

UNIVERSITY OF NEW ENGLAND

CONCEPTUALISING-OPERATIONALISING EXPERTISE
IN INDEPENDENT SCHOOLS: TEACHER AND LEADER
PERCEPTIONS

A Dissertation submitted by
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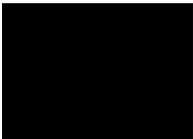
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Certification of Dissertation

I certify that the ideas, experimental work, results, analyses, software and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.



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ABSTRACT

The importance and nature of the work of teachers is unequivocally complex (Loughran, 2010; Shagrir & Altan, 2014). Within schools, teachers have been identified as the greatest resource (Australian Institute of Teaching and School Leadership, 2011a) who also have the largest in-school influence on student learning outcomes (Hattie, 2003, 2009). Barber & Mourshed (2007) claim that the overall quality of any education system cannot exceed the quality of its teachers. Teacher expertise directly impacts on student learning, illustrated by Jensen & Reichl's (2011) claims that, 'all studies show that more effective teachers are the key to producing higher performing students' (p. 3). This thesis researches how professionals in schools conceptualise and operationalise the attributes and practices of teacher expertise. An underlying premise of this study, is: as teacher expertise increases, student learning is optimised.

Theories of generic expertise predominantly focus on novice versus expert comparisons, and Williams & Ericsson (2008) contend that more research is needed into how experts learn. Developmental teacher professional standards comprise several career levels that 'articulate what teachers are expected to know and be able to do at [various] career stages' (AITSL, 2011a p. 1). In reality, not all experienced practitioners progress to an expert stage (Bereiter & Scardamalia, 1993; Berliner, 2004; Ericsson & Poole, 2016).

There is a gap in the literature about how teachers and school leaders conceptualise-operationalise expertise in teaching. In this study, perceptions are conveyed by professionals about how they conceptualise-operationalise expertise in classroom teaching. Participants are asked what attributes and practices characterise expertise and how experts and experienced non-experts differ as classroom teachers. Further inquiry includes how expertise development is enabled or inhibited, and what informs teachers and leaders on the topic of expertise, as well as how to recognise it. This research could inform the thinking of professionals in practice on the topic of how expertise is conceptualised-operationalised by a group of teachers and leaders.

This study utilised qualitative case studies methodology (Yin, 2009) situated within an interpretivist paradigm to research the perceptions of professionals in practice. This occurred at three sites in two Australian states (Queensland and New South Wales) and one territory (The Australian Capital Territory) in K-12 coeducational and single sex school settings. All participants who volunteered for this

study had four or more years' experience as a professional foundation to underpin their views and perceptions on expertise in teaching, expressed in individual and focus group interviews. Two cases were formed: a teacher case and a leader case.

Two theoretical frameworks were used in this study. These were Practice Architectures/Ecologies of Practice (Kemmis et al., 2012; 2014a) and Ecological Systems Theory (Bronfenbrenner, 1994). Both were selected because of their specific focus and relevance to schools and compatibility with this study's approach. The applied constructive use of these two frameworks in Chapter 6 and Chapter 7, make the findings of the study more useful because they enable greater potential for accessibility of the results for other professionals in education. The *Australian Professional Standards for Teachers* (AITSL, 2011a) was also used to map alignment of the emergent themes of this study to the Focus Areas of the seven Standards.

Data for the two cases were collected separately from teachers and leaders at each of the three sites. Analysis of the data involved Creswell's (2014) seven-step thematic analysis process to reveal five emergent themes. The results of the two cases were reported in separate chapters, then compared and contrasted in the Discussion chapter. The nature of the themes that emerged were the same in both cases: teachers and leaders alike identified overall thematic conceptualisations involving expertise and expert teacher attributes and practices. Themes involving dimensions of teaching were related to the following: possessing high levels of subject content knowledge; applying pedagogical practice; building relationships in the school community; displaying particular character traits and qualities of teachers; and, demonstrating receptiveness to growth and improvement involving the mindset of teachers. However, while the overall themes were largely consistent between the two cases, noteworthy differences are signalled and elaborated on as part of this study.

When comparing this study's emergent themes to an analysis of the wider literature on teacher expertise, three themes are commonly recognised in the literature, while two themes are scarcely documented. Themes involving dimensions of expertise on subject content knowledge, pedagogical knowledge and skill, and relationship building are well covered in the literature. However, our key themes concerned with either particular teacher character traits and qualities, or teacher mindset receptive to growth and improvement are not as common in the wider literature. These latter two themes form areas to consider as implications for the profession and as recommendations for further research.

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CHAPTER 1

INTRODUCTION

1.1 SETTING THE CONTEXT

This research study is an investigation into how expertise is conceptualised and operationalised by professionals in schools. It researches the concept of generic expertise and then narrows to explore professional perceptions about teaching and teacher expertise as the focus. As a mid-career educator with more than twenty years' leadership experience, including senior executive and principal leadership, I have become increasingly intrigued by the diverse views that pervade school communities about teacher and teaching expertise. These views, often conveyed emphatically, are presented by a diverse range of stakeholders who each have varying connections to, or an association with, schools. These stakeholders include students, members of governance bodies, politicians, commercial entrepreneurs and the media, in addition to professionals in schools, such as classroom teachers and school leaders. Views on teaching and teacher expertise are expressed by referring to concepts such as quality and effectiveness. Notionally, terms such as these involving teachers and teaching, also relate to the varying conceptualisations of expertise, and when put into context of school settings, are concepts connected by the practices and attributes of teachers. That is, a teacher, or teaching practice, is expressed as high or low quality, effective or ineffective, expert or non-expert, or graduations of each representation on a continuum. This study focuses on the conceptualisation of expertise, how expertise is then operationalised, and recognises that other related terms are also used to describe expertise.

As a key area of interest and impact in schools, I continue to raise and discuss this topic of teacher and teaching expertise repeatedly with other executive colleagues, leaders and classroom teachers to inquire about their own thoughts, accessing those educators who form part of the core of the profession. These discussions with colleagues provoke my own curiosity and inquisitiveness on the topic. In these interactions, some views expressed by a range of stakeholders appear to overlook some the inherent complexities involved and instead offer overly simplistic solutions on teacher and teaching quality. This can lead to a considerable variance in the conceptualisations of teacher and teaching expertise. Thus, this

stimulates my interest to further research this complex phenomenon involving the diversity of views on teaching and teacher: expertise, quality, and effectiveness in school environments, cast by a range of stakeholders.

The quality of teaching in schools is a complex and contested concept (Peng et al., 2014) and education researchers have been exploring the construct of expertise for decades (Palmer, Stough, Burdenski, & Gonzales, 2005). Peng, McNess, Thomas, Wu, Zhang, Li & Tian (2014) suggest there is a need to look beyond the more obvious aspects of teacher practice and gain a deeper understanding of the underlying beliefs and values that influence the school environment for teachers. From my experiences, I have pondered how various perceptions of teacher practice have been influenced by a range of academic and social discourses on teachers and teaching expertise in a school community. Literature has increasingly debated the variance in teaching quality for well over a decade (Dinham, 2008a; Hanushek & Rivkin, 2012; Hattie, 2003; Loughran, 2010; Marzano, 2007; Rowe, 2004). In addition to the various perceptions on what might constitute quality teaching, the basis of how views are formed is also intriguing. Hanushek (2011b) contends that for some time it has been widely accepted that high quality teachers are the most important asset of schools. The teaching profession would benefit by further developing a deeper understanding about the particular attributes and practices that define teaching and teacher quality, with a particular focus on exemplary teaching. This usefulness would potentially extend beyond schools, as Hanushek (2011b) links broader societal economic benefit and impact with student achievement, influenced directly by teacher quality, though this study is confined to exploring the perceptions of teachers and leaders in school contexts. Palmer et al. (2005) have stated that the criteria used to identify expert teachers to date, have been inconsistent and given little attention, despite the widespread use of the term in the profession.

The considerable influence teachers have on student learning outcomes is substantive and well-stated (Darling-Hammond, 2000; Hanushek, 2011a; Hattie, 2003, 2009, 2016; Marzano, 2007; Mourshed, Chijioko & Barber 2010; Whitby, 2009, 2010, 2012). Specifically, the literature states that teachers are an important in-school factor that accounts for some of the variance in student achievement. OECD (2011) state that of the variables open to policy influence in schools, 'factors to do with teachers and teaching are the most important influences on student learning. In particular, the broad consensus is that teacher quality is the single most important school variable influencing student achievement' (p. 7). For instance, Hattie (2003) conducted an 800 meta-analysis of 50,000 studies on student achievement and observed that the teacher

accounts for approximately 30% of the variance of the in-school student achievement factors, which is the single largest factor apart from what the student brings to school themselves. That is, individual abilities, personal attitudes, family influence and community background (OECD, 2005, 2011). Hattie (2003) further states that 'we should focus on the greatest source of variance that can make the difference – the teacher' (p. 3). Hanushek (2011a) states 'the magnitude of variation in the quality of teachers, even within each school, is startling' (p. 41).

Naylor & Sayed (2014) suggest that developing a quality teacher workforce should be the focal point to establish key strategies to improve student outcomes. These, and other similar claims regarding the importance of teachers in schools, provide a sound rationale for further exploring the notion of expertise in teaching. Identifying the importance of teachers in schools is also expressed by professional teaching authorities as key policy makers, though this is not unexpected within the profession. The New South Wales Department of Education (2017) affirms the inextricable links between successful student outcomes and higher quality teaching by stating, 'the research is unambiguous that successful students are an outcome of high-quality teaching, which in turn, is the hallmark of effective teachers and excellent schools' (para. 4). The *Australian Professional Standards for Teachers, (APST)* specifically acknowledges the importance of the quality of teaching and retention of teachers, stating, for instance, 'the greatest resource in Australian schools is our teachers' (AITSL, 2011a, p. 1). The APST are an important and relevant framework that aim to make explicit and 'articulate what teachers are expected to know and be able to do at four career stages: Graduate, Proficient, Highly Accomplished and Lead' (AITSL, 2011a, p. 1). Given its relevance and purpose to guide and enhance high quality teaching in Australian schools, this framework is discussed in greater detail within this chapter.

The study of generic expertise provides a relevant foundation to then explore the narrowed field of expertise in the teaching profession. It is worth looking into the relationship between generic expertise theory and the relevance to the teaching profession. For instance, historically in the teaching profession in Australia, teachers have been awarded with increased teacher status and incrementally paid higher salaries for accumulated experience (until a ceiling is reached of approximately ten years full-time equivalent teaching) without any formal evaluation of performance linked to those increases. The assumption appears to have been founded on a premise that increased experience equates to better teaching. While a change to this process has occurred in some states, not all are yet to substantially modify this process. It is

clear in the literature on generic expertise that experience, while an essential component, is not a satisfactory singular attribute to define an expert, rather a determination of expert performance requires greater rigour (Bédard & Chi, 1992; Bereiter & Scardamalia, 1993; Berliner, 2001; Ericsson, 2006; Ericsson, Prietula & Cokely, 2007; Ericsson & Poole, 2016; Herbig & Glöckner, 2009; Hoffman, 1996; Mieg, 2006). Other features of generic expertise are also relevant to expertise in teaching.

The particular focus of this research study is on how expertise in teaching is conceptualised-operationalised in professional practice. Thus, this study seeks the voices of teachers and leaders in schools to inform this complex issue, as they provide unique perspectives to complement the existing wider literature. This study investigates the attributes and practices that characterise expertise in teaching and the expert teacher. Despite the complexities and challenges involved in identifying and determining the clear nature of professional knowledge among teachers (Loughran, 2010), it is particularly important to learn more about how teachers and leaders conceptualise-operationalise expertise in teaching within a school's setting.

Improving the quality of teaching leads to improved learning outcomes for students. To provide 'a quality teacher in every classroom ... as the ultimate aim' declares Dinham, (2011, p. 4). More needs to be understood about what this really means to those who teach in classrooms and to the leaders of those teachers, as well as how expertise develops in a school context. The findings in this study may enable teachers and school leaders to gain further knowledge and insight into this complex issue, which can inform, and be applied to, their own professional context.

1.2 ABOUT THE RESEARCHER

As the researcher of this study, I have held roles as both classroom teacher and leader within independent schools, serving in both capacities concurrently for over two decades. Both my classroom teaching and leadership roles have covered primary and secondary schooling, with leadership roles spanning K-12. The leadership roles have included middle and senior level leadership for over twenty years, with five of those as school principal. Each of the schools have been K-12 co-educational day schools, and another involving boarding school, with locations ranging from metropolitan to rural and student populations varying from 230 to 1350. These experiences have occurred in four independent schools located in Queensland and New South Wales (<https://www.australias.guide/maps/>).

Prior to the role as principal, responsibilities had focused on administrative, curricular and pastoral areas, and I have taught in the classroom across three

different key curriculum learning areas, leading one of these. My strong interest in teaching quality initially developed through exposure to diverse teaching and leadership experiences, particularly with the latter having access to privileged perspectives of key stakeholders in school environments.

1.3 THE RESEARCH PROBLEM AND PURPOSE

The broad consensus regarding the importance of teacher influence on student learning (Darling-Hammond, 2000; Hanushek, 2011a; Hattie, 2003, 2009, 2016; Marzano, 2007; Mourshed, Chijioke & Barber 2010; Whitby, 2009, 2010, 2012) identified earlier in this chapter, is also linked to the emerging evidence of increased educational accountability throughout the globe (Hallinger, Heck & Murphy, 2013). A feature of this evolving educational accountability involves the practice of teaching in schools, typically focused on the concepts of quality teachers/teaching and effective teachers/teaching. As McNess (2004) asserts regarding that claim, around the world there has also been a strong focus on restructuring the role of the classroom teacher with the purpose of increasing the quality of practice, to in turn raise standards of student achievement. Hallinger et al. (2014) further state that substantial investments have also been made in reengineering systems of teacher evaluation models in an attempt to measure the effectiveness of teacher performance, as an important influence on student achievement.

There is also an emerging focus on student achievement comparison in international external testing of students. For instance, the Organisation for Economic Cooperation and Development (OECD) administer a test to a sampling of 15 year olds in a growing number of countries, extending beyond OECD member countries, called Programme for International Student Assessment (PISA). External comparison tests such as this, strengthen the emphasis placed on teacher performance because it is one way to account for performance results and international rankings. An example of the increasing public accountability of teacher performance is evidenced in articles published in the mainstream media. For instance, Riddle & Lingard (7 December, 2016, Australian Broadcasting Corporation (ABC) News) reporting on the release of the 2015 PISA results state:

The media, politicians and education commentators will go into a panic over Australia sliding down the international rankings, falling standards in classrooms and poor quality teachers. (para. 3)

Frequent reporting and comments such as these continue to increase the public interest in tests such as PISA in Australia, which consistently draws teacher/teaching quality and effectiveness into the commentary and debate on the quality of education in this country. This public awareness then flows on to school environments, which potentially raises questions or concerns over the teaching practices and teaching quality within individual schools, as perceived by key stakeholder such as parents, school leaders, and members of governance. Part of the problem is that there is no broad consensus on what quality teaching is, or how effectiveness of teachers can be accurately or reliably measured. Campbell, Kyriakides, Muijs, & Robinson (2003) connect student learning and teacher effectiveness pertaining to external testing and suggest whilst these sort of tests have been useful to distinguish ineffective teachers, they are not good at distinguishing highly effective and averagely effective teachers. Sehgal, Nambudiri & Mishra (2016) states that the number of research studies attempting to examine and define teacher effectiveness outside of the (North) American context, are scant, yet it remains a critical concept for wider society. All these issues presented in this section are relevant in an Australian school context. The National Assessment Program, Literacy and Numeracy (NAPLAN) provides another example of external testing, administered by Australian Curriculum, Assessment and Reporting Authority (ACARA).

As briefly stated previously in this chapter, at a school level, key stakeholders form perceptions on teacher quality and effectiveness in a localised school context, as I have observed and experienced in professional practice. Professionals in schools would benefit from an improved consensus on what high quality and effective teaching is, so that greater clarity can be achieved when conceptualising-operationalising exemplary practice demonstrating expertise. In addition to being a benefit for professionals in schools, it would also be useful for other stakeholders to be informed as they develop their own perceptions of teacher practice and what constitutes quality teaching and effective teaching. The interpretation of these terms remain contested (Peng et al., 2014). Palmer, Stough, Burdenski, & Gonzales (2005) contend individuals nominated as expert teachers in schools may be selected for a variety of reasons, because different researchers and policy makers use different indicators to describe expertise with different criteria. Palmer et al. (2005) further state 'little attention has been given to the consistency of the selection criteria used to identify "expert teachers" across studies despite the widespread use of the term

“expert teacher” (p. 13). Adding to this challenge and complexity, Loughran (2010) observes:

There is a considerable literature describing the diversity of views on the nature of teachers’ professional knowledge of practice. However, despite the wide range of these views, understanding what teachers’ professional knowledge really is, what it looks like, and how it might be interpreted and implemented through classroom actions is exceptionally difficult. (p. ix)

This tacit knowledge in teaching provides deeper insight into the problem of identifying and developing expertise, because some aspects are difficult to articulate. Potentially obscuring clarity, the literature reveals multiple terms pertaining to the notion of teaching expertise (Palmer et al., 2005) and terms tend to be used interchangeably. For example, when defining expertise, the following terms are used: highly qualified teachers (Palmer et al., 2005), excellent teachers, effective teachers (Salkind, 2008), master teacher (Berliner, 2001), best teacher (Stronge & Hindman, 2003), expert teacher (Bereiter and Scardamalia, 1993; Dinham, 2008; Findall, 2009; Hattie, 2003; Loughran, 2010; Tsui, 2009), highly effective teacher, (Naylor and Sayed, 2014) high quality teacher (Gore, 2015; Hanushek, 1992, 2011a), gifted teacher (Sternberg, 1998); highly accomplished and lead teacher (APST, 2011a).

Adding to the problem, is understanding why some teachers do not progress from the novice stage to reach a level of expertise as experience accrues, noting expertise is neither automatic nor merely as a result of accumulated experience, (Dinham, 2008). Although expertise cannot develop in the absence of experience (Benner in Rolf, 1995; Shagrir & Altan, 2014), broader evidence from existing research suggests the automaticity of expertise progression does not necessarily occur in wider populations either (Bereiter & Scardamalia, 1993; Ericsson, 2008; Ericsson, Prietula & Cokely, 2007). Exploring the attributes and practices that characterise expertise in teaching in schools, inquiring beyond the parameters of experience, provides potential for teachers and leaders in schools to be further informed when considering their own professional context. Campbell et al. (2010) refer to a realm of teacher effectiveness that is free of contextualisation, though others take an opposing view where dynamic contextualisation is considered inherent to teaching effectiveness (Creemers, Kyriakides & Antoniou, 2013). Even if defining and articulating expertise were straight forward processes, which they are not, mere replication of teacher expertise is not considered a straight forward proposition either and there is no

attempt to suggest such identifications and processes are simplistic. Although being able to identify and replicate elements of generic expertise are considered important features of its recognition as a construct (Ericsson, Prietula & Cokely (2007). Marzano (2007) further points out:

Research provides us with guidance as to the nature of effective teaching, and yet I strongly believe that there is not (nor will there ever be) a formula for effective teaching...no amount of further research will provide an airtight model of instruction. There are simply too many variations in situations, types of content, and types of students encountered across the K-12 continuum. (p. 7)

Despite these and other challenges, there is a need to better and more accurately identify, define, articulate, communicate, implement, develop and evaluate expertise in teaching practice in schools. Each of these individual aspects has its own challenges and complexities and, when considered collectively, they are substantial. In the following sections, the problem is further situated and in stating these challenges, the purpose of the study is elaborated.

1.4 SITUATING THE STUDY

The following sub-sections further explore some aspects relevant to the purpose of this study. These sub-sections include: looking back at the emergence of related key policy developments in Australian education over recent decades, exploring professional teaching standards, interpreting quality teaching, appraising teaching practice in schools, and how self-evaluation is relevant to the challenges.

1.4.1 THE EMERGENCE OF TEACHING STANDARDS IN AUSTRALIA

Prior to establishing the APST (AITSL, 2011a), other significant state and national policies on teaching quality had been developed in Australia over the previous three decades. An example of this dates back to 1996, when the National Project on the Quality of Teaching and Learning developed the *National Competency Framework for Beginning Teachers* (Australian Teaching Council, 1996). A core purpose of this competency-based framework, according to the Ministerial Council on Education, Employment, Training and Youth Affairs (2003), more commonly known as MCEETYA at that time, was to guide the professional practice of beginning teachers. However, this particular framework attracted, ‘many critics who were particularly concerned with a perceived emphasis on “doing teaching” rather than “knowing about teaching”’ (MCEETYA, 2003, p. 2). This reflective critical evaluation

raised uncertainty about whether articulating teaching *competency* was the most effective method to guide teacher practice. At this stage, there was no other formal governing policy or framework to specifically guide the professional practice of beginning teachers, such as professional standards.

