go and ask. And unless you know to ask you're not going to ask, you're just going to do it the way that you think it needs to be done.

But I know to ask. And I've always been one to ask a lot of questions. (Interview 2)

When working in the FLC, Sarah asked questions of her mentor, and in the Business Administration department she asked questions of her colleagues, the senior teacher, and the HoS.

You get all this information from a range of teachers and students. Or people, or colleagues. It's not you, and your students there's a wide range ... a circle of information there and you need to get it when the opportunity arises. (Interview 2)

While she had a clear preference for a mentor to support her learning, she actively sought advice from appropriate people.

Sarah used a range of resources to support her learning. The written resources that she accessed most often to support her learning were the textbooks and subject plans that were used to support student learning. In this research, Sarah was in the unique position of being both a student in her teaching area, and a teacher. Some of the subjects that she was teaching were ones that she had recently studied as a student. A number of times Sarah said that she planned to enroll in particular subjects that she might be asked to teach so that she became familiar with them. She did not actually do this in the end, but instead, for some of the subjects that she had not previously studied, she would take the subject plans and textbooks home with her and work through them. She essentially studied the subjects at home in the same way that she might have as a flexible student but without being enrolled in them.

Positive feedback from colleagues, supervisors, and students was very important to Sarah, and her confidence in her abilities as a teacher was often contingent on this. In her first year of teaching, her mentor was aware of this and was forthcoming with praise. During this first year, students attending her classes became another form of positive feedback. In determining whether her teaching was successful, Sarah placed a lot of emphasis on the praise that students gave her. In her second year of teaching, this positive feedback was available to some extent from the Senior Teacher as well as from some students. Complaints to the HoS from one group of students encouraged Sarah to change certain teaching strategies that she had previously found successful. The gift of flowers from another group was a clear sign for Sarah of her skills as a teacher.

When she began teaching in the classroom, Sarah initially found it difficult to get students to speak in the class. Through trying some different strategies she found that by making the class fun, and the topics amusing, she was able to get better student engagement.

Making it fun worked. So I tried to incorporate this into other sessions as well but it's difficult when you're not conducting funny meetings, you know. But yeah, definitely works, it's good. (Interview 2)

Sarah then worked to ensure that all of her classes included an element of fun. This was successful for some time until she had an experience where her usual approach to teaching did not result in the results that she had hoped for.

When I took that Diploma class, I was the fun-loving teacher. And towards the end I know I shouldn't have been. I should have moulded myself to match what I was going to get from these students. (Interview 2)

This was the group of students that had complained to the HoS about Sarah's teaching approach. This experience resulted in Sarah considering the best approach to take with each of her classes, and to consider alternative ways of working with different groups of students. It is probably not insignificant that she was teaching a Diploma level subject and had only a Certificate III level qualification.

Sarah undertook the Cert IV TAA in her first year of teaching. However it was not until she began classroom teaching that she began to see the value of what she had learnt in the Certificate IV:

Now I am fully classroom based, full time students. So front of the class conducting a lesson. So all of the learning that I did when I did my Cert IV is coming in to play. About lesson plans. About being prepared. About knowing what you're talking about. About assessing students. Making decisions. (Interview 2)

She referred to her assignments and notes from the Cert IV TAA to further develop her learning at that time.

Every moment I get, I read back through my Cert IV notes, and I also go and observe other teachers at work. I ask for advice from experienced teachers. (Journal entry, 2nd year of teaching)

Sarah's learning as a result of the Cert IV TAA thus formed a part of her development as a teacher.

4.5.6 Practice Architectures of the Business teaching departments that enabled and constrained novice teacher learning

Employment arrangements

Sarah was initially employed as a teacher in a team teaching arrangement while she was still a student in the same faculty. She planned to get a teaching contract and then move to a permanent position, and was aware that it would take some time before this would happen. She did more than she was paid for in relation to preparation and other work in the hope that this would lead to additional hours of casual teaching work and eventually to contract and then permanent work.

Sarah identified an expectation that casual teachers should work long hours in the office, above the hours that they were actually paid for:

It's a lot of work. Because you put in so much prep work ... You know none of us know [the number of hours casual teachers are expected to work for each hour of teaching they are paid for], the casuals just put in hours. You know the amount of casuals we have that only do between six to, or even four to ten hours of teaching a week. They've got their own workstations, they come in at 9 o'clock, they leave in the afternoon when they finish. You know, they might only be teaching for two hours that day, because they want to make sure that everything's right. They have their own phone numbers. I'm one of them now. (Interview 2)

Sarah also did a lot of relief work, so that if another teacher called in sick for instance, Sarah made herself available to replace her. She did this to increase her income, as well as to show her willingness to be available when needed. In a sense, the casual teachers were self-monitoring, undertaking long hours of unpaid work and making themselves available for additional work because it was perceived as an advantage in getting a teaching contract. Even

an experience the previous year, when three permanent teachers were employed, none of whom had worked casually in the TAFE prior to being employed, did not change this perception for Sarah.

Sarah was also aware that having the appropriate qualifications was important in getting a contract or permanent position. Having commenced teaching prior to completing her Certificate III in Business, by the beginning of the second year of teaching she had completed that qualification and was enrolled in a Diploma at another organisation. She did this as a means toward getting contract work as a teacher:

Because that's my next step to getting permanency. Cause I'd like to try the 19 hours and one hour PD permanent contract for a year or two. I think I could do it. But I'm not going to get it unless I'm fully qualified. (Interview 2)

Sarah was aware that this was not a short-term plan, although it was somewhat tongue-in-cheek when she said:

After 15 more years of study I might get permanency. (Interview 2)

The cultural-discursive arrangements of the Business Administration department, where working longer hours was an expectation, influenced Sarah's actions and she continued to do many hours more than she was paid for until she left the organisation.

Material-economic arrangements

In the first year, when Sarah was teaching in the FLC, the placement of the casual teachers' staffroom was in a different building to the permanent and contract teacher offices and this is likely to have constrained her learning through interaction with teachers other than her mentor. She did not know

these other teachers, and the physical arrangements allowed no space for her to interact with them.

In Sarah's second year of teaching, the physical arrangements in the Business Administration department were more conducive to enabling interaction with other teachers. Sarah had a workstation in a staffroom with three other teachers. Asking questions of the other teachers was possible without leaving her desk. This arrangement also allowed for Sarah to be involved incidentally in teachers' discussions about a range of teaching matters. If she had a specific query for one of the teachers in the other staffroom, it was a short walk next door to access them. More than just the physical benefits associated with having her own workstation in the same room as other permanent teachers, Sarah saw having her own workstation as a physical representation of her acceptance as a teacher.

Cultural-discursive and social-political arrangements

When Sarah began in the Business Administration department she was considered an experienced teacher by her HoS and colleagues because she had been teaching in the FLC on the other campus the previous year.

I was introduced as "This is the new *Communicate in the Workplace* teacher." Not "This is Sarah, she'll be learning how to teach in this area, she's just been qualified with a Cert IV, she needs some guidance, she'll need this, she'll need that."

(Interview 2)

At that time Sarah had not had any classroom teaching experience, and had only recently completed her Certificate III in Business.

I'm surprised how much responsibility I have with so few qualifications ... I'm still learning, and yet I have so much responsibility. (Interview 2)

Because she had been teaching the same competencies working with individuals in the FLC as she would be teaching in the classroom, the assumption had been made that she was able to undertake the quite different practices associated with classroom teaching.

In the Business faculty there was an expectation that new teachers would be supported not only by their allocated mentor, but also by other teachers. By the middle of her second year of employment as a teacher, Sarah began speaking about supporting the learning of other teachers:

New teachers can bring on a little bit of stress for other teachers because you think 'Oh God ... I've got to show them this'. And it can take a while. I'm still asking questions six months down the track, and I probably always will be. Not about teaching, about processes in the area. You know, where is this, what can I do with this? (Interview 2)

While Sarah recognised that she still needed ongoing support, she also saw it as her role to support other new teachers when she was able to do so.

Teaching in the faculty where she was also a student created social-political arrangements that impacted on Sarah's relationships with her colleagues and her students. This was especially the case when she was enrolled in the same qualification that some of her students were undertaking. Sarah did not want her students to know that she was also a student, and therefore did her studies on a different campus to where she was teaching. On one occasion she encountered two of her students on this campus and told them that she was preparing classes rather than letting them know that she was studying. In her second semester of teaching, some of her students had been in the same sessions as her in previous years when she was also a student. This created difficulties at times. The most notable of

these was with a student who was studying a competency that Sarah was not familiar with. The student asked for support with a particular task and Sarah was unable to provide it. She asked the student to come to another session with a more experienced teacher. Sarah's fears were realised:

The student actually in this case, this is a bit of an awkward situation, she said 'Well, teachers should know more than students' and it rattled me. (Interview 2)

This experience led to Sarah more often taking home textbooks and subject plans for subjects that she was not familiar with, and learning the subjects this way after her young daughter was in bed.

4.5.7 Concluding remarks

Sarah was a teacher in two very different sites, and the practices in each site varied considerably. In the FLC, where she supported students individually, Sarah was supported in her learning by a mentor, the use of well-developed resources, and team teaching with her mentor. When she began teaching in a new department in her second year, she still felt very unconfident in her role as a teacher but was welcomed by her colleagues as an experienced teacher. In this second site, the role of a teacher was quite different to that in the FLC, and included classroom teaching. In her second year of teaching, being in a staffroom with experienced teachers allowed for ready access to support and advice. She also worked through flexible learning guides that were developed for students, to assist her in understanding some of the subjects that she was teaching. In addition she revisited her notes from the Cert IV TAA that she had studied the previous year.

4.6 Learning 'how to go on' as a teacher in Beauty Therapy

4.6.1 Practice landscape

Walking up the stairs to the Beauty Therapy classrooms, the blue/purple walls, coloured glass tiles creatively positioned across the wall beside the stairs, the fragrant smell of beauty products, and related posters at the top of the stairs transport the visitor into another world from the stark corridors below. A visitor to the Beauty Therapy teaching area must first pass by an attractively decorated reception area where signs and posters entice them to make a hairdressing or beauty therapy appointment. During the day this area is well populated with students, teachers, and often clients. In the evening, however, there is no one there and the shutters to the reception area are closed.

Past the reception area is the beauty therapy clinic, which is used during the day for supervised students to learn their trade by working with clients who pay a concessional fee. This area is also closed in the evening. Walking past the clinic takes the visitor to the make-up classroom. This room is designed to facilitate make-up application and has benches along the two long parallel walls of the room and mirrors above the benches. A space in the centre of the room allows students to pull their chairs over for a demonstration, after which they can move back to the benches to practice applying make-up on each other.

The staffroom is shared with hairdressing, tourism and culinary teachers, and is in another building a few minutes' walk from where the

classrooms and clinic are located. Entering the staffroom takes you into a series of cubicles that serve as closed off workstations for teachers. These workstations have 1.8 metre high partitions around three of the four sides, with the fourth side partially open to the aisle. Interactions with teachers at their work stations takes place from this open side. Two rows of partitioned workstations are set aside for contract and permanent teachers. The workstation set aside for casual teachers is not in this area. Only a few metres separate the casual teacher workstation from the contract and permanent teachers, however the partitions and closed-off feel of the work areas make it seem like a much greater distance. There is no area set aside in this large staffroom to facilitate teacher interaction.

A relatively large kitchen containing a microwave, refrigerator, dishwasher, and large communal table can be found about 150 metres from the staffroom. This kitchen has little natural light and what is available comes from a small, high window. The kitchen is rarely used except to heat food.

4.6.2 Novice teacher

The first impression that you get of Tabitha is of a well-dressed and well-groomed woman in her mid-thirties. On realising that she is a make-up teacher, closer observation reveals subtle make-up designed to enhance her appearance. Tabitha has an air about her of being on her way to somewhere else, and on hearing about her portfolio of jobs and responsibilities, it is likely that she is.

Tabitha was employed to teach make-up one night a week for three hours. She also had a full-time administrative position with another

organisation and did freelance make-up, specialising in weekend weddings. In addition she is the mother of three teenage children and tries to be available for them as much as she is able, given her other obligations. Tabitha would like to have been able to work part time in her clerical job, to do make-up for weddings on the weekends, and to teach part-time during the day. She took the evening work in the hope that it would begin that progression. Table 4.4 outlines Tabitha’s qualifications and other obligations.

Table 4.4: Beauty Therapy Novice Teacher: Tabitha

Teacher	Details	Comments
Employment basis	Casual, three hours a week in the evenings, for the first year of teaching	Left teaching after two semesters of teaching.
Specific field of expertise	Make-up	Seven years industry experience when initially employed as a teacher.
Qualifications	Certificate IV in Make-up. Certificate IV in Training and Assessment	Achieved by end of first year of employment as a teacher.
Other work	Full time administrative job Weekend work doing make up for weddings	Parenting of three children important part of identity and responsibilities.

After teaching for a year Tabitha decided not to continue the following year. She gave a number of reasons for this:

I’m not going to do it next year cause I find the commitment to it too much, being at night, when I work full time as well, and my husband travels sometimes now in the job that he’s in and I just don’t like leaving the kids so I’m not going to do it ... I might again in the future, but just for now, I’ve decided not to do it. (Interview 2)

Not enjoying teaching as much as she had anticipated was another reason that she chose to leave. She also found the lack of enthusiasm from some of her students both puzzling and discouraging.

4.6.3 Projects

For Tabitha her overall project was to share her passion about make-up.

That's the main reason I wanted to do it because I want to share it because I love it so much. (Interview 1)

She began teaching as a way to be able to do make-up on a more regular basis.

I do freelance, and that's mostly weekend work, and it's not busy 12 months a year, and I wanted to find something where I can do make up more regularly as well. Like during winter it's usually really quiet. So I wanted to ... do this, so I could do make up without having that big break ... because I do really like it. And because I like dealing with people as well. And to share what I love. (Interview 1)

Tabitha's focus was thus on the make-up rather than on the teaching.

4.6.4 Learning substantive practices

The substantive practices that comprised Tabitha's work were teaching, assessing, developing a subject outline, lesson preparation – including preparing lesson plans and accessing resources – and structuring a semester of classes.

Tabitha began her work as a casual teacher with the expectation that teaching would be the only practice that she would undertake in that role.

I didn't realise ...when I first started ... I thought that I was coming in and they

would tell me what to do. And then I found out that I had to do it myself and I didn't know what to do. (Interview 1)

She was therefore surprised to find that lesson planning, resource development, assessment, and the development of subject outlines were also part of her role.

At Golden Towers TAFE, all teachers are expected to develop subject outlines for each competency or group of competencies they are teaching and to provide these to students within the first two weeks of semester. Subject outlines are developed based on a template used in all teaching areas across the organisation. This template requires teachers to add information such as competencies addressed, content covered, and the dates on which this will occur. An assessment overview, followed by the details of any assessment tasks, is also included. In her first semester of teaching, one of the practices that Tabitha undertook was the preparation of the subject outline for her class. All other research participants in this study had learnt to prepare a subject outline. It is highlighted in Tabitha's case because she found it a difficult and confusing task to learn.

The first time I found it difficult cause I had to do all the paperwork, and set up all the [Subject Outlines] and I hadn't done that before and I felt a little bit out of my depth. (Interview 2)

Learning to prepare a subject outline can be seen to have the added benefit of supporting the development of an awareness of the competencies that comprise the subject. In the second semester, when Tabitha did not prepare the Subject Outline for the subject that she was teaching, she did not develop this awareness. This will be discussed in detail shortly.

Tabitha found that she needed to learn how to plan a lesson as well as to structure an entire semester of classes. For the first semester she did this in consultation with the course coordinator, and for the second semester she largely followed the same lesson plans despite teaching different competencies. On realising that the competencies that she was teaching in the second semester were different to those she was teaching in the first semester, she decided that what she had done in the first semester largely addressed these competencies as well:

But a lot of that is different to how I would teach. The stuff that's written in that is not exactly how I'm teaching it. But I guess it covers it in my way. (Interview 2)

Tabitha saw teaching make-up as something broad and holistic rather than being bounded by the competencies.

The resources that Tabitha used to support student learning included her own make-up books. She brought these in each lesson for students to browse, and also photocopied relevant sections as appropriate. Tabitha was unfamiliar with the make-up products supplied by the TAFE, with some of the products that she used regularly having no equivalent in the product range provided. Consequently she brought in her own make-up products and brushes for students to use. Rather than learn about the resources available at the TAFE, Tabitha provided her own.

Timing of lessons was one of the areas that Tabitha found she had to work on. Sometimes her classes finished early, and other times the work that she had planned meant the class finished late.

It didn't follow the exact timing that I thought it would follow. I thought it would take longer to explain everything. And the last week we finished just after 9:00 o'clock because you get lost and caught up in doing it all and the time just escapes

you. (Interview 1)

In the first semester, her mature-aged students were comfortable with classes going overtime. However a younger cohort of students in the second semester was less prepared to stay late.

While Tabitha needed to learn a range of practices that she had not anticipated, the practices that she had to undertake were fewer than for other casual teachers. Most notably, assessment tasks were provided for her by the subject coordinator and therefore their development was not part of Tabitha's duties.

4.6.5 Practices that support learning

For Tabitha, her teaching work was a small part of a full life. The time and space that she had available to learn a range of practices associated with being a teacher were limited.

Like many of the other novice teachers, Tabitha used lesson plans created by other teachers as models in developing her own lesson plans and her assessment tasks:

I got an example of an old folder and had a look how that was done, and then just sort of changed it to suit how I would run it and things that I think ... the way I would teach. (Interview 1)

Tabitha was also provided with the competencies that she was teaching, but commented:

A lot of it, it's not relevant to the way ... it's quite an old way of doing things. For them everything was step by step and you had to do it this way and you have to do it that way, but that's not how it works. From experience that's not the way I do it,

and it's not the way I was taught to do it either. So I would teach it my way.

(Interview 2)

So while she relied on some existing resources, she chose not to follow others based on her industry experience.

Tabitha referred often to her own positive and negative experiences as a student in informing her own approach to teaching:

I find from experience of when I did my make-up course I didn't find that I got enough information given to me... so I try to give them written stuff as well as showing them and talking to them about it. (Interview 1)

As a result, for each lesson Tabitha photocopied a handout for students from one of her books. Many of the positive experiences that informed her teaching were as a result of make-up workshops conducted by the company that supplied the products she used in her freelance make-up work. These workshops were not related to qualifications, however, and did not include assessment tasks.

Tabitha also used her own learning preferences as a guide to her teaching:

I guess because I learn better that way, being shown and doing it rather than just reading because just reading you don't learn ... I guess I'm very visual... and I think make-up is very visual. So I think if they watch someone do it, and they can see how you blend, or how you use a brush or a particular tool it's easier to copy it than just reading about it. That's why I did it that way. (Interview 1)

Tabitha made the assumption that her own learning preferences and needs were shared by all make-up students.

Tabitha found that the Cert IV TAA supported her in structuring classes:

I'm learning more about how to structure classes and how to do things through that. Because before I had no idea. (Interview 1)

She noted a number of times that she did not like the teaching approach of the Cert IV TAA teacher, and found that she did not understand her teaching. She noted:

It was just really frustrating, I just couldn't wait to get it done and out of the way. (Interview 2)

Tabitha was very clear that her focus was on getting through the qualification rather than learning the competencies associated with it. Tabitha made no other mention of the Cert IV TAA.

4.6.6 Practice architectures of the Beauty Therapy teaching department that enabled and constrained novice teacher learning

Employment arrangements

Being employed as a casual teacher to teach a three-hour evening class each week established a number of practice architectures that constrained Tabitha's learning to undertake the role of a teacher. Working once a week in the evening, and having extensive other commitments, resulted in limited access to cultural-discursive and social-political arrangements that could support learning through interactions with other teachers.

When Tabitha first began teaching she was surprised by the work that was involved and had not factored this additional work into her heavy load. Tabitha had a lot of obligations to meet, so finding time to prepare classes was difficult. This heavy demand on her time and energy left little time to

learn the practices associated with being a teacher. In the first semester Tabitha interacted with the course coordinator by phone, face-to-face, and email. These interactions were limited, and primarily related to her development of lesson plans, a subject outline, and the administrative processes required to submit student results.

Cultural-discursive and social-political arrangements

Lacking substantial interaction with teaching colleagues, Tabitha understood 'How it's done around here' from the broad perspective of the make-up industry and from her previous experiences of learning about make-up. In explaining why she teaches the way she does Tabitha said:

When I did my course that's how it happened. Whenever I've done anything to do with makeup that's generally how they do it. (Interview 1)

Her limited time on campus meant that the cultural-discursive arrangements of the teaching department were less influential for Tabitha. Instead, industry experiences and prior learning experiences, particularly the product training workshops that did not include competencies, qualifications or assessment, influenced Tabitha's work as a teacher.

Tabitha had a number of experiences of being unaware of what was required of her in her work as a teacher. The most notable of these occurred during the second semester when she had been teaching for four of the 12 weeks and then discovered that she was expected to have been teaching something else. For this subject there were three classes, and three teachers. The contract teacher had prepared the subject outline and provided it to the casual teachers. Tabitha was expected to be teaching different competencies and at a different qualification level to those she was teaching in the first semester.

I thought I was just doing the make-up component of it. There's actually six parts to it, which was retail, OHS and all that kind of stuff, but I didn't realise there was a difference. Like I didn't realise I was supposed to teach all of those. (Interview 1)

As a result of this misunderstanding, for the first four weeks Tabitha taught the same content that she had taught in the previous semester.

Serendipitously by the fifth week, the three classes became two as a result of reduced student numbers. The resulting discussion that Tabitha had with another teacher alerted her to the need to teach different competencies for this class. Prior to the semester commencing, the contract teacher had provided:

running sheets, like session plans ... brief notes of what she was going to cover.
(Interview 2)

Unfortunately Tabitha did not regard this teacher as having sufficient industry knowledge in working with make-up,

but I know that she doesn't have the experience in make-up, like she doesn't do make-up outside of the TAFE, like she's only ever..is a beauty teacher. Make-up is a subject as part of the beauty course, but I don't think she actually does make-up outside of there. So it's different, her teaching is different to me teaching it. It'd be like me going in and trying to teach one of her beauty classes. (Interview 2)

As a result of this perceived lack of industry experience, Tabitha indicated that she could not be guided in her teaching by this experienced teacher.

Tabitha was explicitly asked to use the same lesson plans as those provided by the contract teacher:

They said to me at the beginning you have to teach it the same way as the other teachers are teaching it, so we did work it out the class sessions the same, but it's only the same to a certain degree because everyone teaches differently, so as long as we handed out the same information it was OK. (Interview 2)

Tabitha interpreted this request to use the same teaching approaches as being met by using the same handouts, and largely continued to rely on the lesson plans she had prepared the previous semester.

Material-economic arrangements

The separation of the casual teacher workstation from those of the contract and permanent teachers meant that even on those few occasions when she was able to be on campus during the day, Tabitha did not have the chance to interact with experienced beauty therapy teachers on an informal basis. This left her with few options for seeking advice and support, or in learning the cultural-discursive arrangements of teaching including language and concepts associated with teaching in VET. Tabitha did feel that she was able to contact the coordinator if she had concerns, but was reluctant to do that regularly:

If I was really really unsure about something I would have gone to [coordinator] about it, cause she's very approachable, but [because she] has got heaps of people, I didn't want to bother ... feel like I was bothering her over a single thing. Not that she ever made me feel like I was a nuisance or annoying her, cause she's not like that, she's really lovely, but I felt that I shouldn't have to contact her every time I wasn't sure about something. (Interview 2)

Easier informal access to other colleagues, such as that experienced by other teachers participating in this research, would likely have provided the opportunity for Tabitha to check anything that she was unsure about:

I didn't want to keep hassling. I felt like I was being ... I didn't want to be annoying if I wasn't sure, to keep seeking clarification or anything on it cause I thought, they expect me to know this but I'm not really sure. So I would ask [contract teacher], but sometimes, like I said, I wouldn't get, it wouldn't really give me the answer, like more information to make me feel like I was 100% sure on things. (Interview 2)

With the lack of interaction with other teachers, the importance of the competencies as the basis for what she needed to teach had not been reinforced for Tabitha.

I think a lot of what's in their competencies is not really relevant, or not quite up to date with the real world. (Interview 2)

While this may have been true, the lack of opportunity to discuss her decisions with experienced teachers may have constrained her learning as a teacher.

In the first semester Tabitha used a folder from a previous teacher to support her in developing lesson plans:

But I looked at hers to see how she'd done it, and I thought 'that's okay, I'll include this in here and I'll swap this around'. So basically I felt lucky. I was really glad that we had those because like I said I didn't know that we had to do that. And so I just based it on those and just changed bits and pieces to suit what I was teaching. (Interview 1)

In the second semester Tabitha was provided with the Training Package that included the competencies that she was meant to be teaching, but she decided not to follow the approach outlined in the competencies because she did not do it that way herself and felt it was outdated.

For a range of reasons, including those identified by Tabitha and quoted in the Novice Teacher section of this case study, Tabitha chose not to continue teaching at the TAFE after two semesters. Instead, she planned to

do make-up lessons for people if they want them at home, cause that's what I really like, cause I don't have to do any paperwork, I just say what do you want to know? (Interview 2)

This suggests that she planned to continue to share her passion for make-up, but in an environment where she had more say over timing and content, and without the requirements of assessment.

4.6.7 Concluding remarks

The practice architectures that supported Tabitha in learning to undertake the role of a teacher were fewer than for any other participants in this study, and her resulting learning reflected this. Tabitha was on campus mainly at night when other teachers were not there. Her extensive commitments elsewhere meant that her time and capacity to learn and to undertake the role of a teacher were limited.

4.7 Conclusion

This chapter has outlined four cases of casual teacher learning and has attempted to answer the research questions in relation to each of these individual cases. Each case considers the practice landscape of the site where each teacher undertook their work as a teacher; the projects and the substantive practices that each teacher undertook; what each teacher needed to learn in each site; how they learnt what they needed to learn; and what enabled and constrained that learning.

Chapter 5 does similar work in relation to contract or permanently employed teachers. Chapters 6 and 7 draw together the findings from this chapter and Chapter 5 to provide a cross-case analysis of the findings.

Chapter 5

Being Stirred into Practices: Contract and Permanent Teachers Learning to Become Teachers

I was sort of chucked in the deep end. Ewan, Air Conditioning and Refrigeration teacher

I was sort of thrown into it a bit ... I learnt through trial and terror. Simon, Electronics teacher

5.1 Chapter overview

In Chapter 4 I introduced each of the research sites where novice teachers were employed on a casual basis during their first two years of teaching. That chapter also introduced each of the casual teachers, and the projects and substantive practices that they undertook. For each of these case studies, I identified the practices that supported the teachers' learning (PSLs) and the practice architectures that enabled and constrained teacher learning.

This chapter does similar work with case studies for those teachers who were employed on contract or permanently for most of the time that they were employed as a teacher during this research. My purpose is to "zoom in" (Nicolini, 2012 p. 16) on each case study to answer the research questions for each of these teachers. The case studies in this chapter relate to teachers employed in the teaching areas of Building Design, Community Services, Electronics, and Air Conditioning and Refrigeration. These case studies are of different lengths, with the Community Services and Electronics case studies being more extensive than those for the other two sites. The

Electronics case study relates to two novice teachers, and also addresses a site where the practice architectures largely served to constrain the learning of the novice teachers. The novice teacher in the Community Services case study undertook a broad range of practices. Additionally, one of the projects that she undertook involved different PSLs, and different practice architectures to the rest of her work.

5.2 Learning 'how to go on' as a teacher in Building Design

5.2.1 Practice landscape

To the visitor walking into the Building Design teaching department it is apparent that this is part of the Creative Industries faculty. You walk past sculptures that are a display of the best student projects. Water colour paintings and charcoal sketches are on the walls in the corridor and the classrooms. Building Design is part of a department with Interior Design, but for the purposes of this case study I refer to it as the Building Design department.

Entering the room where most of the Building Design teaching is done, you notice that in half of the room the chairs are lined up in rows, setting the scene for a lecture. There is a whiteboard at the front of this half of the room. Desks are pushed up against the walls on the other half of the room with a computer on each desk. In the middle of this side of the room

the desks are pushed together to form one large rectangular table where students can work together.

In the Building Design staffroom you notice that each of the wrap around workstations is set up as a pair against the long wall, touching each other at one point (see Figure 5.1). When teachers are working on their computers they have their backs to each other and the set-up of the workstations, including the high partitions, cocoons teachers from other activity in the room. When they want to work away from the computer, either alone or collaboratively with others, they turn their chairs around to a table that is usually behind them.

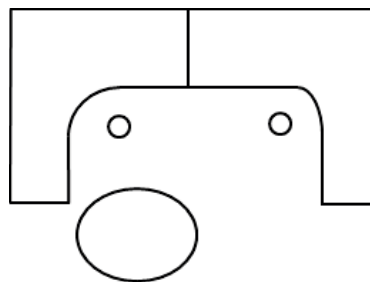


Figure 5.1: Sam's workstation

The novice teacher was paired with an experienced practitioner in this environment, thus allowing easy access to ad hoc advice.

5.2.2 Novice teacher

Sam, the novice teacher in the Building Design teaching department, is an architect. He did not plan to become a TAFE teacher. He and his family had recently moved to the city where Golden Towers TAFE was situated and Sam had been doing freelance architectural work. Shortly after moving, both

of the jobs that Sam was working on 'fell through'. With a partner who had a demanding job working long hours, and two small children, a teaching job that provided holidays and some flexibility around attendance times was attractive. A further attraction was that he was able to maintain his involvement with architecture through his teaching. To use his words:

And I'm still involved in something that I really feel passionate about. (Interview 1)

So while he did not feel a passion for teaching initially, he did have a passion for what he was teaching about. Over time he found:

[I was] really enjoying the teaching, it wasn't like second priority or whatever. I found it much more creative and engaging than I thought it would be. So I was surprised, and happy to take up a challenge basically. (Interview 2)

Sam was employed to teach on a casual basis for the first semester of his teaching. He was then successful in gaining an 18-month contract. Sam's teaching was during the daytime only, and he had no other paid employment during his time as a teacher. Table 5.1 provides an overview of Sam's qualifications, his work experience, and the basis of his employment as a teacher in each semester of the study.

Table 5.1: Building Design Novice Teacher: Sam

Teacher	Details	Comments
Employment basis	Casual for first semester of teaching Contract until the end of the second year of teaching	Left teaching after two years of teaching to travel. Uncertain whether he would seek work in the organisation on his return.
Specific field of expertise	Architecture	Approximately twenty years industry experience when initially employed as a teacher.
Qualifications	Architecture degree Cert IV TAA	Achieved by end of first year of employment as a teacher.
Other work	No other paid work.	

5.2.3 Projects

Preparing students to operate successfully as a building designer was one of Sam's projects. A related but separate project was to ensure that students gained the appropriate knowledge and skills to be willing and able to communicate with a range of people that they would access on a building site. This included builders, architects and engineers. Sam saw a good understanding of the language and practices of other occupations that building designers needed to work with as a crucial part of being successful in their occupation. The initial project that resulted in Sam taking the position as a teacher was for him to be available for his young children after school and for school holidays. This remained an important project

throughout his time as a teacher and he managed much of his teaching work around this overarching project.

5.2.4 Learning substantive practices

Sam learnt a broad range of practices in the two years he was employed as a teacher. The key practices that he learnt were teaching, class preparation, assessing student work, developing assessment tasks, coordinating a qualification, and writing curriculum.

Most of Sam's teaching took place in a classroom. He relied heavily on Power Point slides in his teaching. Some of these had been prepared by previous teachers, and some he prepared himself. When asked how he might teach if he was not able to use Power Point slides he said that he would have to rely entirely on site visits. Sam's learning associated with site visits was largely confined to the administrative processes that he needed to undertake to arrange the visits and to seek appropriate permissions.

Assessment was largely project or assignment-based. These assignments often involved site visits and people acting as a 'client' for the assignment. Sam embraced these assignment approaches, and developed them further.

In his second year of teaching Sam took on the role of coordinator for the qualification that he was teaching in. He needed to learn the administrative practices associated with this role. Unlike the experiences of Trevor, which will be discussed in a later case study, Sam's Head of School (HoS) was very engaged with her department, and consequently Sam's workload as a qualification coordinator was not extensive. As coordinator,

Sam was also responsible for writing the curriculum for a new qualification. This involved developing a greater understanding of the Training Package requirements as well as the interaction between student needs, employer needs, and the resources and expectations of his faculty and of the TAFE organisation.

5.2.5 Practices that supported learning

Sam was well supported in his learning by his supervisors and his colleagues. He received advice and support from the coordinator of the qualification that he taught, who was an informal mentor throughout his first year of teaching. He also valued the advice that he received from the other two Building Design teachers as well as the HoS. Sam worked closely with a curriculum consultant to develop a new qualification that the faculty planned to offer and found this person's one-on-one support and advice offered over a series of regular meetings and available by phone as required, to be highly effective in supporting his learning.

Team teaching was also an important influence on Sam's learning. In his first year he team taught a number of competencies with the qualification coordinator. This allowed him to observe her teaching, and for her to observe his teaching in an arrangement that Sam saw as non-threatening. After class they would discuss Sam's teaching and the coordinator gave advice about what went well and areas for improvement. Sam also co-taught a number of subjects with his mentor as well as other experienced teachers.

Sam was provided with extensive and well-developed resources including Power Point slides, subject outlines, student handouts, assessment

items and lesson plans when he commenced teaching. He used these with little change in his first semester of teaching, and then used a similar format when creating his own for future semesters. Shortly after he began teaching Sam was also provided with a copy of the Training Package that contained the competencies that he was teaching from and he was advised by the coordinator to become very familiar with it. He used the information from these competencies to inform any alterations or the development of new resources, lesson plans, Power Point slides, assessment tasks and subject outlines.

Sam identified a range of areas where he learnt from the Cert IV TAA. This included learning how to set assessment, the importance of feedback and formative as well as summative assessment. He noted:

For me doing the Cert IV it's like 'oh wow' there's a lot there, and it's all really important stuff. (Interview 1)

For Sam, the Cert IV TAA served the purpose of alerting him to issues and requirements, and he would then follow up particular matters with his colleagues or supervisors. At other times he accessed relevant documents, including subject outlines and the Training Package.

Sam also learnt through trialling something and then reflecting on the outcome, especially in relation to student responses and feedback. He reflected on his teaching regularly, particularly with the coordinator and with his wife who was an experienced facilitator. Having a conversation with Sam inevitably resulted in him reflecting on a range of issues related to teaching and learning.

5.2.6 Practice architectures of the Building Design teaching department that enabled and constrained novice teacher learning

The practice architectures of the Creative Industries faculty strongly influenced the Building Design teaching department. There were a number of reasons for this, including a shared staffroom, and a shared building where teaching took place. Also, the Creative Industries faculty was relatively small and each of the departments within the faculty were small. There were only four teachers in the Building Design teaching department and they interacted closely with teachers from other areas within the faculty.

Employment arrangements

After teaching for one semester as a casual teacher, Sam then worked full-time on an 18-month teaching contract. The first term had essentially been a trial both for Sam and for the faculty. Sam found that he liked teaching, and he chose to continue with the work. As a teacher he continued many of the work practices that he had used in his previous role of being a self-employed architect. With an overriding project of being a carer for his young children he arranged flexible work hours and limited his time on campus.

Cultural-discursive arrangements

When Sam began teaching in the Creative Industries faculty, some of his colleagues would be working long hours. Sam was not prepared to do this, and he argued:

Some of the other staff who have been here for years and years say that they've learnt from me and another staff member about the fact that they don't have to be here till 10 o'clock at night doing the work.

You can be here nine-to-five or whatever it is, and get the work done. We're just here, we get the work done, and we're out of here. We've got to go pick up kids, we've got to go do whatever we do. It's been sort of beneficial to some of the others. They have taken it on board, and they're not working silly hours. They're actually taking days off when they're working nights and whatever else. So maybe it's... probably creating a better working environment for everybody. (Interview 2)

Sam and the other staff member were thus able to make changes to the expectations about the hours that teachers were required to be on campus, and thus to the working arrangements of other teachers.

Material-economic arrangements

The physical set up of the staffroom served to enable Sam's learning in a number of ways. In his first year of teaching his workstation was set up to enable easy ad hoc access to the coordinator of the Building Design qualification. The staffroom design also allowed easy access to other teachers, including Building Design and Interior Design teachers.

The physical arrangements of the classroom where Sam did most of his teaching enabled a mix of lecturing and a more student-centred approach. Half of the very large room was set up for lecturing and the other was arranged for individual student work or group interaction. Despite this, Sam's teaching was almost entirely based on delivering Power Point presentations from the front of the classroom in the way that his Building Design colleagues did. Thus, while the physical arrangements supported a more learner-centred approach, Sam followed the practices of the other teachers in his department and lectured using Power Point slides.

The material artefacts that were available for Sam to use as resources or as models for the development of his own resources were primarily

related to a lecturing approach that used Power Point slides. This further reinforced his teaching approach.

Social-political arrangements

The HoS established a positive relationship and met regularly with all of the teachers. Sam noted:

My Head of School gets very excited by the things I'm doing, which is nice.

(Interview 3)

The HoS and the Building Design coordinator were overtly supportive of Sam's learning and of the expertise that he brought to the school.

The practice of team teaching was very supportive of Sam's learning to become a teacher. The combination of team teaching with the physical staffroom arrangements was particularly effective. The transition to Sam becoming the qualification coordinator and then doing the curriculum work for the introduction of a new qualification was similarly well supported by the HoS and the curriculum consultant.

Sam was well supported into all of the practices that he undertook. When he was learning to teach, the coordinator undertook some team teaching with him. When he was learning how to develop the curriculum for the new qualification the HoS worked together with him and the curriculum consultant to do the work.

5.2.7 Concluding remarks

Sam was well supported in his learning to become a teacher through an informal mentor, team teaching, a well-resourced department, and a

supportive group of colleagues. The cultural-discursive, material-economic and social-political arrangements worked together to positively enable learning.

5.3 Learning 'how to go on' as a teacher in Community Services

5.3.1 Practice landscape

When you enter the Community Services staffroom you see a large open plan room that is comprised of a number of grey partitioned work stations. It is difficult to see the teachers at their workstations unless you are standing beside them. The staffroom could be considered dreary if it wasn't for the large communal table in the middle of the room. This table is used for eating lunch and morning tea, preparing classes, marking, and a range of other tasks. Importantly, it is a place where teachers regularly interact. In the dozens of times I have been in the staffroom there was always at least one person, and usually more, sitting at the communal table.

The campus where Community Services is located was previously a high school, and this is apparent when walking into the classrooms. They feel like school classrooms, with desks and chairs facing the front whiteboard.

5.3.2 Novice teacher

Alice had held a number of jobs, including managerial positions, before commencing as a teacher. These were in fields related to her subsequent teaching areas of youth work, gambling counselling, mental health work, and drugs and alcohol work. Prior to her teaching at Golden Towers TAFE, Alice had worked in prisons. She had also completed a psychology degree

many years previously, and given many presentations and facilitated some non-accredited training in her 30 plus years in the Community Services industry. Alice was in her fifties during the time of this research, and she characterised herself in the following way:

Yes, I have seniority and expertise in quite a lot of areas, but I like to think of myself as a terrified novice in some others. Or an excited novice. (Interview 2)

Alice began work at Golden Towers TAFE as a casual teacher. However, within weeks of her starting, one of the experienced teachers unexpectedly died and another unexpectedly took long-term leave. Alice went from teaching eight hours a week during the first three weeks, to teaching a full-time load across a broad range of teaching areas. She was offered a contract after teaching for a term, and was employed permanently after a year. Alice taught mostly through the day, but also some evenings and some weekends. She also did some work for a community organisation for additional income. Table 5.2 provides an overview of Alice's qualifications, her work experience, and the basis of her employment as a teacher in each semester of the study.

Table 5.2: Community Services Novice Teacher: Alice

Teacher	Details	Comments
Employment basis	Casual for the first semester of teaching 0.8 contract until the end of the first year of teaching Permanent thereafter	Also casual teaching to take her over a full time load. Had left the organisation three years after commencing.
Specific field of expertise	Youth Work Mental Health Drugs and Alcohol Gambling	30+ years industry experience when initially employed as a teacher.
Qualifications	Psychology degree Cert IV TAA	Achieved by end of first year of employment as a teacher.
Other work	Workshops for community organisations	

5.3.3 Projects and practices

Alice had a number of projects over the two years of this study. An overarching project for her was supporting the people who work in the community services and community development industry. She noted:

I'm particularly passionate about helping people adjust to living and living well, and to me it's a way of honouring those people who choose to do that work.

(Interview 1)

Alice went on to say:

I want to give them the strength that they need and the knowledge that they need and I realise that they're also seeking something higher, from that experience of learning. So they're seeking enthusiasm and joy and engagement, and the fact that you're in a classroom, they're seeking connection with likeminded people as well, so I want to facilitate that for them. (Interview 1)

When talking about her work Alice spoke about her students who were in, or were preparing for, the community services industry, as well as the clients that they supported.

Within this overarching project, Alice undertook a number of other projects. Teaching well was one of these. She also facilitated and coordinated a number of qualifications that were tailored for particular organisations and delivered on site at their premises. Alice saw each of these as a separate project. Some of these she had full responsibility for, and others were shared with other teachers. Alice worked quite differently in facilitating and assessing these competencies than she did when working with students in the classroom. After teaching for about a year, Alice was given a major project to develop an entire qualification for online delivery.

5.3.4 Learning substantive practices

While Alice had some involvement in facilitating workshops in her previous work, she found the teaching that she undertook at Golden Towers TAFE to be quite different. She now needed to follow a defined curriculum that was based around units of competency. In her first semester of teaching Alice felt confronted by the behaviour of some of the students. She noted that in the prison where she had previously worked, people attending a workshop were polite and passive, undertaking whatever was asked of them. In the TAFE

classroom students often spoke while she was speaking. Some students would walk around the room, or walk out of the room at will. She initially found this very difficult. After she had been teaching for two years Alice had developed quite a different approach:

I'd like to think the people that wander in and out of my class.. I'm not saying I encourage disrespect, but I'm just not precious about that stuff. And I really give the message that what's going on is important and fun, and if you're not here bad luck. You're the one missing out. (Interview 3)

This change was a gradual one. Other approaches that Alice used in her teaching also changed as she became more experienced. For instance, she was initially actively resistant to using an electronic whiteboard. As a result of work that she did developing online learning materials she began using an electronic whiteboard and it gradually became a part of her teaching repertoire.

From her experience of classroom teaching, Alice reported that up to 40 percent of students in her classes had been born, and had undertaken all or most of their schooling, in another country. Alice actively worked to develop teaching approaches that met the learning needs of these students.

When Alice began teaching in the final term of the year, much of the class preparation, including lesson plans; resource development; development of assessment tasks; and administrative tasks, had already been undertaken by others. At this time, class preparation involved developing a clear understanding of the class content and often an internet search for more recent examples of issues to be discussed in the class. Later, class preparation also involved development of lesson plans, assessment tasks, and resources.

Gaining an understanding of the administrative systems of Golden Towers TAFE was difficult for Alice, and she found this a source of frustration.

While broadly familiar with the topics she was teaching, Alice was initially very focused on learning the specific subject matter for each class. Once she became comfortable with the content she was then more able to focus on her teaching practice. Teaching across a broad range of areas meant that she had a lot of content that she needed to become comfortable with before teaching others.

Alice had not been involved in assessment prior to commencing at Golden Towers TAFE. She did not like the approach to assessing student learning, and was initially resistant to undertaking formal assessment of student learning. While she did not change her dislike for formal assessment, over time she came to accept the assessment requirement and worked to develop assessment approaches that she felt comfortable with.

The Community Services teaching department worked with a number of organisations to develop and deliver qualifications tailored to meet the needs of their staff. This involved a training needs analysis of the organisation, recognition of prior learning of the staff, and gap training that involved the holistic development of competencies around the work roles of the learners. When one of the Community Services teachers unexpectedly died (discussed further in the Practice Architectures section of this case study), Alice took over his role in one such organisation, and then undertook this role when similar courses were developed for other organisations. This also included coordination, facilitation, assessment, and administrative work.

In her first year of teaching Alice found that the expectations and practices of the learners who were undertaking the qualifications at their own workplace were different to those of the students who attended classes at the TAFE.

Alice learnt a range of things as a result of working in these different environments, including different facilitation approaches, and different assessment approaches. For Alice, her most important learning was related to ensuring that the commercial arrangements were set up in such a way that student learning was well supported. This learning was framed by Alice's need to ensure that she did not feel professionally compromised.

After she had been teaching for just over a year, Alice was asked to develop an entire qualification that could be delivered online. During a six-month period most of her time was dedicated to the development of this online qualification. She had had no prior experience in online learning, either as a teacher or as a learner. Alice expressed major reservations about the value of online learning, and about her own skills in that area. This is discussed in more detail later in this case study.

5.3.5 Practices that supported learning

When Alice began as a teacher, the HoS identified an experienced teacher, Jenny, as the person who would provide advice and support for Alice. Jenny made herself available and Alice occasionally sought her advice. The HoS was also available for advice as needed. Alice noted:

I've had support in everything. Really that's the whole way that I've gained knowledge, because as I said there was nothing written out except what [Jenny] gave me. So it's really been my colleagues there that have helped me do everything. Just the whole way of going about everything has been given to me by my

colleagues. Often volunteered, because they realised that I wouldn't know, or they've been very open to me asking them about something. (Interview 1)

Alice was able to do some team teaching with experienced teachers in her first term of teaching. She was also involved in co-teaching where two or more teachers would teach the same subject to different cohorts of students. She found both team teaching and co-teaching contributed to her learning to teach. Two of the teachers that she did team teaching and co-teaching with also became informal mentors.

Alice was welcomed into the classes of other teachers. This began as part of an assessment task for the Cert IV TAA and continued beyond that. Alice valued this approach to learning because it gave her greater insight into her colleagues' teaching approaches, and because it supported her own learning.

Resources, assessment tasks, lesson plans, and learning guides were made available for Alice when she began teaching. She used these as models when she developed her own versions, making changes as she judged appropriate. Alice also did a lot of reading to develop and maintain her knowledge in each of her teaching areas. This included online and hardcopy material as well as the material that had been developed by other teachers for use with the students.

Learning as a result of doing something and finding it worked as she had hoped, or that it did not work, was one of the approaches that Alice used. For instance, she had set an assessment task where students were required to develop a plan for a fictitious client. She found that the task was not well done and that students did not learn all that she hoped they would learn from it. For future classes she arranged for students to develop a plan

for themselves as a practice exercise prior to undertaking the assessment task.

At a more basic level, learning through engaging in something was important in a number of areas for Alice. For instance, she reported that shortly after beginning teaching:

I was sent to do information and enrolment sessions, and I didn't know the first thing about it. How could I possibly help someone fill out a form when I didn't even know the difference between subjects and competencies at that stage. (Interview 3)

Just by working in the area she became aware of the subjects that are available for students to study. So while she was not easily able to advise students about their enrolment when she first began teaching, after teaching for some time this was something that she was easily able to do.

The practice of learning how to do something through doing it worked best when Alice had some relevant prior experiences to inform her actions. She saw a clear connection between the previous work that she did in Community Services and the teaching role:

In a sense, casework, counselling, at the back of it all, there's some elements that are common to teaching. (Interview 3)

Alice made use of those common elements in learning to become a teacher.

The importance of prior experiences in supporting Alice's learning through doing became most apparent in its absence. When she was given the project of developing an online qualification Alice used this strategy of learning through doing as part of her initial approach, together with advice from others. After doing the work for some months she still reported:

I'm too much of a baby in it, I'm too inexperienced, I'm too technically ... I mean ... I feel like I'm a kindergartener. Like I got as far as first class maybe. (Interview 2)

While Alice had felt that she had learnt something about online learning, she also felt that there was a large gap between her present practices and where she needed to be to do what she wanted to do. She then arranged a number of other strategies to support her learning in this area. These included one-on-one support from a teacher experienced in online learning, and enrolment in Advanced Diploma subjects related to online learning.

Reflection was an important component of Alice's practice. She discussed her reflective practice in each of the interviews, often extensively. While reflection was most often an individual practice for Alice, reflection with colleagues was also important. A conversation with Alice usually involved some level of reflective discussion.

Alice found that gaining the Cert IV TAA provided her with a framework about the Australian Qualifications Framework. It also supported her in gaining a greater understanding of assessment and the reasons for assessment, in addition to a basic introduction to online learning. She made no other substantive reference related to the Cert IV TAA.

5.3.6 Practice Architectures of the Community Services teaching department that enabled and constrained novice teacher learning

Prior to Alice's joining the Community Services teaching department, staff turnover had been low. The experienced teachers in the department had worked there for many years and had been in the same staffroom and teaching in the same classrooms for many years. The practice architectures of

the site were therefore strongly entrenched and had changed little in recent times.

The unexpected death of an experienced and beloved colleague a few weeks after Alice joined the team had an impact on the practice architectures of the department. The teaching department was not only short staffed, but grieving. At the same time the sudden loss of this teacher meant that others had to undertake aspects of his role immediately. As a result of this, and the unexpected leave taken by another experienced teacher, Alice was called upon to take on a heavy teaching load across a broad range of teaching areas. This load included both on-campus and off-campus teaching.

Employment arrangements

Alice was initially employed casually to teach eight hours a week. After a few weeks this casual load was increased to the equivalent of a full-time load. A term later Alice was offered a two-year contract, and by the time she had been teaching for just over a year she had gained permanent employment. The progression from casual to contract and then to permanent employment in this short period of time was rare within the faculty that Alice worked in. She noted:

I know that some people have a very slow progression towards permanency so I feel I've been very fortunate. (Interview 3)

These arrangements supported Alice's learning in that they provided financial stability and therefore decreased the stress related to financial pressures. They did not, however, completely eliminate these pressures. As a result of receiving incorrect advice about pay rates, Alice found she was earning less than she expected. To address this gap between her expected income and her actual income she undertook facilitation work for a

community organisation on some weekends. This sometimes resulted in her being tired and lacking energy for her teaching work for Golden Towers TAFE.

Cultural-discursive arrangements

The cultural-discursive arrangements that impacted on Alice's learning within the department of Community Services included shared understandings that Alice had no access to, an ethos of support for both colleagues and students, and a shared language and valuing of community services workers.

Alice was very aware that her colleagues were helping her to learn what's acceptable and what's not. What's expected and what's not. Matching that against my own ideas of what's reasonable and fair and right. They're sort of helping me gauge where I am in the organisation and where I fit in. My colleagues have been my main source of learning. (Interview 2)

However, after teaching for two years Alice noted that there were some basic expectations that she did not know about. These included what her obligations were for being on campus throughout the day and throughout the year.

Even a clarification of the time I was expected to work here, and the difference between leave and stand down, would have been helpful. And I still don't really understand this. (Interview 3)

They also included what her actual obligations were to fulfill her role as a teacher. Alice noted:

Only on Friday did I get that document explaining what a Band 1 does, and I've been a Band 1 for two years. Their whole process of commercial work ... that's

undocumented ... That would have really helped me know what on earth I was doing. They were all stressful. (Interview 3)

She went on to say:

I haven't known where I could say no for instance. And it's a really key thing. People said to me afterwards, you've just been exploited. You haven't said no. Well I have no idea of my ability to say no. What could I ... what was I obliged to do? (Interview 3)

The Community Services teachers had a shared language related to community services. This was combined with a shared valuing of workers in that industry, and of their students who either already were, or would become, community services workers. This ethos of supporting others became apparent in many ways. For instance, Alice's initial concerns about formal assessment of student competency were assuaged to some extent by the approach of the department to support students to pass:

There was a very big emphasis on helping people pass. Not allowing them to pass when they clearly didn't merit it, but there was a kind of culture there that I see which would encourage people to resubmit and spend time with students to help them do better work the next time round so that they can pass, so that they do get it. I love that, I thought that was wonderful. (Interview 1)

This cultural-discursive arrangement enabled student learning. It was also consistent with Alice's belief system and enabled her to engage with the practice of assessment that she initially felt quite resistant to.

Alice found that she had a shared language and value system with her colleagues. She articulated this in the following way:

I like the people that I'm working with. They are my kind of people ... their understanding of their subject matter is extremely advanced. And I find it very

interesting to talk to them about, you know ... we're on the same page as far as professional, and even some life interests. So my kind of people! (Interview 3)

This shared language and shared understandings provided a cultural-discursive environment that supported Alice's learning.

Material-economic arrangements

The material-economic arrangements that impacted on Alice's learning included material artefacts, the physical environment of the staffroom, commercial arrangements, and off site teaching.

The range of material artefacts included well-developed assessment tasks, lesson plans, and subject guides. In addition to these more standard artefacts, the department had a tradition of developing workbooks of case studies. These case studies were sometimes developed as teaching resources, but often they were stories taken from newspapers or magazines. They also served to provide Alice with an understanding of the depth of knowledge that was expected of students. Like other teachers, Alice used these case studies in her teaching, and added to them for future classes.

The teachers' workstations were each surrounded by high partitions that served as barriers to interaction with others and little interaction took place at these workstations. In other staffrooms, for instance in the Beauty Therapy case study discussed in Chapter 4, such workstations operated as a constraint to novice teacher learning. Within the Community Services staffroom this constraint was overcome through another physical arrangement, a large communal table.

The communal table in the Community Services staffroom served as a material-economic arrangement that enabled Alice's learning. Discussion at

this table was both personal and professional. People ate their lunch and shared morning and afternoon tea there. It enabled teacher interactions, co-operation, and critical discussions. It was an important site for sharing of ideas and reflections, for shared planning as well as problem solving and providing support. At this table the social-political arrangements were informal and supportive, and the table served as a kind of levelling artefact that reduced the distances between peoples' roles and status. People came together in different configurations depending on the time of day. They debriefed, shared the highs and lows of their day, and did their work. Alice noted:

I was involved regularly in discussions about development of materials, and with other colleagues there, so I did feel very included and I did feel that what I had to offer was taken on board. (Interview 1)

The custom within the department of sharing resources, working on the development of resources together and coming to an agreement about approaches used, was undertaken at this table. It was an important enabler of teacher learning within the department.

At a broader institutional level, there was strong encouragement for teaching departments to undertake commercial arrangements that brought income into the organisation. These arrangements were driven by the need for the TAFE to develop alternative sources of income to government funding. The Community Services department engaged with this commercial imperative by offering fee for service courses to organisations. This involved tailoring courses to the needs of the organisation.

As already mentioned, three weeks after she was employed, Alice was brought in to teach and coordinate a commercial Youth Work qualification as

a result of the death of a colleague. She found this difficult and was uncomfortable with the approach that had been set up for this teaching project:

I just struggled with the whole ... the format of it, the set-up ... I think I'm too new, to have really got in there and I felt very little control of the process. All in all I found it very stressful. (Interview 2)

Whereas Alice had concerns about the way the project was organised, she was able to identify that her own lack of experience was also a factor. Although being brought into this project as a very new teacher was stressful, it did result in rapid learning. Alice was also able to use this experience to reflect on the problems that she encountered and to identify ways that the next commercial project could be developed to ensure that students were better supported both by their employer and by the TAFE.

Over the two years of this research, Alice was involved in a number of off-campus teaching arrangements. The practice architectures related to the teaching that Alice did off campus were quite different to those of the TAFE. The cultural-discursive, material-economic and social-political arrangements were also different in each off-campus site. Becoming familiar with these different arrangements, and working out how best to support student learning in each site was an important part of Alice's learning as a teacher.

Social-political arrangements

Relationships that impacted on Alice's learning included those developed through team teaching and informal mentoring. An ethos of respect for

colleagues and for students was an important social-political arrangement within the department.

When Alice took on the work of the teacher who had died, two of the experienced teachers took on an informal mentoring role to support her learning in the areas where they had expertise. This provided Alice with one-on-one support in a timely manner and also served to reduce her feeling of isolation due to working off campus. At times these teachers also did some team teaching with Alice, and this served to create an environment where the experienced teacher was able to provide support and advice for Alice across a range of practices, including class preparation, assessment and facilitation. It also served to establish closer relationships with each of these teachers on an individual basis.

There was an ethos within the department of Community Services of respect, valuing and care for colleagues. Alice noted:

I felt supported, emotionally, by the fact that they're pleasant people to be with, and that's been a really nourishing, supportive factor. There is a nice sort of vibe there, and people are good to each other, and share resources. (Interview 2)

This ethos was an important component of the social-political environment that supported Alice's learning.

Alice was more comfortable in seeking support and advice from her colleagues if she was also assisting them in some way:

People have been willing to show me their lesson plans, conversely I've supplied them with some more up to date handouts, so I feel it's been a sharing experience. (Interview 1)

This reciprocity was important to Alice and was mentioned a number of times.

Online learning

After she had been teaching for about a year, Alice was taken off the majority of her face-to-face teaching work, and asked to develop one of the Community Services qualifications for teaching online. The practice architectures related to this project were so different to those related to the rest of her work that I will address them separately. In this section I explore the cultural-discursive, the material-economic and the social-political arrangements as they enabled and constrained Alice's learning for this project.