Earlier still in the timeline, one of the most significant policy initiatives related to recognition of the importance of Australian schooling was *The Hobart Declaration on Schooling* (Australian Educational Council, 1989) established by the State, Territory and Commonwealth Ministers of Education of the time. This Declaration was the first time all states, territories and the Commonwealth had cooperated to create nationally agreed goals for schooling, as observed and communicated by the Education Council (formerly, The Australian Education Council) (2014). *The Hobart Declaration on Schooling* (1989) stated, in its *Annual National Report on Schooling*, that:

In the history of Australian education there has never been a single document which informs the citizens of Australia about the nation's education systems and performance of our schools. The annual National Report will for the first time, provide a true and comprehensive account of Australian schooling to the nation. (Education Council, 2014, para. 2)

The Hobart Declaration on Schooling (Australian Educational Council, 1989), the subsequent *Adelaide Declaration on National Goals for Schooling in the Twenty-First Century* (MCEETYA, 1999) and *The Melbourne Declaration on Educational Goals for Young Australians* (MCEETYA, 2008) each had a strong focus on a need to recognise and communicate the importance of schooling and education in an Australian context. The *Adelaide Declaration on National Goals for Schooling in the Twenty-First Century* (MCEETYA, 1999) increased focus on teaching quality, and stated achieving the common and agreed national goals involved a commitment for the purposes of 'enhancing the status and quality of the teaching profession', (p. 228). Similarly, 'supporting quality teaching' (p. 10) was again referred to in the *The Melbourne Declaration on Educational Goals for Young Australians* (MCEETYA, 2008). In 2001, MCEETYA had established the *Teacher Quality and Educational Leadership Taskforce* (TQELT) to focus on establishing teacher standards for graduate teachers, as well as for teachers continuing to service the profession. MCEETYA (2003) identified that this taskforce was a critical step in moving from a compliance-based approach towards providing advice on the development of professional standards and the ongoing development aimed at improving the quality and standard of teaching.

In 2003, *A National Framework for Professional Standards for Teaching* (MCEETYA, 2003) was developed to provide an ‘architecture within which generic, specialist and subject-area specific professional standards [could] be developed at national, and state and territory levels’ (p. 2). This framework ‘describe[d] the skills, knowledge and values for effective teaching’ (p. 2), which included the Professional Elements of Professional Knowledge, Professional Practice, Professional Values and Professional Relationships, and included career dimensions spanning Graduation, Competence, Accomplishment and Leadership (p. 3). Although not a set of professional standards itself, *A National Framework for Professional Standards for Teaching* was created ‘in continuing efforts to define and promote quality teaching,’ (p. 2) with the intent for this framework to provide a basis for alignment among teacher standards around the nation.

Shortly after the release of this preliminary framework, and in the years following, professional standards emerged in some Australian states and territories. For example, in Queensland, a pilot framework was created which then served to inform the *Professional Standards for Teachers Guidelines for Professional Practice* (Education Queensland, 2005). In New South Wales, *Professional Teaching Standards* (New South Wales Institute of Teachers, 2004) was created just prior to Queensland’s. The Northern Territory published *Professional Standards for Competent Teachers* (Teacher Registration Board of the Northern Territory, 2006), which drew upon the *National Framework for Professional Standards for Teaching* established (MCEETYA, 2003). There was also the *Teachers Registration and Standards Regulations 2005* in South Australia (Teachers Registration Board of South Australia, 2011) and the *Tasmanian Professional Teaching Standards Framework* (Teachers Registration Board of Tasmania, 2010) was another state-based standards framework that emerged. Whilst not professional standards per se, the Australian Capital Territory used the *Teachers’ Code of Professional Practice 2006* (Department of Urban Services, ACT Government, 2006), and the *Teachers’ Code of Professional Practice* claimed it was a ‘statement of the standards of professional conduct and integrity expected of teachers,’ (p. 1) which included upholding values and principles outlined in the document. This general period, spanning over several years, was the first-time Australian teachers and school leaders had frameworks created specifically for the development of teaching standards at the respective state and territory level, reflected in these examples.

A final example of significant governmental policy development related to teaching and teacher quality, and important background to this study, occurred with the formulation of APST, developed by AITSL (2011a). The APST (AITSL, 2011a)

framework was finalised in December 2010 after being endorsed by the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA). This framework was initially released as *The National Professional Standards for Teachers* (2011) and amended to be the *Australian Professional Standards for Teachers* in November 2012. The current APST has three Domains of teaching (Professional Knowledge, Professional Practice and Professional Engagement), seven Standards, thirty-seven Focus Areas and descriptors articulating professional knowledge and/or practice at each career stage for each of the Focus Areas. These national Standards are the current framework that 'are a public statement of what constitutes teacher quality', AITSL (2011a, p. 2). The Department of Education in the State of New South Wales (2017, para. 6-7) has recently acknowledged the importance of this, observing:

Until relatively recent times however, as a nation and as a state we have not had a public statement of what constitutes 'quality' in teaching. The now nationally agreed *Australian Professional Standards for Teachers* provides that public statement. This public statement attests to the professionalism of teachers – the statement says to the community, this is what quality teaching looks like and this is what you can expect to see good teachers doing in classrooms.

This brief background demonstrates the considerable evolution that occurred in the lead-up to, and creation of, the current APST. However, the evolved existence of the APST, and others before them (as state/territory based professional standards), or similar policies that contributed to the development of professional standards, has not led to all experienced teachers attaining expertise despite substantive resources to guide teachers to excellence in practice. As the APST pertain to all teachers in Australian schools, they can be considered as the primary statement for professional practice for teachers.

1.4.2 AWARENESS AND ENGAGEMENT OF TEACHING STANDARDS

Over the past two decades in Australian education, resources such as the frameworks stated previously, have evolved to support professional practice and development for teachers. For instance, the *National Competency Framework for Beginning Teachers* (Australian Teaching Council, 1996) was created around the time of my full-time commencement in a teaching role; yet, this framework has not

influenced my own professional work at all until quite recently. Initiatives such as these did not seem to be ‘penetrating the classroom door,’ which is a phrase used by Rowe (2004, p. 2) to illustrate the importance of improvement initiatives actually being made known to the teachers and influencing practice. Bourke (2011) further reinforces concerns about teachers’ awareness of important resources in a study of twenty teachers investigating the effectiveness of professional standards on professionalism in teaching. The period of Bourke’s study was after the implementation of *Professional Standards for Teachers’ Guidelines for Professional Practice (2005)* (Education Queensland, 2005), though prior to the implementation of the APST (AITSL, 2011a). Bourke (2011, p. 251, 253, 270) found that, overall participants in the study had ‘limited knowledge’ of the *Professional Standards for Teachers Guidelines for Professional Practice (2005)* (Education Queensland, 2005), resulting in their practice also lacking guidance from the respective professional standards.

In a much broader study conducted by AITSL (2014b), the *Evaluation of the Implementation of the Australian Professional Standards for Teachers* found that 63% of teachers had knowledge of the APST, with just over 50% engaging with them. The scope of the evaluation of the APST, which involved more than 4000 teachers, did not enable investigation of why almost one-third of teachers involved were not aware of the APST and why nearly half did not engage with them. The AITSL noted in the evaluation that misinterpretation of the APST by teachers and other relevant professionals would be a potential issue and key challenge. As Hattie (AITSL, 2014b) elaborates, ‘the success, or not, of the Standards influencing teacher quality will be largely a function of the success of their implementation’ (p. 3). *Insights – Final Report – Evaluation of the implementation of the Australian Professional Standards for Teachers: interim report 4 – 2016 key findings*, (AITSL & University of Melbourne Graduate School of Education, 2016) reported an improvement in the attitudes to the APST. Loughland & Ellis (2016) note a tension pertaining to the APST. The authors acknowledge that there are still many critical policy researchers that critique the ‘reductionist, technical and instrumentalist impacts that performance standards have on teaching’ (p. 56). One aspect of their research indicates that the implementation of the APST may have an adverse impact on teaching quality, and not enhance practice. Conversely, Loughland & Ellis (2016) also acknowledge ‘at the same time, advocates of the standards espouse their potential as providing a common language of teaching’ (p. 56). Providing a common language for teachers has advantages and is useful, however, it is likely that a deeper exploration of expertise is required for professionals in schools to consider.

Interpreting the nature of expertise in teaching is a relevant issue to consider in the context of this study. This further relates to recognising, evaluating and appraising performance. These issues of awareness and engagement of one resource, albeit a significant one in the current era, give some insight into the challenges of important information and resources reaching classroom teachers in practice. This impacts on the opportunity for teachers to develop a conceptualisation-operationalisation of expertise with the benefit of sophisticated and purposeful resources.

1.4.3 INTERPRETING QUALITY TEACHING

For some time, 'researchers have attempted to define the qualities of excellent teaching' (Salkind, 2008, p. 1). The research literature mostly describes quality teaching indirectly, rather than explicitly (Zammit, Sinclair, Cole, Sing, Costley, Brown àCourt, & Rushton, 2007). The term 'teacher quality' remains a contested term with multiple meanings, often reflected in the differing perspectives of writers, researchers and policy-makers (Naylor & Sayed, 2014). Descriptors used include a teacher's knowledge and skills, academic ability indicated by qualifications, student achievement and performance outcomes, and classroom practice (Naylor & Sayed, 2014; Zammit et al., 2007). The indicators used by researchers to define teacher expertise varies considerably, according to Palmer et al. (2005), who refer to: 'a) years of experience, b) social recognition, c) professional or social group membership, and d) performance based criteria' (p. 13). An *effective* teacher is a term reflecting specific student achievement outcomes (Naylor & Sayed, 2014). A number of research studies refer to the effectiveness of the teacher based on student achievement outcomes, and have found that students of highly effective teachers learn at a substantially faster rate, and learn more within the same period of time, compared to those with less effective teachers (Jensen & Reichl, 2011; Marzano, 2007; Strong, Gargani & Hacifazlioglu, 2011). There can be up to a whole year of effective learning as a difference between high and low-quality teaching (Hanushek, 1992, 2011a), which Jensen & Reichl (2011) describe as a high-quality teacher covering the same work in half the time of a low-quality teacher.

Another aspect of teacher quality can include social-emotional outcomes, which adds to the complexity needed for a definition of what 'quality' means (Zammit et al., 2007). Studies of effective teachers and teaching referring to specific student academic outcomes do not identify, and are not focused on, how those teachers are more effective (Strong et al., 2011). It is difficult to measure the social-emotional aspect of

teaching involving student-teacher relationships. NSW Department of Education & Communities (2015) has introduced a wellbeing framework to ‘underpin the work that goes on in education...in regard to student wellbeing and school excellence’ (p. 2) and further states that ‘wellbeing is difficult to define...largely because the concept of wellbeing has so many applications across a broad range of disciplines’ (p. 2). While some studies claim that effectiveness is measurable, reference to the high-quality teacher or high-quality teaching is not a measurable one (Naylor & Sayed, 2014) because it can be interpreted quite differently depending on one’s perspective. When attempting to define expertise, quality teaching or effective teaching, multiple facets of the role of the teacher should be considered, not merely focused on transactions involving content knowledge.

This study explores the conceptualisation-operationalisation of expertise in teaching, which encapsulates the terms, quality teacher/teaching and effective teacher/teaching. Lower-quality teaching is referred to as non-expertise and, where the teacher is experienced, reference is to an experienced non-expert. The variance in the quality of teaching expertise and the teacher as an expert or experienced non-expert is briefly presented in the next section. The concept of expertise and the expert practitioner is addressed in the next chapter, the Literature Review.

1.4.4 ACKNOWLEDGING THE VARIANCE IN TEACHER QUALITY

Literature acknowledges the wide variance in teaching quality and expertise, and suggests that the variance within a school is greater than between schools (Dinham, 2008; Hattie, 2003). Further acknowledgement of teacher variance is noted in a school-based teaching professional-political context by O’Neill, as the Education Department Director-General in Western Australia, who states in an article published by Hiatt (2015):

I want to put on notice with principals that I will taking a direct interest in teacher quality . . . I don’t think children should have to bear the brunt of poor performance. I am considering putting a team in place to support principals directly dealing with underperforming teachers . . . some are ill-matched for teaching . . . I think parents would be on my side when I say we shouldn’t accept poor performance or mediocrity. Teachers know who the poor performers are because they cover for them and I don’t think they should have to pick up the slack for those that struggle. (para. 3-9)

In a similar professional-political context, though positioned quite differently, Rattenbury, in Australian Capital Territory Government (2016), as the Minister for Education, ACT, acknowledges that there is a variance in teaching quality in schools, and suggests that, to facilitate the growth of teacher expertise, resources to articulate, support and guide professional practice, are required. Rattenbury, in Australian Capital Territory Government, (2016), also states that developing 'great teachers in every classroom ... won't happen by chance,' and adds, 'the best teachers ... are supported to develop their expertise and skills over the course of a rewarding career' (p. 5). These comments by two high ranking political figures leading education policy at a state and territory level respectively, are included to indicate that the issue of teacher/teaching quality, effective teacher/teaching and expertise in teaching is also a political one, which ultimately impacts at a school level in the profession.

1.4.5 APPRAISING PERFORMANCE

According to the OECD (2013), 'Teacher appraisal can be a key lever for increasing the focus on teaching quality' (p. 9). Teachers have their performance informally evaluated by key stakeholders, often in an ad hoc informal and non-confidential method by students, parents, colleagues and school leaders. Formally structured and confidential evaluation of teachers is most likely rare, and restrictively provided by those with school leadership responsibilities. More broadly, demands are placed on teachers by politicians, media commentators, bureaucrats, unionists and parents (Boon, 2011; MacCormack, 2016; Whitby, 2009). A teacher's work is busy and intense and far from the '9am-3pm' that is often quoted by some non-teachers, with an overwhelming majority of independent schools commencing classes well before 9am and finishing beyond 3pm. Extensive after-hours work is a routine requirement of all teachers in all schools, with many school teachers in the independent sector also have an expectation placed upon them to coach school sporting teams, tutor students in academic subjects and instruct in performing arts groups, after-hours on weekdays and on weekends. Another typical condition of employment is involvement in extra-curricular activities (not limited to sports coaching) outside of hours, on weekends and through school holiday periods. With significant demands placed on teachers, there is a real risk of simply 'doing teaching' (MCEETYA, 2003, p. 2) and this may also be an inhibitor to the development of expertise, both conceptually and in practice in schools.

Further challenges include teacher perceptions of the effectiveness of undergoing appraisal. More than sixty percent of teachers in research conducted by

Jenson & Reichl (2011) stated that appraisals have little impact on their approach in the classroom and do not improve teaching at all. Furthermore, sixty percent also suggested that appraisals are done to fulfil administrative requirements and are not authentically purposeful to help teachers improve practice. Ninety percent of the teachers in the research state that effective teaching is not recognised by their school; rather, they felt that if they improved their teaching quality it would go unrecognised. Similarly, they state that leaders overlook under-performance with half of the respondents suggesting that leaders tolerate sustained poor performance and seventy-one percent suggest that teachers would never be dismissed because of underperformance in their school (Jenson & Reichl, 2011). Appraisals are often seen to be about judgement, rather than to guide reflection and professional development (Elliot, 2015). Thus, they heavily weigh on accountability rather than growth and development (Bartlett, 2000).

Locally developed instruments are frequently used to appraise teachers in schools in the independent sector rather than the APST or other accepted frameworks. Reinforcing that not all protocols are alike, Gore (2015) suggests:

A common problem with many existing observation approaches is that everyone is judged to be effective with very little specificity to what effective means... The same might be said of the Australian Professional Standards for Teachers which, as currently written, do not provide specificity about, or a clear position on, what constitutes high quality classroom practice'. (p. 7)

Gore's observation challenges what instrument is suitable to use for appraisal of teacher performance. It should be noted that the initial context of Gore's statement was written in a paper focused on classroom observation involving the Graduate level of the APST - nonetheless, some key principles and the statement presented are considered relevant beyond the graduate teacher.

Appraising teacher performance to enable teachers to receive feedback and be evaluated with a common framework would be useful. While some professionals may consider the APST as the obvious solution in this regard, not all independent schools use the APST for this purpose. Without a common language framework and shared understanding that is well accepted, the value of the observation and appraisal process may be limited in facilitating expertise development.

1.4.6 SELF-EVALUATION

For practical reasons and the associated costs, comprehensive teacher observation and appraisal by others can only occur infrequently in schools. Therefore, to inform practice and to evaluate teaching quality on a substantially more regular basis, there is a heavy reliance on self-evaluation. This reliance includes having knowledge of the various expertise-related disciplines of teaching, and the application of informed, honest and accurate self-evaluation. This does not always occur, according to Von Hippel and Trivers (2011), who argue that when self-deception occurs, it eliminates the cognitive load associated with deceiving one's self, and allows individuals to display greater levels of confidence than is warranted. Theories of expertise development include both feedback appraisal by others and self-appraisal in the form of applied, accurate and intentional reflective practice for improvement to occur in any field (Berliner, 2001; Chi, 2006; Dreyfus, 2004; Ericsson, 2006; Hoffman, 1996).

In research reported by AITSL (2015a), there are significant gaps in the perceptions of teachers compared to students on topics such as engagement in lessons, care in the quality of completed student work, and helping students in personal development goals. For instance, in the research reported, seven percent of teachers reported their students were bored, whilst thirty-eight percent of students reported they were bored in their learning experiences and thirty-one percent of students reported they pretended to pay attention in class. Similarly, one in four students reported not getting useful feedback from teachers compared to ninety-six percent of teachers suggesting their feedback was useful. The attributes required to fulfil accurate and effective self-appraisal is another complexity for all teachers to progress their expertise during each career stage.

1.4.7 THEORETICAL FRAMEWORK

There are two theoretical frameworks selected to inform this study. The first is Practice Architectures incorporated into the Ecologies of Practice framework designed by Australian researchers Kemmis, Edwards-Groves, Wilkinson, & Hardy (2012) and Kemmis, Wilkinson, Edwards-Groves, Hardy, Grootenboer, & Bristol (2014a). This framework applies to school settings focused on the interactions of people within an organisation. These interactions are described as practices forming 'socially established cooperative human activity' (Kemmis et al., 2014a, p. 31). A central tenet in this framework involves the understandings that occur in schools, described by Kemmis et al., (2012; 2014a) as *sayings*, *doings* and *relatings*, as clusters of

practices in which people relate to each other and the world around them. Kemmis et al. (2012; 2014a) posit a need to reconceptualise schooling for the twenty-first century, and, in order to achieve authenticity, they argue that it is necessary to change the practice architectures that exist in schools.

The second framework adopted to inform this study is Ecological Systems Theory (EST). Developed by Bronfenbrenner (1994), EST is designed to investigate the human development and growth of individuals as they interact with their surroundings. This framework is also primarily applied to school settings and initially focuses on a child's development, through to adulthood, as a functional member of society. Ecological Systems Theory is used for this study because of its focus on an individual interacting in the school environment – in this instance, the classroom teacher. Paquette & Ryan (2001) state that EST 'has implications for the practice of teaching' (p. 3) and further application of this framework occurs in Chapter 6 and Chapter 7.

These two frameworks collectively provide a complement to each other and this study because of their focus on the interconnected interactions that occur in a school community (Kemmis et al., 2012; 2014a) along with the focus on individuals' perceptions and behaviours as they interact in their setting (Bronfenbrenner, 1994). These frameworks are utilised in Chapter 6 (Discussion) where the results of both cases are compared and contrasted, and implications of the findings and recommendations are presented. Using case studies methodology, the frameworks form a conduit to 'house' the results, enabling greater potential accessibility for other professionals in schools. That is, the application of the findings of this study when applied through these frameworks enable professionals in schools to relate more effectively to Recommendations in the final chapter. This occurs because these theoretical frameworks are founded on principles related to education, and individuals within educational environments.

1.5 SIGNIFICANCE OF THE STUDY

In 2015, the then incumbent federal minister for education, Christopher Pyne, stated, 'It's not possible to provide young Australians with a first-rate education without first-rate teachers', (Pyne, 2015, para. 3). The literature consistently reveals that the quality of the classroom teacher is the biggest in-school influence on student achievement (Goe, 2007; Goe and Stickler, 2008; Hattie, 2003; 2009; 2016; Marzano, Marzano & Pickering, 2003; OECD, 2013; Rice, 2003). In addition, teachers who are satisfied professionally have students who perform better in their learning outcomes

compared to teachers less satisfied (Thomson, Hillman, Wernert, Schmid, Buckley & Munene, 2015). The impact of a less effective teacher on student learning is cumulative and carries through additional years of schooling, with these students more likely to fall behind as a result in subsequent years (Marzano, 2007). Furthermore, Jensen & Reichl, (2011) claim that, apart from the benefit for students as individuals, an improvement of twenty to thirty percent in teacher effectiveness would increase 'Australia's GDP growth by 0.4% per annum adding \$240 billion to GDP by 2050' (p. 6). They also note that improving teacher quality will have the greatest impact of any reform policy available to governments. AITSL (2015b) reports on the substantial challenges teachers are facing to provide a high-quality experience for students in Australian schools which include: learning quality, school engagement, authenticity in purposeful learning beyond exam preparation, relationships, and preparing students for a modern globalised society.

The reasons some teachers with considerable experience do not progress to become expert are relevant to explore in this study. If it is true that 'while some teachers have 25 years of experience, other teachers have the same year of experience 25 times over' (Dinham, 2008, p. 9), then the assumption that all teachers progress through the career stages to become expert does not occur in practice. Similarly, there may be some experienced teachers who consider themselves to be expert practitioners, though their colleagues and others may not agree. This topic is a sensitive one in schools. Capturing the voice of current practitioners is a critical component of this research study. The significance of this study is that it aims to conceptualise-operationalise expertise in teaching from the unique perspective of those participants involved in any aspect of professional practice in schools. If an increase in teacher expertise is to occur in schools, the professional's voice is a crucial part of this aspiration. A better understanding of expertise in teaching, how it occurs and how it can be developed and improved for teachers in schools, enables advancement beyond the status quo. Often, when immersed in the context of a phenomenon, the obvious is not always observed. Tiberius, Smith and Waisman (1998) state that developing expertise in teaching is an important issue worth exploring, which has positive value in our society.

1.6 RESEARCH QUESTIONS

A critical component of this study is to seek the perspectives of teachers. Classroom teachers experience the complexities and real-life demands of teaching first-hand. Similarly, seeking the professional perspectives of leaders in schools is a

key aspect of the research, because they have additional responsibilities that add to the complexity of their roles.

The perspectives sought are from teachers and leaders in independent schools, although it is acknowledged that many similar or same contextualised experiences of teachers occur in common across all education sectors. The reason for containing the study to one of three sectors is based on a long-term understanding of, and involvement in, the independent sector. This familiarity potentially assists with the nuances that exist within the sector and enables greater understanding of the professional context. Managing the scope of the study is a key contributing factor in this decision. However, to incorporate breadth, experiences from participants in different education jurisdictions (in three different school sites across two different states and one territory) are sought. Capturing the professional perspectives of those in current practice in classrooms is a critical component of the following research question:

HOW DO PROFESSIONALS IN SCHOOLS CONCEPTUALISE-OPERATIONALISE EXPERTISE IN TEACHING?

In exploring how expertise is conceptualised-operationalised in professional practice, it is also important to seek the participants' views on the attributes that characterise expertise, and how these attributes might differ between experts and experienced non-experts in teaching. Experienced non-experts are those teachers who are experienced practitioners, though have not attained a level of expertise in practice in one or more dimensions of teaching. Novices are also considered non-experts, thus the term 'experienced non-experts' provides differentiation to novices. Making further enquiry about the factors that both enable and inhibit the development of expertise is another area of focus. Understanding the factors that teachers and leaders perceive improve their practice, and that of their colleagues, is critical to inform how expertise develops over several career stages. Discovering what informs their perspectives, and how they came to know what they did to conceptualise-operationalise expertise, is another area forming part of the research sub-questions listed below.

Sub-questions:

- a) What professional attributes and/or practices characterise expertise in teaching?

- b) How do these attributes and practices differ between experienced non-expert and expert teachers?
- c) What are the enablers and inhibitors to achieving expertise and how do they impact on teaching development?
- d) How are teachers and leaders informed on the specific understandings of expertise in teaching?

1.7 DISSERTATION LAYOUT

The study is organised into seven chapters as outlined below.

Chapter 1: Introduction. This chapter includes an introduction to the study, situates the context, provides a statement of the problem, presents the purpose and significance of the study, and presents the research questions.

Chapter 2: Literature Review. This chapter provides a review of the literature on generic expertise, teaching expertise, formal policy and professional standards, various attributes and practices of teaching and other elements that contribute to the related literature. This serves to clarify and inform the study on the nature and extent of the notion and attainment of expertise in teaching.

Chapter 3: Research Methodology. In this chapter is information on the research methods to conduct the case studies, including providing more detailed information on the selected school sites, participants, data collection methods, as well as data analysis procedures. Issues of trustworthiness, including creditability, transferability, dependability and confirmability are addressed. Finally, the limitations of the study, along with the research plan and ethical considerations are outlined before concluding with a chapter summary.

Chapter 4: Results – Teacher Group. The results from the three school sites will be merged for the two respective case groups identified – teachers and leaders. This chapter reports the results arising from the data and identifies the emergent themes of the teacher group.

Chapter 5: Results – Leader Group. Chapter 5 reports the results of the second case group – the leaders of teachers. This chapter reports the results arising from the data and identifies the emergent themes of the leader group.

Chapter 6: Discussion. The Discussion chapter reflects on the data analysis and further interprets and expands on major themes emerging from the results. The two cases and the emergent themes are compared and contrasted and two theoretical frameworks are detailed.

Chapter 7: Recommendations and Conclusion. In this chapter, the research questions are revisited where the findings are presented and the themes carried forward from Chapter 6. Included are implications and recommendations interwoven into two theoretical frameworks for professionals in schools particularly to consider and possible areas of future research are also stated.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The previous chapter introduced and set the context for this research study. In this chapter, a series of self-contained short analytical surveys review the relevant literature. The review focuses on literature related to the conceptualisation of expertise as a generic phenomenon, and then narrows the focus to expertise in school-based teaching as a profession. The chapter examines the key attributes of expertise, how expert performers are identified, how expertise develops over time and the characteristics that enable improvement. Furthermore, the stages of expertise are evaluated before narrowing the focus to teacher-specific expertise. In the sections specific to teacher expertise, the attributes and practices of the expert teacher are examined and the challenges in ascertaining expertise are identified. Career stage is also an area of focus. Within the teaching profession, this literature review is relevant to classroom teachers and leaders to facilitate further discussion and debate.

2.1.1 IDENTIFYING AN EXPERT AND DEFINING EXPERTISE

The notions of 'expertise' and 'an expert' form a central tenet of this study. Thus, it is important to first discern the difference between the two terms. *Expert* refers to an individual who is particularly skilful, knowledgeable, well-informed, and has extensive intense experience in a particular field; *expertise* relates to the particular characteristics, such as knowledge, techniques and skills, that are performed to distinguish experts from non-experts (Ericsson, 2006). A non-expert can range from a complete novice to an experienced person in a particular field. When attempting to identify expertise, there is often a focus on skill-based performance (for instance, a world class athlete) or skill-based decision making (for instance, a grandmaster in chess) (Endsley, 2006). This focus is enabled when opponents are in direct competition and a winner emerges. Emerging as the victor over other competitors provides a clear rationale and delineation for who is more expert. However, identifying an expert can be difficult in some fields, particularly in some professions where there is no existing widely-accepted or straightforward metric. An added complication in any field is consistency of performance. Martinovic (2009) observes that, within a particular field, '[a suitable person] can function as an expert in one

situation but as a novice in another' (p. 168). This denotes that experts can perform poorly in one situation and still retain their status as expert because of their greater consistency overall. Bereiter & Scardamalia (1993) postulate that 'it would be bizarre to say that people lost their expertise and then regained it' (p. 18), particularly owing to momentary inferior performance; rather, experts retain their expertise, even in moments of inferior performance. The status of an expert is neither determined, nor dependent, on a single performance; rather, it is sustained superior performance over time (Martinovic, 2009; Mieg, 2006). Herbig & Glöckner (2009) express that 'the most commonly acknowledged definition of expertise [involves] 'high, outstanding and exceptional performance that is domain specific, stable over time, and related to experience and practice. Additionally, some authors regard the possession of knowledge as an essential part of expertise' (p. 2). A non-expert, however, differs. The non-expert is unable to reliably and repeatedly reproduce superior performance in a range of different environments (Ericsson, 2006). Thus, it is entirely feasible for a non-expert, particularly an experienced non-expert, to produce moments of performance that replicate expertise, though this does not warrant a claim to be an expert (Martinovic, 2009).

An important characteristic essential for expertise to occur, though it alone does not determine expertise, is experience (Bereiter & Scardamalia, 1993; Benner in Rolf, 1995; Ericsson & Poole, 2016; Shagrir & Altan, 2014, Schempp, 2012). Ericsson & Towne (2010) highlight a problematic relationship between experience and expertise stating, 'many researchers started to define level of expertise operationally by the amount of accumulated experience in the domain, where 10 or more years of experience became synonymous with reaching the status of expert' (p. 404). Experience has been shown to be valuable until the point of automaticity, particularly in low cognitive tasks; however, once automaticity has been reached, the value of experience is diminished or even ceases (Ericsson & Towne, 2010). Examples include driving a motor vehicle, typing or hand-writing (Schempp, 2012). In higher-order cognitive tasks, often inherent in professional roles, experience has been shown to be unrelated to improvement in several reviews and even associated with decreased performance (Ericsson & Town, 2010). Therefore, experience cannot be said to determine expertise, though it is a contributor to the development of expert-level performance.

Ericsson, Prietula & Cokely (2007) claim that the following three tests must be successfully applied when identifying and determining expertise:

First, it [the expertise] must lead to performance that is consistently superior to that of the expert's peers. Second, real expertise produces concrete results ... Finally, true expertise can be replicated and measured... (p. 2)

Ericsson et al. (2007) also assert that expertise must lead to positive outcomes and refer an example from the medical profession whereby: irrespective of other factors, a surgeon must have successful outcomes with their patients. In spite of these tests, particularly the third one, which proposes that expertise must be measurable and be replicable, Ericsson et al. (2007) also acknowledge that measuring all forms of expertise can be particularly challenging in some corporate environments. In an attempt to identify an expert in more complex environments, Chi (2006) proposes the absolute and relative approaches. The absolute approach involves identifying irrefutable outright meritorious performance, recognised either retrospectively or concurrently, as success achieved in a particular field. For instance, a large number of albums sold for a musician or composer might demonstrate expertise. Or, leading an elite rating system in chess or achieving grandmaster status might also demonstrate expertise. The alternative proposed by Chi (2006) is the relative approach, which assumes expertise is a level of proficiency that a novice can eventually achieve. This contrastive approach positions the experts as the most capable and the novices as the least capable, relative to each other. While less precise, the relative approach is a simpler method. Importantly, the goal of this approach is to go beyond merely identifying who is expert and how experts excel. Chi (2006) suggests it is important to learn *why* the experts came to be superior so that others can also learn to become more skilled and knowledgeable.

When attempting to identify an expert, it is also worth noting another important concept introduced by Mieg (2006) known as 'the phenomenon of shifting expertise status: where the same individual can be constituted as an expert in one knowledge domain but constituted a novice when traversing to some other knowledge domain' (p. 746). An example of this occurs in schools when a teacher is required to teach an unfamiliar subject. Although the teacher may retain overall status as an expert teacher (as a result of other knowledge, skills, characteristics and experience), they would not be considered an expert specifically in the new subject content area that is unfamiliar, according to Mieg's reflection on shifting expertise. Importantly, expertise is said to be relative to the required performance criteria in specific contexts and environments (Mieg, 2006). Given the specificity of expertise to

particular performance environments, a contextualised definition for each application may appear logical; however, Bucci (2004) suggests this is not practical and some general principles of expertise must be identifiable.

So far it has been revealed that indicative features of expertise include superior performance and knowledge in comparison to others. The superior performance of experts is consistently demonstrated and reproduced in various environments, and they create situations that lead to useful and positive outcomes. Expertise is measurable, domain-specific, related to practice and relies on a certain amount of experience – although it does not occur *because* of experience and performance may actually decline in some situations where too much experience is accumulated (for instance, forgetfulness or diminished motivation) (Ericsson et al., 2007). The following section provides additional specific detail of some key attributes of expertise including specialised knowledge and the approach to problem solving, which discerns experts from non-experts.

2.2 KEY ATTRIBUTES OF THE EXPERT

Experience has been presented as an essential characteristic for expertise to develop, though insufficient to determine expertise, and in some limited situations a detractor from performance. Experience is also insufficient to distinguish between an expert and an experienced non-expert, although it does separate a novice. This section examines some of the key attributes that differentiate the expert and experienced non-expert, and begins with a focus on knowledge and problem solving.

2.2.1 KNOWLEDGE

Like experience, knowledge is considered an essential feature of an expert (Bédard & Chi, 1992; Bereiter & Scardamalia, 1993; Berliner, 2001; Ericsson, 2006; Ericsson, Prietula & Cokely, 2007; Ericsson & Poole, 2016; Herbig & Glöckner, 2009; Hoffman, 1996, 2008; Mieg, 2006). It is without question that the expert has a greater quantity of relevant domain knowledge, according to Bédard & Chi (1992), which is an essential part of expertise (Herbig & Glöckner, 2009). Stated another way, Bereiter & Scardamalia, (1993) posit, ‘there are no experts who lack expert knowledge in their fields’ (p. 44) and suggest that, without superior knowledge, one cannot be expert. There is, however, more to an expert’s repertoire than possessing a great deal of knowledge in a domain area (Chi, 2006). Hoffman (1996) suggests the development of the required *quantity* of knowledge to be an expert takes an extensive amount of time, somewhere in the order of ‘tens to hundreds of thousands of individual propositions, and somewhere in the neighbourhood of 50,000 concepts’ (p. 85). An example of this

quantity of knowledge is found in grand chess masters who can typically recognise tens of thousands of different meaningful game patterns, compared to a good player having access to around 1000 patterns (Bédard & Chi, 1992). However, it is not merely quantity of knowledge that helps to enable expertise to develop; it is the way that knowledge is used and is organised that does so.

Mieg (2006) suggests expertise is specific to contexts and environments. Domain knowledge is often highly contextualised and can be a very specific and even a limited kind of knowledge (Berliner, 2001). Experts tend to organise and mentally structure their knowledge better (Berliner, 2001), enabling it to be more functional, efficient and accessible, and therefore is a more crucial factor than merely possessing large quantities of knowledge (Bédard & Chi, 1992). Hoffman (1996) states the 'concepts are interrelated in meaningful ways and memories are concept-, context-, and content-addressable' (p. 85). An expert's knowledge is complementary knowledge, not isolationist knowledge (Bédard & Chi, 1992). Rolf (1995) identifies knowledge of an expert as 'know-how, personal or experiential knowledge' (p. 94). Others recognise two key types of knowledge - declarative and procedural (Bereiter & Scardamalia, 1993; Fadde, 2009; Marzano, 2007; Sternberg, 1998) - with the former manifesting itself in events such as explanations, lectures, justifications, while procedural knowledge manifests into performance as skills (Bereiter & Scardamalia, 1993). Sternberg (1998) notes that experts have large, richly developed schemas, both declarative and procedural, in their own domain area. Such capabilities lead to superior performance. Fadde (2009) further suggests the expert has a heightened ability to codify and transmit important declarative knowledge and execute procedural skills as a result of their extensive knowledge base.

Experts are able to detect and recognise information that is more relevant, do so more quickly than others, and process that information more efficiently (Wolff, van den Bogert, Jarodzka & Boshuizen, 2015). In terms of processing information, Bédard & Chi (1992) highlight the superior capability of the expert to organise the information with greater meaning, enabling better access, improved functioning with cross referencing capacity and more efficient retrieval. Wolff et al. (2015) also identify that experts have superior cognitive functioning in their awareness of relevant events owing to the richness and sophistication of their knowledge. This allows for more efficient recall and application of this knowledge. Awareness of the events around them is also a key feature of experts as they interact with, and recall from, their own superior knowledge. The capacity to adapt to the surrounding environment is important. Berliner (2001) uses the terms 'adaptive' or 'fluid' to describe this aspect of

the expert (p. 473). Similarly, Bereiter & Scardamalia (1993) use the term 'fluid expertise', though they also present the term 'crystallised expertise' explained as follows:

We can distinguish between a crystallised form of expertise consisting of intact procedures, well learned through previous experience, that can be brought forth and applied to familiar kinds of tasks. Then there is fluid expertise, consisting of abilities that are brought into play on novel or challenging tasks or tasks that the expert has elected to treat in a challenging way. (p.36)

The terms 'fluid' and 'crystallised' expertise will be elaborated further in this section as an important distinguisher of types of expertise including problem solving. This is particularly relevant as experts interact with their surrounds.

Other aspects of knowledge relating to the surrounding environment, in both familiar and unfamiliar situations, include explicit and tacit knowledge. One phenomenon noted in Hoffman (1996, 2008) is that the more the expert learns, the more the knowledge shifts from explicit to become more tacit, where performance becomes more automatic and less conscious. Automaticity has benefits such as increased efficiency. This occurs, in part, through a reduction in mental effort, because knowledge recall is quick and efficient and accompanied by a diminishing need to analyse a situation owing to familiarity (Bereiter & Scardamalia, 1993). However, this ability of the expert to transfer explicit knowledge to tacit knowledge, gaining a benefit of efficiency through automaticity, is also problematic. Moore, O'Neil & Barrett (2008) suggest this phenomenon results in the inability of the expert to communicate what they know to others. They can *do* it, though they cannot effectively explain it. This paradox occurs without the expert being aware of just how much knowledge they have accumulated over time; they underestimate the amount of information that is required to inform others about developing similar levels of proficiency for a task (Moore, O'Neil & Barrett, 2008). This form of accumulated knowledge is not openly stated nor expressly taught, (Cianciolo, Matthew, Sternberg & Wagner, 2006). Polanyi, in Cianciolo et al. (2006), stated:

'We can know more than we can tell'. Tacit knowledge underlies a wide range of skills, from tool use to application of the scientific method...it must be passed on by example and practice, often implicitly. (p. 615)

In a teaching context, Loughran (2010) also suggests teachers struggle to define their knowledge because it is so tacit, and this is an important point to note from the literature relating to an expert teacher's capacity to pass on knowledge to non-expert teachers. Yates & Hattie (2013) label this the phenomenon of the 'curse of expertise' (p. 43), which is also identified as the expert *blind spot* (Nathan & Petrosino, 2003 in Yates & Hattie, 2013). Therefore, the inability to describe an action or decision-making process by experts is worth noting as a phenomenon that might cause one to question their own expertise in a situation in the field. Communicating expertise is a challenge for the expert.

This section has presented the key concepts related to knowledge and the expert and has covered a number of different principles and elements of knowledge and expertise. The next section looks at another important attribute of the expert: the approach to problem solving.

2.2.2 APPROACH TO PROBLEM SOLVING

It is well-recognised that experts are highly adept at familiar tasks within their domain area (Bédard & Chi, 1992; Bereiter & Scardamalia, 1993; Cianciolo, Matthew, Sternberg & Wagner, 2006; Moore, O'Neil & Barrett, 2008; Sternberg 1998). However, an ability to respond to unfamiliar tasks and situations, and to solve problems, are also important attributes of the expert (Bereiter & Scardamalia, 1993; Björklund & Eloranta, 2015) that go beyond superior knowledge and being adept during anticipated routines and demands. Hoffman (1996) claims the problem-solving capabilities, and an ability to respond effectively in disrupted situations, often determines whether the highly knowledgeable person is actually an expert or not. Hoffman (1996) provides examples of those initially thought to be expert chess players, bridge players, or computer programmers, although subsequently struggle to respond expertly when the chess piece positions are scrambled, or rules changed on a bridge player, and similarly for the programmer, proving themselves to be something less than experts. Experts will cope with these disruptions, then identify and make meaningful representations, because their expertise goes beyond memory recall and incorporates an ability to find solutions. Berliner (1991, 2004) claims that the less structured the environment, the harder it is to demonstrate expertise when recovering from disruption because there are no agreed right moves to rely upon, unlike in structured situations in chess, bridge or mathematics.

While a demonstrated ability to problem-solve is an accepted differentiator and indicator of expertise, Björklund & Eloranta (2015) suggest a prior step is problem

identification. This concept is also identified by Schempp & Woorons Johnson (2006), who observe that the development of acute perceptual capacities is an important feature of the expert: 'the better you become at interpreting the significance of what you see, the better the information available to you upon which to make sound decisions' (p. 29). Endsley (2006) refers to the term 'situation awareness', defining it as:

The perception of the elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future. (p. 634)

There is logic in the view that if one is not perceptive to a particular problem, there is a greatly diminished chance of solving it. Schempp (2012) suggests experts do not need to *be* extrinsically motivated from any particular stimulus or source, because they *are already* intrinsically motivated. The literature, however, lacks clarity and does not explain why an experienced non-expert has lower levels of situational awareness (presenting as perceptiveness, comprehension and projection) and whether there are causal links to capability or more simply lacking the required motivation. Endsley (2006) is clear in stating that situational awareness is a requisite of an expert's repertoire.

Bereiter & Scardamalia (1993) make a link between an expert and the level of motivation of an individual to invest time and energy in the problem-solving process. For instance, the term '*progressive* problem solver' was coined by Bereiter & Scardamalia (1993, p. 98) and indicates experts who invest and re-invest their time and energy into a particular predicament to continuously improve their knowledge and skills, reinforcing and strengthening their level of expertise. Bereiter & Scardamalia (1993) suggest the attributes of the progressive problem solver include 'paying attention to, thinking about or trying to achieve something' (p. 101). The progressive problem solver can readily identify a problem to solve. Bereiter & Scardamalia (1993) also add, 'Experts, we propose, tackle problems that increase their expertise, whereas non-experts tend to tackle problems for which they do not have to extend themselves' (p. 78).