From a cultural-discursive perspective, the language of online learning was quite different to the language of the community services industry that Alice was familiar with prior to commencing as a teacher, and the language of classroom teaching that she had become familiar with through interacting with her colleagues in the Community Services department. This might account to some extent for Alice's experience after working on the project for some months of not feeling that she had learnt much:

I realised I hadn't actually learnt a lot of the things I needed to have learnt. They just didn't stick in my brain. (Interview 3)

In addition to it requiring a different language, Alice was not convinced of the appropriateness of an online medium for engaging the students who would be studying the course that she was developing. Her reservations about online learning were at odds with the policy of the TAFE to provide more online learning, as well as the plans of the management of her faculty. However they were in keeping with those of her colleagues. Alice reported:

It's not just me, the rest of the people in my team either don't use it at all, or can only really use ... [Jenny] can use it a bit, and [Mike] can use it a bit, the others don't even want to go near it. They hate it, they find it ... it's not inviting to them, they haven't got the time to do stuff on it, it's like an imposition and a resentment. (Interview 2)

Thus both the language of online learning and the lack of valuing of the approach by her Community Services colleagues can be seen as constraints to Alice's learning.

During the time that Alice was given to develop the online learning qualification, a desk in the Online Learning department which was located in a different part of the campus, was made available for her use so that she could more easily access advice from the online learning team. From a cultural-discursive perspective this can be seen to have had the benefit of moving Alice away from the other teachers who were negative about online learning. At the same time, these teachers were the people who supported her learning in all other areas, and she felt cut off from this camaraderie. This move from an area where online learning was not valued to an area where it was highly valued may have had some positive impact on Alice's learning. However, material-economic arrangements worked against this possible outcome.

While Alice was on the same floor as the online learning team, her desk was separated from the area by a wall. This separation of her desk from the activities of the online learning team meant that she needed to leave her desk and walk to their desks to have any interaction with these teachers. The desks of the online learning team faced the corridor, and engaging in an extended conversation required standing in front of someone's desk as

others walked past, which further served to constrain Alice's interaction with these staff and consequently her learning.

Alice found that the approaches that had been successful in learning other practices, such as just doing it and seeking advice from colleagues as needed, were not successful in supporting her to learn how to develop the online learning courses. The social-political arrangements of the Online Learning department were also quite different to that of the Community Services department. Alice noted:

A lot of lovely people had been helping me, some of them getting a bit impatient with my slowness and doing things for me... But now I [have lost all the work that I had done]. I've got to go back and do it all again, basically, which is probably quite good, because I think I'd do it slightly differently now. (Interview 3)

After 'losing' the work that she had done over a period of four months, Alice realised that she had not learnt as much as she had needed to learn, and sought alternative approaches to learning:

I've enrolled myself in the advanced [Online Learning] course which I'm doing now, to really address my own deficiencies. I have quite a struggle in my head over [online learning]. (Interview 3)

She was aware that she needed to develop skills and knowledge in online learning; however, she maintained concerns about the value of the approach for her students.

Alice also sought support from the Head of Faculty for an experienced online learning teacher to work closely with teachers in the Community Services department to support their learning in this area. This arrangement had been put in place shortly before the end of this research, and Alice reported that she was finding it successful in supporting her learning. By the

time this research was completed, and almost a year after she began working on the online learning courses, Alice had not yet completed the development of these courses.

By the time that Alice had been teaching for two years she was a full member of the teaching staff, and in some areas she could be seen to be steering the direction of the department.

5.3.7 Concluding remarks

Alice was well supported in her learning to be a classroom teacher through a supportive group of colleagues who shared resources and provided advice. A large communal table in the middle of the classroom provided a physical set-up that further enabled this learning from others. Alice can be seen to have thrived in this environment, and to have learnt a broad range of practices related to the role of a teacher relatively quickly and successfully.

When asked to develop an online learning version of a qualification, the practice architectures associated with undertaking this project were quite different to those in her department. These practice architectures, together with Alice's own perceived lack of relevant prior experiences, served to severely constrain her learning. After many months on the project, Alice felt that she had learnt only a small part of what she needed to know, and she had not produced what was expected of her.

These two very different experiences of learning help to illustrate how the practice architectures of a site where a teacher is learning the role of a teacher can enable and constrain learning.

5.4 Learning 'how to go on' as a teacher in Electronics

5.4.1 Practice landscape

The electronics teaching area is not clearly identifiable by the casual observer until entering one of its classrooms. The classrooms that the electronics teachers primarily used were set up with a row of chairs facing a whiteboard. Around the edges of the room were benches that were covered with electronics equipment with chairs in front of them.

Some of the last overhead projectors in the organisation may be found in these classrooms, although teachers report that it was now very difficult to obtain transparencies to use on these projectors. They also report that they have been unable to get access to electronic whiteboards for the classrooms designated for the Electronics department or computers for the use of the Certificate III students. This is despite almost all other teaching areas of the TAFE having these facilities. This had implications for the ways that the teachers were able to teach.

On entering the staffroom for the electronics teachers, you see that most of the desks are unoccupied. Prior to the two novice teachers, Trevor and Simon, being employed here, the teaching department had been divided in two, with more than half of the teachers and the HoS of that old department moving to another campus. They took a large proportion of the resources of the department with them. In addition, in the time between when these two novice teachers were interviewed and when they took up their positions, all except two of the experienced permanent electronics

teachers in the department had resigned. In this time the recently appointed HoS for the Electronics department had also accepted a promotion elsewhere. According to Trevor and Simon, the HoS position was then left vacant and was not filled during the two years of this research.

5.4.2 Novice teachers

This section introduces Trevor and Simon, who were employed to teach different qualifications in the Electronics department. For both teachers this was their only job. Electronics was the only department in this study where two novice teachers were employed in the one site, and as a result this case study reads slightly differently to the others.

Trevor

Trevor came to teaching through circumstance rather than as a deliberate career path. A restructure was taking place at his previous work and his position became uncertain. Trevor said:

I had family obligations, a mortgage etc, and they couldn't give me an answer, and I said well ... I need a steady job, so I ... looked in the paper and this job was there and I thought ' I'll throw my hat in'. I didn't plan to be a TAFE teacher. (Interview 1)

For Trevor then, teaching was the job that was being advertised at a time when he decided to leave his previous job rather than something that he had aspired to for some time.

Prior to being employed at the TAFE Trevor had worked in electronics for more than 30 years. Table 5.3 provides an overview of Trevor's qualifications, his work experience, and the basis of his employment as a teacher in each semester of the study.

Table 5.3: Electronics Novice Teacher: Trevor

Teacher	Details	Comments
Employment basis	Full time permanent throughout	Employed as a teacher as well as the coordinator of a qualification. Average of 12 hours of teaching a week (full load is 20 hours). Remainder was coordination work.
Specific field of expertise	Electronics	More than 30 years in this industry.
Qualifications	Associate Degree Trades qualification Cert IV and Diploma in a second trade Cert IV Training and Assessment Diploma Training and Assessment	Achieved by end of first year of employment as a teacher. Almost completed by end of second year of employment as a teacher.
Other Work	No other paid work.	

Trevor was employed to both coordinate and teach on the Certificate III qualification that is considered to be the Electronics trade-level qualification. He felt that he had:

inherited a program that had been long neglected. (Interview 2)

The person who had been the coordinator prior to Trevor being employed had been ill for eight months prior to retiring. He had continued teaching during that time but had not been able to also undertake the coordination work. He had retired four months prior to Trevor commencing work in the

position. As a result, when Trevor began in the role, there had been little work done in coordinating the qualification for over a year.

Simon

Simon had been working in electronics for thirty years prior to beginning work as a teacher. He was initially employed to teach Advanced Diploma and Associate degree level subjects, and later also taught in the Diploma and Certificate III programs. Simon had considered being a teacher in the past, and also saw teaching as a way of contributing to his industry.

I felt I could put something back into the career that I'd enjoyed a lot, and it's ... something that I'd wanted to try ... Opportunities don't come up very often for teaching, so when it did come up I thought I'd try it. Took a chance. (Interview 1)

Simon took a \$10,000 per annum pay cut to take on the teaching role. Table 5.4 provides an overview of Simon's qualifications, his work experience, and the basis of his employment as a teacher in each semester of the study.

Table 5.4: Electronics Novice Teacher: Simon

Teacher	Details	Comments
Employment basis	Permanent full time	Teaching for the two years of the study. Left after teaching for three years.
Specific field of expertise	Electronics	30 years industry experience when initially employed as a teacher.
Qualifications	Trade-level certificate	
	Individual university subjects	One unit at a time to develop specific knowledge relevant to his electronics design role in previous jobs.
	Cert IV Training and Assessment	Achieved by end of first year of employment as a teacher.
	Diploma Training and Assessment	Almost achieved by end of second year of employment as a teacher.
Other work	No other paid work	

5.4.3 Projects

Despite being only two of four permanently employed teachers in the Electronics department, Simon and Trevor had very different experiences of learning to undertake the practices associated with their job. Part of this can be accounted for as a result of Simon being employed as a teacher, and Trevor being employed to both teach and to be the coordinator of a qualification. In this section I first outline the projects that Trevor undertook followed by those undertaken by Simon.

The projects that Trevor focused on initially were fulfilling his obligations in the broad areas of coordination and teaching. For the first year of his employment, even though more than half of his load was teaching, his focus was largely on his coordination work. After eight months the

implementation of a competency based approach for the Certificate III became a key project.

In the first year of working as a teacher, when Trevor spoke about teaching he focused only on getting students through the course rather than on supporting learning, or on developing students as professionals in their field. He expressed it in the following way:

I want the students to sign the dotted line, at the start, and then at the end of the four years sign again on the dotted line. There's no dramas with admin, there's no dramas with anything, they just come to class, get the knowledge, do the competencies, go home and say I enjoyed that. And their employers say yeah that was nice and easy, there's no dramas. (Interview 2)

During this time Trevor's focus was on his coordination role, and explicit questions about teaching and learning resulted in responses unrelated to either.

While it had not been apparent previously, after Trevor had been teaching for almost two years, supporting student collaboration became one of his projects. He hoped that this would result in increased collaboration, not just in the classroom but also in industry, where he believed there was insufficient collaboration.

The projects that Simon identified were to support student learning, being well prepared for classes, and to ensure that equipment and practices were safe and met occupational health and safety requirements. He noted a number of times that the desire to support student learning was what guided his actions:

I believe we're here to help the students learn, we're not here to make their life difficult. We're here to support them in their learning process, and that should be flexible and it should be adaptable and depending on their situation, the subject we're teaching them. And it shouldn't be too rigid. (Interview 2)

Especially initially, supporting student motivation to learn was important for Simon. Many of the decisions that he made in relation to his teaching were related to student motivation. He believed that without motivation the students would not succeed. After teaching for almost two years he had come to believe that students had to have their own motivation, but he still worked to ensure that he did not reduce student motivation to learn.

Simon spoke on a number of occasions about being properly prepared for his classes. This was a real focus for him throughout the two years. Initially it involved having a good knowledge of the theory that he was teaching, as well as determining how best to share that knowledge with students. After he had been teaching for two years his focus was on how best to support student learning.

5.4.4 Learning substantive practices

I first address the practices that were common to both teachers, and then separately address their additional individual practices. The substantive practices that both Trevor and Simon undertook included teaching, class preparation, assessing student work, Recognition of Prior Learning, developing assessment tasks, and administrative practices and processes.

The teaching approach used in the Electronics department was different to that of most other areas of the TAFE. Electronics teachers usually talked through a workbook that the students had, working through additional

examples on a whiteboard as well as telling anecdotes related to the information in the workbooks. Simon initially learnt:

The process of standing in front of a class and talking and teaching ... getting used to thinking on my feet, and thinking clearly when ... working through something on a whiteboard without panicking about 'do I know this or don't I know it' ... getting used to people watching you, what you're doing, that can be quite a daunting process, just getting used to that process. (Interview 1)

Because of the way that the teaching was undertaken, both of these novice teachers felt that their knowledge, or lack of knowledge, was under scrutiny by the students.

Within a relatively short time Simon was using an electronic whiteboard when teaching one particular class. He was then able to show diagrams and other information readily without the students needing to wait for him to complete the diagram on a whiteboard. He would then save all of the diagrams and calculations that he made and post them online for students to access. This avoided students having to take detailed notes from what he was writing on the board. For other classes he redeveloped the student workbooks, and provided handouts.

Trevor also had to learn how to teach. After being employed for four months he described his teaching as writing notes on a whiteboard that the students copy for the theory component of the class, and walking around helping students individually when they are doing practical work. For the Cert III qualification subjects, students had workbooks which Trevor noted were based on resources that were 30 years old and were written for electrical apprentices rather than electronics students. For these classes students would update the workbook by copying notes that the teachers

would write on the whiteboard. When asked if he could change the workbook so that they met the needs of the current cohort of students, Trevor went into detail about all of the other work that he had to do before he could have any time to change the workbooks. A suggestion that he provide photocopies of his notes was met with a similar response. When asked what changes he might make to his teaching practice, Trevor's response related to the colour of the whiteboard markers that he used:

Every time you use a different colour they complain, if you use the right colour it's not big enough, the writing's small, it's still a learning opportunity every day.
(Interview 1)

When I suggested that there might be other teaching approaches he could consider, he initially could not conceive of alternative approaches, except to tell each student individually. After he had been teaching for a year, when asked whether he could see any changes in his teaching since the first interview, he responded:

Not really, just got a heavier workload is all. (Interview 2)

At this stage Trevor was still focusing largely on his coordinator role.

As part of an assessment task for the Cert IV TAA, Trevor prepared a Power Point presentation. However, it was not a successful experience:

I used ... the projector with the computer once. Death by Power Point. I did that for one day and then I lost my voice and that was the last time I did it. It was enough for me. (Interview 2)

He later mentioned that some of the students walked out of the class during this presentation. This unsuccessful foray into alternative teaching approaches contributed to Trevor maintaining his practice of writing on the board for students to copy.

Toward the end of his second year of teaching Trevor began changing his teaching practice to include increased support for student collaboration. As noted, he did this because he had come to believe that by teaching students to collaborate he may, over time, be able to influence the broader electronics industry to collaborate with each other.

Learning the content of the subjects that they were teaching was one of the key practices that both teachers engaged in during their first year of teaching. Both were familiar with the practical components of the courses; however, a sizeable component of the teaching that they did was theoretical. To a large extent this underpinning theory was not something that they had revisited since their own initial training some decades previously. Trevor was very aware of his lack of theoretical knowledge and was initially concerned about the students knowing more than him. He noted:

My theory has to be re-learnt again ... I stay up till 3 o'clock in the morning just to know the theory, all the stuff I take for granted. (Interview 1)

Simon also worked to relearn the theory he was teaching. He noted:

Just being sure that I've ... fully understanding the knowledge itself, well enough to be able to explain it, and explain it in a way that comes across ... that the student can understand, that's my concern. That ... my understanding is deep enough in the first place, to be able to pass on that knowledge. (Interview 1)

Simon thus saw two levels to this understanding. First, to know the theory, and second, to be familiar enough with it to be able to explain it well to the students. For him, relearning the theory resulted in some positive changes to the resources that were available for the students. While working through the student workbooks to support his own learning he also made changes to the workbooks that he implemented for future classes.

Preparation for classes was something that both Simon and Trevor identified as an important area of learning in the first year of teaching. Once Simon had developed a strategy that worked for him, he noted a decline in stress. For him, in addition to learning or relearning the relevant content of the lessons, preparation included preparing or rewriting students' workbooks, and writing lesson plans. Where they were available, Simon used previously developed workbooks the first time he taught the class, and then updated them for future classes. He added diagrams, which he redeveloped to better scaffold student learning. Trevor's class preparation initially related largely to learning the theory that he needed to teach, and to developing diagrams and other changes that students needed to make to the workbooks to update them.

Assessment tasks in electronics were primarily tests and practical assessments. Assessment tasks were available for all subjects that had previously been taught – some of them decades old. Simon considered the existing assessment tasks from the perspective of the competencies that were to be assessed, and where there was a discrepancy, or he felt that the competency could be better assessed in a different way, he made the appropriate changes. He also looked at the results of assessment tasks, and he made changes for future assessments when students had trouble understanding what was asked of them. In his first year of teaching Simon also developed a project-based assessment task for one of the subjects he was teaching. While this assessment task assisted student learning, it also required additional skills (unrelated to the actual competency that he was teaching) that Simon saw as basic, but that some of the students had not yet

developed. As a result he offered a number of additional classes to support students in completing the project.

Both teachers undertook Recognition of Prior Learning (RPL) assessments, although the RPL load was much higher for Trevor, who was a coordinator. Basic paperwork for RPL had been set up prior to their arrival and initially they followed these processes. Over time, and with the support of the RPL coordinator for the TAFE, they altered the procedure to better reflect the requirements of competency based assessment.

Both Trevor and Simon expressed surprise at how much administrative work they had to undertake, for instance, booking teaching rooms, enrolment paperwork, applying for resources (usually unsuccessfully), and paperwork related to 'facilities' processes. They also found that there was a lot that they needed to learn about the administrative processes within the organisation. This was especially the case for Trevor, who had a larger administrative load as the course coordinator. In other areas of the TAFE many of the administrative tasks that Simon and Trevor undertook were addressed by a range of people, including the HoS, an experienced coordinator, and administrative staff.

The next section identifies practices that Trevor and Simon had to learn. It begins with Trevor.

Trevor

Being employed as both a coordinator and a teacher meant that Trevor had to learn both of these roles. In the first interview he focused almost exclusively on discussing practices associated with his coordinator role. Even when asked explicitly a number of times to describe a particular class he had

given that morning, he mostly talked about other matters. One explanation for this could be that with so much to learn, Trevor had to prioritise, and it was the work in the coordinator role that he prioritised. Unlike Sam's experience in the Building Design department, discussed in an earlier case study, Trevor's work as a coordinator was extensive.

Learning the relevant policies for his range of responsibilities was an important focus for Trevor, especially in his first year of employment, when he saw them as important guides to many of the decisions he had to make related to students and to qualifications. There were relevant policies associated with some of the areas of learning discussed above, as well as with student enrolments, curriculum, and supporting Language, Literacy and Numeracy (LLN) for students.

Trevor needed to learn the practices associated with student enrolment. These practices required a good understanding of the qualification and the associated rules for completing that qualification. After working on this for eight months, decisions were made elsewhere for the Electronics department to move to a competency based training approach. For Trevor this resulted in much administrative work, with new students beginning the training package qualification, some previous students being transferred to the training package qualification, and others completing the previous qualification. He then needed to learn the rules and processes associated with meeting the requirements of a competency based qualification.

As a component of his role as coordinator, Trevor was required to determine the competencies that the TAFE would offer based on the requirements of the Training Package, available equipment, and other

resources. To do this he needed to become familiar with the curriculum that informed the qualifications the students were studying for. He worked with a curriculum consultant to identify the relevant competencies to be offered to students and to undertake the administrative tasks associated with the TAFE offering these competencies. He referred to this as developing curriculum.

The TAFE had a section whose role was to support the LLN of those students who needed to develop their skills in these areas. They also saw the development of the skills and knowledge of teachers as part of their role. Trevor worked with one of the teachers from this department to update the workbooks that they had developed for the students studying the qualification he was coordinating. As a result of these regular meetings he also developed his own understanding in this area and was able to use this knowledge to support students in the classroom.

As coordinator, the management of student behaviour where it interfered with the learning of others, was part of his role. On occasion Trevor was required to manage students who were acting aggressively in other teachers' classes. He also worked to manage students in his own classes who challenged his authority or disagreed with him.

One of the interesting things that Trevor learnt very soon after commencing his job was that there were two positions in the classroom where you do not allow students to sit. The reason for this is

anybody that sits here in any workshop has bad luck. So we're superstitious. And this one here as well, we won't let them sit there. (Interview 2)

He did not know why or when this superstition started, but he never allowed students to sit in those areas. There was no indication, either from Trevor or

from my own investigations, that there were any safety issues or other more rational explanations for why students could not sit in those two areas.

In the first year of teaching, Trevor was resistant to using the internet as a source of information for himself or for his students. He noted that it was best to

get books out of the library on it. I don't like the internet for looking at things cause they can camouflage a lot of things, and it's somebody else's bad idea, or somebody's good idea, you don't know. Books are best. (Interview 1)

By the end of the second year of teaching he was overtly promoting the use of the internet as an important source of information.

I mean the library books are alright, it's a great resource, but it's not the only resource, there's lots on the web. (Interview 3)

This change also can be seen as a shift from his previous 'sage on the stage' approach to an acceptance and promotion of other sources of information. He further noted:

They can look it up (on their Smartphones), they don't need me to say oh you're right or you're wrong, they check and 'Look see, it says like this', and they go 'Oh yeah', so they're teaching each other. (Interview 3)

This shift was not something that he seems to have noticed himself.

It would be easy to identify Trevor as a poor teacher with little interest in developing his skills in this area. This would be a narrow conception of his position. Trevor was placed in not just one but two roles that he had no prior experience in, little support with, and was understandably overwhelmed by. Not being skilled in the practices associated with the coordinator role had implications for the students if they were incorrectly enrolled. It is unsurprising that Trevor chose to focus heavily on learning the coordinator

role. Mistakes in the coordinator role could (and did) create extensive additional work for himself and others, as well as difficulties related to completing the qualification for some students.

Simon

Simon began using the online platform used by the TAFE to support student learning in his second semester of teaching. All of his students were in face-to-face classes, and he used the online platform as a repository for resources. He also learnt to develop online quizzes so that students were able to test their own knowledge of a particular area.

5.4.5 Practices that supported learning

Both Trevor and Simon used previously developed assessment items, workbooks, and other resources, as a basis for developing new items. For assessment, Trevor reported taking different questions from a number of previous tests and combining them to create a new test. Simon reported using some questions from previous tests, and creating new questions based on the format of the previous ones. His concern was that some previous tests were designed to mislead students rather than to test their knowledge. Over time, therefore, while keeping a similar format to the tests, he mainly developed new tests for each class according to the competency requirements. For both teachers, the format of previous tests formed the framework for assessment tasks developed for subjects that had not been previously offered.

Similarly for teaching resources, both teachers used previously developed resources. In writing workbooks for new subjects Simon used a

framework similar to that used in workbooks for other subjects. He altered this framework to some extent by incorporating extensive use of diagrams. Trevor did not report rewriting workbooks. As noted previously, he used old workbooks for similar subjects and wrote relevant changes on the whiteboard for students to copy into the workbook.

Both teachers valued advice and feedback from others in supporting their learning. They both identified asking questions as important in learning how to operate in their department. They asked questions of administrative staff, technical staff, the Head of Faculty, professional staff, qualification coordinators, casual teachers, and other teachers studying the Cert IV TAA. Trevor noted:

I'll ask (the previous Head of School), he's very experienced. I asked [the Cert IV TAA teacher] a lot of things about assessments ... Also there's a lot of other teachers around who've had more experience than I've had so I can ask them. (Interview 1)

The practice of asking questions was not always successful in supporting learning, as Simon noted:

The [TAFE] process, is quite ... there was quite a steep learning curve, just learning how [this TAFE] works ... I found that really frustrating, because, no-one would tell me. You don't know which questions to ask. And no-one would tell me, 'well if you want to, this is how [the student administration process] works ... lots of little things, on how the whole system works. How you put a job in through the [facilities] request system, and yeah that was hard to get information on. There was no induction ... (Interview 1)

One of the important things that they both came to learn over the two years of teaching was whom to seek answers from. When Trevor commenced work the Head of Faculty arranged a mentor for him. They also arranged for the retired coordinator that Trevor had replaced to be employed for 30 hours

over three months to work with Trevor and help him learn to undertake the coordinator role. Trevor's mentor, Meredith, was known as a talented and experienced teacher as well as a coordinator.

She's a real goldmine of information, very energetic, very enthusiastic, and that really helped a lot. So she was able to take me through and make sure I did the right thing and you know, I could go and talk to her occasionally. (Interview 1)

Meredith provided Trevor with advice related to his coordination work. Interestingly, Meredith also operated as an informal mentor for Simon. She observed one of his classes and provided feedback on his teaching. She also invited him to observe her classes and was influential in supporting him to use the online learning platform.

Trevor was very aware that he needed the advice and support of others. One of the strategies that he used to gain access to this advice was instigating a shared social meeting time.

We've started a thing on a Friday afternoon to all get together and have a hot chocolate, and this afternoon I brought in freshly cooked muffins, just to get together and talk. And that's when you pick up things, just general conversations rather than talking seriously with them. We just talk openly...(Interview 1)

The shared afternoon tea was attended by the Electronics teachers and occasionally others in the faculty who were available.

Trevor found that other staff in the faculty, and in the organisation more broadly, were helpful in supporting his learning.

The support that I get from other people who really have nothing to do with me, who can get me in the right direction, you know 'Go talk to such and such', they're really good. Then you talk to them and they're so helpful. But they're not supposed to do this, it's just someone who wants to help you. (Interview 2)

When pushed harder about the type of support he received, Trevor did not mention support in teaching, but instead listed a series of administrative tasks. This had changed after he had been teaching for about 18 months, by which time he had identified relevant and knowledgeable people in the organisation (outside his own faculty) and was seeking their advice about teaching matters.

Trevor looked outside his teaching department for support in his learning to become a teacher and especially in his learning to be a coordinator. There was probably value in this in the longer term in that it gave him access to more ideas and approaches. In the short term it was extremely time consuming and took away time that he might have used for other things, including enhancing his teaching skills.

The Cert IV TAA and Diploma TAA were perhaps more valuable to Simon and Trevor than for any of the other teachers who participated in this research. Each began the Diploma shortly after completing the Cert IV. There were a number of aspects to why these qualifications were especially valuable to Simon and Trevor. First was the learning they did that was related to the content of the Cert IV TAA and the Diploma. For instance, for Simon the initial introduction to the online learning platform and a basic overview of online learning practices was his impetus to seek further advice so he could use this platform. Trevor used the availability of the Cert IV TAA teachers before and after the workshop to get answers to his questions. For both teachers the discussions they were able to have with the other students and teachers attending the Cert IV TAA workshops were important sources of advice and of support. They both maintained contact with some of these teachers well after they had achieved the qualification. The Cert IV TAA

assessment tasks were of value in supporting their learning, particularly the requirement of both qualifications to observe and be observed by other teachers.

Observing other teachers teaching was one of the assessment tasks that all teachers studying the Cert IV TAA were required to undertake. The choice of who to observe was important in informing future teaching practice. Simon chose to observe Meredith, a talented and experienced teacher in his faculty who was Trevor's mentor. It was through observing Meredith use an electronic whiteboard in her teaching that Simon chose to use one in his own teaching. This was quite a break away from the teaching practices of the rest of his department, who were using whiteboards and overhead transparencies.

Trevor identified observing other teachers as an important component of learning how to teach. He chose to observe a casual teacher who taught at the Diploma level and he noted:

Later we'd talk about what they'd done and how they'd done it this way or that way. Say 'Try it with this'. But they were taking the Diploma, so they [the students] want to be there, whereas tradesmen don't. (Interview 2)

He argued that different teaching approaches were required for the students studying the Certificate III qualification.

The introduction to competency based training and expectations related to competency based student assessment also influenced the learning of both teachers to some extent. Trevor used the opportunity of changing to competency based training to make some changes to the way that assessment of theoretical knowledge was undertaken.

From very early in his teaching, Simon was aware of using cues from students to identify when they did not understand something.

I think it's just a bit of experience, to sense that they didn't grasp it, and often I've found that just in the process of explaining it, I get a sense that 'ah I haven't explained that very well'. So I go away and... I guess I try and put myself in the student's place. I just have a sense ... I pick up cues, and I think ah, you know that didn't go so well. (Interview 1)

Simon would then work on preparing the next lesson to ensure that it better supported student learning.

By the end of the second year of teaching, Trevor had made some changes to his teaching approach as a result of feedback from students.

When pushed to identify these changes he said:

When the lady said that she'd like me to stop talking when they were writing down, I did that. And I said to the second years, 'Would you rather me write and then move to one side, and let you write down', and they said 'Yeah, that's a brilliant idea'. (Interview 3)

So while he did not entirely change his approach of writing things on the whiteboard and having students copy them, he did make some changes.

Both Trevor and Simon found that they had to relearn the theory (having initially learnt electronics-related theories many years ago in their own study) that they were now teaching. They did this by reading through the textbooks, teachers' notes, and student workbooks. They found this time consuming and demanding.

After he had been teaching for eight months Simon was asked to teach a subject that had not been taught before and that he had no prior knowledge of. To do this he identified the required skills and knowledge from the

competency, and then did extensive online research to learn more about the content of the subject. He then discussed it with friends and acquaintances working in the electronics industry in the area that this competency addressed.

Both Trevor and Simon provided numerous examples of just trying something to see if it worked, and then making adjustments when necessary. Simon referred to this as “trial and terror”.

They also reported on a number of occasions that they were influenced in their teaching by their own prior experiences as students. Their prior experience of teaching others, especially trainees, in other workplaces also influenced their teaching and their interactions with students. Simon found that the experience he had in his previous workplace was valuable in supporting his learning about new subjects that he had had little or no experience with. He also mentioned his prior experience as a sporting coach as influencing his interactions with students.

The coordinator of the program that Simon was teaching was planning to retire. Perhaps for this reason he often involved Simon in a range of activities that were not usually expected of novice teachers but which supported Simon’s learning more broadly. For instance, he often took him to meetings such as curriculum meetings. Simon was able to observe the process of curriculum development, and to have some input into the curriculum work, without having responsibility for the work. The learning that he did at these meetings gave him a broader understanding of how the department and the organisation operated, and also helped him place the subjects that he was teaching in the context of the broader program that he was part of.

5.4.6 Practice architectures of the Electronics teaching department that enabled and constrained novice teacher learning

Employment arrangements

Trevor and Simon were employed as permanent full-time staff. They moved into a department where almost all of the other staff had left, and they had to begin afresh. Both teachers reported being overwhelmed by the demands on them and the learning they had to do. Both teachers also reported needing to work additional hours to those of a normal work week to be able to meet the basic requirements of their job, especially in the first 18 months of employment. Both were teaching theory that they had not revisited for 30 years or more, and Simon was doing so at an Advanced Diploma level. This was particularly problematic when he was completely unfamiliar with the subject area as he notes below:

[In my second term of teaching, and three weeks before classes began, the coordinator] gave me two subjects, said here's the subjects you are teaching. Both subjects were quite outside, totally outside my field of experience. One had never been taught before here, it was a brand new subject. There wasn't even a book in the library on the topic. (Interview 1)

Both teachers indicated that in their previous work they had been able to complete their work within standard work hours. This need to work many additional hours just to meet basic requirements of their job was a source of discontent for both of them. When, three years after he began work at the TAFE, the workload was still more than a standard working week, resources

were still scarce, there was still no HoS, and no-one seemed to be listening to his concerns, Simon chose to leave the organisation and work elsewhere.

When Trevor and Simon began teaching, the staffing arrangements had changed quite a lot from those that existed when they had accepted their positions. Trevor noted:

When [I took the job] we had staff. I had a tech, I had a storeman, I had three ladies to help out with the paperwork. And the day I turned up to start, the Head of School says I resign from my position, and your staff, you got none. It's all yours, and I went 'What do I do?' (Interview 2)

This loss of staff impacted on the work that Simon and Trevor had to do at a time when they were trying to learn how to become teachers. This included additional work that in other teaching departments was undertaken by non-teaching staff. For instance, Trevor discovered that the two casual teachers he was managing had been teaching for some years with no computer access, no telephone, and no email accounts. Students were thus unable to contact them except when they were in class. This put an added burden on Trevor because students sought his support and advice in the absence of access to the other teachers. The work that he had to do to arrange this access took time away from his other work and his learning.

This additional work took time that they could otherwise be using to learn to teach. Both teachers noted, in passing rather than as a direct comment, that they did a lot of their class preparation at home after hours. For instance, when Trevor was explaining his preparation for a class that he had taught the previous day he said:

Well I prepared it between the hours of 9 o'clock and 3 o'clock the night before.
(Interview 1)

This practice of preparing classes at home at night was still the case after he had been teaching for a year.

Cultural-discursive arrangements

Trevor and Simon entered an environment where those teaching the Certificate III trade-level qualification (the qualification that Trevor was now the coordinator of) operated quite separately to those teaching the Advanced Diploma and the Associate Degree-level qualifications. Simon expressed it in the following way:

There's always been this mentality ... the trades areas ... in the past, there's been this history of real separation between the two areas. (Interview 3)

Trevor felt that he was on his own in coordinating the qualification that he was responsible for. While there was another coordinator in the Electronics department, and in the same staffroom, Trevor rarely accessed support from him. There was also little interaction between Trevor and Simon. They accounted for this as being a result of them teaching in different qualifications. This separation impacted on the support that Trevor received in his learning, especially initially. In effect, rather than being in a department with four permanently employed electronics teachers (Trevor, Simon, an experienced coordinator and an experienced teacher), Trevor was in a section with two casual teachers who came in to teach and then left.

Trevor actively worked to change this separation of the two areas of the small teaching department. The instigation of a shared afternoon tea on Friday afternoons was an important step in doing this. Trevor found this informal arrangement critical to his learning. He commented:

I wouldn't be able to survive without these contacts. (Interview 3)

While these cultural-discursive traditions of separation between these two areas still influenced the Electronics teaching department they became less influential over time. This is possibly due to a range of factors, including the moving of the electrical and air conditioning teachers to another campus, the leaving of most of the experienced permanent electronics teachers and the HoS, and Trevor's active efforts to have electronics teachers working more closely together.

The transition of the Electronics department to competency based assessment, after many years of resisting it, was possible because of these more diffuse cultural-discursive arrangements. Most other departments had been using competency based training and assessment for up to two decades by this time. This move to a competency based approach served as a catalyst for change in assessment which at times flowed through to a change in teaching and, occasionally, to a change in the content of what was taught to students. For Trevor, this change resulted in a great deal of administrative and curriculum writing work in his role as a coordinator. It also resulted in considerable learning for both teachers.

It is likely that the move to a competency based approach further loosened the influence of previous discourses in a range of other areas. One of these was the strict separation of the Certificate III trade qualification and the higher level qualifications. Simon was asked to teach a competency where both trade students and Advanced Diploma students were in the same class. In the past these students had been taught by different teachers, in very different ways, with different content. The argument had been that the Advanced Diploma students needed a higher level of theory to the trade students. For Simon this was a difficult situation where he felt he was in the

middle of two different sets of expectations. His coordinator wanted him to teach content well above the requirements of the competency as they had done in the past. Simon had learnt in the Cert IV TAA that this is inappropriate practice, and to teach only what the competency required. Simon was put in the position of needing to make the decision about how to proceed.

The two identical subjects are being taught two quite different ways ... I'm told by one area that you must teach it the same, and I'm told by some of my colleagues 'No that has to be taught higher than it says in the training package'. Yet the curriculum people are saying ... [and] I keep hearing the Cert IV, 'No, no, you can't do that'. So I'm caught in the middle there and I feel that I'm not really qualified to make that judgement yet. (Interview 2)

With no HoS to provide leadership and direction, Simon was aware that he would need to go against the expectations of at least one group of people. While distressing, this dilemma led to Simon learning more about competency based requirements than he otherwise might have so that he was able to justify his decision.

Material-economic arrangements

This Electronics teaching department was more poorly resourced than any other of the teaching departments included in this research. Lack of physical resources was a source of angst for both Simon and Trevor. As Simon noted:

I just keep getting told that there's no money for resources. There's no money for Smartboards, there's no money for a printer, there's no money for consumables. This is what I've been told from day one, which I find very demoralising as a teacher. (Interview 1)

The division of the previous teaching department and the move of a large proportion of the resources to another campus resulted in ongoing difficulties for Trevor and Simon.

The teaching resources available impacted on the novice teachers' learning. For instance, while electronic whiteboards were available in most other teaching departments across the organisation, this teaching department was still using overhead projectors. While Simon was able to access a classroom with an electronic whiteboard in another building, he was only able to use it once a week, and it resulted in the need to separate theory and practical sessions.

As a result of limited administrative and technical support in the Electronics department, Simon also undertook a range of administrative and non-teaching practices that other teachers were not expected to do. These initially included physically setting up classrooms or arranging for others to do so, fixing furniture and lights, installing power outlets and especially ensuring safety of equipment. He was particularly concerned about the safety of much of the electronics equipment. Without access to a technician who was qualified to do this work, Simon did it himself. This added to his work and responsibilities. He argued that the need to constantly check for safety issues, and then redoing the work when they were discovered, as well as continually worrying that students might be hurt, was even more demanding.

Equipment that the teachers believed was necessary to support student learning was not available. The teachers claim that much of the equipment that had been used in the past was taken to the other campus when the rest of the staff moved there. They had tried, unsuccessfully, to get

some of it returned, arguing that it was essential for teaching Electronics and not used for teaching the other trades. Trevor noted:

For one of the units for third years I have no equipment, so I've been bringing stuff in. I've been getting all the teachers to bring their own personal gear to do the practical. (Interview 1)

With no-one listening to their concerns, and no HoS to advocate for them, Trevor felt that he had very little power to do anything else.

The Electronics department had many filing cabinets containing resources, lesson plans, workbooks and assessment tasks. Trevor noted:

The material was set up a long time ago, and it's based on the NSW material, but it's 30 years old. (Interview 2)

Trevor used this material without changes initially, arguing that it was not possible to make changes. He later acknowledged that the previous coordinator had had to make small changes and that he also had to make small changes so that it met present day requirements.

Social-political arrangements

Both teachers felt very under-supported and this lack of support increased the difficulty of learning. For instance, the practice of learning the relevant policies was made difficult in the first few months of Trevor's work because he had not been advised that they were readily available on the Staff Information System. In other departments this information would have been available from a range of people, and especially the HoS, whose responsibility includes being familiar with these policies. For both teachers

the lack of support impacted heavily on how they felt about their work.

Simon noted:

My biggest challenge probably is staying positive in an environment where I feel lack of support. Not becoming too focused on the negatives, not getting frustrated with the system, but just focusing on the teaching. That's my biggest challenge.
(Interview 1)

With Trevor and Simon feeling that they were provided with little ongoing support to learn their jobs, the advice that they were able to access was largely external to the Electronics department, from people with special expertise related to the information they were seeking. For instance, they received advice from the RPL coordinator, the curriculum consultants, the Cert IV TAA teacher (in addition to the workshops that she offered), and from Meredith, Trevor's mentor and a talented teacher. As a result, the learning they did was largely consistent with local and national VET policies and expectations. This sometimes created tension within the teaching department.

Simon found that the new ideas that he was bringing to the department were not always appreciated. After the first few months he became strategic about the way that he tried to bring in new ideas. For instance, he realised that he could design a project that would incorporate three different competencies, support student learning well, and result in a product that would give the students a sense of achievement. He suggested this to the teachers of the other two classes and met with some resistance.

I've had to step back and say OK ... I've made the suggestion so now I ... can't push it. I don't feel like I can push it anymore, because I pushed a little bit on a few different ideas, and I kind of felt I've come in from industry and the first few months I think I pushed pretty hard on 'why are we doing it this way'? And 'why was there

only one graduate last year'? And 'maybe we're doing something wrong', but it wasn't received very well. So I've got to step back. I think I've got to step back and say 'well, maybe I come across arrogant' ... nobody likes to feel like they're being told that the way you're doing it is wrong. I mean I wouldn't, so I've got to stand back and say ... there's another way of doing this. So just waiting. (Interview 2)

He thus realised that he was more likely to be successful if he slowly introduced the changes that he wanted to make. These changes that Simon was suggesting, and at times implementing, were consistent with the policies and expectations of the relevant Training Packages, the electronics industry, and Golden Towers TAFE, but not the traditions of the teaching department in which he was operating. By trying to make changes to pre-existing approaches, Simon challenged previous traditions and this further impacted on the lack of support he received for his learning and for other matters.

While all other teaching departments reported to a HoS, the Electronics teaching department reported directly to the Head of Faculty. Politically, the absence of a HoS resulted in there being no-one to advocate for them when higher level decisions were being made. The HoS was the person responsible for lobbying for equipment and resources, and without a person in that role the teachers (two of whom were novices both to education and to the organisation) were the only people likely to be pushing for resources. This may have been one of the reasons why this department was poorly resourced. This lack of management and leadership on a day-to-day basis made the work that Simon and Trevor had to do quite difficult. As Trevor said:

How could they leave a group behind with nobody to look after it? And expect other people to look after it? There's been no planning for budgeting or enrolments or students. (Interview 2)

While the Head of Faculty was officially responsible for the Electronics department, he had a broad and demanding range of responsibilities that included frequent international travel. This left a leadership vacuum that both Trevor and Simon found unsatisfactory. Trevor noted:

It's not working. We never see him. We just have the impression he's not interested. But it's probably not that, I think he's just too busy. (Interview 3)

The Head of Faculty was difficult to access when novice teachers needed guidance and support. On a number of occasions Trevor identified a desire for more support, more acknowledgement and more direction. Not only was he a novice teacher himself, but Trevor was also the supervisor of experienced casual teachers. He was therefore in a position where watching these casual teachers teaching was one of the main learning strategies that he used to learn how to teach. However, these relationships were not always the most supportive of novice teacher learning.

Trevor had a difficult relationship with his students, especially initially. He followed the teaching approach of his teaching department, which was of the 'sage on the stage' style (King, 1993). This established a clear power differential, and all challenges from students were viewed through this lens. This relationship with students served to constrain Trevor's learning from student experience and student feedback. For Trevor it was a relationship of power, with students regularly challenging his skills and knowledge. Trevor saw his power lying in his years of experience working in the industry he was teaching about, together with his authority as a teacher and assessor. When students made complaints about his teaching for instance, his response was to bring his reference from a previous employer to class.

So some guys just sit back and think it's absolutely boring. I bring my job reference in, show them my experience and they say, oh we don't do that anymore. (Interview 1)

This response from the students furthered his concerns about his own lack of knowledge in some of the areas that he was teaching about. Interestingly, this issue of his knowledge and experience being challenged by students was part of the motivation for Trevor to work harder at learning through reading.

Only when he was comfortable with his level of knowledge of the subject matter that he was teaching was Trevor able to develop his teaching approach slightly away from that of 'sage on the stage'.

I'm scared of them knowing more than what I know, but as [Barry] said, they know nothing. He says they think they know it but they don't. (Interview 2)

By the end of the second year of teaching Trevor was still concerned about his lack of knowledge but had incorporated the advice from Barry into his own thinking.

I'm a bit more relaxed ... I've learnt that the ones out there know nothing. The students, they know nothing. They think they do but they don't, and I can say well when you guys get to 30 years work experience and have got a couple of degrees under your belt then I can talk to you face to face on the platform but otherwise you just listen to what I'm saying. (Interview 3)

Nonetheless, with his project of increasing student collaboration, he had moved to a slightly more student-centred approach to teaching and it is possible that this contributed significantly toward an improved relationship with his students. However, for Trevor having control was still an important component of his relationship with the students.

5.4.7 Concluding remarks

Being employed to undertake the role of both a teacher and a qualification coordinator, with no prior experience in either, effectively meant that Trevor had to learn two jobs. The heavy demands of the coordinator role resulted in his focusing heavily on that role at the expense of his teaching role. This was further exacerbated by practice architectures that constrained his learning to undertake the role of a teacher. These included lack of access to the support of colleagues or a supervisor, very limited staffing and other resources, and the resulting administrative tasks that were not part of a teacher's or coordinator's role in other departments. Regular meetings with a mentor provided some support for Trevor's learning, but because of his own focus on the coordinator role, mentoring support also focused heavily on what he needed to learn for that role. To support his learning to become a teacher, Trevor relied largely on his own prior experiences; observing the teaching of casual teachers; using pre-existing resources and assessment tasks; advice from staff outside his own faculty; the Cert IV TAA; and reading.

Many of the practice architectures that constrained Trevor's learning, also impacted negatively on Simon's learning. For Simon, the lack of collegial support was especially difficult. In the first few months of his teaching he identified a number of ways that the department could improve their practices, including their teaching approach, and better support student learning. The social-political arrangements present in the site did not support new approaches, however, and Simon's more student-centred approaches were rejected. The Cert IV TAA, doing the job, using pre-existing resources and assessment tasks; observation of the teaching of an experienced teacher, and advice from staff outside his faculty, all supported Simon's learning.

5.5 Learning 'how to go on' as a teacher in Air Conditioning and Refrigeration

5.5.1 Practice landscape

Walking into the building that houses the Air Conditioning and Refrigeration staffroom, the first thing that you notice is that it is very new. The department is a combination of the Electrical teaching area and the Air Conditioning and Refrigeration teaching area. For the purposes of this case study I refer to it as the Air Conditioning and Refrigeration department. The teaching department had previously also included the Electronics teaching area from the previous case study. At the time of this research the Air Conditioning and Refrigeration department was part of a large campus devoted entirely to trades teaching. The department was divided between two buildings, with the staffrooms and some classrooms in the new building and the practical teaching workshops and other classrooms in another building that was shared with other trades.

On entering the large, light-filled, open-plan staffroom, a close observer might notice that there are two groups of teachers. The electrical teachers have workstations at one end of the room, and the Air Conditioning and Refrigeration teachers at the other. Two glass-walled rooms are available for meetings when privacy is preferred.

All of the classrooms are set up with desks in a U or V shape that enables student discussion and interaction, and most had screens on the wall attached to a computer that allows the use of online materials and videos. There are no windows in any of the classrooms. The classrooms have

diagrams, models, and physical examples of the different systems that the students are learning about.

The two workshops where practical teaching is undertaken are in a nearby building. One of these is set up as a simulated worksite where students encounter equipment and environments similar to what they might encounter in the workplace. The other workshop is set up to allow students to safely learn to handle refrigerants and other gases, as well as to undertake a range of practical tasks.

5.5.2 Novice teacher

When meeting Ewan the first impression you get is that you are meeting a tradesman. His clothes are those of a well-dressed tradesman and his body language is that of an experienced and confident tradesman. Ewan had been working in the air conditioning and refrigeration industry for 20 years when he began teaching. He had both worked for others and owned his own business for some years.

During his time as a tradesman Ewan had supervised many apprentices. He had a trade certificate in air conditioning and refrigeration, and a Certificate IV in Occupational Health and Safety. He completed a Cert IV TAA within his first semester of teaching. Table 5.5 provides an overview of Ewan's qualifications, his work experience, and the basis of his employment as a teacher in each semester of the study.

Table 5.5: Air Conditioning and Refrigeration Novice Teacher: Ewan

Teacher	Details	Comments
Employment basis	Two year contract	Full time contract throughout. Left the organisation to teach in a TAFE in another city after 18 months.
Specific field of expertise	Air Conditioning and Refrigeration	More than twenty years industry experience when initially employed as a teacher.
Qualifications	Trade Certificate Cert IV Occupational Health and Safety Cert IV Training and Assessment	Completed one semester after commencing as a teacher.
Other work	No other paid work	

After teaching at Golden Towers TAFE for just over 18 months, Ewan and his family moved to another city in another state, attracted by a permanent position and to be closer to family support with their new baby. Ewan took a position at another TAFE where his role was to set up a new Air Conditioning and Refrigeration teaching department for that TAFE. While I had a third and final interview with Ewan about four months after he had commenced this new position, this case study focuses largely on Ewan’s learning as a result of his time at Golden Towers TAFE.

5.5.3 Projects

The initial project that Ewan worked toward was that of teaching apprentices. By the time he had been teaching for more than a year his project was much broader. He characterised it as:

Giving students the tools and the knowledge they need to do their work, to be good tradespeople and pretty much to pay the bills and put food on the table for them. And if they want to work hard, become good successful business people. Give them the basic stepping stones they need to spring off from there. (Interview 2)

After moving to the new TAFE, the projects that Ewan identified were setting up the new department, bringing new students into the course, and teaching.

5.5.4 Learning substantive practices

Ewan's learning about how to undertake assessment developed throughout the months he was at Golden Towers TAFE. The practical assessment initially included tasks similar to those that he had supported apprentices with prior to becoming a teacher. Ewan's own development of assessment skills and knowledge was assisted by the coordinator's support for the development of holistic assessment tasks over a number of subjects so that a project for one subject formed the basis for a project from another subject. Through working closely with the coordinator, he also developed skills in creating both online and paper-based assessment tasks.

Ewan's teaching practices and class preparation skills developed over the time that he was a teacher at Golden Towers TAFE. From when he first began as a teacher there, he was also involved in using the online learning

platform to support student learning. This served as a repository for resources for students. Ewan also used these resources in the classroom via an electronic whiteboard. Online tests were also created for this online platform. These tests were automatically marked and allowed students to access a result as soon as they completed the test. Students were also able to revisit the test and identify questions that they got wrong. Ewan learnt to create these tests shortly after he commenced teaching.

Ewan found that a number of the apprentices who were in his classes were not committed to working in the air conditioning and refrigeration industry, and were consequently not committed to learning. This had a number of implications, including what Ewan considered to be high levels of repeating of subjects and consequent costs to employers and to students. One of the consequences was that the less-engaged students interrupted the learning of those who wished to engage. Ewan developed a range of strategies to address this issue.

5.5.5 Practices that supported learning

In the first six months or so of his teaching, Ewan was guided in his learning by an informal mentor, the qualification coordinator David. David had developed strong pedagogical skills through postgraduate study in adult education. In relation to assessment Ewan noted:

[David] gives me a lot of pointers on what we should be assessing them on. He's very much into using the Training Package, getting the core meaning of what they mean and then working out my assessment around that. (Interview 1)

Ewan was often not actively aware of David's guidance. At other times when Ewan encountered difficulties it was David that he went to for advice. For instance:

Afterwards I spoke to [David] and I said 'Listen, got a few issues here blah blah blah'. And we just discussed it and he told me some ways I could probably, you know, methods I could use to hopefully change their behaviour and work from there. (Interview 1)

Another source of support were the informal chats that took place every morning at the morning tea break that Ewan's team referred to as 'smoko':

I'll discuss with the other teachers, they'd discuss what works for them, or what doesn't work for them, you know just sort of pretty much get around at smoko, saying we'll try this next time, we'll do that so basically just peer support really. (Interview 1)

Smoko was a time when the personal and the professional overlapped. It created a space where discussion included stories and anecdotes, advice and support, and some ad hoc planning related to future teaching.

By the time Ewan had been teaching for just over a year, the support had changed to a shared discussion among the full-time Air Conditioning and Refrigeration teachers. Ewan noted:

We freely talk about a lot of things, you know, what we should be teaching, what doesn't work, what does work. We all give each other pointers on what tasks we can do or what equipment we've got that other teachers might be able to utilise in their class, so that makes it a lot easier. (Interview 2)

This is discussed further in the section on practice architectures.

David arranged for Ewan to team teach with himself and one of the other experienced teachers. This enabled him to come to know less familiar content areas in a safe environment. It also allowed for him to learn different teaching approaches as well as to observe and be involved in lesson and subject planning and lesson preparation. A number of the classes that Ewan was teaching in the first year were co-taught by other more experienced teachers. For instance:

We've actually got three second-year classes, another teacher teaches the first two so I'm just piggybacking off him for the third class ... but basically, I just stuck to his plan. (Interview 1)

This provided a model for teaching that Ewan followed initially but later changed to better meet his own teaching preferences and his understanding of student needs.

When he first began teaching, Ewan was given classes that had been well prepared by previous teachers (or sometimes co-teachers). This included lesson plans and resources. In preparing future classes, these largely engaging and student-centred lesson plans served as a pedagogical model. Previous assessment tasks also served as a model for future tasks. These resources, integrated with the experiences of co-teaching and team teaching provided a solid basis for Ewan's learning.

Ewan saw student interaction and engagement as key evidence that his teaching was going well. When asked six months after he began teaching how he would know if he was teaching well his response was:

Student behaviour I think would be one. If I like totally lost students, if they didn't interact in my classes, if they just sat there silently, you know. I suppose the results,

if they fail, if they don't meet the guidelines, the criteria of the Training Package, I think that'd be an indication that it wasn't working. (Interview 1)

He thus saw student success as an important indication of the success or otherwise of his teaching approaches.

Especially initially, Ewan's own experiences, including as an apprentice and in supporting other apprentices when working in the industry, informed some of his teaching and assessment approaches. Ewan's prior experiences as an employer also informed some of his teaching approaches.

My experience that I've had in other areas which don't relate to teaching. How I've trained people before ... like I said the apprentices I used to have when I was a tradesman. Most of those sort of shaped the way ... I knew what I didn't like and what I did like and I tried to suit my assessments and classes and whatever to suit the way I would prefer to be taught. (Interview 1)

Ewan felt that the Cert IV TAA did not meet the learning needs of those teaching apprentices. He noted:

There was a Cert IV which we did, but ... I mean it's not relevant to a trade, apprentice training. A lot of it is similar but you've got to take what you want out of it ... They've got a whole range of professions and different types of learning experiences so they need to cater for everyone, and sometimes I think maybe the trade learning experience might be overlooked. Apprentices are a different kettle of fish to, say, the professional that comes and wants to do his Cert IV ... [who is] there because they want to be there. I think we have a hassle where we have some students that just don't want to be here. (Interview 2)

After some discussion of why the Cert IV did not meet his needs, I asked if there were any sections that were relevant for him. He replied:

The creation of documents and subject guides and assessment tools, that was all relevant. (Interview 2)

5.5.6 Practice Architectures of the Air Conditioning and Refrigeration teaching department that enabled and constrained novice teacher learning

Employment arrangements

Ewan was employed on a two-year contract. While he would have preferred to have a permanent position, this contract provided similar benefits such as sick leave, paid stand down during non-teaching time, and recreation leave. He was keen to achieve a permanent position to allow for job security and noted:

Hopefully I've proved myself and I think the other teachers who are more superior said I'm doing a good job, so hopefully that'll go towards me getting a more permanent position. (Interview 1)

Like some of the other teachers in this research, Ewan saw the availability of a permanent position as being closely related to his performance rather than, for instance, as part of the broader financial management of a faculty.

Cultural-discursive arrangements

The language of the trade was used within the staffroom and in the classroom. Sometimes shorthand expressions were used that other Air Conditioning and Refrigeration teachers clearly understood but were not clear to me. Interestingly, a number of times Ewan used the language of school teaching in a somewhat pejorative way. For instance, one of the teachers who yelled at students was referred to as a 'schoolmaster'.

Ewan also used language about students that he attributed as language used in his department. For instance:

Eventually the trouble makers, not that they're trouble but we labelled them as trouble makers ... (Interview 1)

Each time he referred to students in a negative way such as this, he would add some qualifying words as he did in the example above.

Material-economic arrangements

The physical arrangements of the staffroom served to provide easy access to advice and support from David and other experienced Air Conditioning and Refrigeration teachers. These included a shared morning tea around a communal table in a large kitchen; a staffroom shared with the electrical teachers, a number of whom had Bachelor or postgraduate qualifications in education; and an open plan staffroom.

The Air Conditioning and Refrigeration department had relatively good access (compared to other departments, and especially compared with the Electronics department) to both reusable and non-reusable resources. For instance, the holistic assessment tasks that were introduced shortly after Ewan began teaching required the purchasing of what Ewan considered to be quite a lot of equipment and non-reusable resources. While it took some time, this equipment was eventually purchased. They also had access to a technical assistant who set up equipment for classes as well as administrative support staff.

Social-political arrangements

The social environment within the Air Conditioning and Refrigeration department allowed for teachers to be working together to develop their teaching and assessment of students. Ewan said:

It's just a constant conversation we've been having and we go through it that way.
(Interview 2)

This constant conversation took place across their desks, over smoko, and during deliberate meetings set to review subjects or assessment tasks.

The Air Conditioning and Refrigeration department (including the Electrical teaching area) had resisted a move to the competent/not yet competent approach to assessment that had been used in most of the other teaching departments for some years, and was often seen as a core component of competency-based assessment. Instead they focused on a percentage approach, with students needing to achieve 100 percent in some tests, and 80 percent in other tests to be deemed competent. The strong social-political arrangements of support that were available for Ewan may have also served to reinforce this approach. In discussing how the Cert IV TAA teachers did not understand the needs of his department, Ewan noted that the teachers in his department

... always sort of joked, 'Just tell them what they want to hear, when you do the subject', but what actually happened to them up there on the coal face is a little bit different. (Interview 2)

When he first started teaching, Ewan's approach to his relationship with students was:

I've got my trade, I'm here to help them get their trade. I think that a little bit more respect rather than being the bully bloke at the front of the classes. (Interview 1)

He was particularly negative about another teacher who, he noted a number of times, yelled at students. After teaching for a year Ewan's approach to his relationships with students was more nuanced through experience:

I try and lead by example and try to have good rapport with students, but you still..
Because a lot of them are only young, you still need to have a little bit of authority.
(Interview 2)

5.5.7 Concluding remarks

More than any of the other teachers in this study, Ewan was well supported in his learning to undertake the role of a teacher. Team teaching with his mentor, access to ongoing discussions with colleagues, an environment of solidarity between teachers, and a well-resourced department, all contributed to this support. A daily morning tea at a large communal table attended by all staff, was an important practice architecture that supported Ewan's learning.

Chapter 6

Learning How to Go On: Cross Case Findings²

6.1 Chapter overview

The previous two chapters ‘zoomed in’ (Nicolini, 2012) to look closely at each of the case studies of the practice sites where novice teachers were employed. The case studies presented in those chapters addressed the research questions at this zoomed in level for each case. In outlining the substantive practices that the novice teachers undertook in each site, the case studies identify what it is that each of the novice teachers needed to do, and this formed the basis for what each teacher needed to learn. Next, the practices that supported learning (PSLs) that each teacher undertook that resulted in learning these substantive practices were outlined. Finally, the practice architectures that enabled and constrained learning in each of the sites were then outlined.