The opposite is someone who reduces the problem without solving it in a progressive manner, which indicates a non-expert, even if that non-expert possesses superior knowledge on a topic. Problem reduction in situations that call for a need to learn more are indicative of non-experts. Such problems typically present themselves in complex environments. However, there are some situations where problem

reduction is the most desirable outcome, and these tend to occur in simple situations, as 'one has to know where to pursue problem reduction and where to pursue progressive problem solving'. Bereiter & Scardamalia (1993) add, 'to pursue expertise in all areas of our lives would be both suicidal and impractical' (p.100). Knowing which one and when to pursue it is key to being an expert.

Another attribute of the expert, according to Chi (2006), also related to problem solving, is opportunism; the expert is opportunistic and also chooses better solutions to solve problems with greater accuracy. An expert often takes longer to analyse a problem, not less, compared to novices and experienced non-experts, though once analysed, they find the best solution more quickly (Chi, 2006). This is corroborated by Herbig & Glöckner (2009) who also assert that novices and experienced non-experts are often faster at making decisions. They explain this reasoning as 'experts being aware of more potential complexities and more possible diagnoses than intermediates, thus needing longer to think about diagnostic questions' (p. 13). Sternberg (1998) similarly notes that, on the surface, it might appear that experts are less efficient, however, overall it is actually their efficiency in solving problems that sets them apart. The nuances are important here: the expert takes longer to *analyse* the problem; the novice and experienced non-expert are faster at *making decisions*; the expert is quicker at *solving* the actual problem overall (Chi, 2006; Herbig & Glöckner, 2009; Sternberg, 1998; Wolff et al., 2016). Experts are also better at accurately identifying what needs to be achieved and know how to accomplish the desired goal (Dreyfus, 2004) and more accurately predict the difficulty and complexity of the problem (Sternberg, 1998). Overall, experts are not only better at problem solving, they are better at many other elements that are related to this concept, including identifying the problem, ascertaining whether to progress or reduce the problem, analysing a problem, solving it more efficiently overall, and understanding and predicting how to accomplish the desired goal.

2.2.3 ADDITIONAL ATTRIBUTES AND PRACTICES OF AN EXPERT

There are further attributes and practices of an expert that also characterise expertise. One less commonly known attribute is the ability to work in both a forward and reverse thinking direction, often most tested when solving complex problems. Taking note of the level of complexity, experts can favour either one depending upon whether efficiency or accuracy is most important. Sternberg (1998) asserts that experts typically think in a forward direction (novices and many non-experts tend not to) because it is most efficient to do so, even though this is more cognitively challenging.

Experts only revert to a reverse engineered approach when complex problems arise in order to produce increased accuracy when determining the solution.

Experts excel at self-monitoring to detect errors and avoid becoming over-confident in their approach (Chi, 2006). This self-monitoring capability, arising from metacognitive processes, gives additional insight into their own performance, (Feltovich, Prietula & Ericsson, 2006). When experts evaluate a situation, they continue to evaluate their own actions while in the process of developing new and multiple perspectives on the issues occurring, or those that could occur (Berliner, 2004). Björklund & Eloranta (2015) claim that meta-skills connect back to the expert’s capacity to learn new knowledge and problem solve: ‘Monitoring, adjusting and analysing one’s thinking, learning and knowledge is a basis for problem solving and expertise. Experts know the limits of their knowledge, how to learn and how to set goals and proportionate them to the resources available’ (p. 2). While experience does not equate to expertise, Rolf (1995) suggests reflecting on experiences and processing these can result in useful knowledge, as Schön (1983) espoused when coining the terms, *reflection-on-action* and *reflection-in-action*. The experts produce a more accurate feedback loop of their own performance.

A brief summary of attributes of an expert are presented in Table 2.1, including some attributes not yet specified. Collectively, these summarise the attributes typically identified with an expert within the wider literature. The next section examines how expertise develops and considers the role of talent.

Table 2.1: An overview summary of attributes of an expert and non-expert

Domain specific	Experts excel in their domain; non-experts are less effective in their ability to recall in their own domain area. Glöckner (2009); Chi (2006); Bédard & Chi (1992)
Experience	Experts accumulate their expertise over extensive periods of time and have a great deal of experience to call upon, though experience itself does not differentiate the expert, and it is used effectively. This may be 10,000 hours or 10 years; or tens to hundreds of thousands of concepts built over time. Ericsson & Towne (2010); Ericsson, Prietula & Cokely (2007); Hoffman (1996)
Spends more time analysing the problem	The expert spends more time analysing the problem because they consider a greater range and depth of possible solutions. Overall the expert is more efficient because they can choose the best solutions more efficiently and with greater accuracy; when time constraints are imposed, experts have a capacity to solve problems more quickly and speed up the process. Chi (2006); Bédard & Chi (1992); Berliner (2001); Sternberg (1998)
Reproducible superior performance	The expert is able to consistently reproduce high outstanding performance over time; non-experienced performers and novices do not reproduce the performances as consistently or as highly over time, or at all in some instances; non-experts can be focused on how others perceive their performance. Ericsson, Prietula & Cokely (2007); Glöckner (2009); Martinovic (2009)

Table 2.1 Continued.

Generates the best solutions	The expert consistently generates the best solutions faster and more accurately than others; experts call upon and utilise the best strategies. Chi (2006)
Detects more features & more meaningful patterns	Experts are able to detect more features and more meaningful patterns than others; experts are also accurate in their predictions, while non-experts are often less accurate and also hold some additional bias. Chi (2006); Berliner (2001)
Progressive problem solvers	Experts are progressive problem solvers. They reinvest time and energy back into the problem to generate the best solutions and increase their knowledge and expertise as a result. Non-experts reduce the problem so they do not need to invest as much time and energy but consequently, their expertise is not progressed; problem solve with richer and deeper representations. Bereiter & Scardamalia (1993); Berliner (2001)
Selecting problems to progress and reduce	Experts are more adept at discerning the problems that benefit from progressive problem solving, and better recognise those problems that are worth reducing to save time and energy. They choose problems that matter. Bereiter & Scardamalia (1993)
Opportunistic	Experts are more opportunistic; they know how and when to take advantage to investigate a problem or situation. Chi (2006)
See the problem	Experts are able to, as well as motivated to, see the problem in the first instance so that they are able to better solve the problem with more information at hand. Schempp & Woorons Johnson (2006); Bereiter & Scardamalia (1993)
Self-monitoring	Experts are better at self-monitoring performance and detecting errors; non-experts can be overconfident and less accurate in monitoring performance; experts have better self-regulatory processes when engaged in activity. Chi (2006); Berliner (2001)
Access to domain knowledge	Experts organise their information more efficiently and are able to retrieve it more quickly and apply it in a variety of situations. Wolff, van den Bogert, Jarodzka & Boshuizen (2015)
Knowledge	Experts develop tacit knowledge that is so extensive it is difficult to articulate to others; the tacit knowledge brings efficiencies and enables the expert not to have to problem solve as much as a non-expert because they are able to call upon their domain knowledge more often, which enables greater familiarity and efficiency. Experts also have extensive explicit knowledge; experts have large rich schemas of both declarative and procedural knowledge; experts have deep knowledge while non-experts tend to rely on contextual cues as prompts to recall knowledge. Chi (2006); Hoffman (2008); Sternberg (1998)
Flexible	Experts are more flexible in their approach, able to adapt to new situations more quickly, and are less rigid than non-experts. This includes more recent research on neuroscience for the brain to adapt to new learning. Chi (2006); Berliner (2001); Martinovic (2009); Ericsson & Pool (2016)
Cultural and context dependent	Expertise can be specific to different cultures, where localised knowledge can be part of the expertise; expertise can also be context dependent and relative. Bucci (2004); Martinovic (2009); Mieg (2006)
Metacognition	Experts have well-developed metacognitive skills to monitor, adjust and analyse their own thinking, learning and knowledge as a foundation for problem solving. Sternberg (1998); Björklund & Eloranta (2015)
Fluid	Expertise is fluid and adaptable to changing conditions over time. Bereiter & Scardamalia (1993)
Reflective practice	Experts invest extensive time as reflective practice to further improve and do not rely on talent. Ericsson (2006); Berliner (2001)

Table 2.1 Continued.

Usefulness	Expertise has a usefulness to it where practical outcomes exist. Ericsson, Prietula & Cokely (2007)
Applied knowledge	Experts are able to apply their knowledge and skill in practical situations and have 'know-how' and personal experience in the application; non-experts might possess similar theoretical knowledge but lack the 'know-how'. Rolf (1995)
Know limitations	Experts are more aware of their limitations and work at the edge of their own knowledge and skill. Martinovic (2009)
Goal oriented	Experts better identify what needs to be accomplished and know how to achieve the desired goal. Dreyfus (2004)
Automaticity	Experts develop automaticity, which enables improved efficiency, and also enables opportunity for additional cognitive demands to be utilised concurrently. Berliner (2001); Bereiter & Scardamalia (1993)
Top down, forward problem solvers	Experts tend to work 'top down' and in forward thinking approaches that are more efficient, though revert to 'bottom up' reverse approach thinking when problems increase in complexity; non-experts tend to work in reverse thinking approaches most of the time owing to less capacity to work in a forward-thinking approach. Sternberg (1998)

2.3 HOW EXPERTISE DEVELOPS

A common comparison when researching experts in their field has been to compare an expert to a novice performer, which Bereiter & Scardamalia (1993) have suggested is limited in usefulness as a comparison. Instead, they suggested comparing experts to experienced non-experts. Williams & Ericsson (2008) claim a need for more studies to investigate how expertise develops so the phenomenon is better understood. Chi (2011, p. 18) reports that there have typically been four types of studies on experts carried out over the past four decades that involve the following focus areas: a) attempting to capture discoveries made about expertise and the circumstances involved, b) looking at the environment and societal conditions that may have led to their expertise, c) examining the role of innate talent, d) investigating how individuals perform in their tasks (noting the lack of focus on how individuals develop their expertise). For the purpose of this literature review, it is worth briefly expanding on the environmental conditions, specifically the role of deliberate practice and the role of talent in expertise development. Theories on expertise development vary quite substantially, specifically in relation to these two potential contributors to explain how expertise evolves.

K. Anders Ericsson, a Swedish psychologist specialising in expertise research, contends that practice performed over many years is the largest contributor for expertise to develop. Ericsson (2006) suggests that it is not just 'practice', rather *deliberate* practice, which is characterised by 'full mental engagement, the focus on overcoming current performance boundaries' (p. 238). For instance, Ericsson &

Towne (2010) found that expert violinists had invested more than 10,000 hours of deliberate practice by the time they reached twenty years of age, which was several thousand hours beyond less expert performers in the same field at the same point. Ericsson, Prietula & Cokely (2007) found in their research that it took a minimum of 10 years, or 10,000 hours, for any performers to win at an international level, and 15 to 25 years of steady deliberate practice for musicians to reach an elite level and succeed at international level (p. 4).

Other prominent researchers have also published about the importance of deliberate practice in expertise development (Bloom, 1985; Chi, 2006; Ericsson, Prietula & Cokely, 2007; Gibbons, 1998; Moore, O'Neil & Barrett, 2008; Otterbach, 2008; Schempp, 2012) over several decades. Ericsson proposed the 10,000-hour principle, also acting as the foundation for the same claims by Gladwell (2008) who popularised this well-known principle. Bloom's (1985) study examining the comprehensive and retrospective development histories of 140 world-class experts in their field is relevant to this topic. The study looked back decades to the early childhood phase when most commenced their participation in the chosen field, often around ages five to seven, across multiple disciplines. Bloom (1985) reports these included Olympic swimmers; frequently published writers; top ten world ranking tennis players; as well as sculptors, concert pianists and recipients of prestigious and highly competitive awards and prizes, and finalists in international competitions. A key finding reported that environmental conditions, including deliberate practice, played the largest role in explaining why these participants went on to achieve expertise. Examples included supportive facilitative parents of the child's interests at a young age, caring teachers and coaches who were relentless in pursuing excellence from the young person, and extensive deliberate practice over many years involving thousands of hours. Gibbons (1998), a United States Olympic committee sports scientist, observed of Bloom's study:

Only ten percent of the talented individuals in the study had progressed far enough by age 12 for anyone to make confident predictions that they would be in the top 25 in their talent field by the ages of twenty to thirty. (p.4)

Gibbons reinforced Bloom's findings that talent was not evident even after several years of involvement and training, and certainly not prior to engaging in dedicated practice routines. In Bloom's (1985) study, it was also reported that some of the parents of the expert performers identified other siblings in their family as being

more talented than the sibling who eventually became a world class performer, though those siblings lacked other qualities required to attain such elite performance developed and sustained over many years. Ericsson, Prietula & Cokely (2007) state that popular lore of talent is 'full of stories about unknown athletes, writers, and artists who become famous overnight, seemingly because of innate talent - "they're naturals"' (p. 4). Upon closer examination, though, Ericsson et al. (2007) suggest each success story has invested extensive practice and preparation. Moore, O'Neil & Barrett (2008), state:

Although aptitude and natural ability clearly play a role in the development of high levels of expertise, research suggests that individual talent may be less important than other factors. These factors include time, dedication, support and interpersonal orientation. No matter how brilliant or talented an individual might be, it seems there is no way to short circuit the journey from novice to expert. Equally, even when people do not possess particularly high levels of initial aptitude, the literature suggests that if they 'stick with the programme,' the likelihood of becoming expert is quite high. Many commentators agree that the average amount of time necessary for someone to experience the gradual transformation from novice to expert is about 10 years. (p. 52)

However, not all researchers and authors agree with the extent that K. Anders Ericsson and some others claim the role of deliberate practice plays in explaining how expertise develops. Gardner (1995) argues that talent cannot be overlooked, especially in areas involving creative arts, where expert performance cannot be the result of extensive practice alone. Macnamara, Hambrick & Oswald (2014) have recently challenged existing views on the role of deliberate practice, and argue that while this is an important feature for expertise to develop, they disagree with the extent it is claimed to play. Macnamara et al. (2014) carried out a meta-analysis where deliberate practice was investigated and found that the benefit of deliberate practice was overestimated. They suggest the improvement benefit deliberate practice makes in the professions is as low as one-percent, four percent in education, twenty-six percent improvement for games and slightly less for music and sports. Conversely, Macnamara et al. (2014) suggest that talent plays a considerably greater role than others have credited.

Hunt (2006) particularly acknowledges the importance of practice and includes social support and personal interests as other important contributors. However, Hunt (2006) also states that:

The balance between talent and practice may vary with the field... In order to understand the development of expertise, we have to distinguish between expertise in perceptual-motor tasks and expertise in cognitive activities ... becoming an expert in almost anything requires literally years of work. People will do this only if they have some initial success, enjoy the work, and are supported by the social climate. (p. 31)

Moore, O'Neil & Barrett (2008) have similar views in some areas, stating:

It is not simply the passage of time that facilitates the development of expertise. The 'decade to expertise' needs to be characterised by high levels of motivation, persistence, opportunity and aptitude, and must include dedicated periods of assiduous practice, self-assessment and evaluation by others, complete immersion and formative feedback to support the process. (p. 52)

Although teaching is not a focus of this section, it is evident that, as a profession, teaching is more cognitive than perceptual-motor tasks (Hunt, 2006) in terms of situating the development of expertise. The notion of a 'born teacher' is occasionally raised in the literature (Berliner, 2004; Darling-Hammond, 2006; Dinham, 2008; Schempp & Woorons Johnson, 2006) and this is an important concept to consider in the context of the debate between talent or deliberate practice as determining factors in expertise development. These do not need to be considered as mutually exclusive concepts (Marcus, 2012). For the development of expertise in the teaching profession, deliberate practice, rather than innate talent, is presumed to be more palatable to teachers aspiring to improve over time, irrespective of the level of innate talent. The other environmental factors raised in this section (Bloom, 1985; Ericsson & Towne, 2010; Hunt, 2006; Schempp, 2012) including social support and personal interest are also important to note as contributors toward expertise development. Dweck (2016) affirms that it is not a case of nature *or* nurture, rather, both elements contribute critically to the phenomenon of improvement.

2.3.1 THE STAGES OF EXPERTISE

This section continues to focus specifically on generic expertise, and briefly presents the differing stages identified as a progression from novice-level to expert-level performance. There is no universally agreed single formulaic approach to derive progression from novice to expert. Hoffman (1996) suggests that there is a stage prior to novice, which he labels as the naiveté stage. Martinovic (2009) and Sternberg (1998) suggest that expertise is viewed as an ongoing continual process, not a point of arrival or end-state, with no fixed points. Expertise requires ongoing adaptation and redevelopment (Grenier & Kehrhahn in Martinovic, 2009). Hunt (2006) states ‘it is harder to become an expert than to be one’ (p. 36). Hoffman’s (1996) stages of development to expertise are presented in Table 2.2 below, which not only has a stage prior to the novice stage, it also has a master stage beyond expert.

Hoffman (1996) suggests that progression to expert and master can take decades to achieve. An alternative version of the stages of development, cited often in the literature, that does commence with novice and end with the expert is Dreyfus (2004), presented further below in Table 2.3.

Table 2.2: Stages of development of expertise (Hoffman, 1996, p. 84–85)

<i>Naiveté</i>	One who is totally ignorant of a domain
<i>Novice</i>	Literally, someone who is new — a probationary member. There has been some (‘minimal’) exposure to the domain.
<i>Initiate</i>	Literally, someone who has been through an initiation ceremony — a novice who has begun introductory instruction.
<i>Apprentice</i>	Literally, one who is learning — a student undergoing a program of instruction beyond the introductory level. Traditionally, the apprentice is immersed in the domain by living with and assisting someone at a higher level. The length of an apprenticeship depends on the domain, ranging from about one to 12 years in the craft guilds.
<i>Journeyman</i>	Literally, a person who can perform a day’s labour unsupervised, although working under orders. An experienced and reliable worker, or one who has achieved a level of competence. It is possible to remain at this level for life.
<i>Expert</i>	The distinguished or brilliant journeyman, highly regarded by peers, whose judgments are uncommonly accurate and reliable, whose performance shows consummate skill and economy of effort, and who can deal effectively with certain types of rare or ‘tough’ cases. Also, an expert is one who has special skills or knowledge derived from extensive experience with sub-domains.
<i>Master</i>	Traditionally, a master is any journeyman or expert who is also qualified to teach those at a lower level. Furthermore, a master is one of an elite group of experts whose judgments set the regulations, standards, or ideals. Also, a master can be that expert who is regarded by the other experts as being ‘the’ expert, or the ‘real’ expert, especially with regard to domain knowledge.

Table 2.3: Levels of Proficiency – Moore, O’Neil & Barrett (2008, p. 53) based on Dreyfus & Dreyfus (1986) and Dreyfus (2004)

Novice	Rigidly adheres to taught rules or plans Has little situational perception Has very limited discretionary judgement Has no experience base on which to integrate an assessment of challenges or problems
Advanced beginner	Needs guidelines for action based on some aspects of the situation Has limited situational perception Uses some prior experience to build a base ready for competence
Competent	Copes with crowdedness Sees action at least partially in terms of long-term goals Is capable of conscious deliberate planning Has standardised and routine procedures
Proficient	Sees problems holistically Is efficient at identifying most important aspects and issues
Expert	Does not rely on rules or guidelines Has intuitive, deep, embedded understanding of situations, and understanding that can quickly be acted on

Two models outlining the respective stages of expertise development have been presented as examples (Hoffman, 1996 and Moore, O’Neil & Barrett, 2008, p. 53) based on Dreyfus & Dreyfus (1986) and Dreyfus (2004) in Table 2.2 and Table 2.3. Berliner (2004) provides another more simplistic model expressing the stages of expertise development as novice, intermediate and automaticity. While Bereiter & Scardamalia (1993) do not provide a specific model, they do delineate the expert stage into the intuitive expert and the progressive expert. They describe the former as an expert who reduces the problem to solve it with existing prior knowledge and skill without taking proactive steps to learn more about the cause of the problem. Expertise often becomes ‘crystallised’ for the intuitive expert (Bereiter & Scardamalia, 1993) because of task familiarity, while the progressive expert has fluid knowledge and skill because they are ever evolving, with a desire to learn more and progress (Bereiter & Scardamalia, 1993). Berliner (2004) describes an adaptive expert as one who is ‘changing agency over time’ (p. 204). An important point is that only progression beyond novice is assured and explained by the presence of a certain amount of time invested (Bereiter & Scardamalia, 1993). Beyond the novice stage, the development of expertise is more complex and there is not unanimous agreement in the literature.

2.4 EXPERTISE AND THIS STUDY

Inherent in this study is how the participants conceptualise-operationalise an expert and expertise, which then applies to the practice of classroom teachers and their teaching as a focus of the study. Therefore, an important area of the literature to review is expertise and the expert. Areas to explore further include how to adequately define expertise, how to identify an expert, how expertise develops, and the role talent and deliberate practice play in expertise progression. This section of the literature review is relevant to the study because the research question focuses on how expertise is conceptualised-operationalised, including the attributes and practices that characterise expertise in teaching. Thus, the following section now turns to expertise in teaching.