² Some of the results in this chapter have been published in the following publications:

Francisco, S. (2017). Mentoring as part of a trellis of practices that support learning. In K. Mahon, S. Francisco, & S. Kemmis (Eds.), *Exploring educational and professional practice: Through the lens of practice architectures*. New York: Springer.

Francisco, S. (2015). *Life rafts: Supporting the continuing professional learning of novice VET teachers*. Adelaide, NCVET.

This is the first of two chapters that ‘zooms out’ (Nicolini, 2012) to provide a broader response to the research questions. In this chapter I first draw together the findings from the case studies to provide a combined picture of what the teachers learnt and how they learnt it. Next, the theory of ecologies of practices is used as a framework to explore the interrelationships of PSLs used by the teachers in this study. Specifically, through bringing together the findings of the case studies, this chapter addresses the research questions: How do novice VET teachers learn to become teachers through undertaking the teaching role? How do novice VET teachers learn to become teachers through practices additional to the teaching role? and What do novice teachers learn? The chapter begins with an overview of the substantive practices that the teachers undertook as part of their teaching roles.

6.2 What teachers do

The substantive practices that novice teachers engaged in varied between the different sites. They also varied over time, with most teachers undertaking a more extensive range of practices by their second year of teaching. This development of the range of practices undertaken by novice workers is consistent with other workbased learning research (for instance, Eraut, 2011; Lave & Wenger, 1991). In this chapter, I focus on the “integrative practices” (Schatzki, 2002, p. 88) that teachers undertook, such as teaching. Integrative practices are usually made up of a number of dispersed practices, so that, for instance, the integrative practice of teaching might include the dispersed practice of using an electronic whiteboard. Table 6.1 provides a summary of

the integrative practices that each of the teachers undertook in the first six months of employment. This table shows that in the first six months of working as a teacher the only substantive practice that all of the teachers were involved in was student assessment. Classroom teaching, subject guide development and lesson preparation were undertaken by all except two of the teachers. Subject Guide development was undertaken only once for each subject each semester; however, it is included as a separate practice because it provides an overview of the content and the assessment tasks for the subject for both the students and the teachers. Only Alice and Ewan, and to some extent Sam, were involved in liaising with employers at this early stage of their teaching.

Table 6.1: Practices that Made up the Teaching Role: First six months

	Classroom Teaching	Lesson prep	Development of assessment tasks	Assessment	Subject Guide prep	Teaching in the workplace	Employer/industry liaison
Sport & Fitness Grant	No	No	No	***	No	No	No
Air Cond & Refrigeration Ewan	***	***	***	***	*	No	**
Electronics Trevor	***	***	No	***	*	No	No
Electronics Simon	***	***	No	***	*	No	No
Community Services Alice	***	***	***	***	*	**	**
Building Design Sam	***	***	***	***	*	No	*
Business Admin Sarah	No	No	No	***	No	No	No
Horticulture Michael	***	***	***	***	*	No	No
Beauty Therapy Tabitha	***	***	No	***	*	No	No

*** - used extensively

** - used occasionally

* - used rarely

No – Not used

A number of teachers – including three of the four casual teachers – noted their surprise at the amount of work that was required in addition to teaching. This was often referred to as ‘administrative work’ by the teachers, and included class preparation, subject guide preparation, development of resources, enrolment administration, and recording of student achievement. Similarly, Bathmaker and Avis (2013), in a longitudinal study of English

Further Education teachers, reported that at least one of their participants found that “the amount of preparation and paperwork came as a shock” (p. 740). In my study, this unexpected additional work created difficulties for some of the teachers in managing their workloads, especially for those teachers who were teaching casually, with commitments elsewhere.

After being employed as a teacher for a year, all the teachers in my study were undertaking classroom teaching, assessment and lesson preparation, and all except Tabitha were creating a subject guide for the classes they were teaching (although Tabitha had been involved in developing a subject guide for the subject she taught in the first semester). Alice remained the only teacher who was undertaking some teaching in the students’ workplace, and Trevor had joined Ewan, Alice and Sam in liaising with employers. See Table 6.2.

Table 6.2: Practices that Made up the Teaching Role: End of first year

	Classroom Teaching	Lesson prep	Development of assessment tasks	Assessment	Subject Guide prep	Teaching in the workplace	Employer/ industry liaison
Sport & Fitness Grant	***	***	***	***	**	No	No
Air Cond & Refrigeration Ewan	***	***	***	***	**	No	**
Electronics Trevor	***	***	***	***	**	No	*
Electronics Simon	***	***	***	***	**	No	No
Community Services Alice	***	***	***	***	**	**	**
Building Design Sam	***	***	***	***	**	No	*
Business Admin Sarah	***	***	***	***	**	No	No
Horticulture Michael	***	***	***	***	**	No	No
Beauty Therapy Tabitha	***	***	No	***	No	No	No

*** - used extensively

** - used occasionally

* - used rarely

No – Not used

Two years after commencing as a teacher, Sarah, Michael and Tabitha were no longer working in that role. Classroom teaching, lesson preparation, assessment, development of assessment tasks, and subject guide development were undertaken by all remaining teachers. Ewan and Alice were undertaking some of their teaching in the students' workplace, and

Grant and Simon were the only teachers not liaising with employers. Table 6.3 provides an overview.

Table 6.3: Practices that Made up the Teaching Role: After two years

	Classroom Teaching	Lesson prep	Development of assessment tasks	Assessment	Subject Guide	Teaching in the workplace	Employer/industry liaison
Sport & Fitness Grant	***	***	***	***	***	No	No
Air Cond & Refrigeration Ewan	***	***	***	***	***	**	**
Electronics Trevor	***	***	***	***	***	No	**
Electronics Simon	***	***	***	***	***	No	No
Community Services Alice	***	***	***	***	***	**	**
Building Design Sam	***	***	***	***	***	No	**
Business Admin Sarah	No Longer Teaching						
Horticulture Michael	No Longer Teaching						
Beauty Therapy Tabitha	No Longer Teaching						

*** - used extensively

** - used occasionally

* - used rarely

No – Not used

6.3 What teachers learn

There are many answers to the question of what the novice teachers learnt. A broad response to the question is that they learnt to become teachers in the specific teaching area where they were employed. Another answer is that most of the teachers learnt the actions, that is, the doings, sayings and relatings, associated with being a teacher in their teaching department. These included the language used, the way they used their bodies, the way their teaching places were set up, and the way they interacted with students. The discourse of teaching that was present at each site strongly influenced what each of the novice teachers learnt. Teachers in the study often referred to their own experiences as a learner when preparing to be a worker in the industry that they later became teachers in. To some extent, what they learnt also included the traditions of teaching in that industry.

More specifically, most of the teachers learnt the practices that made up their teaching role, as outlined in Tables 6.1, 6.2 and 6.3, including how to teach in a classroom, prepare classes, develop subject outlines for the subjects they were teaching, and assess student competence through practical and theoretical assessment tasks. All the teachers also needed to learn, or relearn, at least some of the theory component that they were teaching.

Table 6.4 provides an outline of what the teachers learnt. This table however needs to be read with some caution to avoid the misunderstanding that the teachers all learnt the same things. As Chapters 4 and 5 show, while the broad practices could be recognised as the same category, the specific actions involved varied considerably. While all the teachers can be seen to have learnt to teach, for instance, the practices that they engaged in as part of this teaching were often quite different from each other's approaches. I will

illustrate with some examples. When teaching the theory component of a class, Trevor had students sitting in rows in a classroom, using a workbook that was created for a different group of students studying a different qualification, and copying additional information that he wrote on the whiteboard. Trevor learnt not to talk while students were copying down what he had written so they weren't distracted.

By contrast, when Sarah was teaching in the Flexible Learning Centre, she worked with students individually, moving from one student to the next student who had a query. Each of these students could have been working on any of 20 different competencies and Sarah learnt to work individually with many different students across many different content areas. To teach the theory component of one of his classes, Michael had the group in a horseshoe formation or gathered together, sometimes in a classroom, but often in the glasshouses or elsewhere on the bush campus. His students were actively engaged in discussion of what they already knew about the topic, and Michael used plant specimens, and colourful handouts he had prepared specifically for that class, as resources to support student learning. Michael further developed his skills in supporting student learning by using language and approaches that students readily engaged with. When Tabitha taught the theory component of a class, she did it as part of her demonstration of the practical part of her teaching, and she developed strategies to ensure that her class did not go over the allotted time.

All of the teachers learnt something about teaching, and each of them taught in a different way. Table 6.4 indicates the semesters in which the teachers both undertook and learnt a particular practice. In most instances this table includes each semester that they were employed as a teacher. The

exceptions are: Grant, who did not do any classroom teaching, lesson preparation, subject outline preparation and did not need to learn further theory related to his teaching in his first semester of being employed as a teacher; Sarah, who taught in a Flexible Learning Centre for her first two semesters of being employed as a teacher, did not do any classroom teaching, prepare lessons or subject outlines. Michael and Tabitha were no longer teaching in the last two semesters (3 and 4) of this research. While the broad categories of what teachers learnt are the same, in addition to teachers learning different things to each other within those broad categories, they also often learnt different things in each semester of teaching, usually building on learning from the previous semesters.

Table 6.4: What Most of the Teachers Learnt

	Practical assessment	Theory assessment	Classroom teaching	Lesson prep	Subject Outline	Theory content
Grant Sport & Fitness	1,2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
Sarah Business Admin	1,2,3,4	1,2,3,4	3,4	3,4	3,4	1,2,3,4
Simon Electronics	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
Trevor Electronics	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
Ewan Air Cond & Refrig/n	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
Alice Community Services	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
Sam Building Design	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
Michael Horticulture	1,2	1,2	1,2	1,2	1,2	1,2
Tabitha Beauty Therapy	1,2	1,2	1,2	1,2	1	1,2

The numbers refer to the semester of teaching where the practice was learnt. So for instance, 1 refers to the teachers' first semester of teaching.

There were practices that only some of the teachers learnt. An overview of these is provided in Table 6.5. Again, it is important to note that these broad terms meant different things in different sites. The most apparent of these was managing student behaviour. Focusing on the extremes, for Trevor it sometimes meant managing a particular student who was prone to violence in order to prevent others being hurt, and for Tabitha it involved

managing the behaviour of a student who regularly arrived late to class and disrupted others when she arrived.

Table 6.5: What Some of the Teachers Learnt

	Qualif/n Coord/n	Curric/m Dev't	Teaching International and migrant Students	Student Enrolment	Using online learning platform	Creation of assessment tasks	Managing Student Behaviour	RPL Assess/t
Sport & Fitness Grant	N/A	N/A	N/A	N/A	2	2	2	N/A
Sarah Business Admin	N/A	N/A	1,2,3,4	N/A	1,2,3,4	3,4	3,4	N/A
Simon Electronics	N/A	3,4	1,2,3,4	N/A	1,2,3,4	1,2,3,4	1,2,3,4	3,4
Trevor Electronics	1,2,3,4	2,3,4	N/A	1,2,3,4	N/A	1,2,3,4	1,2,3,4	2,3,4
Ewan Air Cond & Refrig/n	3,4	3,4	N/A	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
Alice Community Services	3,4	2,3,4	1,2,3,4	1,2,3,4	3,4	1,2,3,4	1,2	N/A
Sam Building Design	3,4	3,4	N/A	2,3,4	2,3,4	1,2,3,4	1,2,3,4	3,4
Michael Horticulture	N/A	N/A	N/A	N/A	1,2	1,2	1,2	N/A
Tabitha Beauty Therapy	N/A	N/A	N/A	N/A	N/A	N/A	1,2	N/A

The numbers refer to the semester of teaching where the practice was learnt.

In addition to the practices outlined in Tables 6.4 and 6.5, a number of individual teachers learnt other practices. Alice learnt to teach in the workplace of her students, and to tailor qualifications for individual organisations. Ewan also learnt to teach in the workplace of his students

when he moved to the new TAFE. Michael learnt what the bush campus and its surrounds offered as teaching resources. Sarah learnt to work with students studying via flexible delivery and thus to manage teaching up to 20 (but usually no more than six) different competencies in the same teaching session.

In summary, the participating novice teachers in this research learnt much over the two years of this research. Each of them learnt to teach different things in different ways. What was learnt varied between sites, and was informed by the industry that the teaching was about, as well as the traditions of the teaching department and the past experiences and current expectations of the teachers and managers in that department. In Chapter 7 the practice architectures that enabled and constrained teacher learning are explored.

6.4 How teachers learnt through undertaking the role of a teacher

In effect, as noted in the introduction, each novice teacher becomes a teacher as soon as they are employed in that role. Once they step into a teaching environment they are undertaking the role of a teacher (and even before this when they are preparing the first class or the first assessment task). However, the case studies reported in Chapters 4 and 5 have shown that teachers learn much about their role as a teacher through undertaking the role. This is consistent with Billett and Smith's (2014) argument that the learning of workers takes place through "(i) engagement in work activities, (ii) observing and listening, and (iii) 'just being in the workplace'" (p. 890). Consistent with

Eraut's (2011) findings, it is clear that "learning from the challenge of work itself" and "consultation within the working group" (p. 8) were also important sources of learning for the participants in his research. In this section I address the research question: How do novice VET teachers learn to become teachers through undertaking the role of a teacher?

In this study the teachers used a variety of practices that supported them to learn to undertake the role of a teacher. Table 6.6 shows the PSLs that were used by all of the novice teachers through undertaking the teaching role. These included: the support of colleagues and supervisor; the use of existing resources as models (for instance, lesson plans, assessment tasks, student resources); student feedback; and trial and error. Table 6.7 shows those learning practices that were used by some of the teachers. These included: team teaching; co-teaching (two or more teachers teaching the same subject to different student cohorts); reflection; and reading. The number of asterisks used provides an indication of the extent to which each teacher used each practice. Together the tables show that a broad range of PSLs were used by the novice teachers.

Table 6.6: Practices that Supported the Learning of all the Teachers

	Support of Colleagues and Supervisor	Existing resources as models	Student Feedback	Trial and Error	Prior Experiences
Grant Sport and Fitness	***	***	***	***	
Sarah Business Admin	***	***	***	***	
Simon Electronics	*	***	***	***	
Trevor Electronics	*	***	***	***	
Ewan Air Cond & Refrig/n	***	***	***	***	
Alice Community Services	***	***	***	***	
Sam Building Design	***	***	***	***	
Michael Horticulture	**	***	***	***	
Tabitha Beauty Therapy	**	**	***	***	

*** - used extensively
 ** - used occasionally
 * - used rarely

Table 6.7: Practices that Supported the Learning of Some of the Teachers

	Team teaching	Co-teaching	Reflection	Reading	Prior Experiences
Grant Sport and Fitness	**	**	NE	NE	
Sarah Business Admin	**	**	NE	***	
Simon Electronics	Not used	*	**	***	
Trevor Electronics	Not used	*	NE	***	
Ewan Air Cond & Refrig/n	**	**	NE	NE	
Alice Community Services	**	**	***	***	
Sam Building Design	**	**	***	***	
Michael Horticulture	Not used	**	***	***	
Tabitha Beauty Therapy	Not used	**	NE	***	

*** - used extensively

** - used occasionally

* - used rarely

NE – Not enough evidence to know

For both Tables 6.6 and 6.7 the final column is included to show that prior experiences influenced teacher learning across each of the other categories. I have included it in this way to highlight its existence as an influence on the other learning practices that the teachers used. Prior experiences impacted on the learning of all teachers, as well as on the practices that they undertook as a teacher. This is consistent with Price, Johnsson, Scheeres, Boud and Solomon's (2013) argument that

[workers] carry with them particular understandings of similar practices from other contexts (e.g. previous jobs, prior experiences and/or knowledge). In enacting organisational practices, workers understandings of those practices become enmeshed with previous understandings of similar practices from other contexts (p. 233).

For VET teachers it can be argued that these understandings, developed through a range of experiences, including their work in the occupation that they are teaching about, provide a basis for their work as a teacher and their learning in this role.

For casually employed teachers who spent less time on campus, prior experiences were even more influential than for teachers employed on contract or permanently. As well, the less support a casual teacher was given, the more they relied on their own prior experiences. Grant's case is interesting to consider in relation to this. In learning to assess and teach students in the gym, Grant had access to a broad range of PSLs, including observation and modelling, and mentoring. However, during the semester he taught in the classroom Grant had access to fewer PSLs at the same time as (and partly because of) having a more than full-time workload. In this semester he relied heavily on his own prior experiences rather than observation and modelling, and mentoring. Similarly, Tabitha, who had little access to experienced teachers, relied heavily on her own prior experiences. This approach is not likely to be supportive of the development of teaching approaches consistent with present day expectations.

The value of learning through observation of experienced colleagues has been noted by, among others, Billett (2001), Billett and Choy (2013), and Eraut (2011), and more specifically it has been noted by Robson (2006) in relation to the learning of Further Education teachers in Britain. Billett and

Choy (2013) note that most learning at work occurs “through observation, mimesis (i.e. imitation) and practice” (p. 267). It was apparent in this study that team teaching allowed the teachers to learn through these three workplace learning practices. They were able to observe and, where they chose to, imitate, the practices of the teachers they were teaching with. While not all teachers had the opportunity to team teach with an experienced teacher, all teachers in this study observed at least one experienced teacher as part of an assessment task for the Cert IV TAA, and each of them mentioned this experience as contributing to their learning. While several participants noted that they would have liked further opportunities to observe other teachers teaching, identifying it as a useful means to develop their own teaching practice, Alice, Sarah, Ewan, Grant and Trevor actually sought additional opportunities to do this. The use of existing resources as models was used by all the teachers and allowed for imitation of work done by other teachers.

The final learning practice identified by Billett and Choy, ‘practice’, was important for each of the teachers in learning to become a teacher. I have included this as ‘trial and error’ in Table 6.6. That is, the teachers tried something and if it worked they continued doing it. If it did not work the teachers made adjustments and tried again. In undertaking research into the learning of engineers, nurses and accountants, Eraut (2007) also found ‘trying things out’ (which he uses to encompass the actions that I refer to as ‘trial and error’) formed part of the learning activities of the participants in his research. In my research it was often when teachers’ strategies did not work in the way they wanted that they sought advice from colleagues, supervisors and/or mentors.

The support and advice of colleagues and supervisors was important in supporting the learning of all the participating teachers. This is consistent with findings of other researchers that workers learn from the advice and support of others in the workplace (Billett, 2001; Eraut, 2011; Robson, 2006). For the teachers in this study, the extent of the support and advice for novice teachers, and the way in which it was provided, varied considerably between teaching departments and ranged from ad hoc advice to extensive mentoring. In the next section on Continuing Professional Learning (CPL), I explicitly address mentoring as a CPL strategy that supported teacher learning.

An important way that teachers identified whether a practice that they were undertaking was successful was through student feedback. Michael referred to this feedback as “active or passive”. For him, active feedback from students included broad statements such as ‘good class’; positive or negative comments on something that happened in the class; and communications that they did not understand something or that they wanted more assistance in a particular area. Passive feedback included body language indicating confusion or lack of engagement; questions that indicated they had not understood something; and poor completion of assignments or assessment tasks. All teachers relied on both active and passive student feedback to some extent.

Reflection is identified as a PSL in Table 6.7. Care should be taken in interpreting the use of this practice. The type of reflection that the teachers undertook, and the level of that reflection, was not clear in most of the case studies. Nonetheless, there was clear evidence that four of the teachers used reflection to support the development of their learning. I did not see

evidence of the use of reflection for five of the teachers; however this does not exclude the possibility that these teachers used it as a practice to support their learning, just that I did not see evidence that they did so. The same applies to the use of reading as a PSL. In two cases I did not have evidence that the teachers used reading as a PSL, but it is likely that they did use it. Where there was evidence that teachers used reading as a learning practice it primarily related to learning the theory that they were teaching about.

A large proportion of the PSLs that were evident in this research were relational. That is, they involved interactions between people. These included the support of colleagues and supervisors, student feedback, mentoring, co-teaching and team teaching. The social-political arrangements that enabled and constrained teacher learning is discussed further in Chapter 7.

6.5 How teachers learnt through practices additional to the teaching role

In the past, much of the work on teacher learning focused on approaches that were external to the workplace. These included initial teacher training and continuing professional development, which are often characterised as workshops, courses and qualifications. More recently, Continuing Professional Development or Continuing Professional Learning has been recognised by some researchers as also including other approaches that are additional to the actual work role (Boud & Hager, 2012; Guthrie, 2010a). I use the term Continuing Professional Learning (CPL) to highlight that learning is the focus in this discussion. This section addresses the second research

question: How do novice VET teachers learn to become teachers through practices that are additional to undertaking the teaching role?

While much of the learning that the teachers did in this study was as a result of undertaking the practices associated with the teaching role, CPL activities that were additional to this role also contributed to their learning. Table 6.8 provides an overview of these activities. Some of these CPL categories warrant further explanation. Informal mentors were experienced teachers who, in addition to their identified roles and ad hoc help, made a sustained effort to support the learning of the novice teacher. The two instances of CPL in the 'previous teacher' category refer to the support provided by teachers who no longer held active, ongoing positions at the TAFE. In one instance the teacher was paid to do this for approximately 30 hours over a three-month period, and in the other the previous teacher met with the novice teacher a number of times over a two-week period. Industry networking refers to deliberate interactions with industry for the purposes of teacher learning.

Table 6.8: Practices Additional to the Work role that Supported Learning

	Cert IV TAA	Observing other teachers	Formal Mentoring	Informal mentoring	Previous Teacher	Induction courses	Industry Networking	Conferences
Sport & Fitness Grant	**	**	**	***	Not used	*	Not used	Not used
Sarah Business Admin	**	**	***	Not used	Not used	*	Not used	Not used
Simon Electronics	**	*	Not used	**	Not used	*	Not used	Not used
Trevor Electronics	**	**	**	Not used	*	*	Not used	Not used
Ewan Air Cond & Refrig/n	*	*	Not used	***	Not used	*	*	Not used
Alice Community Services	**	**	Not used	***	Not used	*	**	*
Sam Building Design	**	*	Not used	***	Not used	*	*	Not used
Michael Horticulture	*	*	Not used	Not used	*	*	Not used	Not used
Tabitha Beauty Therapy	*	*	Not used	Not used	Not used	Not used	Not used	Not used

*** - used extensively

** - used occasionally

* - used rarely

The Cert IV TAA was compulsory for all teachers, and provided free of charge by the TAFE. All the novice teachers in my study completed this qualification within their first year of teaching. Table 6.8 indicates that Michael, Tabitha and Ewan made less use of it as a PSL than the other teachers. While they attended a similar number of classes, and completed all the same assignments, it had less of an influence on their learning than it did for other teachers. Michael and Tabitha were teaching fewer hours each week

(six and three hours, respectively) than the other teachers and were not easily able to access support in the workplace where they were employed as teachers. This lack of support in the workplace to underpin what they learnt through the Cert IV TAA is likely to have resulted in this qualification having limited impact on their learning to become teachers. This finding reinforces Guthrie's (2010a) argument that "those undertaking the Cert IV TAA require adequate support both during and after completing the qualification" (p. 23). Conversely, Ewan had extensive support in the workplace, and perhaps as a result of this ongoing and easily accessed support, together with a lack of valuing of the Cert IV within his department, he relied less on the Cert IV TAA to support his learning than did the other full-time teachers.

Other CPL strategies included short induction courses and conference attendance. Almost all teachers took part in at least one, and usually all three, of the induction courses that were a compulsory prerequisite for accessing administrative systems. These were brief courses that could be completed within a couple of hours. Funding to support conference attendance was available for all permanently employed or long-term contract teachers, but Alice was the only teacher who used this funding and attended a conference.

Mentoring, both formal and informal, supported teacher learning in a number of sites in this study. Mentoring has been seen as an important strategy for supporting the learning of VET teachers (IBSA, 2014). In this study, formal mentoring was undertaken as a PSL by three of the teachers, and informal mentoring supported the learning of five of the teachers. These experiences are discussed in greater detail in two publications arising from

this research (Francisco, 2015; 2017). Mentoring is also discussed further in the next section on developing a trellis of PSLs.

I had anticipated that practices additional to the teaching role, such as networks and advice from friends and family, would be more influential in supporting teacher learning than I found to be the case. I deliberately asked questions related to these approaches at each interview, and also explored these possibilities through less direct questioning. While most teachers discussed their work with family and friends, the informal learning they reported as a result of this was minimal, and largely confined to the first few weeks of work as a teacher.

For the purposes of analysis and clarity of discussion, I have separated the PSLs undertaken by the teachers into the categories shown in Table 6.8. It is important to note, however, that many of the PSLs were interrelated. This is discussed further in the next section.

6.6 Ecologies of practices and developing a trellis of practices that support learning

The theory of ecologies of practices posits that practices, like biological systems, can form interrelationships, and that one practice can form the practice architectures for other practices (Kemmis, Wilkinson, et al., 2014). The theory addresses the ways in which one practice, such as teaching, is influenced by other practices operating at the site such as learning and communicating (Kemmis et al., 2012a). In outlining and using the theory of ecologies of practices, Kemmis and colleagues (Kemmis, Edwards-Groves, Wilkinson, & Hardy, 2012b; Kemmis, Wilkinson, et al., 2014) include all

practices that are present in a site, or that impact on practices being undertaken in a site. In this section, I use the theory of ecologies of practices in a slightly modified way. Rather than include all interrelated practices, I focus just on PSLs, and shine a light on mentoring as part of an ecology of PSLs. I also introduce the concept of a *trellis*³ of PSLs.

Some of the PSLs undertaken by the teachers in this study can be seen to form part of an ecology of practices, where one PSL provided the practice architectures that further enabled the success of another PSL. While being mentored was supportive of teacher learning, it was when mentoring formed part of an ecology of PSLs that it was most powerful. It became apparent that the interaction of PSLs in some of the sites formed a trellis of interrelated PSLs. A *trellis* is made up of interconnected components that help support growth in a particular direction. For the purposes of illustration, I now consider the PSLs that were available for four of the novice teachers (Trevor, Sarah, Sam and Ewan) where mentoring formed a component of those PSLs. Trevor and Sarah were the two teachers who had been provided with an induction mentor through the formal mentoring program. Sam and Ewan were two of the five teachers involved in an informal mentoring relationship. I focus specifically on the relationship between mentoring and other PSLs for these four teachers and consider the practice architectures that enabled and constrained these interrelationships. The PSLs outlined below are not all the PSLs that the teachers undertook; they are the PSLs that clearly formed ecologies of PSLs with mentoring. It begins with Trevor's experience of mentoring and builds from there.

³ My use of the term *trellis*, should not be confused with Shove, Watson and Spurling's (2015) use of the term "trellis-like framework" when referring to infrastructure. In their use of the term the trellis is made up of physical infrastructures. In my use of the term, the trellis is made up of practices.

Trevor was provided with a mentor shortly after he began teaching. His mentor was an experienced and highly regarded teacher who had successfully mentored many other teachers. Because she was in another department and in another area of the campus, interactions were restricted to regular discussions as well as advice about who else could assist Trevor in particular areas. Mentoring in this case can be seen as a standalone practice with little interaction with other practices that supported Trevor's learning.

For Sarah, team teaching with her mentor, together with the use of well-prepared existing resources that her mentor made available, provided good support for her learning of the specific practices that she undertook in the Flexible Learning Centre. This is represented diagrammatically in Figure 6.1. As part of the practice of team teaching with Sarah, her mentor shared her own well-prepared resources. These resources further enhanced Sarah's teaching, and were also part of the ongoing team teaching and mentoring arrangements. Sarah undertook a range of other PSLs, such as studying for two different qualifications, and reading, but these were not clearly connected with the PSLs that I have highlighted. While the interrelationship of the PSLs can be seen to be valuable, the ecologies of learning practices of which mentoring was a component is relatively limited. When not meeting with her mentor or teaching, Sarah was in the casual teacher staffroom in a different building to the other teachers in her department. She did not know the other experienced teachers in the department, and when her mentor was away she effectively had little access to support or advice. The following year, when Sarah was teaching in another department she felt that she was still very new as a teacher. This limited network of PSLs provided only limited support for Sarah's learning.

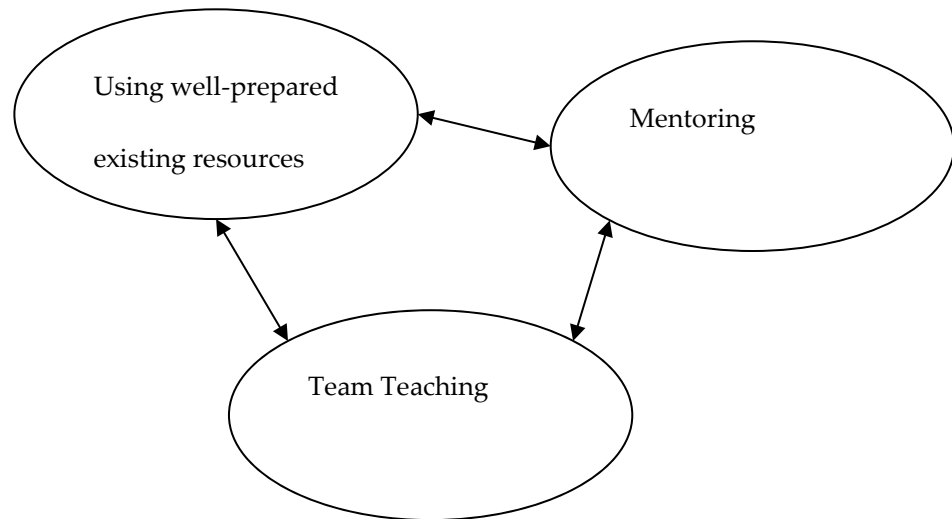


Figure 6.1: Interrelated practices that supported learning: Sarah

In the site where Sam was employed as a teacher on an ongoing contract, he was able to use a number of interrelated PSLs. The HoS was experienced and able to access resources to enable team teaching and some teacher release time for resource development. For Sam, team teaching was undertaken with the qualification coordinator, who also acted as an informal mentor. In the staffroom, Sam's desk was co-located with that of his mentor, providing easy access to support and advice. Sam co-taught some subjects with other teachers, and also had easy access to other experienced teachers in the staffroom. Figure 6.2 shows the interconnected PSLs which Sam engaged in.

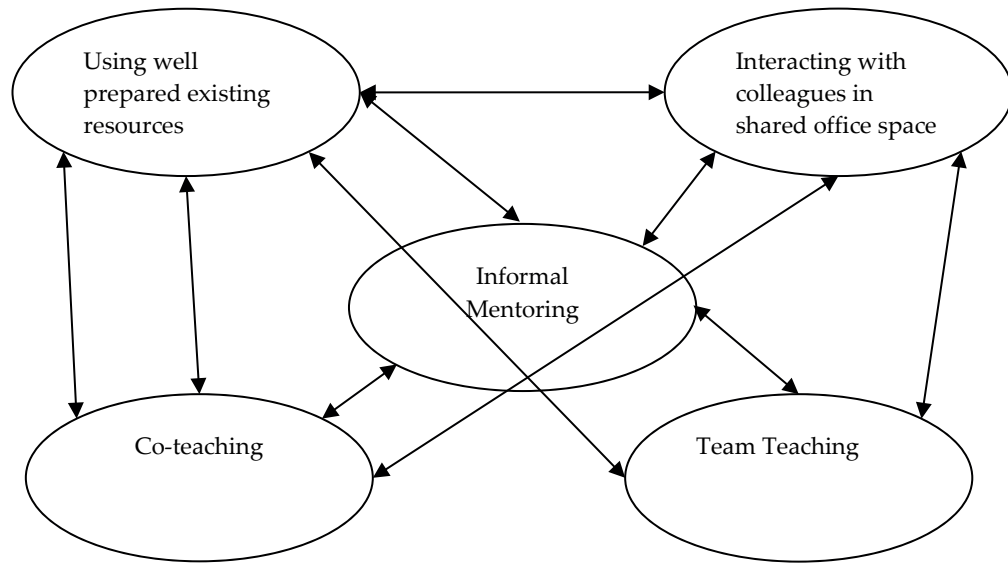


Figure 6.2: Interrelated practices that supported learning: Sam

Like Sam and Sarah, Ewan was informally mentored by the coordinator of the course that he was teaching. Ewan's mentor provided him with well-developed lesson plans, assessment tasks and other teaching resources. Ewan and his mentor also team taught a number of classes together. Ewan's mentor also arranged for Ewan to team teach with an experienced teacher the first time he taught any subject that he was unsure about, and to co-teach with other teachers in subjects where he had more confidence. All the teachers were in the same open-plan staffroom and had ad hoc discussions and provided advice and support across their desks. They also met every day at 'smoko', where, among other things, they told stories of their teaching experiences, built solidarity and shared strategies and ideas. After teaching for six months Ewan was involved in all of the practices of the department, initially together with his mentor, or another experienced teacher. This included the collaborative development of teaching and

assessment practices. More than any other teacher in this study, Ewan quickly became a confident and capable teacher. Figure 6.3 shows that mentoring was just one of the interrelated practices that supported Ewan's learning.

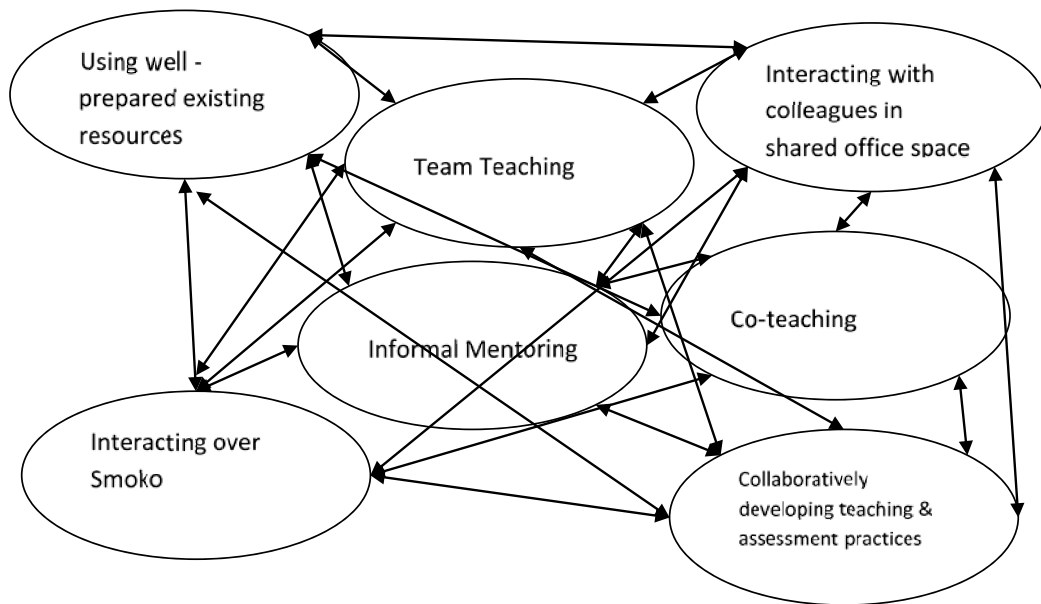


Figure 6.3: Interrelated practices that supported learning: Ewan

The PSLs outlined in Figure 6.3 are not the only PSLs that Ewan engaged in for the purposes of learning to become a teacher. For instance, he also read manuals at home; discussed teaching with, and received advice from, family members; and attended training sessions related to teaching. Similarly, Sarah and Sam engaged in other PSLs that did not interrelate with the PSLs outlined in Figures 6.1 and 6.2 respectively. Importantly, when PSLs

interrelated so that they formed a trellis of PSLs – such as that shown in Figure 6.3 – they provided a powerful support for teacher learning.

Ewan's experiences, particularly when considered in relation to those of Trevor and Sarah, highlight the importance of the trellis of PSLs in supporting his development as a teacher. While Trevor had a mentor who was recognised as very competent and experienced, his learning associated with being mentored was not integrated with other PSLs. Trevor's learning was hampered as a result. Sarah's experience of mentoring was integrated with two other PSLs. However, when she went to a new teaching area in her second year of teaching, she found that it had not actually given her a solid basis for undertaking the teaching role, and in many ways she remained a novice teacher. Sam's experience of mentoring was more integrated with a trellis of PSLs and his learning was well supported. Ewan's experience of mentoring as part of a strong, supportive trellis of PSLs resulted in him learning to undertake the role of a teacher both quickly and well.

6.7 Conclusion

This chapter has pulled together the broad findings from the case study chapters to provide a zoomed out answer to the first three research questions. Importantly, it highlights that while a broad response to these questions can be valuable at one level, there is a danger that real understanding can be lost by relying entirely on a zoomed out answer to the questions. The chapter introduced the notion of a trellis of practices that supported learning, illustrating the concept through reference to four of the case studies.

The next chapter considers the practice architectures that enabled and constrained teacher learning across each of the research sites. It also discusses issues related to teacher learning, including the dual identity of VET teachers.

Chapter 7

Enabling and Constraining Novice Teacher Learning: Cross Case Findings

7.1 Chapter overview

The previous chapter addressed the research questions related to how the novice VET teachers in this study learnt to become teachers and what they learnt. It drew together the findings from the case studies to provide a broad overview of the substantive practices that the teachers undertook, the PSLs they engaged with, and what the teachers learnt. This was followed by a discussion of the interdependence of some learning practices and the development of the concept of a trellis of PSLs.

This chapter explicitly addresses the final research question: What enables and constrains novice VET teacher learning? I focus on the practice architectures of the research site – the cultural-discursive, the material-economic and the social-political arrangements – for the purpose of exploring what enabled and constrained teacher learning. The notion of individual agency is also discussed, showing that agentic actions by the novice teachers also impacted on teacher learning. First I begin by focusing on the employment arrangements of the novice teachers.

7.2 Employment arrangements

For the teachers in this research, employment arrangements created practice architectures that enabled or constrained their learning to undertake the teaching role. Like Rainbird, Munro and Holly (2004), who argue, “The employment relationship is fundamental to studying workplace learning” (p. 38), I found that the basis on which teachers were employed influenced a number of factors that in turn impacted on how the teachers learnt to become teachers and what it is that they learnt.

The employment arrangements for teachers in this study can be divided into three categories, which I call fringe teachers, favela teachers, and permanent/contract teachers. This naming is not about the teachers, but about their conditions of employment. In using these terms, I am deliberately troubling the seemingly broad acceptance of high levels of teacher casualisation in VET, without attending to the personal, professional, and broader damage that this might cause. These categories relate to the extent to which each group had access to a range of resources that impacted on their learning to become a teacher.

Category one comprises those teachers employed casually to teach less than eight hours a week. I refer to teachers in this category as the fringe teachers because of their limited access to support and advice from colleagues and supervisors and also because the material-economic arrangements of their teaching departments serves to separate them from experienced colleagues. Tabitha and Michael are in this category.

Category two comprises those teachers employed casually to teach eight or more hours a week. I refer to teachers in this category as the favela

teachers, after the under-resourced urban housing communities in parts of South America where poor and marginalized citizens live. In using this name I am highlighting the following characteristics of these teachers: they are employed, but they have no security of tenure and can lose their work and their income very easily; they are not paid during the 12-16 non-teaching weeks each year; they do not have entitlements such as sick leave, recreation leave or long-service leave; and they do not have the same level of access to professional development as other teachers on contract or who are permanently employed. Sarah and Grant are in this category. Both of these favela teachers worked longer hours than they were paid for. Like the people living in favelas, these teachers have poor conditions, limited rights, and can be seen to be marginalised. They are on campus regularly but are not fully acknowledged members of the organisation with access to all facilities and benefits. I included Grant in the favela teachers category because while he taught five hours a week for three of the four semesters he was involved in the study, he had additional work as a General Services Officer in the same environment and in this role undertook some of the same teaching. Chapter 4 provided case studies for teachers in the fringe and favela categories.

The third category comprises those teachers who were employed permanently or on contract either immediately or after one semester. I refer to teachers in this category as contract/permanent teachers. The security of tenure was different for the contract teachers and the permanently employed teachers, but as there was no indication in my research that this impacted on the learning of either group, I have put them in the same category. I note however, that those teachers on contract left the organisation 18 months to two years after they were first employed, citing not having a permanent

position as one of the reasons for doing so. So while these teachers were stirred into the role of being a teacher as quickly as the permanent teachers, the TAFE organisation lost the benefit of what they had learnt. Ewan, Alice, Simon, Trevor and Sam are in this permanent/contract category. Chapter 5 provides case studies for those in this group. The impact of employment arrangements can be seen in each of the practice architectures dimensions, and is discussed in the following sections.

At this point I separate the cultural-discursive, the material-economic and the social-political arrangements that enabled or constrained teacher learning in this research. These arrangements are rarely separated in this way in reality and I separate them here for the purpose of illuminating how they might enable or constrain teacher learning. In some of the following sections I bring in the influence of other arrangements where it allows the further understanding of the practice architectures that enable and constrain teacher learning. The next section primarily addresses the cultural-discursive arrangements that enabled and constrained novice teacher learning.

7.3 Cultural-discursive arrangements that enabled and constrained learning ‘how to go on’ as a teacher

The cultural-discursive arrangements in each site included two main types of language. These were language that is used in, and relates to, the occupation or industry that the teaching department is teaching about; and language

related to teaching, education, and training. I address each of these separately.

Industry language and understandings

Because the novice teachers were teaching with colleagues from the same industry, they mostly had a shared industry language. That this shared language was an enabler of learning for teachers became most apparent in its absence. In circumstances where novice teachers were interacting with experienced teachers who did not share their industry language, the novice teachers, especially in their first year of teaching, were less likely to value the pedagogical advice of these experienced teachers. In some cases the novice teachers not only did not value the advice of these teachers, but they actively ignored it, explaining when asked, that the experienced teachers did not understand their industry. From a practice architectures frame, this response includes both the cultural-discursive dimension and the social-political dimension. The fringe teachers had a sense of solidarity with, and primarily followed the teaching advice of, those teachers who had similar industry experience and language, and this remained an issue throughout the time that they were employed as a teacher. Tabitha ignored the teaching advice from an experienced teacher because that teacher had not worked in, and did not use the language of, Tabitha's field of make-up. This was despite the experienced teacher having industry experience in the broader field of beauty therapy. Using similar reasoning, Michael took teaching advice from an inexperienced casual teacher because he was teaching the same competency as him. As the other novice teachers became more experienced, most were able to value and act on pedagogical advice from experienced teachers regardless of their industry background.

Swearing was an interesting language usage that was largely confined to the male-dominated trades areas. Being a woman, and a non-trade teacher, the teachers were often careful not to swear when I was there. At times however they forgot that I was there and swearing became a regular part of the conversation. This usage of swearing continued when students or other trades teachers were present, but was clearly limited when they were actively aware of others outside this group being present. In this way it became an indication of being part of the group, and from a social-political perspective can be seen as a representation of solidarity.

Teaching language

The learning and use of language associated with vocational education and training influenced, and had an influence on, teacher learning. The learning of this language provided some indication of teacher learning more generally about their role as a VET teacher. The teachers learnt to use VET language at different rates. The rate at which this learning happened largely coincided with how they were employed and, consequently, how often they were on campus and exposed to the language of other teachers.

The fringe teachers experienced a relative lack of exposure to teaching/training language compared with those teachers who were on campus more often. When teachers were first employed, the experienced teachers were likely to explain the meaning of words and related concepts that the novices were likely to be unfamiliar with such as 'Training Package' and 'competency'. After a while the experienced teachers stopped these explanations, perhaps making the assumption that the novice teachers knew the language and understood the associated concepts. In Tabitha's case, when she did not know the meaning of these and similar VET related terms

she became too embarrassed to keep asking. It then became difficult for her to know how else to find out, and after a year of teaching and the completion of the Cert IV TAA she was still not confident in knowing the meaning of much of the VET-related language. It is likely that this partly contributed to some of the mistakes she made, including teaching the wrong competencies for a short while. Permanent and contract teachers learnt the VET language and associated concepts relatively quickly, often learning the basics within the first few weeks. The two favela teachers in this research who were on campus well beyond the time that they were paid for, also learnt it relatively quickly.

Learning as an expectation of novice VET teachers

The final cultural-discursive arrangement that I would like to highlight is that all of the teachers in this research acknowledged freely, and without prompting, that they needed to learn to become a teacher. They used language that related to their learning, and I saw no evidence of resistance to the notion of being a learner. This is in contrast to research reported by Boud and Solomon (2003), who found that participants believed that identifying as a learner placed them in a lesser position in relation to their colleagues and the organisation more broadly. Instead, my research supports Billett et al.'s (2014) more recent argument that there is an

increasing acceptance of the need for ongoing learning, both for occupational compliance and ongoing competence (p. 9).

One possible explanation for this is that cultural-discursive arrangements related to acceptance of an identity as a learner as well as a competent worker have changed over the last decade or so.

In this section I have focused on the cultural-discursive dimension and the sayings of the teachers. These sayings are also indicative of the doings that take place within the site. I now turn to the material-economic arrangements that enabled and constrained teacher learning.

7.4 Material-economic arrangements that enabled and constrained learning ‘how to go on’ as a teacher

In this section I address four broad material-economic arrangements that enabled and constrained novice teacher learning: physical arrangements; material artefacts; job design; and economic arrangements.

Physical arrangements

The arrangement of teachers’ workstations (including a desk and computer) was one of the physical arrangements that enabled or constrained teacher learning. In most of the teaching departments the basis of employment impacted on where novice teachers were located physically in the staffroom, with those in the fringe teachers category having less access than the other groups to experienced teachers during the time that they are able to be on campus. In one case study the workstation for the novice teacher was in a different building to the experienced teachers. This was the most extreme example of physical arrangements constraining teacher learning through decreasing access to experienced teachers, although in two other case studies the teachers’ desks were isolated from those of the experienced teachers in another section of the staffroom. In some sites the desks of all teachers were together, with partitions that allowed teachers to see each other across their

desks. One particularly successful arrangement was where the novice teacher's desk was next to the desk of the experienced teacher that he team taught with. Figure 7.1 below shows this configuration.

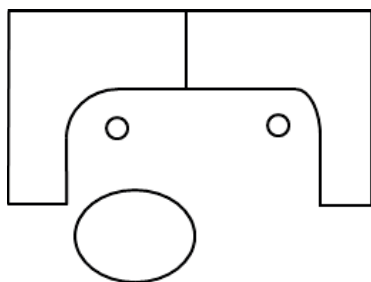


Figure 7.1: Workstation

The oval at the base of the diagram represents a table that was large enough for four teachers to work at, and this was used regularly to develop shared resources and plan future directions. This physical arrangement was successful in providing ad hoc access to the experienced teacher, who was also an informal mentor, and the larger table enabled other teachers to join them in this work.

Another physical arrangement that impacted on teacher learning was the use of a communal table. For instance, the large table in the Community Services staffroom enabled the interaction that supported Alice's learning. In most sites where a communal table was available, the work team also had a shared morning tea at a regular time. When this occurred, casually employed teachers often worked to ensure that they were able to be there and contract/permanent teachers were almost always there. Where teachers met regularly around a communal table, informal conversations, including those related to teaching and other issues associated with being a teacher, took place. In a study of the learning of academics as a result of informal

conversations, Thomson (2015) found, “Conversations were used for a range of purposes related to teaching development and support, for example, seeking information, mentoring, and generating ideas” (p. 142). For the teachers in my study the availability of a communal table that was used regularly served to enable informal conversations and associated learning.

The physical availability of a communal table alone was not always sufficient to enable the informal conversations that often led to teacher learning. For instance, there was a communal table in the lunch room of the Beauty Therapy department that was rarely used. Similarly, there was a large table in the Sport and Fitness staffroom that was not used for staff interaction. There were no chairs around it, and it was used as a receptacle for discarded sport equipment and other clutter.

The physical arrangements of teaching areas impacted on teaching practices and consequently what teachers needed to learn. These varied from site to site, and more details are available in the case studies. In a number of the sites, the set-up of the classroom prefigured particular types of teaching. For instance, in Alice’s campus-based teaching area the classrooms were configured so that students sat in rows facing the teacher at the front. However, when Alice taught at the learners’ workplace the rooms were set up with the learners and the teacher sitting around one large table. Alice’s teaching approach altered between these sites. It cannot be entirely attributed to the changed physical arrangements because the learner profile was also different. Nonetheless, the physical layout of the teaching spaces is likely to have influenced Alice to change her teaching practices between the different sites.

The physical arrangements of the teaching sites also impacted on teacher learning in other ways. This became apparent when Grant noted that being able to regularly observe other teachers teaching in the gym influenced his own teaching. His access to observation of teaching in the classroom was much more limited, however. The teaching in the gym was on display, but in the classroom it was behind closed doors. Except for those teachers who were involved in team teaching, most of the novice teachers had only limited access to observing teaching done in conventional classrooms.

While physical arrangements prefigured teaching practices, they did not predetermine them. An interesting example of where physical arrangements that might have influenced the novice teacher's substantive practices did not do so was in the Building Design classroom. Half of the room was arranged for students to work at a computer or independently, together with a centre table that invited group collaboration, and the other half of the room was set up as a lecture space. Despite this being an arrangement that invited a variety of teaching practices, Sam followed the practices of his colleagues and the coordinator and used a lecturing approach in his teaching. This, together with the examples of the unused communal tables, shows that the existence of a physical arrangement alone is not always sufficient to predetermine particular practices.

Material artefacts

The resources available for novice teachers were important in supporting their learning and in guiding the practices they undertook. These included lesson plans, student workbooks, student handouts, and assessment tasks. These artefacts provided examples of what was expected and, for most of the teachers, these existing resources formed the basis for what they did in their

teaching. In most cases these resources were used with little or no change at first, but they later became models for any future development.

Interestingly the fringe teachers relied less on these existing resources as models for what they did in their teaching. If they did not see the reason for the way the resources had been developed, they were more likely to ignore them and use their own prior work or learning experiences in developing their own. As Michael noted:

If you don't have the time to discuss it, you cannot, either know from management that I don't know, nor can I know what is actually there, and I just start doing things.
(Interview 2)

In instances where the favela and permanent/contract teachers were not satisfied with the existing resources they were more likely to seek advice from other teachers before making changes. For example, Ewan noted:

I'll discuss with the other teachers, they'd discuss what works for them, or what doesn't work for them, you know just sort of pretty much get around at smoko, saying we'll try this next time.

Job design

As became clear in the case studies, the expectations of what teachers would do and how they would do it differed from site to site. In this section I focus on the broader job design issues of timetabling, team teaching, and co-teaching that impacted on teacher learning.

Most experienced teachers did not choose to teach in the evenings and so it was usually new teachers and casual teachers who were timetabled for evening classes. From a social-political perspective, these teachers had less power and were in a position where they took the classes they were given. This evening timetabling of novice teachers and casual teachers decreased

their access to the support of colleagues and supervisors, to ad hoc discussions with other teachers, and to observing others operating in the teaching role.

Team teaching, where two teachers taught the same class at the same time, supported teacher learning. It enabled the novice teacher to: observe an experienced teacher teaching; be involved in, but not entirely responsible for, the development of assessment tasks and lesson plans; observe an experienced teacher assessing student competency; be observed by an experienced teacher and to receive feedback on their teaching; and reflect together with the experienced teacher on how the class went and possibilities for future improvements. From a social-political perspective, team teaching enabled the development of a relationship between an experienced teacher and a novice teacher. In all instances this led to the experienced teacher providing support and advice more broadly than just in relation to the class they were teaching together, and a mentoring relationship developed.

Despite the value of team teaching in supporting teacher learning, at one level team teaching was not supported in the organisation because of the cost involved with two teachers teaching one class. Also, the administrative system related to teacher hours was set up in such a way that it was difficult for two teachers to be paid for the same class. These system-based material-economic arrangements made it difficult for team teaching to take place. Given these arrangements that worked against the use of team teaching, it is surprising that a number of HoS were able to juggle things so that team teaching was possible. Team teaching also usually involved the experienced teachers sharing their resources and often co-developing resources and assessment tasks, which was very supportive of teacher learning. In most

instances (the exception being Sarah, who was teaching in the Flexible Learning Centre and working one-on-one with students) team teaching was made available only to those teachers employed on contract or permanently. From a social-political perspective, this is another example of arrangements that were available for contract/permanent teachers but not available for casually employed teachers. All of the teachers who had the opportunity to be involved in team teaching identified it as an important source of their learning.

Co-teaching was useful in providing some of the benefits of team teaching. These included working together with other teachers to develop assessment tasks, resources, and lesson plans for the same subject. Co-teaching also enabled discussions between novice teachers and experienced teachers, which often led to teacher learning. For instance, Alice noted that co-teachers sharing their lesson plans with her supported her learning. Co-teaching discussions usually occurred at prearranged meetings to finalise aspects of the subject, or in informal settings such as morning tea. Co-teaching was available for most of the teachers. It was especially useful for fringe teachers who had less access to other forms of support for their learning.

Economic arrangements

Economic arrangements can be boundless, and include many things. Here I limit the discussion to key resource based arrangements that impacted on teacher learning, focusing on: access to qualifications including the Cert IV

TAA; availability of administrative support; and the workload of teachers, including that of colleagues and supervisors.

Provision of a Cert IV TAA qualification free of charge to teachers (although with the cost of time associated with attendance and with completing assessments) can be seen as a material-economic arrangement that supported novice teacher learning. The availability of the qualification, combined with the clear message from all levels of the organisation that it was a compulsory part of being employed as a teacher, served to ensure that all teachers in this study had completed this qualification by the end of the first year of teaching. As noted in Chapter 6, teacher learning as a result of the Cert IV TAA varied, with the fringe teachers who lacked ready access to the support of colleagues and supervisors gaining the least from the qualification.

Golden Towers TAFE also made a Diploma of TAA available free of charge for all teachers working at the TAFE if their HoS agreed. The three permanently employed teachers in this study enrolled in that qualification towards the end of this research project. It was theoretically available to all teachers, but the fringe teachers had left by the time it was available, the contract teachers had either left or made plans to leave, and the favela teachers did not know about it. The cultural-discursive, material-economic and social-political arrangements that strongly supported the undertaking of the Cert IV TAA were not as apparent for the Diploma of TAA.

The availability of administrative support as a factor that impacted on teacher learning became evident in its absence. Trevor and Simon began their employment in the Electronics teaching department with limited access to administrative support, and within a few months this limited administrative

support was withdrawn. This resulted in two issues. First, they had to learn how to undertake required administrative tasks in a system they found cumbersome and unfamiliar, which was time consuming. Once they had learnt these tasks they then needed to find time for them, which decreased the time available to learn other practices more clearly related to their role as a teacher. An additional constraint was that the Electronics teaching department was unique in having no access to administrative support and no HoS who could negotiate for additional resources, including administrative support. There were thus no broad systems available to support teachers such as Trevor and Simon. A number of the novice teachers reported finding it hard to learn about, and being frustrated by, the broader systems of the TAFE, which Alice described as 'galumphing'. However, in all other sites the administrative staff and HoS were available to lessen the impact that these systems had on teacher time and consequent teacher learning. From this perspective then, the existence of administrative support can be seen as an enabler of teacher learning in most of the sites. Alice was aware of having learnt from Diane (a pseudonym), the person doing the administrative work in her department. She noted:

I really regard [Diane] as a valuable source of information ... to have someone who knows the system that well, knows the students that well, you know, if I look back on my time and I think how have I got through all this, I would have to include [Diane] in that process. (Interview 2)

In Alice's teaching department, Diane not only undertook the work that Trevor and Simon had had to do themselves, she also supported Alice's learning in relation to administrative tasks and students. By the end of two years of teaching, Trevor and Simon had developed a good working knowledge of the broader systems of the organisation and had developed

amicable relationships with the curriculum consultants, the RPL officer, and the Cert IV TAA teacher. This resulted in ready access to accurate and reliable advice from these people. Nonetheless, with limited time available, the additional work of learning to undertake the role of an administrator and the increased workload associated with this work constrained them in learning to become teachers.

Teacher workload impacts on learning (Davis, 2012). For the teachers in this study it was not only their own workload but also the workload of other teachers and managers in the teaching department which impacted on their learning. Being told by his HoS that being a new teacher was like being in a marathon made clear to Michael that a heavy workload was an expected part of the job. Both Trevor and Simon reported regularly working into the early hours of the morning just to keep up, and still feeling that they had not done enough. These marathon efforts were not comfortable for the novice teachers.

The novice teachers did not feel alone in having a heavy workload. A number of teachers mentioned that they would like to have had more support with their learning to become a teacher, but were aware that the people whom they might have received this support from also had heavy workloads and were often not available to support them. This is a social-political arrangement that impacted on relationships and it will be discussed further in the next section.

7.5 Social-political arrangements that enabled and constrained learning ‘how to go on’ as a teacher

Relating with others is important in learning to become a teacher. The participating teachers experienced a range of relationships with colleagues, supervisors, administrative and technical staff, and students. Many of these relationships impacted on their learning to become teachers, and the social-political arrangements of power and solidarity influenced these relationships. Dall’Alba (2009) argues,

The process of becoming a professional occurs ... through continual interaction with other professionals, as well as those outside the professions. It is misleading to attempt to separate the individual from engagement with others in this process of becoming (p. 42).