2.5 TEACHING IS A COMPLEX PROFESSION

It is a well-accepted proposition that the profession of teaching is a complex one (Dinham, 2010; Loughran, 2010; Loughran, Berry & Mulhal, 2006; Shagrir & Altan, 2014; Whitby, 2010). The convolution of the profession is explained by Bertram (2012) as a 'complex and interwoven fabric of multi-dimensional aspects of a variety of knowledge forms bound up within a professional context' (p. 20). Ingersoll & Merrill (2011) position teaching clearly within the professions, stating:

The underlying and most important quality distinguishing professions from other kinds of occupations is the degree of expertise and complexity involved in the work itself. In this view, professional work involves highly complex sets of skills, intellectual functioning and knowledge that are not easily acquired and not widely held. For this reason, professions are often referred to as the 'knowledge based' occupations. (p. 187)

This view of teaching is not new and was recognised more than fifty years ago by Haan (1964), thereby creating a historical perspective of some relevant issues that prevail in the modern era of the profession. Haan (1964) observed teaching as 'one of the most complex of all professions,' and noted '... comparatively few teachers work in the classroom as skilfully as they could' (p. 285), pertaining to the limited opportunities for teachers to learn the profession more intricately. Drawing upon on Hattie's (2007) research on the investment of ongoing teacher improvement, Dinham (2010) states, 'Teachers currently spend on average one minute per month talking about teaching. Would we have confidence in our doctors if they spent 12 minutes a

year improving their skills and increasing their knowledge? Why should teaching be any different?' (p. 10). Masters (2003) affirms teaching having a rightful place as a profession while associating quality teaching and expertise as important elements:

Teaching qualifies as a profession to the extent that it requires the application of specialised knowledge and skill developed through research and high-level education and training. Quality in teaching practice depends on a familiarity with, and an ability to apply, expert knowledge and skill to achieve improved student learning outcomes. (p. 46)

Teaching is considered a complex profession, and expertise is intertwined within the composition of required knowledge areas and skills. Teacher expertise and related challenges are addressed more specifically in the sections to follow.

The complexity of the profession has increased in the most recent decade, with a particular focus on external testing as a means to focus on teaching quality. Masters (2016) suggests it is concerning that so many Australian students fail to meet minimal acceptable standards in international external tests. The pressure on teachers in Australian schools to improve test scores of students remains prominent in the media (Thomson, Wernert, O'Grady & Rodrigues, 2016), along with calls for a complete reconceptualisation of the education system in Australia and beyond (Kemmis et al., 2012; 2014a). Thomson et al. (2016) assert that some other school systems are improving in their external international test scores, which adds to the pressure on teachers in Australian school classrooms and creates a connection to teaching quality. While these claims are about schools, teachers and leaders are the professionals in schools responsible for the learning outcomes of students. There are also calls for complete reform on the conceptualisation of how education is currently delivered, with some suggesting the industrialised model requires a major reconceptualisation (Mazur, 2009; Mitra, 2014; Robinson & Aronica, 2016). For instance, Whitby (2009) claims Australian schools need to be delivering 'a schooling experience that is relevant, engaging, challenging for and integral to the lives of every student' (p. 9). The education sector is often under some form of scrutiny (Boon, 2011) and teachers are under pressure to raise the external national and international test scores of students. At the same time, they are reinventing a more contemporary, engaging and relevant teaching approach for students in the 21st century classroom to meet a rapidly evolving globalised knowledge community. The classroom teacher is at the

centre of all these pressures and has repeatedly been labelled as the most influential in-school resource on student learning (AITSL, 2011a; Hattie, 2003, 2009).

2.6 THE TEACHER IS THE MOST IMPORTANT IN-SCHOOL RESOURCE

In the current era of education, there is little contest to the recognition of the classroom teacher being the single most important in-school resource that influences and impacts on student learning outcomes (Australian Institute for Teaching and School Leadership - AITSL, 2016; Dinham, 2008, 2011; Hattie, 2003, 2009, 2016). However, this has not always been the case in the historically significant study by Coleman, Campbell, Hobson, McPartland, Mood, Weinfield & York (1966) who reported that schools, and the teachers within them, had little bearing on a child's achievement levels. In an even more recent period, the role of the teacher has been viewed more as a technician with a mere collection of skills (Fish, 1989 in Turner-Bisset, 1999). However, these views are not representative of the wider literature, and teaching is well accepted as being complex and impactful, as reported. Dinham (2011) states that the research has 'powerfully refuted that view' (p. 1) commenting on the historical study by Coleman et al. (1966). Hattie (2003) asserts, 'we should focus on the greatest source of variance that can make the difference - the teacher' (p. 4). However, Hattie (2009) also clarifies an important point on this observation, stating 'the current mantra that teachers make the difference is misleading. Not all teachers are effective, not all teachers are experts and not all teachers have powerful effects on students. It is teachers' variability in effect that is critical' (p. 108). Hattie (2003) initially reported the in-school influence of the teacher arising from 800 meta-analyses of 50,000 individual studies and found that teachers 'account for about 30% of the variance' (p. 2) on student achievement. Hattie (2016) stated his work on this meta-analysis has continued, and now exceeds 1200 meta-analyses of more than 70,000 studies involving more than two million school students, continuing to demonstrate that the proportion of teacher influence is the highest in a school setting. Rowe (2003) expressed a similar contribution, suggesting that the empirical evidence apportions potentially even greater influence in the order of 30-60 percent of student achievement progress to association with class-teacher membership.

The impact of the class teacher is important to note, particularly in relation to this study. Rowe (2003) suggests that in both Australian and international education systems, an 'effective' teacher will achieve with their students in three-quarters of a year what will take a less effective teacher a full year. More notable is that Rowe further suggests the best teachers (those in the top ten percent) will only take half a

year to teach what those in the bottom ten percent take, which is a full year. A study on student achievement outcomes by Nye, Konstantopoulos & Hedges (2004) also found sizeable differences in the learning outcomes of students with different quality of teachers. This study (Nye et al., 2004) found a student with 'an effective teacher' compared to 'a not so effective teacher' (75th percentile versus 25th percentile) outgained their peers by 14 and 18 percentile points in reading and mathematics respectively (p. 253). Similar differences were found in a 90th percentile teacher compared to a 50th percentile teacher. Research conducted by economists from Harvard University and Columbia University in the United States followed 2.5 million people for over 20 years and concluded that those who had 'good' teachers in primary (elementary) and middle school earned more money later in life as adults than their peers who did not have 'good quality teachers'. This resulted in a \$266,000 difference of income over a working lifetime (NSW Government Education & Communities Office of Education et al., 2013, p. 4).

The studies cited in this section indicate that the quality of teaching provided by a classroom teacher matters. However, in the first section of this literature review on expertise and experts, it was noted that, in some complex environments, it is very difficult to measure the expertise of an expert. This point needs to be considered in contemplating the results of these studies. Nonetheless, there is research that makes it clear that differences in teaching quality lead to different learning achievements in students. A final point to present, which was expressed in the literature on this topic, is provided by Rowe (2003), who argues that the impact of a teacher does not occur for a fixed period of say, one year; rather, the impact of the diminished learning is cumulative and carried forward into future learning experiences with the deficit to be overcome. Conversely, the benefits of having an expert teacher are also carried forward. The next section looks at how expertise is demonstrated by the teacher.

2.7 THE ATTRIBUTES AND PRACTICES OF AN EXPERT TEACHER

The following attributes and practices of an expert teacher are presented as relevant and important features: knowledge of content matter, pedagogical knowledge and skills, and developing and maintaining relationships, as well as some additional attributes and related practices.

The literature on the attributes of expertise in teaching and on the expert teacher is not a neatly aligned and agreed proposition. It is, in part, because of this that there is a need for ongoing inquiry, as previously stated. Bucci (2004) conveys this observation, stating, 'A review of expert studies in education reveals many

assumptions and conflicting ideas regarding an expert' (p. 83). Farr (2010) claims that expert teachers themselves, however, 'insist effective teaching is neither mysterious nor magical, nor a function of personality nor dramatic performance' (p. 175). The aim of this section is to identify and present the attributes and practices of the expert.

2.7.1 DOMAIN KNOWLEDGE

This section further advances literature previously presented on knowledge and expertise (section 2.2.1) and now focuses specifically on the teaching profession. Possessing high levels of domain knowledge, also described synonymously as subject matter knowledge in this study, has consistently been identified as essential for a teacher to be considered expert (Krátka 2015; Masters 2003; Salkind, 2008; Shagrir & Altan, 2014; Smith, 2005; Tamir, 1991). This includes an in-depth knowledge base of accurate conceptual and factual knowledge, and developed paradigms for effective organisation of the knowledge (Short, 1995). Masters (2009) suggests holding a deep knowledge of subjects taught is a characteristic of the most effective teachers, which Garmstron (1998, p. 1) describes as 'attaining a rich and complex knowledge base'. Schempp et al. (1998) pose that subject knowledge is a common shared characteristic of the expert teacher, regardless of the domain in which the expertise is situated. A particular challenge in the profession is when a classroom teacher with established subject domain expertise is required to teach in an unfamiliar subject domain area. Transference of subject content knowledge may exist in some applications, though there are many subject areas that do not have any overlap of domain knowledge. The literature clearly shows that an expert teacher requires subject content knowledge to be considered an expert and removing this important feature jeopardises overall status as an expert, despite retaining other forms of knowledge. This scenario is not uncommon in the teaching profession in secondary schools where teachers tend to specialise in the subjects they teach.

However, it is important to acknowledge that possessing expertise in a particular domain knowledge area does not necessarily make a 'good' teacher (Berliner, 2000; Tiberius, Smith & Waisman, 1998), just as experience does not necessarily equate to expertise in teaching (Berliner, 2004). Dinham (2008) suggests that an expert possesses content knowledge at a high level of sophistication which reflects a deep understanding. This deeper level of knowledge and understanding is not merely grounded in isolated facts, rather the knowledge depth can be used flexibly and can be applied to new and different situations. Tsui (2009) explains that the critical difference displayed by an expert teacher is manifested in their ability to

effectively integrate their complex knowledge into their teaching act. Thus, domain knowledge influences other forms of practice such as pedagogical knowledge areas and related decision making. For instance, Short (1995) identifies strong evidence to suggest that higher levels of teacher subject matter knowledge enable better instructional decisions to be made about lesson content and course structure. Expert teachers have additional features to access from their superior levels of content knowledge, as Meyer (2004) explains in the context of a comparison with a non-expert teacher:

Experts, on the other hand, have well-developed bases and organisations that are responsive to multiple external and internal cues and are highly linked allowing for flexible patterns of organisation and problem solving. Because of this, experts continue to develop expertise and knowledge. (p. 972)

As stated, an expert teacher does not merely possess superior factual knowledge with theoretical propositions, they also have a sophisticated knowledge base that is reflective of applicability, contextual and easily retrieved with minimal effort (Dinham, 2010). Put simply, experts make better use of their knowledge (Berliner, 2001, 2004; Salkind, 2008) and integrate it effectively into other teaching dimensions that capitalise on that knowledge (Tsui, 2009), covering skills and values as well as developing theories of practice based on deep knowledge (Farrell, 2015). It is important to recognise that 'knowledge' relevant to an expert teacher is not merely subject content knowledge, as it covers other knowledge types more broadly, including: curriculum, general pedagogy, specialist pedagogical content, learners both empirical and cognitive, self, educational contexts, syntactic and substantive subject (Turner-Bisset, 1999, p. 43). It is the content knowledge that serves to complement other knowledge types. Dinham (2008) recognises expert teachers display the following types of related knowledge:

- Notice features and meaningful patterns (where others do not)
- Acquire a high level of content knowledge that reflect a deep understanding of the matter taught to others
- Knowledge held reflects contexts of applicability, not isolated facts

- Experts flexibly retrieve important aspects of their knowledge with little effort
- Being an expert in a discipline is not enough to teach others effectively but it is required to be expert
- Experts have flexibility in their approach to new situations because of their knowledge.

It is not merely having knowledge of any kind that is important, rather it is the way in which that knowledge is utilised. The amount of knowledge held by expert and non-expert teachers does not necessarily differ in the amount held; rather experts set themselves apart by how they organise and use their knowledge (Hattie, 2003).

When reviewing the literature, the term 'knowledge' is sometimes used without clarifying the extent or context of its meaning. Thus, sometimes 'knowledge' is used loosely when describing experts in their field, or it can be limited to subject content knowledge within a knowledge domain area without recognising other dimensions of knowledge. Another key area of knowledge pertaining to expertise in teaching is pedagogical knowledge, which is covered in the next section.

2.7.2 PEDAGOGICAL KNOWLEDGE

An immense body of literature describes, in minute detail, the acts of teaching and learning, including pedagogical knowledge (Loughran, 2010). However, the volume and coverage of this vast area of teacher expertise is well beyond the scope of the broader purpose of this literature review. The purpose in this section is not to detail the components of effective instruction practice and routines. Rather, it is to review the literature on the importance of highly effective pedagogical practices that contribute to expert performance when implemented in the classroom. For instance, Masters (2009, p. 21) claims that 'studies that take into account all of the available evidence on teacher effectiveness suggest that students placed with high-performing teachers will progress three times as fast as those placed with low-performing teachers', a premise also stated by Marzano (2007), who refers to studies by Nye et al. (2004) of similar proportions of improvement. Rowe (2006) further states that more recent studies suggest that the 'impact of schools on student learning leads to the conclusion that 8-15% of the variation in student learning outcomes lies between schools with a further amount of up to 55% of the variation in individuals learning outcomes between classrooms within schools' and that '60% influence of student

learning is either between or within schools, and the remaining 40% is due to variations associated with the students themselves or to other random influences'. As previously identified, the single largest factor within schools is the teacher (Hattie, 2003; 2009) and more specifically, what occurs in classrooms by teachers (Masters, 2009). The pedagogical command of teachers plays a significant role in their status and development as experts, as identified in the previous section 2.7.1. Teaching effectiveness is dependent on quality teaching which comes from evidence-based teaching strategies that are proven to work and to build capacity in student learners (Rowe, 2006).

Schmoker (2011) suggests any teacher can immediately implement effective instructional strategies, although Ali (2005) cautions that there is no single method of instruction that can be considered to be most effective and context is a necessary application that an expert teacher implements into their approach. Loughran (2010) suggests that any attempt to map out a particular approach to pedagogical practice is excessively difficult to achieve. However, Marzano (2007) advises teachers to incorporate certain routines into every lesson as part of the scientific aspects of teaching, to achieve effective instructional technique as a reliable method to integrate evidence-based practices.

Although, mere engagement at a fundamental level does not warrant expert status without a more sophisticated examination of the complex practices of effective pedagogy used in the classroom. For instance, Loughran (2010) highlights the importance of questioning technique and observes an extensive and complex repertoire of principles and strategies to employ and to know when to employ them for optimal student learning. Reeves (2011) provides a similar scenario related to student feedback, which experts demonstrate in practice. Reeves (2011) suggests experts engage with greater coverage, depth and detail, provide more personalised feedback and do so in a more-timely manner. Experts not only have the technical skills to teach effectively, they also possess suitable levels of judgement and an understanding of when to employ their skills in lessons (Chien, 2014). Describing an expert pedagogue, Yates & Hattie (2013) observe the following:

[The expert] will explain complex ideas with astonishing clarity, using short time blocks. They use instructional methods with precision...are able to 'stop and start' lessons most efficiently. They listen intently at students to obtain feedback on their learning. They have developed highly effective strategies for controlling students'

attention. They anticipate possible problems so can respond to keep momentum flowing...They assist students to think about a problem before providing solutions. They set worthwhile challenges, and when dealing with able students quickly shift across from surface to deep learning tasks. (p. 45)

An expert teacher remains agile and flexible (Findall, 2009) and has better improvisation skills (Berliner, 2004) in implementing their teaching strategies in the classroom, adapting to the needs of students and remaining cognisant of contextual circumstances influencing the lesson at any given moment. Experts also set high expectations for their students (Berliner, 2001; 2004) and themselves (Dinham, 2010) in the classroom and set big learning goals (Farr, 2010) that are explicit, worthwhile and purposeful (Marzano, 2007). An expert pedagogue has better classroom perception of intricate events that occur in all areas involving students and are able to read the cues from their students anticipating what might occur before it actually does (Salkind, 2008). They listen intently, as experts, and this further includes practices such as scanning the classroom quickly, efficiently and regularly with eye fixations (Yates & Hattie, 2013). These acute perceptual abilities in the classroom allow the teacher to focus on what matters most, pay attention to atypical occurrences, and generally observe with a critical eye (Schempp & Johnson, 2006).

The expert teacher is able to punctuate lesson flow strategically to shift focus and knows when to take tangents and when to maintain focus (Findall, 2009; Yates & Hattie, 2013). Because of their superior planning, preparation, capacity to implement their advanced knowledge, and master pedagogical strategies, expert teachers have little to no misbehaviour in their classrooms (Yates & Hattie, 2013) as students are too busy focusing on their learning. Relationships are also a factor in classroom behaviour, which is discussed in this literature review. An additional component to expertise in the classroom is mastering communication to students and an ability to engage students in their learning so that it is enjoyable (Tsui, 2009).

Tsui (2009) claims, 'the extent to which teachers can bring about effective learning is one of the critical features of expertise' (p. 424). For example, Torff (2006) suggests that as expertise develops in teachers, they shift from curriculum-centred to learner-centred practices involving richer immersion in higher-order thinking skills while moderating the focus on content. A non-expert teacher is more focused on content-centred practice and less so on higher-order thinking skills. A non-expert teacher is said to describe the steps of a problem to students, whereas the expert

explains the steps with the latter involving clarification, justification and important additional information (Chi, 2013).

Some researchers refine pedagogical knowledge to pedagogical content knowledge, a term Turner-Bisset (1999) credits to educational psychologist Lee Schulman, as 'an amalgam between content and pedagogy ... into an understanding of how particular topics, problems or issues are organised, represented and adapted to the diverse interests and abilities of learners, and presented for instruction' (p. 41). Chien (2014) claims that 'Pedagogical content knowledge is understood as the most complex form of teacher knowledge, and it is the unique knowledge construction that occurs in a teacher's mind as they blend their knowledge of the context, content, instructional pedagogy and their students' (p. 330). Marks in Turner-Bisset (1999) suggests experts attend to four specific elements of pedagogical content knowledge consisting of: a) subject matter for instructional purposes; b) student understanding of the subject matter; c) media for instruction in the subject matter; and d) instructional processes for the subject matter. Yates & Hattie (2013) add, 'Experienced experts possess pedagogical content knowledge that is far more flexibly and innovatively employed in instruction ... they are more-able to improvise and so alter instruction in response to contextual features of the classroom situation' (p. 46). The literature clearly aligns the view that an expert teacher demonstrates expertise in both pedagogical knowledge and skills, and can refine that further to pedagogical content knowledge for specific groups of learners.

2.7.3 RELATIONAL ATTRIBUTES

Another area of knowledge that is attributed to the expert teacher involves relationships. Tiberius, Smith & Waisman (1998) claim that knowing the students who fall under the care and responsibility of the teacher forms a type of knowledge that an expert attends to in addition to content knowledge and pedagogical knowledge. Webster & Schempp (2008) confirm this view, suggesting strong knowledge of students is an essential attribute to be considered an expert teacher, and equal to having well-developed content knowledge. The expert teacher is able to shift focus beyond delivering the content to notice the personal and social aspects of students (Smith & Tiberius, 1998) and even allow students to in turn know them (Dinham, 2010). In this process, expert teachers find a way to make the learning effective for their students, and enjoyable (Tsui, 2009), both aided by the existence of healthy relationships. A benefit of knowing their students particularly well is that they have virtually no misbehaviour in their classrooms, as expert teachers (Yates &

Hattie, 2013). Dinham (2010) suggests that expert teachers set high expectations for their students (and themselves) in a range of areas. Each of these attributes has some association with forming relationships and student rapport, and all linked to the expert when performed to a high level.

High achievement is enmeshed in relationships, not separate from them. Riley (2010) states, 'the relationships teachers and students form are unique, complex and different from most other relationships ... the importance of this unique relationship is an important factor in student achievement' (p. 41). Common (1991), provides a similar view suggesting, 'Traits such as subject matter knowledge or regard for students are significant only if they contribute to the creation of an educational relationship between teacher and students' (p. 185). Tsui (2009) notes that:

...more recent studies of expertise emphasise its social or social psychological nature. They maintain that expertise does not just reside in the individual, but also in the interaction between the individual and the context in which they operate. (p. 422)

As a key feature of expertise, a teacher's traits are significant features of their relational qualities (Common, 1991). Boaler (2016) highlights a study of English teachers who provided feedback to some of their students by writing an additional emotive-based encouraging comment, such as, 'I believe in you', and found that, overall, that group of students were performing better one year later compared to the control group that did not receive the extra emotive feedback. Connecting on an emotional level with students is a component of teaching that is very challenging, though inseparable from the quality of teaching occurring, because it opens the student to take more advice and counsel from the teacher on a number of levels. The NSW Department of Education and Communities (2015) state 'research evidence shows that students with high levels of wellbeing are more likely to have higher academic achievement and complete Year 12' (p. 3) as well as enjoy improved mental health. They further suggest that school connectedness can mean greater engagement with learning, delivered mainly through teachers, which results in the improved academic learning achievements. Liaw, Marimuthu & Idris (2014) state that 'learning does not take place in a vacuum' (p. 27) and further observe that learning is an interactive process, not an individual one, which involves exchanging ideas, negotiating and sharing decisions made in the learning process with others in the learning environment. To overlook the importance of the broader view of the teacher's role, fails to see the bigger picture of being an educator (Bucci, 2004; Carr,

2006; Wolff, Bogert, Jarodzka & Boshuizen, 2015). Di Stasio, Savage, & Burgos (2016) propose that students elevate their trust in teachers whom they perceive care about and respect them as people. The result of this can flow on to have benefits to learning achievement. The social-emotional dimension of teaching is one dimension of the expert teacher's repertoire.