In discussing the learning of school teachers, Mc Nally et al. (2009) note that “the relational nature of beginning teachers’ development is thus more than just a means or a context in which professional learning takes place; it is integral to becoming a teacher” (p. 326). The same can be said for the learning of the VET teachers in this study. In this section I consider the social-political arrangements that prefigured the relationships that the novice teachers engaged in, and how these enabled and constrained teacher learning.

The support and advice of colleagues and supervisors was an important factor in the learning of the teachers in this study. As Schatzki (2002) argues, practices take place in the “site of the social” (pp. 146-147). The social-political arrangements that impacted on the development of relationships that enabled or constrained learning for these novice teachers

varied from site to site. The teachers experienced a range of relationships with their colleagues, including supervision, informal mentoring, formal mentoring, ad hoc support, discussions over morning tea, team teaching, and co-teaching. In this section I discuss employment arrangements, experienced-teacher workload, volunteerism of experienced teachers, reciprocity of advice and support, and shared morning teas, as social-political arrangements that enabled or constrained novice teacher learning.

Employment arrangements

The basis on which a novice teacher was employed impacted on the social-political arrangements that they encountered. Teachers employed full time on contract or permanently were mostly brought into the teaching team as full members, both physically (as discussed in the previous section) and socially. Rainbird et al. (2004) also report that employment arrangements impact on worker learning:

Patterns of inclusion and exclusion in workgroups, and the ability to move into related areas of work affect the capacity of workers to access informal learning. At the same time, entitlement to formal training and the capacity to access informal learning are also factors constitutive of the balance of power in the workplace (p. 40).

For the teachers in this research, free provision of the Cert IV TAA meant that all teachers were not only entitled to formal training, but undertaking it was a condition of employment. The material-economic arrangements that supported this thus overcame some of the issues identified by Rainbird et al., at least in relation to initial training. Access to informal learning, however, was impacted by employment arrangements. Teachers employed on contract or permanently were involved in staff meetings, assessment meetings, and available for ad hoc discussions. This was rarely the case for the fringe and

favela teachers, who had less access to staff meetings and to the ad hoc teacher talk that takes place at these meetings and elsewhere. It was more than this, however. It was sometimes also about being accepted as a full member of the group and being listened to. For instance, when Grant was teaching full time for one semester he noted:

I sort of got involved a lot more with staff meetings and the goings on, more so than I was previously which was kind of nice actually to have an opinion, or have an opinion and get it listened to! And you know also just being asked what I thought about certain things. (Interview 2)

Being involved in a broader range of activities when he was teaching full time, and the associated differences in how other teachers and his supervisor interacted with him, were particularly apparent for Grant because he had only one semester of full-time teaching, which was preceded and followed by semesters of limited teaching hours. Grant's experience provides a good illustration of the constraints to teacher learning that are apparent through the social-political arrangements associated with being employed as a fringe or favela teacher. Seddon and Palmieri (2009) argue:

The fact that teachers enter an employment contract ... means that they experience certain kinds of relationships with colleagues, clients, associate professionals, and managers; organisational imperatives and ways of working in the workforce; and patterns of conflict and negotiation in workplace and industrial relations. Power and authority are important features of these experiences (p. 464).

The experiences of the teachers in this research support this argument. From a social-political perspective, employment arrangements for fringe and favela teachers served both to reduce solidarity and to increase the constraining element of power.

The value of support and advice from colleagues and supervisors became most apparent in its absence. Boud and Hager (2012) argue that “lack of peers or lack of opportunities to participate with them also severely restricts opportunities and therefore development” (p. 26). For Trevor and Simon, lack of colleague and supervisor support impacted on their learning to become a teacher. It also impacted on how they felt about their work as a teacher. Simon noted that the most difficult thing for him about his work was the lack of support:

Technical support, admin support, purchasing, teacher, general teacher support, all those areas I think that’s really what I find frustrating. My biggest challenge probably is staying positive in an environment where I feel lack of support, not becoming too focused on the negatives, or too focused on the.. not getting frustrated with the system, but just focusing on the teaching. That’s my biggest challenge.
(Interview 1)

This is consistent with McNally et al.’s (2009) finding that “It is a feeling of being supported, rather than the acquisition of specified bits of professional knowledge, that seems to matter most” (p. 326). For Simon there were a number of issues. There was the loss of the administration and technical workers, whose work then fell to the teachers. There was the lack of advice in relation to administration, technical matters, and teaching. However, it was the feeling of not being supported that was most challenging for both Simon and Trevor, and each raised this issue a number of times. This lack of support impacted broadly on how they felt about being a teacher and it permeated their work and their learning. By contrast, most of the teachers in this research felt they were supported by their colleagues and supervisor.

Volunteerism and experienced teacher workload

The learning of the novice teachers in this study was to some extent dependent on the goodwill and volunteerism of their colleagues. In the late 20th century and, in some States, the early 21st century, TAFE teachers were funded and provided with release time to undertake a university-level qualification in education (Smith & Grace, 2011). The withdrawal of this support in many TAFEs and the increased casualisation of the VET teaching workforce, have left a gap that the workplace tries to fill. As many of the case studies in this research show, it does this through relying on the goodwill of the increasingly smaller cohort of experienced teachers. The support of novice teachers by colleagues and mentors, and the development of quality resources for the use of novice teachers where it was available, were valuable for supporting the learning of the teachers in this study.

Two factors that impacted on novice teacher access to the support and advice of experienced teachers were experienced teacher workload and expectations that this support was to be undertaken voluntarily and without recompense. For the two cases of formal mentoring researched in this study, the mentors received some time release from teaching commitments for their mentoring work, even though this was not the usual case for those mentoring as part of the formal mentoring program. The formal mentoring program assumed that mentoring would be undertaken by both mentors and mentees on a voluntary basis, in addition to their other work. For the informal mentors in this study, mentoring was undertaken voluntarily and was not a recognised component of their workload. Thus, the time and effort the experienced teachers devoted to supporting the learning of novice teachers was additional to their other, sometimes heavy, workloads. The

novice teachers, the TAFE students, and the TAFE organisation benefited from this volunteerism. However, the notion that quality VET education is predicated on the goodwill and voluntary work of a decreasing number of experienced teachers is concerning.

Harris, Simons, and Clayton (2005) raised this issue of the heavy workload of experienced teachers impacting on the learning of new teachers more than a decade ago when they noted there was

extra pressure on existing staff to assist, train and mentor new staff ... Experienced staff are obliged to spend considerable time explaining new delivery systems and accountability requirements. Additional tasks such as these create significant amounts of 'incidental' work for the shrinking core of permanent staff (p. 66).

Since the publication of this work by Harris, Simons, and Clayton, the level of casualisation has risen rather than declined (Productivity Commission, 2011). The pressure on the decreased number of remaining experienced staff is likely to have increased during that time. This is likely to have an impact on the willingness of experienced teachers to support the learning of novice teachers, as well as their capacity to do so within a normal work week.

The novice teachers in this study were aware of the heavy workload of their experienced colleagues, and as a result, some novice teachers did not seek support from experienced teachers when they would have benefited from doing so. For some new teachers, the tacit or overt offer of support from experienced teachers was not available at all because of their workloads. As one of the teachers noted, "I just don't think he's got much time to assist me," and another said, "Everyone's struggling for time at the moment."

Reciprocity

The teachers in this study were novices only in their work as a teacher. They were mature people (most in their late 30s, or 40s and 50s) who were experienced in the field that they were teaching about, and had more recently worked in this field than the experienced teachers they were learning from. A number of the teachers noted that they felt they were able to reciprocate for the teaching advice and support that they received by providing the experienced teachers with current industry knowledge. The extent to which the experienced teachers valued this is likely to have varied. Nonetheless, it gave the novice teachers some sense of being able to reciprocate for the support provided to them by the experienced teachers and perhaps more likely to seek this support and advice.

Shared morning tea creating a space for learning

In the Air Conditioning and Refrigeration and the Horticulture teaching departments, teachers met daily at 10.30 a.m. to have a shared 'smoko' or morning tea. Smoko created cultural-discursive (telling of stories and development of shared understandings), material-economic (teachers gathering around a communal table at a regular time each day) and social-political (creation of solidarity and levelling of hierarchies) arrangements that supported teacher learning. It created an environment that moved between the social and the professional, and it fostered the development of person-to-person relationships. Discussion of what happened in the football on the weekend could be followed by discussion about how someone is teaching a particular topic or skill. Unlike the more formal morning teas reported on by Boud, Rooney and Solomon (2009), these were informal, not compulsory, took place on a regular basis, and were readily attended by

teachers. Ewan and Michael both noted that they learnt as a result of being involved in these morning teas.

When Trevor and Simon began teaching there was no regular morning tea in their Electronics area. After a few months Trevor very deliberately established a regular Friday afternoon 'get together' with some teachers in his faculty where people could chat informally over coffee and cake. He found this very rewarding in providing access to experienced teachers who would talk about their teaching, and who could give him advice. In this instance Trevor was able to create practice architectures that supported his learning. Individual agency in learning to become a teacher is discussed later in this chapter.

Exclusion

In this study I noted a number of examples of exclusion which served to decrease the teacher's opportunities for learning. The most apparent of these occurred when fringe and favela teachers were physically located away from experienced teachers. However, exclusion was not confined to this physical separation. For instance, earlier in this chapter I discussed Grant's experiences of inclusion during the semester that he was teaching full time and his pleasure in being consulted and listened to during that time. But Grant was not included in this way during the other three semesters of this study.

Lest it be assumed that power imbalances that impacted on teacher learning were confined to favela and fringe teachers, I refer again to the experiences of the Electronics teachers Trevor and Simon. With no HoS to negotiate for resources for the teaching department, none were forthcoming.

Teachers did not have access to the forums where these negotiations took place, and often Trevor and Simon did not know that any negotiations were required, or who those negotiations should be held with. The long lead time on resource-based bids, together with Trevor and Simon's lack of knowledge of how the system worked, meant that it was often not until an important piece of equipment or a technical support officer was unavailable that they became aware of the issue. Trevor reported bringing essential equipment from home to enable teaching particular competencies, and asking the casual teachers to do the same. Meanwhile, Trevor reported that other areas had an abundance of some of this equipment but would not make it available to the Electronics department. The loss of administrative support staff and technical staff is also likely to have resulted from having no HoS to argue that they were needed. Trevor and Simon only became aware of these problems when the staff were no longer there. This experience of exclusion from forums where negotiation for resources took place concerned the entire teaching department, not just the two novice teachers in this study, and occurred as a result of organisation-wide hierarchical arrangements that relied on each teaching department having a HoS. The impact of this on teacher learning and morale is likely to have primarily been related to the increased workloads associated with lack of resources and lack of easy access to relevant advice.

Students

All of the teachers noted that they learnt from the feedback of their students. Some teachers were more open to student feedback than others, and the

approach that teachers took in relation to their interactions with students seemed to enable or constrain their learning from students.

7.6 Key practice architectures that enabled and constrained learning

Table 7.1 outlines the key practice architectures that enabled and constrained novice VET teacher learning in this study. The information is presented according to the employment category of the teachers. Such a table is necessarily very broad and unable to take into account the nuances of each site where teachers learnt to become teachers. The shaded section of the table identifies practice architectures that were most influential in enabling teacher learning. It becomes apparent in this table that practice architectures enabling teacher learning were not as available for the fringe teachers, and to a lesser extent the favela teachers, as they were for the contract and permanent teachers.

Table 7.1: Practice Architectures that Impacted on Teacher Learning

<i>Enablers of Novice Teacher Learning</i>	<i>Fringe teachers</i>	<i>Favela teachers</i>	<i>Contract & permanent teachers</i>
Cultural-Discursive Arrangements			
Shared industry language and knowledge	x	x	x
Teaching/training language	Became a constraint when not understood	x	x
Material-Economic Arrangements			
Workstation co-located with experienced teachers	Not available	Available at times	Mostly available
Regularly used communal table	Available for one teacher	Not available	Available for two teachers
Quality teaching resources including lesson plans, assessment tasks, student resources etc	Used if the teachers felt they reflected their own industry experiences	x	x
Team teaching	Not available	Available for one teacher	Mostly available
Support by experienced teachers as part of their workload	Not available	Available for one teacher	Available for one teacher
Teaching when experienced teachers were available	Available for one teacher	x	x
Co-teaching	Preferably with experienced teachers because fringe teachers will take advice from other inexperienced teachers	x	x
Compulsory and free Cert IV TAA	Learning limited by lack of support and advice from experienced teachers	x	x
Social-Political Arrangements			
Support of colleagues and supervisors	Difficult to organise because of timetabling	x	x
Shared regular morning/afternoon tea	Available for one teacher	-	Available for two teachers
Novice teachers' perceptions of reciprocity	Not known	Sometimes available	x
Inclusion in discussions and decision making	Not apparent in this research	Sometimes available	x

x - these arrangements were usually available

7.7 Individual agency

The theory of practice architectures acknowledges the influence of human actors, as well as the practice architectures of a site, in influencing the actions that are undertaken (Mahon et al., 2017). In this research I have foregrounded the practice architectures that enabled and constrained what novice teachers did and what they learnt. Nonetheless, it is important to note that the dispositions and motivations of the teachers remain part of the story of teacher learning. In this section, for the purposes of illuminating the individual agency of novice teachers, I discuss teacher identity and the projects that the teachers worked towards.

Dual identity and becoming a teacher

Becoming a VET teacher is not as straightforward as becoming, for instance, an architect or a personal trainer. As Robertson (2008) notes, VET teachers have a dual identity. In this study for example, Sam is an architect and Grant is a personal trainer. They were employed as a teacher for that very reason. When they were employed it was with the understanding that they had no teaching qualifications or experience. Guthrie (2010b) notes that some new teachers

identify most with their substantive vocational discipline and see themselves having a role in teaching others their particular vocation; this group do not see themselves as vocational teachers. These differences in world view highlight the professional dichotomy for many VET practitioners: current vocational expert and expert educator. It is where the perceived balance sits that is important for each individual, not least in terms of where precious time and effort will be likely spent in gaining experience and enhancing skills and knowledge, both initially and subsequently (p. 14).

Robson (2006) goes further and argues in relation to further education teachers in Britain that “most teachers ... continue to prioritise their subject knowledge over and above the knowledge, skills and understanding required to teach effectively” (p. 37). In becoming a VET teacher then, people must both develop an identity as a teacher and hold on to another identity, such as an architect or a personal trainer. To some extent this first identity can be seen to be of more importance than the identity as a teacher.

The novice teachers in this study were operating between two worlds – the world of the industry that they were teaching about, and the world of education/training. Except for Sarah, all of the novice teachers who participated in this research had come straight from the industry that they were teaching about. For Sam, Grant, Tabitha, Michael and Alice, this relationship with their industry continued for at least some of the time they were teaching and they can be seen to be actively working between these two worlds. For Tabitha, Grant and Michael, working between two worlds continued throughout the time they were employed as a teacher. As Schatzki (2002) notes:

A person’s identity depends partly on where he or she fits into social arrangements [and] is also tied to the practices in which he or she participates, whose organisations are articulated around identities available to participants (p. 82).

For the fringe and favela teachers, their places in the social arrangements of the TAFE organisation were marginalised. It’s not surprising then that they would choose to identify more with the occupation that they were teaching about. As Bathmaker and Avis (2013) argue:

Not only have teachers in [Further Education] tended to value a previous occupational identity over and above their work as teachers, which gives credibility

to their status as a vocational specialist, but as Robson suggests, there has been a long-term failure to support the development of a full professional identity for FE teachers (p. 735).

It seems that the teachers in this study, and especially favela and fringe teachers, were similarly hampered in the development of a full professional identity as a teacher. Identifying primarily with the occupation they were teaching about was not confined to the fringe and favela teachers, especially in the first year of work as a teacher

Projects

In identifying important areas of focus for each of the teachers I was also able to identify a number of key projects that each person worked towards. The focus of the individual teacher determined to a large extent where each person chose to allocate their time and energies for undertaking substantive practices and for learning. For Mahon et al. (2017), the project of a practice is determined by the person undertaking the practice.

[It] encompasses (a) the intention (aim) that motivates the practice, (b) the actions (interconnected sayings, doings and relatings) undertaken in the conduct of the practice, and (c) the ends the actor aims to achieve through the practice (although it might turn out that these ends are not attained) (p. 6)

Thus, two people can be doing the same practice and be undertaking different projects. In this research, discussions with the teachers about what they were doing, both specifically and more broadly, and why they were doing it, resulted in the uncovering of a variety of projects. These are summarised in Table 7.2.

Table 7.2: Key Projects Undertaken

Teacher	Projects
Sarah Business Administration	<ul style="list-style-type: none"> • Support migrant learning • Learn to be a good teacher • Being valued for her work
Michael Horticulture	<ul style="list-style-type: none"> • Teach well • Prepare students to be fulfilled and happy in their work • Prepare students as professionals to do well in their business or working for others
Grant Sport and Fitness	<ul style="list-style-type: none"> • Preparation of professionals for industry
Alice Community Services	<ul style="list-style-type: none"> • Supporting the people who work in the community services and community development industry • Teaching well • Workplace learning commercial projects • Development of an online learning course for an entire qualification
Ewan Air Conditioning and Refrigeration	<ul style="list-style-type: none"> • Teaching • Prepare students to be good tradespeople and successful business people <p>In the new TAFE</p> <ul style="list-style-type: none"> • Set up a new Air Conditioning and Refrigeration teaching area • Bring in new students
Trevor Electronics	<ul style="list-style-type: none"> • Coordination of the trade qualification • Being valued for his work • Teaching • After two years – supporting student collaboration
Simon Electronics	<ul style="list-style-type: none"> • Support student learning • Ensure equipment and practices are safe • Being well prepared for class
Tabitha Beauty Therapy	<ul style="list-style-type: none"> • Share her passion for make-up
Sam Building Design	<ul style="list-style-type: none"> • Be available for his young children after school and school holidays • Prepare students to be successful building designers • Including preparing students to communicate with range of people on a building site, including builders, architects and engineers

Some of these projects have similarities, but are not the same. For instance, Sarah’s project of learning to be a good teacher was focused on her own learning, and was closely tied with her other project of being valued for

her work. Ewan's project of teaching was related to doing the job that he had been engaged for. Michael's project of teaching well was closely integrated with his other two projects of preparing students to be fulfilled and happy in their work and preparing students as professionals to do well in their business or working for others. These subtle nuances impacted on the perspective and approaches that the teachers each brought to the practices that they undertook. These in turn influenced the learning that they did. For instance, Sarah's project of supporting migrant student learning led to her own learning related to supporting this specific group of people.

The projects that each of the teachers undertook influenced what they did and what they learnt. While the practice architectures of a site were shown to largely prefigure the practices that novice teachers are likely to undertake, there were also examples where this did not occur. One of the clearest of these examples was in the Building Design teaching department. Prior to Sam being employed there, other teachers in this department worked long hours on campus, and this had become an accepted practice. Sam did not follow this practice, instead leaving the workplace to pick up his children after school when possible. It is likely that Sam's overarching project of being available for his young children lessened the influence of these cultural-discursive arrangements on his practices. Sam noted that the practices of another newly appointed teacher as well as his own served to influence the other teachers and led them to also spend less time on campus. This is not necessarily about the amount of work that was done, but about where that work was undertaken.

Another example where the practice architectures did not initially prefigure the actions of a teacher was in the Electronics department when

Simon used the online learning platform together with an electronic whiteboard in his first year of teaching. Simon had observed another teacher using an electronic whiteboard and felt that it was a valuable teaching approach. Interestingly, by the time that he had been teaching for two years he was no longer using an electronic whiteboard. The cultural-discursive arrangements that included; no other teachers in the department using an electronic whiteboard; the material-economic arrangements that included the need to teach in a classroom at the other end of the campus to be able to access an electronic whiteboard, with the resultant separation of the practice and theory class; and the social-political arrangements that included a strained relationship with other teachers as a result of Simon's attempts to make a range of changes, worked together to constrain the use of this resource and associated teaching practices.

7.8 Conclusion

This chapter has focused on the final research question: What enables and constrains novice VET teacher learning? Table 7.1 provides a broad overview response to that question. Employment arrangements had the greatest impact on teacher learning. While the practice architectures of the sites prefigured the substantive practices and the learning practices that novice teachers engaged in, individual agency also impacted on teacher learning, including what was learnt and how it was learnt.

The next chapter concludes this thesis. It revisits the research questions and the results of the research in responding to these questions. It outlines the significance of this research, identifies its limits, and suggests further avenues for research.

Chapter 8

Synthesis, Implications and Further Research

8.1 Chapter overview

I began this thesis by noting that there has been limited research into how Australian VET teachers learn to undertake the role of a teacher, and what it is that enables and constrains that learning. This research has explored how novice VET teachers learnt to undertake the role of a teacher by asking four questions: How do novice VET teachers learn to become teachers through undertaking the teaching role? How do novice VET teachers learn to become teachers through practices additional to the teaching role? What do novice VET teachers learn? and What enables and constrains novice VET teachers' learning? The journey that this research has taken me on has given me answers to these questions in relation to the participants in this study.

I begin this chapter by outlining the key findings in relation to each of the research questions. Next I raise some implications of the research findings. This is followed by a discussion of the value of the theory of practice architectures and the theory of ecologies of practice, for researching teacher learning and workbased learning. The development of the concept of a trellis of practices that support learning (PSLs) is also addressed. Finally, I propose potential future research directions arising from this research.

8.2 How do novice VET teachers learn to become teachers through undertaking the teaching role?

The practices involved in undertaking the role of a teacher contributed heavily to the learning of the teachers in this study. Primarily the teachers learnt to become teachers through workbased learning. This research considered what substantive practices the teachers undertook as part of their role as a teacher, as well as the PSLs that they undertook.

Learning in the workplace involved undertaking a range of practices associated with the role of a teacher. The broader practices undertaken by all teachers were classroom teaching, assessing, development of subject guides, and lesson preparation, and all teachers except one of the fringe teachers were also involved in the development of assessment tasks. The teachers learnt to teach by teaching, they learnt to assess by assessing, and so on. What these practices actually involved varied between sites. A range of other practices were undertaken according to the unique needs of each site. Essentially, the teachers engaged in a range of practices that supported them to learn (PSLs) to undertake the role of a teacher. A detailed overview of these PSLs can be found in Chapter 6. A brief summary of the most influential of these PSLs follows.

The support of experienced teachers and supervisors was important in teacher learning in the workplace. The existing resources that the teachers used such as assessment tasks, lesson plans and student handouts were another important influence on the workbased learning of novice teachers. Teachers often used these as they were, or modified them slightly, and then used them as models for the development of new resources. Team teaching

was influential in the learning of those teachers who had access to it. Team teaching incorporates a number of factors that support teacher learning, including observation of an experienced teacher. Trial and error (or trial and terror as one teacher called it) was another important practice that supported the learning of the teachers. Student feedback also influenced the workbased learning of the teachers. This included deliberate verbal or written feedback, student body language, engagement with tasks, and success with the subject. Student feedback was important for all teachers, and particularly so for the fringe teachers, perhaps because they interacted more with the students than with their colleagues or supervisors. For the fringe teachers, students provided advice that might be expected to come from other staff, for instance on one occasion advice about the organisational requirements for conducting an excursion. Across all of the influences discussed above, the prior experiences of the teachers impacted on the learning practices they used and the way that they approached these practices.

The findings of this research highlight the importance of workbased learning for novice teacher learning. Of particular significance in relation to how teachers learnt to teach through undertaking the teaching role, is that the fringe teachers in this study did not benefit from workbased learning to the same extent as other teachers. This can be accounted for partly by the limited time these fringe teachers were on campus. This research also shows that certain practice architectures of the workplace further limited, or failed to enable, the workplace learning of fringe teachers.

8.3 How do novice VET teachers learn to become teachers through practices additional to the teaching role?

The teachers in this research did not undertake many PSLs that were additional to the teaching role. Of those additional practices they did undertake, most were not as influential in supporting teacher learning as I had anticipated. I had also anticipated that those teachers who were on campus only a few hours a week and also working elsewhere might have learnt things related to learning to become a teacher in their other workplaces. While this could be the case, I did not find evidence of this for the teachers in this study.

An overview of the PSLs of the novice teachers that were additional to the teaching role can be found in Chapter 6. In this current chapter I limit the discussion to the two key additional PSLs that were influential in supporting the novice teachers to undertake the role of a teacher: the Cert IV TAA and mentoring. The Cert IV TAA was the most influential additional strategy when considered across all of the teachers, mainly because it was compulsory, and therefore all teachers had access to it. Mentoring was found to be the most influential additional strategy in relation to teacher learning for most of the teachers who had access to it.

The Cert IV TAA contributed to the learning of the novice teachers, but the extent of the contribution was variable. Interestingly, the assessment task that required observation of experienced teachers was the part of their experience of the Cert IV TAA that most of the teachers identified as supportive of their learning. Importantly, the impact of the Cert IV TAA was

enhanced when combined with regular and timely access to the support and advice of experienced teachers.

Both formal and informal mentoring supported the learning of a number of the teachers in this study. While much mentoring research focuses on mentoring as a standalone strategy (for instance Eby, Allen, and Hoffman et al., 2013; Hobson, Ashby, and Malderez, 2009; Sanzero-Eller, Lev and Feurer, 2014), this research found that mentoring was most powerful in supporting teacher learning when it was part of a strong, interrelated, trellis of PSLs.

8.4 What do novice VET teachers learn?

The teachers in this study learnt to undertake the practices that were required in their teaching department in the way that it was done at that site. As might be expected, teachers learnt a range of things, including teaching, preparing lessons, undertaking assessment, and developing assessment tasks. What each of these involved varied from site to site. For instance, in sites where facilitated constructivist learning took place, teachers learnt to use a constructivist approach. In sites where teachers stood at the front of the class and transmitted their knowledge to students by writing on a whiteboard for students to copy into their workbooks, the teachers learnt to

do this. A more detailed overview of what the teachers learnt can be found in Chapter 6.

8.5 What enables and constrains the learning of novice VET teachers?

The ways in which, and the extent to which, the practice architectures of the workplace enabled teacher learning varied considerably between the different sites. Of most note is that the basis on which teachers were employed impacted on their learning to become a teacher. The impact of the basis of employment on teacher learning was so apparent that I identified three different categories of teacher based on their employment arrangements: fringe teachers; favela teachers; and teachers employed on contract or permanently.

In discussing the employment arrangements of VET teachers, government policy documents largely focus on the needs of the organisations that employ VET teachers (Productivity Commission, 2011; Skills Australia 2011). These arguments are framed in managerial language and focus on casual employment meeting employers' needs for flexibility and agility. This argument is made alongside the argument that quality VET teaching is important for employers, for students, and for Australia's prosperity (Skills Australia, 2011). In focusing on the learning of VET teachers, this research found that employment arrangements impacted on that learning, thereby suggesting that high levels of casualisation of the VET teacher workforce is incompatible with a high level of quality VET teaching.

Table 8.1 outlines the arrangements (other than basis of employment) that contributed the most to teacher learning in this research. A more detailed table that includes a broader overview of arrangements that impacted on teacher learning, as well as those arrangements that were influential in some sites but not across all sites, can be found in Chapter 7.

Table 8.1: Key Enablers of Novice Teacher Learning

Practices that supported learning	Enabled through
Interaction with experienced teachers	Team teaching Informal Mentoring Shared regular morning/afternoon tea Regularly used communal table Workstation co-located with experienced teachers Observation of experienced teachers undertaking the teaching role Formal Mentoring Co-teaching Timetabled for teaching when experienced teachers were available
Availability of quality assessment and teaching resources	Included lesson plans, assessment tasks, and teaching resources
Undertaking the substantive practices	What was learnt, and how it was learnt, through undertaking the substantive practices associated with the role of a teacher was influenced by interactions with experienced teachers, and the quality of resources that were available
Shared Language	Shared industry language and knowledge Teaching/training language
Cert IV TAA	Compulsory and free

A reading of Table 8.1 shows that interaction with experienced teachers was enabled through various arrangements. The extent of access to these interactions was critical in relation to teacher learning. For those teachers who had access to it, team teaching was powerful in supporting their learning. Interestingly, in every case where the novice teacher was involved

in team teaching the experienced teacher was a mentor or became an informal mentor. Informal mentoring was quite powerful in supporting the learning of novice teachers in at least two instances within this study. Part of the reason for this were the interconnections between informal mentoring and other learning practices.

The availability and quality of pre-existing resources was important for all novice teachers in this research, and especially for fringe teachers. These resources determined the quality of many of the practices that the novice teachers undertook in their teaching role because they set many of the expectations for what was to be done and how it was to be undertaken. For the fringe teachers, however, where these resources did not accord with their own experiences, or they did not understand them, they were not used. This was especially the case in the absence of regular and timely interaction with experienced teachers.