Riley (2010) suggests that the relationships fostered by teachers with their students and colleagues is crucial to the success of their work and also linked to the success of student achievement (Cochran-Smith, 2005; Onwuegbuzie et al., 2007; Riley, 2010). An expert has strong collegial relationships (Riley, 2010). Barth (2006) claims that an incontrovertible finding from a career in schools is that the nature of collegial relationships has a greater influence on the character and quality of the school, which extends into student learning realms more importantly than any other influence. An expert teacher could not occupy one of the toxic and ineffective or non-collegial approaches towards colleagues identified by Barth (2006) in this vein, and retain expert status. Although not always immediately linked to expertise when compared to forms of knowledge and other skills, the formation of healthy school-based relationships is a practice the expert demonstrates as a core attribute.

2.8 OTHER ATTRIBUTES AND PRACTICES OF THE EXPERT TEACHER

Continuing with a literature analysis on expertise with a narrowed focus on the expert teacher illuminates some additional attributes and practices. Other virtues include the following: respect (Berliner, 2001; Salkind, 2008), empathy (Day in Krátká 2015), passion (Berliner, 2001; Berliner, 2004; Dinham, 2008; Day 2013 in Krátká 2015; NBPTS-USA in Salkind, 2008:2; Yates & Hattie, 2013), diligence (Yates & Hattie, 2013), a strong sense of commitment (Dinham, 2008) and honesty and care (Day in Krátká, 2015). An expert teacher also has the ability to self-monitor performance and self-regulate practice (Berliner, 2001; Björklund & Eloranta, 2015; Chi, 2006; Feltovich, Prietula & Ericsson, 2006; Moore, O'Neil & Barrett, 2008; Salkind, 2008; Webster & Schempp, 2009). In practice, expert teachers show flexibility (Berliner, 2001; Chi, 2006; Findall, 2009; Martinovic, 2009; Meyer, 2004; Yates & Hattie, 2013) and are opportunistic (Berliner, 2004; Chi, 2006) to learn more about their craft.

The expert teacher is intuitive beyond explanation (Dreyfus & Dreyfus, 1986), which incorporates, in part, Schön's (1983) view that 'knowing how' is embedded into expertise as opposed to merely 'knowing what' (in Tsui, 2009, p. 429). Dinham (2010) also describes the expert teacher as possibly appearing as 'arational', 'intuitive' and 'non-analytical' at times whilst in such situations they are really seeing the bigger

picture and understanding problems at a deeper level than others (pp. 49–50). It is this deeper understanding that allows the expert to spend more time analysing a problem qualitatively, yet to generate a better solution more efficiently, more accurately and resolve the issue more quickly, according to Chi (2006). A primary characteristic of expert teachers is their development of acute perceptual capacities (Schempp & Woorons-Johnson, 2006). They exhibit situational awareness and perceptiveness (Endsley, 2006; Herbig & Glöckner, 2009; Martinovic, 2009; Schempp & Johnson, 2006; Wolff et al., 2015; Wolff et al., 2017) and Tsui (2009) further points out that the expert has the ability to exploit opportunities as a result of seeing things that others cannot. This ability, identified by Schempp & Woorons Johnson (2006), to ‘observe with a critical eye, focus on the relevant events including the atypical and make important inferences’ (p. 29), also serves the expert with an additional foundation to identify problems with accuracy, prior to considering how they might best be solved. In the classroom expert teachers are able to focus their attention of the most relevant areas of activity with increased visual perception, informed by knowledge of teaching (Wolff, Jarodzka & van den Bogert, 2016). Expert teachers have better problem-solving strategies that equip them on a path of continual improvement in their professional practice (Berliner, 2001; Berliner, 2004; Salkind, 2008; Smith & Tiberius, 1998; Tsui, 2009; Webster & Schempp, 2009).

Another feature of the expert teacher is the utilisation of additional time, energy and efficiency generated through automaticity. These benefits enable a shift in the capacity focus to new aspects of the environment, which in turn better enables the expert to accomplish mastery in another area and further progresses their total expertise (Berliner, 2001, Berliner, 2004; Chi, 2006; Smith & Tiberius; 1998). Automaticity also frees up memory capacity for the expert teacher to refocus (Salkind, 2008). While Dreyfus (2004) suggests the expert does not have to think too much in these situations, Tsui (2009) contends that actually it can be quite a different reality because experts constantly work hard to engage in continual improvement, which on the surface might appear as effortless, fluid and perfunctory to others. An expansion of new knowledge and wanting to bring complexities to light are signs of the expert (Tsui, 2009). Bereiter & Scardamalia (1993) refer to this as people working ‘at the edge of their competence’ (p. 34). Webster & Schempp (2009) similarly describe experts as continually seeking to expand their knowledge and improve effectiveness, as insatiable learners. Smith, Tiberius & Waisman (1998) suggest that progressive problem solving, a term coined by Bereiter & Scardamalia (1993), must be practised by teachers as professionals to avoid ruts and stagnation, expressing that it would be

helpful for teachers to 'think of their automated skills as building blocks of new skills that are not yet automated' (p. 133). Applied in the classroom, the expert teacher has heightened decision making abilities to improvise when needed (Berliner, 2001; Berliner, 2004) and is able to hold the focus of the lesson. Expert teachers have an ability to retain mental scripts and routines of important aspects during lessons while filtering out irrelevant details to work with flexibility, thus enabling variation to occur rather than adhering only to one 'correct' way (Yates & Hattie, 2013).

Reflecting on teaching practice is important as a means identifying further improvement opportunities (Berliner, 2004; Farrell, 2015; Krátká, 2015; Loughran, 2010; Rolf, 1995; Tsui, 2009) and deliberate practice in expertise development is also observed (Berliner, 2001). Tsui (2009) states:

One of the critical differences between expert and non-expert teachers is their capability to engage in conscious deliberation and reflection. Such engagement involves making explicit the tacit knowledge that is gained from experience. (p. 429)

Farrell (2015) also identifies an ability to accurately reflect as an attribute of the expert teacher, noting this sophisticated ability to deeply reflect, multiple times for the same event, goes beyond problem solving and 'thinking on one's feet' during a lesson. Farrell (2015) notes this can occur before, during, or after the event, and acknowledges Schön's (1983) research in this regard. One of the benefits gained by the expert teacher when reflecting is making tacit knowledge explicit knowledge in the teacher's own specific work contexts (Tsui, 2009). Expert teachers can also reflect effectively because of their own sense of identity, which contributes to their own emotional wellbeing, motivation and ability to teach at their personal best (Krátká, 2015); this is a crucial enabler of expertise. Loughran (2010) claims that reflection in practice is far from simple, and not fleeting as some may think it to be, as it calls on skills, abilities and knowledge to be applied in a variety of challenging ways and is dependent on the nature of the problem or predicament in the practice setting. It is an attribute of the expert when performed at a sophisticated level. Reflecting accurately on one's own ability to teach is a feature of the expert. For instance, Turner (in Berliner, 2004) reports that 'non-exemplary teachers claimed it took them 2.5 years to learn to teach. Exemplary experienced teachers thought it took them almost twice that long: 4.5 years' (p. 201). Schempp (2012) identifies similar results in his research on the same issue. Danielson (2008) states that there are four modes of thinking which enable greater understanding of the complexity of reflection, which are: technical

(formulaic) thinking, situational thinking (specific context), deliberate thinking (seeks more information) and dialectical thinking (builds on and deepens deliberate thinking to gain understanding). Danielson (2008) contends that these four modes help educators understand their own practice, ultimately contributing to improved quality of teaching.

Overall, the attributes and practices of the expert teacher go well beyond possessing extensive subject matter knowledge (Berliner, 2000), having well-developed pedagogical knowledge and applied skills, or having an ability to develop and maintain effective relationships in a school community, particularly with students and colleagues. Each of the attributes and practices identified also reflect the sophistication with which the expert teacher practises in and out of the formal classroom setting. Identifying *who* are the experts in schools is an additional challenge beyond identifying the attributes and practices of *what* characterises expertise.

2.8.1 CHALLENGES ASCERTAINING EXPERTISE

While general attributes of an expert, and specific attributes of an expert teacher, have been theoretically identified within the wider literature, identifying an expert in a school setting is complex, with considerable challenges involved. Salkind (2008) claims that, unlike some other areas of expertise that have well-defined and measurable processes or outcomes, education has been problematic because, as a profession, it lacks that same clarity. Berliner (2001) attributes part of the issue to 'definitional issues' and further cites cultural issues with varying contextual competencies as another challenge (p. 467). However, even in the same cultural context, Krátká (2015) suggests that terminologies used in schools such as 'expert', 'good', 'quality', 'veteran', 'creative', 'effective' are problematic because people assign different meanings to each of these, particularly a 'veteran' teacher (p. 840).

Berliner (2001) raises societal advancement as a challenge, because, as society changes, so too do the criteria for expert teacher performance. The inherent differences and dynamics that will inevitably occur across different classrooms, including teachers and students within them, occur because of differing personalities, age groups, and curriculum area specialisations, all contributing to the challenges of identifying and determining expertise (Salkind, 2008). More specifically, there is no one particular style or method of teaching that can be argued to be the most successful or most effective approach, which illuminates one of the biggest challenges. Even within a single domain area, teachers will vary considerably in their

specialisations of expertise, as noted by Schempp, Manross, Tan and Fincher (1998b), who observed in a study of their own: 'teachers demonstrated varying levels of professional knowledge, demeanour, and competence depending on their knowledge of the subject matter being taught ... the level of professional competence is not a generalised measure, but rather must be sensitive to the subject matter being taught' (p. 353). Schempp et al. (1998a) suggest teachers can be proficient in one area of their subject domain, but lacking in another. Expert teachers can fluctuate in their expertise, even down to a novice level of performance (Martinovic, 2009). This occurs because expert teachers have limited knowledge to transfer to their students and expertise can alter with a change of environments (Berliner, 2001). It is important to discern between *teachers* to *teaching*, because everyone can teach poorly on occasions and no one is always excellent. It is an important point when considering the ongoing quality of teaching, without being fixated on the quality of a teacher.

Masters (2003) questions the nature of a teacher's expert knowledge when it comes to improving student learning, which is noted as being deeply personal (Krátká, 2015) and so intrinsic in nature as part of everyday routine and practice, that it largely remains hidden and unexplored (Bertram, 2012). Loughran (2010) states that this is because, traditionally, teachers have not talked explicitly about their professional knowledge to the same extent as other professions, creating a barrier to passing on the expertise that resides in the tacit knowledge. Part of this specific challenge is that the tacit knowledge also delves into the emotions of teachers because it is so personal in nature (Krátká, 2015).

One other area of challenge identified in the literature was teacher evaluation and appraisal, which has typically occurred by lesson observation. Challenges in this approach are conveyed by Archer, Cantrell, Holtzman, Joe, Tocci & Wood (2016), who state:

In our field, we learned a great deal in recent years about what happens in quality observation ... The key ingredient is evidence. Observers collect evidence in the classroom, then use it to rate teaching performance, and refer to it when giving the teacher feedback. But quality observation takes a special set of knowledge and skills. To collect evidence, you need to know what evidence is, and what kinds of evidence are relevant. To rate performance, you need to understand the conditions under which each rating is merited. To provide feedback, you need to know how to coach. (p.3)

Archer et al. (2016) further state that, if observers of classroom practice possess inadequate knowledge or skills, this will result in frustrated observers and teachers, creating ineffective and inaccurate feedback. Dinham (2011, p. 5) notes *how* and *who* conducts teacher assessments and appraisal are crucial points. 'A valid and reliable scheme for assessing individual teacher performance for high stakes decisions therefore requires multiple, independent sources of evidence and multiple, independent trained assessors of that evidence', claim Ingvarson et al. (2007, p. 6).

Another challenge exists in determining the expert teacher. Earlier in this chapter, the terms 'effective' and 'good' teacher were used, where effective was said to be *measurable* (Berliner, 1988) whilst *good* had no measurable criteria. Marzano (2007) acknowledges Berliner's early work of the 'pursuit of the expert pedagogue' (p. 5) suggesting the 'effective' teacher has 'effective instructional strategies; effective classroom management strategies; effective classroom curriculum design'. However, Bucci (2004) suggests an effective teacher is also one who performs roles beyond those measurable, which often go unrecognised. Bucci (2004) states:

There are, nonetheless, many effective teachers who are not recognised because their effectiveness was outside the current classification of productive skills. For example, how would you measure the positive effect a teacher has on her students with respect to social consciousness? Is this effect any less valuable than being able to add fractions? (p. 84)

An important question raised in the literature is whether all facets of a teacher's role can be measurable. If not, determining *what* characteristics constitute an expert teacher becomes virtually impossible; one must instead turn to the much greater challenge of determining *who* is an expert teacher. Multiple methods are required, as there is no one single measure of determining expertise; various approaches are needed along with contextualisation and relevance applied (Ingvarson et al., 2007). This section has identified some of the challenges associated within the study of expert teachers.

2.8.2 EXPERTISE IN TEACHING AND THIS STUDY

Examining the attributes and practices of an expert teacher in the wider literature provides a comparison to then examine how participants in this study conceptualise-operationalise expertise in teaching from their own unique perspectives. Contextualisation is an important feature when exploring expertise,

suggests Tsui (2009) stating, 'the distinctive knowledge held by expert teachers therefore must be understood in terms of their ways of being as teachers in relation to their contexts of work of which the teachers themselves are a part' (p. 422). The perceptions held by participants in the case studies may or may not align with the existing literature when comparisons are made, though it is anticipated participants will offer insight as professionals.

Dinham (2008a) suggests an expert teacher in every classroom is the aspirational goal, with expert teachers outperforming colleagues by up to twice the pace of achieving learning outcomes with their students (Marzano, 2007). However, a challenge is that not all experienced practitioners become experts (Bereiter & Scardamalia, 1993, Chien, 2013; Ericsson, 2006; Ericsson & Pool, 2016; Meyer, 2004) and this is the case in teaching too (Berliner, 2004; Smith, 2001; Smith & Tiberius, 1998; Yates & Hattie, 2013). Smith, (2001) explicitly states, 'Not everyone becomes an expert with experience. Not all experienced teachers do an excellent job of teaching!' (p. 75). Farris-Berg, (2014) reasons that, in part, this is because 'sometimes we are so accustomed to the way things are that we can't imagine a different way of doing things' (p. 31). Yates & Hattie (2013) suggest seniority and years of service do not predict genuine levels of performance, though both Berliner (2004) and Meyer (2004) also clarify that neither can expertise come without experience.

The next section notes the career stages of the teacher, with a focus on the expert stage. The *Australian Professional Standards for Teachers* (APST) (AITSL, 2011a) are also included in this section of review.

2.9 THE CAREER STAGES OF THE TEACHER

In a previous section in this chapter, two models of the stages of development progressing to generic expertise were presented (Dreyfus, 2004; Hoffman, 1996). Overall, these models are typically consistent with the literature when identifying the attributes and practices of a professional progressing from a novice to an expert stage. That is, additional interim stages exist, though these do not occur as linear progressions of accomplishment. Rather, different individuals reach different stages of development at different time intervals, and some do not attain higher levels of performance. Dinham (2008a) identifies a prerequisite to expert status by positing, 'Firstly, it takes time, learning and effort to develop from a novice to an 'expert' teacher, and not all teachers become experts. Further, 'there is not a critical point when one magically transforms from a novice teacher to an expert; rather the lines are blurred and there is a continuous journey toward greater understanding', Toppel

(2010). Secondly, teacher expertise varies considerably' (p. 7). Bereiter & Scardamalia, (1993) provide a perspective on the progression of career stage from novice to expert, espousing:

The problem is not how to turn novices into experts faster or with less work. The problem is how to ensure that novices develop into experts rather than into experienced non-experts. This statement really gets to the core of the issue in its relevancy and importance.
(p. 18)

'Making our professional knowledge of practice explicit is crucial', states Loughran, (2010, p. 44) so that knowledge can be accessible to those who want to improve in their own pursuit of expertise. Tsui (2009:423) states that 'most studies on expertise have focused on the detailed analysis of superior performance'; little has been done on expertise from a developmental perspective'. Hashim & Ahmad (2013, p. 472) also suggest that 'little attention has been paid to studies on *how* expertise grows over time'. The view that teachers are 'born' and 'not made', has been repeatedly contradicted by research on effective teaching (Berliner, 2004; Dinham, 2008; Darling-Hammond, 2006) with Schempp & Johnson (2006, p. 29) stating, 'the good news is that no one is born expert. Expertise is developed and nurtured from years of experience, increased knowledge, and deliberate attempts to improve one's own performance'. Ericsson (2006) consistently delivers research evidence that attributes attainment of expertise to extensive deliberate conscious practice over many years. Schempp & Johnson (2006, p. 29) go on to state that 'the skills of the expert teacher can, therefore, be developed by anyone who has the knowledge of what makes a great teacher and who makes deliberate attempts to continually and appropriately practice the skills of expert teaching'. This observation is important to this study because part of what this research undertakes is to gain the perceptions of participants as to what the attributes and practices of expertise are for classroom teachers.

One challenge identified in the literature for teachers to attain expertise, is Dinham's (2008) observation that so much of teaching occurs behind closed doors, encouraged by a culture of individuals practising in isolation. Vygotsky in Webster & Schempp, (2009, p. 27) assert another challenge is teachers working in 'the zone of proximal development' (referring to the space between what a person can currently know and can perform now and what an expert is ultimately capable of achieving. Webster & Schempp (2009, pp. 29-30) advise teachers who desire to improve in their

professional practice should surround themselves with other teachers whose skills and knowledge surpasses their own, and further advise the following explicit strategies to improve:

- Take the time to observe lessons of more expert teachers
- Communicate with well-established educators at different levels of education including K-12 teachers and professors at universities
- Attend professional conferences and workshops
- Read both contemporary and classic works on teaching and learning
- Read widely and prolifically as we know even experts cannot and do not know it all
- In other words, invest in becoming an avid learner
- Practise each skill until mastered (do not be deceived by the simplicity of this statement)
- Begin by practising and refining perceptual awareness skills –see like an expert.

Other developmental factors have been presented in the review of literature in this study. For example, deliberate reflective practice is regarded as one means to further improve (Ericsson, 2004; Ericsson & Pool, 2016; Tsui, 2009). Receiving and implementing feedback is another way to improve (Berliner, 2001). Collectively, this literature review provides a substantive number of improvement strategies that are said to contribute to expertise development. Schempp & Johnson (2006, p. 29) suggest that the 'skills of an expert teacher can be developed over time by anyone who has the knowledge of what makes a great teacher and who makes deliberate attempts to continually and appropriately practice the skills of expert teaching'. Professional standards are one means to guide improvement in practice so that expertise develops over time and through career stages.

In Australian education, the *Australian Professional Standards for Teachers* (AITSL, 2011a) provide four explicit career stages of teacher status which recognise increasing levels of expertise. Table 2.4 presents one example of the career stages along with one Focus Area, which together provide an indication of the shift in the standard of professional practice. Standard 2, Focus Area 2.2, has the Graduate (novice) 'organise content into an effective learning and teaching sequence'. The Proficient stage evolves as, 'organise content into coherent, well-sequenced, learning and teaching programs'. The Highly Accomplished stage is, 'exhibit innovative practice in the selection and organisation of content and delivery of learning and

teaching programs'. The Lead career stage is, 'lead initiatives that utilise comprehensive content knowledge to improve the selection and sequencing of content in coherently organised learning and teaching programs'. The level of expertise increases with each career stage descriptor and both the latter equate with expertise.

Table 2.5 then outlines the three Domains of Teaching and the seven Standards in the APST from which the example of Focus Area 2.1 is extracted as an example of how these interrelate with career stage development of the APST.

Table 2.4 The *Australian Professional Standards for Teachers* (AITSL, 2011a, p. 10)
Professional Knowledge Domain for Standard 2: Know the content and how to teach it and Focus Areas 2.1 and 2.2 (sample Focus Area & Career Stages)

Focus Area	Graduate	Proficient	Highly Accomplished	Lead
2.1 Content and teaching strategies of the teaching area	Demonstrate knowledge and understanding of the concepts, substance and structure of the content and teaching strategies of the teaching area.	Apply knowledge of the content and teaching strategies of the teaching area to develop engaging teaching activities.	Support colleagues using current and comprehensive knowledge of content and teaching strategies to develop and implement engaging learning and teaching programs.	Lead initiatives within the school to evaluate and improve knowledge of content and teaching strategies and demonstrate exemplary teaching of subjects using effective, research-based learning and teaching programs.
2.2 Content selection and organisation	Organise content into an effective learning and teaching sequence.	Organise content into coherent, well-sequenced learning and teaching programs.	Exhibit innovative practice in the selection and organisation of content and delivery of learning and teaching programs.	Lead initiatives that utilise comprehensive content knowledge to improve the selection and sequencing of content into coherently organised learning and teaching programs.