Shared industry language formed a point of connection between the teachers and made it apparent that the teachers were novices in only one of their dual identities. Shared industry background was narrowly interpreted by many of the teachers in the early stages of their teaching but it broadened out over time for the permanent/contract and favela teachers who were at the workplace for extensive periods of time each week. The use of VET language became a constraint to learning for fringe teachers over time as they became reluctant to keep checking the meaning of concepts, and experienced teachers assumed they understood.

Less than half of all VET teachers hold the Cert IV TAA qualification (Productivity Commission, 2011). At this TAFE the Cert IV TAA was

available free of charge to all teachers. It was also a compulsory condition of employment that the qualification was completed within the first year of teaching. It is likely that the combination of these conditions contributed to the completion of this qualification for all teachers in the study. The Cert IV TAA was of most value when it was combined with ready access to the support and advice of experienced teachers.

8.5.1 Creating a trellis of practices that support learning (PSLs)

In some sites, teachers were able to access a broad range of interconnected PSLs. In keeping with the theory of ecologies of practices, I have called these inter-connected PSLs a *trellis*. Only PSLs that interrelate with other PSLs form part of a trellis. All the teachers engaged in PSLs that were not interconnected with other PSLs, for instance reading to ensure an understanding of content to be taught, or discussing their teaching with family. While these two particular PSLs could, in some circumstances, be interrelated with other PSLs, in this research they were undertaken as stand-alone practices and did not form part of a trellis of PSLs.

The PSL that most apparently interconnected with other PSLs in this research was mentoring. In looking at the ecologies of PSLs of which mentoring was a part, it became apparent that while mentoring alone was supportive of teacher learning it was considerably more supportive of learning when it was part of an interconnected structure of PSLs. There is a clear indication that the interconnectedness of these PSLs resulted in a trellis

that resulted in better support for teacher learning than the sum of the individual learning practices of which it was composed.

8.6 Implications of the research findings

The findings of this research are likely to be of relevance to those who are interested in and/or responsible for supporting the learning of novice VET teachers; novice VET teachers who are learning to undertake the role of a teacher; and those at the local and national level who are responsible for making policy decisions in relation to, or that impact on, VET teacher learning. The theory of practice architectures aims to discover the kinds of conditions that make particular practices possible (Kemmis et al., 2017), but it extends beyond identification of the practice architectures that prefigure particular practices. Kemmis et al. (2017) note that the theory of practice architectures also

asks how our practices might be constructed otherwise under other conditions, and also asks how other conditions can be created through our practices and the practices of others (p. 242.).

Through illuminating what VET teachers learn, how they learn it, and what enables and constrains that learning, this research provides some tools for those interested in quality VET to construct alternative conditions where ineffective, unreasonable, or unjust conditions exist (Francisco, Mahon, & Kemmis, 2017).

In answering the questions of how novice VET teachers learn to become teachers, this research has contributed to our understandings of the importance of work based learning for novice VET teachers. The finding that

workbased learning was crucial for the novice teachers has implications for how novice teachers are supported in the workplace. Further, it has implications for how we research teacher learning.

Research into novice VET teacher learning in Australia has focussed largely on the initial, and only compulsory, teaching qualification, the Cert IV TAA (Clayton, 2009; Clayton et al., 2010; Guthrie, McNaughton, & Gamlin, 2011). The finding that teacher learning as a result of undertaking the Cert IV TAA is tied to their learning in the workplace has implications in relation to explicitly supporting this interaction. Further, the finding that the fringe teachers learnt little as a result of the Cert IV TAA is an important one. Further research to determine the impact of deliberately supporting the workbased learning of fringe teachers (and all novice teachers more generally) through approaches such as the provision of well-developed quality teaching resources, easy access to experienced teachers, team teaching, and mentoring, together with the Cert IV TAA would be valuable. Importantly for the development of quality teaching and learning, the expectations held in the local site of fringe teachers needs to be considered in relation to the prior skills they have in teaching and the support that they are provided.

Table 8.1 and the more detailed tables in Chapter 7 can serve to provide an indication of the PSLs revealed in this research and that may be of value in similar circumstances. In any attempt to replicate these approaches it is important to note that it is possible that an approach that enables teacher learning in one site may not do so in another site. This research shows that the practice architectures of each site will be different and likely to enable and constrain different approaches. For instance, the availability of a

communal table was important in a number of sites, but in two of the sites a table was available but not used. This example illustrates that creating conditions to enable teacher learning is not as straightforward as adopting one particular strategy, and that changing one or two arrangements, such as adding a large table that can be used by all, will not necessarily result in the outcome aimed for.

The finding that a trellis of PSLs is more supportive of teacher learning than a series of unrelated learning practices is an important one which has implications for how novice teachers are supported to learn to become teachers. In supporting the development of a trellis of interconnected PSLs, the cultural-discursive, material-economic and social-political arrangements in the site need to be taken into account. Various decisions are likely to impact on the learning of novice teachers, including those that are not usually associated with the concept of teacher learning. These include arrangements such as where teachers are physically located in the staffroom, and where, when, and how often the teaching team meet to have morning tea together.

This research found that the support of colleagues and supervisors was important in supporting novice teacher learning, and that to a greater or lesser extent, all of the novice teachers received this support in some way. This is at odds with the findings of Lucas and Unwin (2009), Bathmaker and Avis ; and Orr and Simmons (2010, 2011) who, in their research looking at trainee Further Education (FE) teachers in England, found very limited and sometimes non-existent support for trainee teachers. While it is possible to speculate about why the English findings differ from those reported in this thesis, including the possibility of volunteerism of experienced teachers

having been over-used in English FE; productive further research might explore the practice architectures that enable and constrain experienced teacher willingness to support novice teacher learning in Britain and Australia.

The majority of the support that was provided to novice teachers was given in a volunteer capacity rather than as a recognised component of the job role. The level of TAFE teacher casualisation has been increasing since the 1990s (Nechvoglod et al., 2010). The latest figures available show that at least 60 percent of all TAFE teachers are employed on a casual basis, with much more than this in some States (Productivity Commission, 2011). As a result there are increasingly less permanent teachers available to provide support for new teachers. In this research many of the novice teachers noted that they often did not ask questions, or seek advice when they needed to because of the workload of the experienced teachers and supervisors. The pivotal role of experienced teachers and supervisors in supporting the workbased learning of novice teachers, combined with a heavy workload for experienced teachers, is likely to impact on the learning of novice teachers. Policy decisions at the site level, the organisation level, and the national level, need to be made with this understanding.

In research undertaken by Mitchell et al. (2006) looking at key issues for stakeholders in relation to VET the researchers found that the quality of teaching was of key importance to all stakeholders. They note:

ultimately most parties want quality in teaching, learning and assessment, leading to benefits for individuals, enterprises and the nation (p. 7).

In the first year of teaching, most of the teachers in this study felt out of their depth, and were spending a great deal of their time learning basic content for

the subjects that they were teaching. It is unlikely that the quality of teaching during this first year was high. This is combined with a high attrition rate of teachers. After two years, only five of the nine teachers were still employed as a teacher, and three and a half years after the study began only two of the teachers remained employed at the TAFE where the research was undertaken. A third teacher had taken up a permanent position at another TAFE. This high attrition rate, combined with a first year of teaching that is unlikely to have included high quality teaching, needs to be considered at a broader policy level.

The teachers in this research did most of their learning in the workplace. With limited access to the teaching workplace, and obligations elsewhere, this learning was necessarily limited for the fringe teachers. In the absence of timely interactions with experienced teachers, the key learning practices for the fringe teachers were the use of existing resources and the learning involved in doing the work. Other workbased learning practices were available to the fringe teachers, but not to the same extent and this necessarily impacted on the learning of these teachers.

Because fringe teachers had little access to experienced teachers they are less likely than other teachers to check that the changes that they are making are appropriate. Often what fringe teachers know as a result of their industry experiences may coincide with what the training package outlines as required for competency. But this is not always be the case. This creates a risk that students are learning what one novice teacher thinks is appropriate for them to learn rather than the nationally accredited curriculum or training package. Organisations that employ fringe teachers may not be able to rely on workbased learning to sufficiently meet the learning needs of these

teachers. While this research did not seek to assess the quality of teaching of the novice teachers, it is likely that limited access to workbased learning practices will have a corresponding impact on the quality of teaching of the fringe teachers. With teaching quality considered by many to be important, future research is warranted to explore the impact on teaching quality of fringe teachers' limited access to PSLs.

Because novice teachers learn to undertake their role as a teacher in the way that others in the site do, it is likely that both positive and negative practices will be repeated. Similarly, because teachers model their development of resources such as lesson plans, assessment tasks and student resources on the existing ones in their teaching department, the quality of the resources provided to novice teachers becomes important, not just for the semester that these resources are used, but into the future when they are used as the basis for the development of future resources. This points to a fundamental limitation of workplace learning. The reproduction of existing practices can be of value in some instances, and in other instances it can reproduce practices that, from a broader perspective, may no longer be considered appropriate for changing times. For novice VET teachers, a combination of workbased learning, together with interventions to enrich that learning (Billett, 2001; Billett & Choy, 2013), are likely to be more effective. Such 'enrichment' from outside the local site might be of value in allowing novice teachers to gain important understandings that are not apparent in the workplace, such as a broader understanding of changing VET pedagogy. The Cert IV TAA could form the basis for such enrichment, although in this study some of the teachers, and especially the fringe teachers, did not value their learning from that qualification.

Next I turn to a discussion of the theory of practice architectures and the related theory of the ecologies of practices.

8.7 Using the theory of practice architectures

The value of practice theories to inform work-based learning research has been understood for some time (Fenwick 2008; Nicolini, 2012). Nonetheless, the theory of practice architectures is a relatively new theory and here I discuss its value in this research. As outlined in the literature review chapter, the theory of practice architectures has been used in a range of educational and other research. It has been identified as a theoretical, analytical and transformational resource (Mahon et al., 2017). For this research, the theory of practice architectures, together with Schatzki's (2002, 2005, 2006, 2012) practice theory, has provided the theoretical framework to address the research questions. It also formed the framework for analysis of the data. In allowing the illumination of particular conditions, it can also serve as the basis for transformation.

In considering the cultural-discursive, material-economic and social-political arrangements of the sites where novice teachers learnt to undertake the role of a teacher over a two-year period, this research provides the first extensive use of the theory of practice architectures in exploring Australian VET teacher learning. More broadly, a significant contribution of this thesis is that it demonstrates that the theory of practice architectures is valuable in gaining an understanding of what enables and constrains learning in the workplace.

The theory of practice architectures has been valuable in addressing the research questions for this study, including the identification of what enabled and constrained teacher learning. Through that analysis certain conditions became apparent. Firstly, each of the groups of teachers: the fringe teachers; the favela teachers; and the permanent/contract teachers; were identified as having different access to learning possibilities. Smith (2008) argues that “noticing, naming and reframing” (p.77) can be transformative. By renaming these groups of teachers to highlight the conditions of their employment I hope to offer a different perspective to our framing of the casualisation of the VET teacher workforce, and to our approach to the employment of casual teachers.

The use of the theory of ecologies of practices (Kemmis et al., 2012) in a modified way, and focusing specifically on the ecologies of practices that support learning, allowed the identification of the interrelated learning practices that served to further support teacher learning. This empirical finding led to the development of the concept of a trellis of PSLs. It may be that certain PSLs are more important in supporting this trellis than others. The practice architectures of a site will enable and constrain what PSLs are available and which of these are taken up. In Chapter 7 I illustrate how mentoring formed the basis of a strong trellis of PSLs for two of the teachers, but for two other teachers it did not. For both Trevor and Sarah, the other practice architectures of the site where they were learning to become a teacher resulted in limited learning taking place through mentoring. In the two cases where a trellis of learning practices was developed, low staff turnover, experienced teacher willingness to mentor new teachers, and the

funding of team teaching were important factors in supporting the development of a trellis of PSLs.

8.8 Future research

Throughout this chapter I have identified a number of directions for future research. In this section I outline additional directions that are indicated as a result of this research. The section begins with research that might follow directly from this research, and concludes with research directions that more indirectly arise from the research reported in this thesis.

Although this research provided rich data through eight different case studies, over two years, across four campuses and eight industry areas, all case studies were undertaken in the one large TAFE organisation. There are limitations to the extent to which the findings from this study can be generalised. First, the research was undertaken in a TAFE college. The practice architectures existing in other RTOs, such as enterprise RTOs, schools and private RTOs, are likely to be different to those evident in TAFE. Future research that explores the learning of novice VET teachers across a range of TAFE colleges and in other circumstances where VET is taught such as enterprise RTOs, schools and private RTOs would broaden our understanding of the learning of novice VET teachers. It could also be extended to include the learning of more experienced teachers to determine whether the arrangements that support the learning of novice teachers also support teacher learning more broadly.

This research has identified practice architectures that enable (and constrain) novice teacher learning. The clearest direction for future research

is an exploration of the outcomes of making changes in line with the arrangements identified in this study as enabling teacher learning. Of particular value would be research in sites where a trellis of PSLs has been deliberately established to support the learning of novice VET teachers. Research in schools, to determine whether the development of a trellis of PSLs is successful in supporting the learning of novice school teachers would also be valuable. The concept might also usefully be extended beyond teacher learning, and into workbased learning more broadly.

While teacher retention was not a focus of this research, the fact that two years after commencing work as a teacher four of the nine teachers were no longer teaching, and three years after commencing only three teachers were still teaching, is an area that warrants future research. This can be seen as a loss to VET that is not understood, and at some level not noticed. Guthrie (2010) notes that “Looming VET teacher shortages are a pressing issue” (p. 14). Combining this with the literature outlined in Chapter 2 indicating that the reasons why people might choose to be VET teachers are limited, suggests there is reason for concern. Of the teachers in this research who were no longer teaching by the end of this study, only one did so because she no longer wanted to be a VET teacher (although she did want to continue to teach – see Beauty Therapy case study). There are a range of issues associated with this high turnover rate. These include: the cost to the organisation of losing the teachers after some training; the personal and professional cost to the novice teachers involved; the additional workload for experienced teachers of supporting the learning of a rotating crop of new teachers; the likelihood that the decreasing number of permanently employed experienced teachers will become increasingly less willing, or able,

to support teacher learning on a voluntary basis; and the likely impact on teaching quality. Further research is warranted in this area.

8.9 Concluding remarks

As a teacher educator for many years prior to this research I found that I learnt more about how novice teachers learn to become a teacher as a result of my interactions with these teachers over the two years of this study than I had in the previous eight years of being a teacher educator. This has allowed me to make an original contribution to knowledge through highlighting the learning that TAFE teachers do as a result of their immersion in their role as a teacher. This research is significant because it clearly shows the critical role that workbased arrangements have in the learning of novice teachers. This research is positioned both in the literature related to the learning of VET teachers, and in the workplace learning literature. The findings will be useful for those supporting the learning of novice VET teachers. It will also be useful more broadly in relation to developing a greater understanding of workbased learning and how that learning might be supported.

The identification of three groups of VET teachers based on employment arrangements and associated access to workbased learning practices provides an important contribution to the literature on VET teacher learning. The finding that casual employment strongly impacted on teacher learning, particularly when the teachers were employed for less than eight hours a week, is an important one that could contribute to policy and management decisions.

VET teachers have been acknowledged as having complex jobs that require high level skills (Billett, 2013; Wheelahan & Curtin, 2010). The learning that they do happens primarily in the workplace. This research showed that the extent to which this learning was supported depended primarily on the colleagues and supervisors they worked with. This ad hoc approach to supporting teacher learning means that novice teachers are in danger of being poorly prepared for the role. If VET teachers are to be well supported to learn to undertake the role of a teacher, then a trellis of PSLs needs to be provided. The outcomes of this research provide some indications of the possible arrangements that might support such a trellis.

Appendices

Appendix A

Ethics approval and participant consent form

Appendix A1—UTS Ethics Approval Letter

27 August 2010

Professor David Boud
Communication & Learning Group
CB10.05
UNIVERSITY OF TECHNOLOGY, SYDNEY

Dear David,

UTS HREC 2010-280 – BOUD, Professor David, MARTIN, Dr Gregory (for FRANCISCO, Ms Susanne, PhD student) – “How Do Novice TAFE Teachers Learn How to Teach?”

Thank you for your response to my email dated 19/08/10. Your response satisfactorily addresses the concerns and questions raised by the Committee, and I am pleased to inform you that ethics clearance is now granted.

Your clearance number is UTS HREC REF NO. 2010-280A

Please note that the ethical conduct of research is an on-going process. The National Statement on Ethical Conduct in Research Involving Humans requires us to obtain a report about the progress of the research, and in particular about any changes to the research which may have ethical implications. This report form must be completed at least annually, and at the end of the project (if it takes more than a year). The Ethics Secretariat will contact you when it is time to complete your first report.

I also refer you to the AVCC guidelines relating to the storage of data, which require that data be kept for a minimum of 5 years after publication of research. However, in NSW, longer retention requirements are required for research on human subjects with potential long-term effects, research with long-term environmental effects, or research considered of national or international significance, importance, or controversy. If the data from this research project falls into one of these categories, contact University Records for advice on long-term retention.

If you have any queries about your ethics clearance, or require any amendments to your research in the future, please do not hesitate to contact the Ethics Secretariat at the Research and Innovation Office, on 02 9514 9772.

Yours sincerely,

Professor Jane Stein-Parbury
Chairperson
UTS Human Research Ethics Committee

Appendix A2—Participant consent form

PRINTED ON UTS LETTERHEAD

UNIVERSITY OF TECHNOLOGY, SYDNEY

I _____ (*participant's name*) agree to participate in the research project How Do Novice TAFE Teachers Learn How to Teach, UTS HREC approval reference number 2010-280A being conducted by Susanne Francisco (ph 62074821), of the University of Technology, Sydney for her degree Doctor of Education.

I understand that the purpose of this study is to explore the variety of ways in which novice TAFE teachers learn how to teach.

I understand that my participation in this research will involve:

- three one hour interviews over a twelve month period;
- a monthly invitation to send an email about your learning about teaching;
- an invitation to keep a journal about your learning as a TAFE teacher.

Involvement could be as little as five hours (interviews plus brief monthly emails), or up to twenty hours. I have control over any amount of time that I choose to be involved in the study.

I understand that the interviews will be recorded using an audio recorder.

I am aware that I can contact Susanne Francisco or her supervisor Professor David Boud (02 9514 3945) if I have any concerns about the research. I also understand that I am free to withdraw my participation from this research project at any time I wish, without consequences, and without giving a reason.

I agree that Susanne Francisco has answered all my questions fully and clearly.

I agree that the research data gathered from this project may be published in a form that does not identify me by name.

____/____/____

Signature (participant)

____/____/____

Signature (researcher or delegate)

NOTE:

**This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: 02 9514 9772, Research.Ethics@uts.edu.au) and quote the UTS HREC reference number 2010-280A. Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

Appendix B

Research instruments

Appendix B1— Interview 1 Questions

Interview questions were open ended, and areas followed up as appropriate. Questions related to the doings, sayings and relatings about: teaching 'know how'; the 'rules' related to teaching (implicit and implied); purposes/end points toward which they are aiming; and general understandings related to the work involved in being a teacher.

Demographic Questions

- What area do you teach in? (eg hairdressing, automotive, IT etc)
- What previous experience have you had of teaching/training?
 - (prompt – eg coaching a soccer team; helping a sibling with their homework, training/mentoring an apprentice etc)

Practice Based Questions - Doings

- Think about one of the classes you taught this week.
 - What did you do?
 - What did your students do? (eg read, listen, discuss, practice etc)
 - Why did you do it this way?
 - What would you do next time?
 - Did it work in the way you anticipated?
- Have you had any problems/things that you couldn't immediately deal with? What did you do about it? (might need to give them prompts – who, what)
 - Have they/ has that helped you before?
 - What help did they give?
- Have your students done any assessment recently?
 - Where did the assessment come from? (Did you set it? did someone else set it? come from someone else?)
 - How did you know what assessment to set? (eg training packages, examples, talking to someone)
 - Were you satisfied with it as an assessment item? Did it do what you wanted it to do? If not – what was it about it that you weren't happy about?

- Would you do anything differently next time?
- If you wanted to do assessment differently how would you get information to improve it?
- If you were teaching very well what would it look like to you?

Sayings & Relatings

- So far, what have been the tasks that make up your role as a teacher?
 - What advice/help/ have you received in each of these tasks?
 - Who from?
- Who do you talk to about your teaching? Think of as many people as possible.
 - (prompt eg boss in other job; colleague, partner).
- What advice/ help do they give you with your teaching?
- In teaching the way you do, what has influenced you to do it this way?
 - Similarities between past & present influences?
- How do you know what you are meant to be doing in teaching? Where do you get this information?
 - Expectations of other people
 - Course/training package
 - Industry?
 - Try to probe influences
- What are your biggest challenges right now in your job as a teacher?
- What is bugging you now? What are you finding it difficult to cope with?
 - Last time you said this? Do you still feel this way?
 - What happened so that is no longer a concern?
- Think of something that you have tried in your teaching that you won't do again. Why won't you do it?
- Think of something that you have tried in your teaching that you will do again. Why will you do it again?
- How did you come to try that?

Identity

- Why did you decide to be a TAFE teacher?
- What do you tell people about your job as a TAFE teacher?
- What do you like about being a TAFE teacher?

Bigger picture

- Questions related to their teaching philosophy;
 - What do you believe about teaching?
 - What do you believe about students?
 - What do you believe about learning?
- What is helping you to improve the way you teach?

- Penultimate question – thinking back over the last few months to when you began teaching, what do you see as the main influences in how you are learning to become a TAFE teacher?
- Final question - Is there anything else you'd like to tell me about your teaching or about your learning about teaching?

Appendix B2 —Interview 2 Questions

Interview questions were open ended, and areas followed up as appropriate. Initial questions related to changes since last interview.

- What are you doing now?
- How is this different to what you were doing last time we met?

Doings, sayings, relating

- Think about one of the classes that you taught this week.
 - What did you do?
 - What did your students do?
 - Why did you do it this way?
 - What would you do next time? Why?
 - How was your classroom set up? Did you set it up that way? Why? Why did you choose to leave it set up that way?
 - Why would you change the way a room is set up?
- Think about some assessment that your students have done recently
 - Where did the assessment come from? (Did you set it up? Did someone else set it up?)
 - How did you know what assessment to set? (examples? Training package? Talking with someone?)
 - Were you satisfied with it as an assessment item? Did it do what you wanted it to do? If not, what was it that you weren't happy about?
 - Would you do anything differently next time?
 - If you wanted to do assessment differently, how would you get information to improve it?
- Think about how you have provided feedback to students about that assessment
 - What did you do?
 - How did you know to do it that way?
- Think about what other teachers in your area do in their teaching.
 - What do they do?
 - How has what they do informed what you do?
 - How do you know what they do?
- Think about what other teachers in your area do in relation to assessment
 - What do they do?
 - How has what they do informed what you do?
 - How do you know what they do?
- Think about what other teachers in your area do in relation to providing feedback to students about their assessment
 - What do they do?

- How has what they do informed what you do?
- How do you know what they do?
- So far, what have been the tasks that make up your role as a teacher?
 - Are you doing these tasks differently to the last time we talked?
 - In what way?
- What support have you received in each of these tasks?
- Who do you talk to about your teaching? Think of as many people as possible. (eg boss in other job, or at TAFE; colleague in other job, or at TAFE; partner; friend etc)
- What support do they give you in your work as a teacher?

Qualifications

- What qualifications did you have when you began as a TAFE teacher?
- Have you gained any since then?

Room set up

- Can you draw a picture of how the room that you teach in is set up?
- Would it be possible for me to take a photo of the room/s that you normally teach in? Which room is it?
- Do you use it the way it is now, or do you make changes to it? What changes? Why?
- Do you use e-learn? How? How did you learn to do that?

Identity

- What do you call your job when you tell someone about it? Are you a teacher? Trainer? Facilitator?
 - Why do you call it that?
 - What name do others in your area use?

Teaching

- How do you know what you're meant to be doing in your teaching? Where is this information? How do you get this information?
- Think of something that you have tried recently in your teaching that you won't do again. Why won't you do it?
- Think of something that you have tried recently in your teaching that you will do again. Why will you do it again?
- Can you see any changes that have taken place in your teaching since our first interview?

Broader questions

- I'd like you to think about how you learn new things. Do you have preferences about how you prefer to learn things? Eg how to raise a child; how to make soup; how to teach; etc
- Do you think that you learn the things the same way? Or do you learn different things in different ways? Can you think of examples?

Teaching Philosophy

- What do you believe about teaching?
- What do you believe about students?
- What do you believe about learning?

Emotions

- Thinking back over the last weeks, months, and since you began teaching, what emotions have you felt in your teaching?
- What emotions have you seen others experience?

- Final question - Is there anything else you'd like to tell me about your teaching or about your learning about teaching?

Appendix B3 —Interview 3 Questions

Introductory discussion related to their teaching role and any changes.
Think about one of the classes you taught this week.

Class Preparation

- What did you take into the classroom with you?
- What did you take home the night before, or what did you look at when you were preparing for this class?
- What material did you consult in preparing that class?
- How was the classroom set up – draw a sketch

Teaching

In the class

- What did you do?
- What did your students do?
- Why did you do it this way?
- What would you do next time?
- Why?
- How is this different to what you did last time we met?
- How was your class set up? Did you set it up that way? Why? Why did you choose to leave it set up the way it was?
- Why would you change the way a room is set up?

Again, in that class

- In addition to the content of classes (ie the skills and the knowledge related to the competencies that you are teaching) is there anything else that you are hoping to teach your students? (how to be a professional? How to be an adult? How to be a citizen?)
 - How do you think that students learn these things?
 - Are any of these more important than the others?
 - Have you done any teaching in E-Learn? What did you do?

Assessment

Think about some assessment you've done recently.

- What did you do?
- How did you feel about doing that?
- Where did the assessment come from? (Did you set it? did someone else set it? come from someone else?)

- How did you know what assessment to set? (eg training packages, examples, talking to someone)
- Were you satisfied with it as an assessment item? Did it do what you wanted it to do? If not – what was it about it that you weren't happy about?
- Would you do anything differently next time?
- If you wanted to do assessment differently how would you get information to improve it?

Feedback

Think about how you provided feedback to the students about their assessment.

- What did you do?
- How did you know how to do that?

Influences on teaching and on learning

- Is there anyone now that you are talking to about teaching and learning that you weren't talking to before?
- Other influences?

Relationships/relating

- Tell me about your students. Who are they? (ages? Gender? Background?)
- What relationships do you try to develop with your students?
- Has this changed since you started?
- What relationships do you have with your industry?
- Has this changed since you started?
- Do you relate more to your industry or to TAFE? In what way?

Learning through practice

- Think of something that you have tried recently in your teaching that you won't do again. Why won't you do it?
- Think of something that you have tried recently in your teaching that you will do again. Why will you do it again?
- Is there anything that is bugging you at the moment about your work?
- What skills have you developed in the last month? What can you do now that you couldn't do a month ago?
- How did you develop those skills?

Teaching Philosophy

- What do you believe about teaching?
- What do you believe about students?
- What do you believe about learning?

Identity

- What is your employment status now?
- Why are you learning to be a TAFE teacher?
- Do you intend to be a TAFE teacher for the foreseeable future? Why/why not?
- What do you like about being a TAFE teacher?
- What frustrates you about being a TAFE teacher?
- What does being a TAFE teacher mean to you? What do you value about it?

Broader Questions

- Can you see any changes that have taken place since our first interview in how you're teaching?
- Is there anything that you still feel that you need to learn about teaching?
- How might you learn that?
- If a friend of yours was going to begin teaching what advice would you give them about:
 - How to be a good teacher?
 - How to best learn to do their job well
- Now think back to when you began teaching – what advice would you like to have been given?
- Thinking back over the last weeks, months, and since you began teaching, what emotions have you felt in your teaching?
- How confident do you feel in your teaching now?
 - Has this changed since you started? How?
- Final question - Is there anything else you'd like to tell me about your teaching or about your learning about teaching?

Appendix B4 —Example email questions

Email questions were sent monthly, and there was usually one or two questions. Examples are below.

Most (all?) of your students will have just completed assessment tasks.

- What have been your tasks/roles in relation to:
 - developing the assessment tasks
 - marking
 - giving feedback to students?
- What will you do the same way next time?
- What will you do differently?
- Why?

Who have you talked to about your work as a teacher this week?

- What did you talk about?
- Did they give you any advice about being a teacher?
 - If so, what was it?

Think about the last class that you taught

- What did you do?
- What did your students do?
- How did you prepare for the class?

- What do you know now that you didn't know at the beginning of the year?
- What can you do now that you couldn't do at the beginning of the year?
- How did you come to know these things?

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