Table 2.5: The Australian Professional Standards for Teachers (AITSL, 2011a)
Domains and Standards overview

Domains of Teaching: Professional Knowledge	Standards: 1. Know students and how they learn 2. Know the content and how to teach it
Professional Practice	3. Plan for and implement effective teaching and learning 4. Create and maintain supportive and safe learning environments 5. Assess, provide feedback and report on student learning
Professional Engagement	6. Engage in professional learning 7. Engage professionally with colleagues, parents/ carers and the community

Whilst the career stages reflect an escalation of complexity signifying expertise at an advanced career stage, not all teachers in an Australian school context appear to implement these Descriptors and Standards into practice, nor progress in career stage as indicated by the descriptors. As reported in Chapter 1, an evaluation study by AITSL (2014) reviewing the implementation of the APST found just over one in every two teachers engaging with the standards as part of their practice. Less than two in three were aware of the APST, which raises questions over what is guiding other teachers on the notion of expertise in practice. The purpose of this literature review is not to evaluate the APST. However, it is noted that other researchers and authors have introduced issues, attributes and practices that exceed those stated within the APST and thus, this study cannot assume the APST are an exhaustive guide for expertise in practice for teachers in Australian schools. However, the APST, to date, offer the most unified and accessible resource of those available, in this light for teachers in Australia.

2.10 CHAPTER CONCLUSION

A review of literature in this chapter identifies the attributes and practices of an expert and defines expertise. It qualifies experts in their any field as having many different attributes, often sophisticated, that separate them from an experienced non-expert. One key differentiator is that the expert is able to sustain expertise over time in a predictable and replicable manner (Herbig & Glöckner, 2009; Martinovic, 2009; Mieg, 2006). Notably, the attributes of an expert include superior domain knowledge compared to peers (Bédard & Chi, 1992; Bereiter & Scardamalia, 1993; Berliner, 2001;

Ericsson, 2006; Ericsson, Prietula & Cokely, 2007; Ericsson & Poole, 2016; Herbig & Glöckner, 2009; Hoffman, 1996; Mieg, 2006) and experts are also better at accessing their knowledge because it is well organised and, furthermore, extends to flexible application of knowledge (Wolff et al., 2015). The other key attribute of experts is their approach to problem solving, which occurs in a progressive manner, further enhancing and perpetuating their expertise, as opposed to constricting it (Bereiter & Scardamalia, 1993). This progressive approach to further grow and enhance expertise enables it to be adaptive and fluid in nature (Berliner, 2001), rather than knowledge and skills becoming crystallised (Bereiter & Scardamalia, 1993). It is claimed that experts take longer to analyse a problem compared to non-experts; however, experts are more efficient at solving the overall problem (Bédard & Chi, 1992; Chi, 2006; Sternberg, 1998). Other attributes also distinguish the expert from the non-expert. Additional examples are the ability to consistently generate the best solutions to predicaments (Chi, 2006), to detect more meaningful patterns (Berliner, 2001; Chi, 2006), to be more opportunistic (Chi, 2006) and to demonstrate better perceptiveness and situation awareness (Endsley, 2006; Schempp & Woorons Johnson, 2006).

Experience is an attribute of the expert, though not a determining attribute (Bereiter & Scardamalia, 1993; Benner in Rolf, 1995; Shagrir & Altan, 2014, Schempp, 2012). There are no inexperienced experts, though not all experienced individuals are experts (Bereiter & Scardamalia, 1993). The development of expertise remains a contentious issue in the literature, with some researchers proposing expertise is enhanced primarily through deliberate practice over many years, even decades (Ericsson & Poole, 2016; Schempp, 2012). A different proposition is that talent plays a larger role than the former researchers espouse and deliberate practice less of a role, particularly in the professions (Macnamara et al., 2014). Some also claim that expertise is important in terms of conceiving the roles of talent and deliberate practice. Endsley (2006) identified two main categories: cognitive tasks that are inherent in the professions; and perceptual motor skills.

Teaching is an intense, highly demanding (Carbonneau, Vallerand, Fernet & Guay, 2008) and complex profession (Carbonneau et al., 2008; Dinham, 2010; Loughran, 2010; Loughran, Berry & Mulhal, 2006; Shagrir & Altan, 2014; Whitby, 2010; Wolff et al., 2016) where cognitive expertise exists as one feature of the profession. Teaching has complex attributes and practices in common with, and relevant to, many aspects of generic expertise identified in the literature. The expert teacher possesses tacit knowledge (Loughran, 2010) that is difficult to convey to others because of its sheer complexity and contextualisation. The expert teacher

makes better use of knowledge (Berliner, 2001; Berliner, 2004; Salkind, 2008) than a non-expert teacher. A second distinguishing feature is the possession of pedagogical knowledge and skills to be able to effectively teach the knowledge to students (Chien, 2014; Hattie, 2003, Tsui, 2009). The expert teacher possesses a range of additional attributes including accurate self-reflection (Berliner, 2004; Farrell, 2015; Krátká, 2015; Loughran, 2010; Rolf, 1995; Tsui, 2009), respect (Berliner, 2001; Salkind, 2008), empathy (Day in Krátká 2015), passion (Berliner, 2001; Berliner, 2004; Dinham, 2008; Day 2013 in Krátká 2015; NBPTS-USA in Salkind, 2008:2; Yates & Hattie, 2013), diligence (Yates & Hattie, 2013), a strong sense of commitment (Dinham, 2008), honesty and care (Day in Krátká, 2015). Thus, a review of the literature reveals that there are many attributes and practices of generic expertise that also align with the attributes and practices of teaching. The literature on both topics when considered together, illuminate important knowledge on this complex phenomenon.

This chapter concludes by presenting key characteristics of the APST four career stages and provides an example of one Focus Area. The Highly Accomplished and Lead Teacher career stages are interpreted as the expert teacher stage based on the most sophisticated and demanding practices of all the stated career stages. The Domains, Standards and Focus Areas within the framework of the APST articulate more specifically what teachers are expected to know and be able to do, and these reflect the progression and overall demands of each stage. The APST cover professional knowledge, professional practices focused on pedagogical skills, and professional engagement. Relationships are referred to in professional knowledge (of students) and in professional engagement (of colleagues, parents and community). The APST cover little, if anything, in terms of attributes such as empathy, work ethic, commitment, passion and honesty, though other sources identified these attributes. The APST are purposefully designed and implemented to guide all Australian teachers in professional practice.

Following the presentation of key operational definitions in section 2.11, the next chapter addresses the methodological approach used in this study by specifying the research paradigm and rationale for selecting the research design and research methods of investigation.

2.11 OPERATIONAL DEFINITIONS

Attribute

A term used in this study to describe a characteristic or quality drawing from personal values, beliefs and character traits.

Conceptualise

A formation of an idea as a concept of something; used mainly in reference to participant ideas and concepts in this study pertaining to the notion of expertise and expert performance.

Inquiry

An intentional attempt to systematically gain insight into the phenomenon from which data has been collected.

Knowledge Domain

A term used in this study to describe the curriculum knowledge area that a teacher specialises in after formal learning and training has occurred in that area. The term domain knowledge is used synonymously with subject knowledge in this study.

Leader

This term refers to professionals in schools who have a formalised position of added responsibility in addition to, or in lieu of, their classroom teaching duties.

Operationalise

This term has been used in conjunction with 'conceptualise' as a complement to communicate that the study researches both the conceptual and the more concrete elements of participant perceptions. This term refers to the putting into operation or use.

Perception

Refers to an individual who interprets something, which may further proceed to be expressed as a view through various media. The view may also represent a collective view of a group of individuals.

Professional Learning

A broad term used to describe the learning a teacher undertakes to inform professional practice. Professional Learning encompasses professional development as one of its dimensions (Evans, 2015). It can be both formal and informal in nature, as well as being either episodic or ongoing.

Teacher

In this study, the term Teacher refers to a professional classroom practitioner in a school setting who has direct face to face contact with students on a regular basis, and who teaches curriculum content to students ranging from Kindergarten to Year 12 age groups.

CHAPTER 3

RESEARCH METHODOLOGY AND RESEARCH PLAN

3.1 INTRODUCTION

This chapter presents the research approach employed in the study. It commences by giving consideration to three possible paradigms in which the study could have been situated, before it was determined that an interpretivist paradigm (Sarantakos, 1998) was the most suitable. Following confirmation of this selection, the three qualitative research designs considered are presented. The selection of the research design is then presented, providing a rationale for choosing qualitative case study as the methodology (Yin, 2009). Case study methodology allowed for context-sensitive participant perceptions and judgements to inform the study in-depth, and this was investigated further for its suitability prior to selection. The research question was a key consideration in selecting both a suitable paradigm to situate the study and a research design. This study's research question was, '**How do Professionals in Schools Conceptualise-Operationalise Expertise in Teaching?**' It was important that the research question and research approach were a good fit, as some research questions pair better with certain research designs (Schofield-Clark, 2006). The chapter then examines the study's units of analysis and criteria for interpreting the findings, before presenting criteria for selecting the research site and participants. Data collection and data analysis procedures are presented prior to issues of trustworthiness, along with limitations of the study, ethical considerations and presentation of the research plan before the chapter summary.

3.2 SELECTING A RESEARCH PARADIGM

Denzin & Lincoln (1994) define a paradigm as a 'basic set of beliefs that guide action. Paradigms deal with first principles, or ultimates. They are human constructions' (p. 99). There are different interpretations of paradigms that pervade the literature (Dash, 2005; Denzin & Lincoln, 2005; Guba & Lincoln, 1989; Lather, 2006) with Niglas (2001) identifying more than thirty different types of qualitative research approaches. This can cause some confusion (Mackenzie & Knipe, 2006) as Vine (2009) states: 'there is great debate how to define paradigms, methodologies and methods' (p. 1) though as a set of beliefs, paradigms have no absolute truthfulness and therefore one cannot be proven to be better than another. When endeavouring to select the most suitable paradigm to situate this study, Krauss' (2005) view provided some

perspective towards understanding the possibilities, stating, 'The philosophical assumptions or a theoretical paradigm about the nature of reality are crucial to understanding the overall perspective from which the study is designed and carried out' (p. 79). The suitability of a selected paradigm is guided by the purpose of the research, not the researcher's allegiance to any particular paradigm. Sarantakos (1998, p. 33) identifies three to explore further, which were considered relevant possible selections for this research study: positivist, interpretivist, and critical.

3.2.1 POSITIVIST

Positivism positions research as scientific explanation, where positivists typically assume that reality can be positioned and described as objectively measurable properties independent to the researcher and their related instruments (Myer, 1997). Guba & Lincoln (2005) reason that a positivist approach maintains a framework where reliable knowledge is based on direct observation of the natural phenomena through empirical means. Neumann (2003) suggests that, when employed in the social sciences, positivism is an organised method for combining deductive logic where precise predictions can be made from patterns of human behaviour, which can be viewed as probabilistic causal laws. Positivists often test these types of causal explanations in experimental studies. Orlikowski & Baroudi (1991) further suggest that this form of research approach also often includes hypothesis testing, quantifiable measures of variables, and drawing inferences from a sample of a stated population. Myer (1997) suggests that a positivist approach to research can be both quantitative and qualitative. An interpretivist approach was then considered as an alternative.

3.2.2 INTERPRETIVIST

Unlike the positivist approach, the interpretivist inquirer aims to *understand* a particular social action and to further grasp the meaning that constitutes the action (Schwandt, 2000). Alexander (2006) states that this is because 'humans are purposeful beings' (p. 213) and have a capacity to understand. Interpretivists further consider the cultural and historical aspects within the social life-world (Crotty, 1998). Any particular action can be interpreted in different ways by those who view it, depending on context. This is classically illustrated by Geertz's (1973) example of gestures such as a smile or a wink, whereby interpreting the intention behind the action is a critical component of understanding the action, not simply observing the act itself and viewing it in a single dimension. The philosophical assumptions about the nature of reality are a determinant on perspective (Krauss, 2005) and in turn influence a study

overall. Paradigms help to guide the researcher to what is reasonable and legitimate (Patton, 2002) and further informs what is relevant and important. The interpretive perspective focuses on the social process to bring about meaning (Vine, 2009) and makes the world visible for the researcher by situating them in the activity, not external to it (Denzin & Lincoln, 2005). In the interpretivists' paradigm, there is acceptance of multiple realities (Merriam, 1998) rather than an objective singular truth or reality.

3.2.3 CRITICAL

Critical theory is an alternative paradigm to that of positivism and interpretivism. This paradigm assumes a reality that is apprehensible and shaped over time from social, cultural, economic, political and gender factors. It then forms these into a new series of structures which one takes, inappropriately, as 'real' (Guba & Lincoln, 1994). Critical theorists endeavour to challenge existing guiding social assumptions (Chambers, 2004) rather than to name and describe occurrences in the lifeworld (Pascal, Johnson, Dore & Trainor, 2010) where real-life problems are found in the everyday workplace (Creswell, 2014). Critical theorists not only reflect on their current experience with respect to values identified, they are also trying to change a situation from a particular vantage point (Chambers, 2004).

I considered each of these three paradigms in the context of this study. After consulting further relevant literature, I made a selection, which is presented in the following section.

3.2.4 PARADIGM SELECTED

The purpose of undertaking this research was to seek perceptions of educators that deepen insight, provide contextualised understanding and give meaning to complex phenomena in relation to the notion of expertise in schools. It was important to capture this perspective from those who teach, and those who lead teachers, in the practice of teaching. Vine (2009) suggests a paradigm in educational research 'has come to mean a framework that determines the way knowledge is studied and interpreted and the motivation and goal of the research' (p. 1). Lather (2006) identifies the purpose of a positivist paradigm as one that ultimately tests hypotheses and makes predictions. Coughlan & Coughlan (2010) claim the creation of universal knowledge is the aim of the positivist researcher. Eisner (1993) suggested that historically, the view was 'the more scientific the study, the greater status it enjoyed' (p. 51) and that non-scientific knowledge was simply not *knowledge*, rather a *belief*. This is despite other paradigms existing for hundreds of years (Guba & Lincoln, 1989) and

other views prevailing, such as Alexander's (2006), which states social educational research is 'as intellectually legitimate' (p. 206). Guba & Lincoln (2005) note the 'contention among various paradigms for legitimacy and intellectual and paradigmatic hegemony' (p. 191), where differing views and beliefs about research approach add to the situation when attempting to identify the characteristics of each paradigm. Mertens (2005) suggests that a 'researcher's theoretical orientation has implications for every decision made in the research process, including the choice of method' (p. 7), reinforcing that the paradigm selection is pivotal in the process.

Positivism typically hypothesises from the deductive to inductive, which Cohen, Manion & Morrison (2007) observe: 'beginning with observation of the particular, scientists set out to generalise findings to the world at large' (p. 11). The methodology employed in a positivist paradigm is quantitative and involves survey, longitudinal, cross-sectional and/or experimental methods (Neville, 2007). The strengths of positivism and potential benefit for this study would have involved generalising results. This would have been accepted to a larger degree had the research been replicated on larger and different populations and sub-populations (Johnson & Onwuegbuzie, 2004). Surveying a large number of participants' views on expertise, for instance, would have contributed to this possibility. Because a broader approach involves more participants, future predictions are more likely to be accepted (Johnson & Onwuegbuzie, 2004). A reliable instrument 'will yield similar data from similar respondents over time' (Cohen et al., 2007, p. 146) that also contribute to the validity of the research design employed. However, problems would have existed within this paradigm; considering that the research objective and purpose was to learn, in-depth, perspectives of a smaller number of individuals, a positivist position was not a suitable one and I therefore excluded it from consideration. This research aimed to learn the views on how participants conceptualise-operationalise expertise as well further in-depth perception on why these views were formed. Ormston, Spencer, Barnard & Snape (2014) state:

Positivism had a major influence on the way social enquiry developed over the last century, and provides the wider backdrop against which qualitative research evolved and matured. Indeed, it has been argued that qualitative researchers often define their approach in opposition to the perceived tenets of positivism and the 'scientific method'. (p. 8)

Arising from careful consideration of suitability for this study, I then evaluated the suitability of an interpretivist or critical paradigm, in preference to positivism.

Asghar (2013) claims 'non-critical paradigms only present what is observable in a situation, whereas a critical paradigm, because of its inherent reformative fervour, goes beyond mere recording observations, and strives to reform for a better world' (p. 3121). Horkheimer (1982), as a co-founder of Critical Theory, states: '[Critical Theory] seeks human emancipation to liberate human beings from the circumstances that enslave them' (p. 244). Critical theory is particularly focused on social institutions and issues within a society relating to power involving interactions of race, class, gender, education, economy or religion (Asghar, 2013). This study has dynamic intersections between students, teachers, aspects of the classroom, workplace, parent relationships, and school leaders, and thus has evolving power imbalances that shift depending on the nature of the relationship in a school setting. Enquiring about expertise from the multiple perspectives informing these intersecting relationships was worth investigation. It was, however, beyond the scope of this study to consider all the complexities involved with such an approach.

A critical paradigm is explanatory in nature, often about what is wrong in a social reality, and looks to change the social injustice by taking some form of action. It provides clarity about the criticisms and transformation sought (Bohman, 2005). In this study, there was no intent to influence the cultural, political, gender related, social or economic aspects of the phenomena, which has been associated with critical theory. This study may be used to further inform practice in schools, though it does not prescribe an agenda for that practice. Critical theory places an emphasis on inquiry on imbalances of power in dynamic relationships. This study was without a particular 'vantage point' (Chambers, 2004, p. 241); Bohman (2005) reminds us that a critical paradigm is typically explanatory. I therefore examined the features of an interpretivist paradigm for suitability.

The interpretivist paradigm takes a different ontological and epistemological position from the critical paradigm and, most particularly, from the positivist paradigm. Lather (2006) claims the interpretivist approach seeks to understand and regard the social world as constructed by human beings rather than something 'out there' (Phothongsunan, 2010). This study aimed to discover the meanings attributed to expertise by the participants in the study, which aligned with the overall purpose of the research question. Interpretivists view reality as multi-layered and socially constructed with multiple interpretations, unlike the positivist who views a single reality as truth. Phothongsunan (2010) suggests that 'interpretative researchers seek to

investigate how humans perceive and make sense of this world. For the interpretative researcher, there can be no truly objective position' (p. 1). Mackenzie & Knipe (2006) suggest all participants involved in research, including the researcher, bring their own unique interpretations of the world and, importantly, the researcher needs to be open to any values and attitudes presented by participants and actively suspend prior assumptions. Elliot & Lukes (2008) suggests that case study methodology is suited to an interpretivist paradigm where the focus is on the social, collaborative process of discovering knowledge and bringing about meaning (Vine, 2009) to a real-life event.

Thus, the paradigm selected as the most suitable to situate this study was an interpretivist paradigm, as it aimed to understand a particular social action by grasping the meanings attributed by participants involving multiple realities.

3.3 SELECTING A QUALITATIVE RESEARCH DESIGN

Having identified an interpretivist paradigm as the most suitable to situate the research, selecting a suitable methodology was the next step in the process. The methodology chosen should be determined by the aim and alignment of the phenomenon of interest in the research, not determined by the researcher's commitment to any particular paradigm (Krauss, 2005). The methodology and the phenomenon work together, not in opposition. The interest in this study was to intently listen (Thomas, Nelson & Silverman, 2011) to the participants as practitioners in the field of education, enabling an important voice in the exploration of better understanding expertise in teaching. When selecting the research approach, whether qualitative or quantitative, it is characterised by the research aims (Patton, 2002).

Qualitative research involves an interpretive and naturalistic view (Boote, 2008) of the world, where inquirers research phenomena in their natural setting, observing and interpreting the meanings to make sense of what people bring to them (Denzin & Lincoln, 2005). Bogdan & Biklen (1998) observe various features of qualitative research, such as collecting data that is descriptive, emphasising process over outcomes or product, exploring both how and why a phenomenon occurs, and taking place in a naturalistic setting (such as a workplace) where the researcher spends time to learn of issues. Qualitative inquiry has a profound concern with understanding what other human beings are doing and saying, (Schwandt, 2000). Bogdan & Biklen (2003) further state that qualitative research places the researcher in context with the nature of the research in the field, not removed from it, and proceeds to analyse the data inductively.

Creswell (2007) suggests other key characteristics of qualitative research are: capturing multiple sources of data; utilising the researcher as a key instrument; keeping participants' meanings in focus; modifying research design as needs emerge; and having a theoretical lens. It is an interpretive inquiry where the researcher interprets the data and involves a holistic account, reporting multiple perspectives. Yin (2009) describes research design as a 'logical plan for getting from here to there, where here might be defined as an initial set of questions to be answered, and there is some set of conclusions about these questions' (p. 26). Schofield-Clark (2006) observes that certain research questions pair better with different methodologies. The selection must be a good fit for the research purpose and be able to respond to the research questions. Qualitative research is a way of exploring and understanding the meaning ascribed to a particular social or human problem (Creswell, 2014). Qualitative researchers are confronted with numerous choices when selecting a methodological approach to most effectively serve the purpose of the research and research question. Several different types of qualitative approaches were considered for this specific study, including grounded theory, action research and case study.

When considering methods to collect data, interpretivists taking a qualitative approach use more open-ended questions rather than starting with a hypothesis, and focus on interpreting the meaning of the data. Suitable qualitative research methods include focus groups, individual interviews, and research diaries, where variables can be recorded in the data capture process (Vine, 2009). Interpretative research is often idiographic, using only small numbers of participants to explore meaning, not generalise as a purpose (Phothongsunan, 2010). In this research study, the aim was to gain in-depth responses, in favour of breadth through other means (such as surveys) which also compromise the capacity to learn why particular views were held. Understanding meaning through inductive means, rather than deductive, is also suited to methods that best serve interpreting the participants' perceptions on expertise. In the following sections, three different types of qualitative research are presented as an evaluation that occurred to select the most suited to this study. They include grounded theory, action research and case study.

3.3.1 GROUNDED THEORY

Fernandez (2012) reports different versions of grounded theory (GT), including classic grounded theory developed by Glaser & Strauss in the 1960s, Straussian grounded theory developed by Strauss & Corbin (1990), and a more recent version being constructivist grounded theory developed by Charmaz (2000). Strauss &

Corbin (1990) suggest understanding complex data occurs ‘... inductively and derived from the study of the phenomenon it represents’ (p. 16). The data is discovered and developed systematically with the analysis of data relating to that particular phenomenon coming to light in a new theory (Zarif, 2012). According to Mehran (2007), the new theory arises from the data inductively, which involves a rigorous and systematic approach. Strauss & Corbin (1990) add ‘... one does not begin with a theory, then prove it. Rather, one begins with an area of study and what is relevant to that area is allowed to emerge’ (p. 16). Grounded theory is a conflation of multiple voices (Borgatti in Jones & Weas, 2012) that informs the construction of this new theory.

Evans (2013) states that a key feature of constructivist grounded theory is the creation of descriptive theory, as opposed to developing explanatory theory in a classic grounded-theory approach. To develop descriptive theory, the views of a broad cross section of participants who are relevant to the phenomenon are required (Kennedy, 2009). Creating theory on teaching expertise utilising a grounded theory approach would ideally require representation of all major demographics of teachers to ensure a broad range. For instance, this would require teachers of a wide range of experience from beginning teachers to mid-career teachers and highly experienced teachers.

Soklaridis (2009) explains that the data analysis involved with grounded theory is a particularly important part of the overall approach where the researcher must demonstrate consistency and show that any inconsistencies in participant responses are fully examined and explored carefully. For instance, these might be idealised versions of the truth. In attending to the data analysis carefully, inductive coding occurs, whereby data is broken down, conceptualised and reconceptualised in new ways as a central process to build theory from data (Strauss & Corbin, 1990). Developed codes are grouped as abstract categories, and categories are generated through the same analytical processes used for developing the codes and provide the means for which theory can be integrated (Soklaridis, 2009).

Grounded theory is increasingly being used as a research method in a variety of diverse areas to generate new theory that is grounded in the realities of participants’ daily lives (Elliot & Higgins, 2012). A key feature of this methodology is to be able to identify the research problem from the perspective of the participants in order to conduct inductive inquiry to develop new theory (Elliot & Higgins, 2012). Researchers need to be wary of the bias they bring to the research inquiry as Glaser & Strauss (1987) acknowledge that no researcher can erase all the literature they know

from their mind when constructing new theory. They stress the importance of cultivating literature, from within the realm of the theory, that emerges during the inductive process. There are a number of features of grounded theory that could have been potentially be suitable for this research study. It is suited to the real-life context and is used to understand the meaning of contemporary phenomena that participants divulge as the research problem. The data-capture processes suited to this methodology included focus groups and interviews and the inductive data analysis process was also potentially suited in developing a new theory of expertise in teaching.

3.3.2 ACTION RESEARCH

Action research (AR) is a method developed in the 1940s-50s by Lewin and his colleagues as a collective problem-solving cycle for improving organisations (Calhoun, 1993). It involves researchers systematically and carefully examining their own practice using certain techniques in the research process (Watts, 1985). Sagor (2000) describes action research as a process of disciplined inquiry conducted *by* and *for* those taking the action. Hine (2013) suggests the systematic inquiry seeks to improve social issues affecting the lives of everyday people, while Clarke and Bautista (2017) suggest AR solves real-life problems. Used in education, Ferrance (2000) states that action research is disciplined inquiry conducted by a teacher with the intention of the research informing his or her own practice in the future. Ferrance (2000) further adds that action research is carried out in the researcher's own work environment. The primary purpose, according to Sagor (2000), is so that the researcher, also the actor, can benefit from the research. This can occur in one of three ways, according to Calhoun (1993): as individual teacher research, collaborative action research, or as school-wide action research.

Action research is a well-suited method for education, because educators can investigate experiences in their own environment where the researcher can be closely involved in the research and be a teacher concurrently. Baumfield, Hall & Wall (2012) propose that personal stories from the classroom can be the most persuasive in educational research. Action research enables researchers to get close to the research in their setting and allow their passion for a topic, their school and their students to be leveraged in the research process rather than remain at a distance (Herr & Anderson, 2015). Action research is also considered a form of professional learning (Scott, 1999) to improve educational settings and, as another benefit, support the career development of the educator conducting the research (Hine, 2013). Action research

can revitalise a whole-school learning community and aid in teachers reflecting on practice, (Calhoun, 1993). In selecting one of the types of action research, there are five elements to consider, according to Calhoun (1993): a) purposes and processes b) support provided by outside agencies, c) the type of data utilised, d) the audience of the research and e) the expected side effects. Zuber-Skerritt & Fletcher (2007) state that 'action researchers are usually doers interested in improving their practice through innovation, change and development' (p. 414).

Side effects of action research include a reliance on the collegiality of teachers to have a willingness to share their work and findings. If the benefit of the research is not mutual between researcher and participants, it can result in a loss of enthusiasm from one side particularly when external agencies are used. In collaborative action research, whole-school action research requires buy-in from all teachers and also relies on collegiality to be most impactful (Cahlhoun, 1993). Another side effect, and potential disadvantage of action research in the context of this study is that when the researcher is also the actor, there can be perceived imbalances of power in some situations involving collaborative or whole-school action research.

3.3.3 CASE STUDY

Case study is another research approach, typically qualitative, that is well-suited within the interpretivist paradigm. Yin (1989) suggests that case study investigates a contemporary phenomenon in a real-life context and utilises multiple sources to inform the inquiry being researched. Bromley (1990) in Zucker (2009) refers to case study as a systematic inquiry of one or more related events that then describes and explains the phenomenon of interest as part of its aim. Suitable data can come from various forms including interviews and observations as well as documentation. Case study is a widely recognised approach in many social science studies when in-depth explanations of social behaviour are sought (Zainal, 2007), as it allows for the exploration and understanding of complex issues. Zainal (2007) claims that it is a robust research method, particularly when a holistic in-depth investigation is required.

Within the social sciences, each research method has its own distinct advantages and disadvantages depending on three particular conditions, according to Yin (2009): a) the type of research question being investigated; b) the level of control an investigator has over the events relevant to the research; and, c) whether the focus of the phenomena is contemporary or traditional. Yin (2009) explains that case study is most suited to conditions that are focused on *how-or-why type questions*, where the

researcher has little control on the events occurring and where contemporary phenomena are being investigated. Stake (1995) suggests that case study is an effective method of qualitative inquiry that operates as an integrated and bounded system. Corcoran, Walker & Wals (2007) explain that case study is suited to a wide variety of research designs, disciplinary perspectives, epistemological orientations and data collection techniques. Case study also enables the options to research multiple cases in the same research study, and to make comparisons between the different cases as a means to gain even greater insight into the contemporary phenomenon.

There are different components to case study research design that include: a) a study's question; b) any propositions it may have, though these may not always be present; c) its unit/s of analysis/es; d) logic linking the data to any existing propositions, if present; and e) criteria for interpreting the findings (Yin, 2009, p. 27). Any of these five components of case study research can apply to any of the three categories Yin (2009) reports can be used to investigate case study: exploratory, explanatory or descriptive. The selection of an interpretative case study was chosen to understand the perspectives of participants on how they conceptualise-operationalise expertise. Schwandt (1994) explains: 'to understand the world of meaning, one must interpret it' (p. 118). Another reason the case study method suits this study is that it allows for in-depth understanding of perceptions to be explored, as participants are able to explain their rationale and the researcher can probe, where relevant, to make further inquiry. The depth of research applicable to case study (Blatter, 2008) is a benefit and contributor to the selection of the method. Extending this rationale further, the method of case study also enables context-rich data to be captured as a form of ecological validity (Crossley & Vulliamy, 1984). Pearson, Albon & Hubball (2015) suggest case study has further benefits in the flexibility of the types of research questions that can be addressed as well as the methods of data collection that can be utilised.

Critics of case study methodology have questioned the rigour, credibility and lack of generalisability of findings. However, Pearson et al. (2015) claim that when case study is employed with proper attention to the context of the case(s) and the research aim, with effective management of data and ethical treatment of participants involved in the study, case study(s) can be rigorous, credible and generalisable. To achieve this rigour, Pearson et al. (2015) suggest that readers of a case study draw their own conclusions of the findings and applicability relevant to their own settings, rather than the results of a case espousing generalised findings to other situations. Rossman & Fallis (2003) report that case studies are detailed single examples, where

understanding phenomenon can come from intensive focus on the particular. Welch, Piekkari, Plakoyiannaki & Paavilainen-Mäntymäki (2011) question whether a case study can contextualise *and* generalise concurrently, suggesting incompatibility of two opposing principles. Conversely, Tsang (2012) claims that building theory from case study has been an effective use of the method in some research communities in the professions where case study can and does inform other situations. Case study or case studies are a possible method to select as an approach to inform the research investigation of this study. After considering all three options, I selected the most suitable for this study and I have presented this selection in the following section.

3.3.4 THE QUALITATIVE RESEARCH APPROACH SELECTED

This investigation aimed to discover and understand how professionals in schools conceptualised-operationalised expertise in teaching by seeking participants' perceptions and gaining insight into the research topic. Gray (2009) asserts that when 'not enough is known about a phenomenon' (p. 35) the researcher can conduct exploratory means to gain insight. The research question, 'How do Professionals in Schools Conceptualise-Operationalise Expertise in Teaching?' is a real-life complex contemporary phenomenon that was investigated in several school settings. Investigating in a school setting enabled contextualisation to occur, and this was an important feature of the approach that was selected. Gaining depth of insight was a critical dimension of this investigation in order to learn the views of participants as well as why they held their views in place to shape their professional perceptions. After selecting a qualitative research paradigm, and presenting rationale in section 3.3 to consider positivist, interpretivist and critical to situate this study, I selected an interpretivist paradigm as being most suited to the research inquiry.

Following on from the paradigm selection, the qualitative research approach was selected from those considered, which were grounded theory, action research and case study. Carter, Ritchie & Sainsbury (2009) suggest that 'qualitative research seeks to understand what happens, what things mean, to generate new and relevant concepts, and to find out what is important to participants' (p. 105). According to Tracy (2012), qualitative research has three important concepts as part of its foundation: self-reflexivity, context and thick description. The three possible approaches were reconsidered and one was selected.

Grounded theory was one consideration as a possible research approach for this study. Specific details of grounded theory are presented in section 3.3.1, which outlines the features as an approach. It is important to remember the different

versions of grounded theory that were relevant when making a selection for this study, because the suitability varied in each version. The most suited versions for this investigation were a divergence from classic grounded theory (Glaser & Strauss) in favour of a variation developed by Strauss & Corbin (1990) and a constructivist grounded theory developed by Charmaz (2000). This was because these versions offered a better potential fit for this study and its purpose. For instance, constructivist grounded theory (Charmaz, 2000) creates descriptive theory rather than the explanatory theory inherent to Glaser & Strauss' classic grounded theory, and this is more suited to the research inquiry seeking participant perceptions on how expertise is conceptualised and operationalised. Grounded theory had potential for suitability in that it allows for theory to emerge from the data inductively, which may have been applicable to develop a descriptive theory of expertise. To develop theory, grounded theory requires the voices of a broad cross section of participants who are relevant to the phenomenon being investigated (Kennedy, 2009). Another factor of this study relevant to considering this approach was that grounded theory would have required extended periods of investigation and repeated contact with participants to build robust theory over time (Kinnunen & Simon, 2012) arising inductively from the available data (Mehran, 2007) as it developed. However, this study was not seeking to create a new theory of expertise; rather, it sought to understand the deeper perceptions of expertise in teaching as a contemporary phenomenon by those in the study.

I also considered action research as an alternative approach. The primary purpose, and a clear benefit of action research was so that the individual, or collaborating team, or whole-school system could benefit from the research. This flexibility of involvement is an advantage of this approach in many research situations. This occurs as a result of careful and systematic research that examines practice in a school setting (Watts, 1985). Action research is a disciplined approach (Ferrance, 2000) that allows personal stories to inform the research (Baumfield et al., 2012). This is another benefit of this research design, because it enables contextualisation in a school setting. Action research allows the researcher to get close to the research rather than be required to remain at a distance (Herr & Anderson, 2015), which is both a potential benefit and potential problem. For instance, situating researchers in their own school setting can empower the individual or collegial team undertaking the research. It gives greater insight for the researcher and allows for holistic problem solving to occur (O'Brien, 1998). However, conducting the research in that setting may create current or future tension between leadership roles and

imbalances of power between colleagues, which may cause some potential conflict inhibiting the research integrity, and being problematic in the workplace. Being too close can compromise objectivity and impartiality when it is needed. As a school principal and researcher, this was a relevant consideration. Action research has been labelled as an approach that goes beyond wanting to understand a phenomenon, into the realm of wanting to change practice. For instance, Zuber-Skerritt & Fletcher (2007) suggest action researchers are 'doers' who are most interested in improving practice through innovation and development. This approach may be the most tangible in terms of seeing more immediate change in practice in a particular school setting. O'Brien (1998) suggests that people will learn most effectively when they are involved in the research themselves, because they are then more willing to apply what has been learned. Action research can be time-consuming, and managing a wide range of data collection methods can be problematic for individual researchers, particularly those who are working full-time in schools in other capacities.

The third possible consideration of an approach to suit this study was a case study or multiple case studies. This approach allows for an opportunity to explore and interpret meaning from participant perspectives at a deep level to gain insight and contextualised understanding, acting as a possible 'blueprint' as a case (Perry, 2000, p. 8). Further detail about case study and its suitability was outlined in section 3.3.3 as a robust approach well-suited to this research study. Case study is well-supported in the literature as a legitimate research design (Perry, 2000; Stake, 1995; Tellis, 1997; Vine, 2009; Yin, 1989, 2003, 2009, 2011; Zainal, 2007; Zucker, 2009). Furthermore, case study allows the participants to inform the research of the complexities of the phenomenon within the teaching profession, bound within a single or in multiple cases, to ascribe their own meanings to concepts. Perry (2000) suggests the design plan of case study is aimed at moving from questions to answers and includes a unit of analysis and criteria for interpreting the findings. Case study helps to guide teachers' thinking and reflection, causing them to consider and question real problematic experiences about their own cases, the cases of others and the particular problem as lenses for thinking about their work in the future (Schulman, 1996). Case study was selected over other methodologies for these reasons.

Further justification for selection is presented by Skilbeck (1983), who suggests that 'case study illuminates the process of schooling and opens it up to evaluation by all those concerned with education' (p. 18). In this research study, the purpose was not to generate new theory; rather, it was to gain a deeper insight and understanding of

the perspectives of classroom teachers and leaders on an existing contemporary phenomenon in the context of their own practice. Case study suited this study because schools have complex cultures and this approach caters to understanding such complexities in the context of the settings involved. Two cases were created, each as a bounded system (Stake, 1995): a teacher case and separate leader case. Each case had participants across three school sites as part of its context. Stake (2000) suggests that 'it is believed that understanding [the cases] will lead to a better understanding, possible theorising about perhaps a larger collection of cases' (p. 437). Potential tension could have occurred if action research was selected in my own school site, and selecting case studies at other school sites turned out to be a more suitable approach. Considering the purpose, nature and the context of the research question, a qualitative case studies approach was selected as the most suitable research design and methodology.

3.4 CASE STUDY AND CASE STUDY METHODOLOGY

Johansson (2003) observes that there are different typologies on what a case study is to different researchers, largely dependent upon the interpretation of a case study as either a methodology or as an object to be investigated. According to Bell in Shamoail, (2005), case study is an 'umbrella term for a group of research methods that have in common the decision to focus an inquiry around a specific instance or event' (p. 78). Case studies can accommodate a wide variety of research designs, epistemological orientations, disciplinary perspectives and data collection techniques (Corcoran, Walker & Wals, 2004). Typically, case studies involve 'in-depth investigations of a single person, community or event informed by a variety of sources' (McLeod, 2008, p. 1). Merriam (1998) describes case study as an 'intensive holistic description and analysis of a single instance, phenomenon, or social unit' (p. 21). In this research study, case study is the methodological approach, not an object to study. Baxter & Jack (2008) identify two key approaches that guide case study methodology, one proposed by Robert Stake (1995) and the second by Robert Yin (2009). Both aim for the topic of interest to be well explored, where the essence of the phenomenon is discovered or revealed, though the methods that each employ are different. This research study utilises a qualitative case study methodology aligned more closely to the work of Yin.

Further clarifying and affirming what case study *is*, Yin (1989) and Baxter & Jack (2008) describe case study as a methodology investigating contemporary phenomenon within its real-life context. Case study acts as a bounded and integrated system as part of its feature (Creswell, 2014; Miles & Huberman, 1994; Stake, 1995).

Creswell (2014) suggests case study is 'often found in fields of study inquiry that have evaluation and in-depth analysis' (p. 14). It is a suitable design when the research questions seek to explain the present social circumstances as a phenomenon (Herold, 2011). Yin (2009) further describes and differentiates case study as a methodology, suggesting it is used when a *how* or *why* question is being asked, adding, though, that *what* questions can also be exploratory by nature. The how or why questions help in bringing about understanding of a social phenomenon.

Yin (1994, 2003, 2009) has also described three different types of case study orientations including exploratory, explanatory and descriptive. This study adopts a methodological framework that aligns more consistently with the exploratory approach. Streb (2012) claims that exploratory case studies often precede explanatory research design as a means to explore distinct phenomena characterised by a lack of detailed preliminary research. There is a paucity of existing research capturing the professional perceptions of expertise in teaching that investigate 'teacher' and 'leader' cases. Exploratory case study researches social phenomena in their original context with a predominant characteristic of being intuitive and flexible in approach (Streb, 2012). Exploring participant views in-depth in this study can provide value in discovering the perceptions held by participants relevant to the social phenomena of the study's research question about conceptualising-operationalising expertise. The phenomenon is contemporary and is relevant to the societal context of cultures, and thus subject to change over time. As noted above, exploratory case studies are also suitable for 'what' type questions (Yin, 2003) and a number of the sub-questions to research in this study were 'what' type questions that investigated what informs participants specifically on a range of issues. Furthermore, exploratory case study is also a suitable methodology to use when the researcher has a very limited degree of control to exert on the behavioural events under investigation (Yin, 2009) – in this research study, the perceptions of participants across three independent school sites distant to the researcher.

It is important that the case brings out the details from the viewpoint of the participants (Tellis, 1997). There are several possible features of the research design when selecting case study methodology. One account is by Johansson (2003, p. 3), who draws upon Groat & Wang's (2002) conceptual framework of case study, identifying different research strategies to form a research methodology, which include:

- Qualitative

- Logical/ Argumentation
- Simulation
- Experiential
- Interpretive Historical
- Correlational

Hammersley & Gomm (2002, p. 3) offer other specific guidance for the consideration of employment of case study as a methodology, including:

- the number of case studies and role of comparison
- how detailed the case studies are
- the size of the cases being dealt with
- the extent to which the researchers document the context of the case in terms of wider society
- the extent to which researchers restrict themselves to description and explanation, or engage in evaluation and prescription.

There are also commonalities that Johansson (2003) describes as a 'common denominator' (p. 2) among the varying interpretive approaches of different researchers associated with case study, such as Johansson (2003); Merriam (1994); Miles & Huberman (1994); Stake (1995); Yin (1994, 2009). According to Johansson (2003), these in-common features should include: a complex functioning unit; investigation in its natural context; and contemporary phenomenon. Yin (1994) recommends four key stages in the case study approach, which again indicate his view of case study as methodology and systematic process, not just an object of the inquiry or investigation. These include:

- Design the case study
- Conduct the case study
- Analyse the case study evidence
- Develop the conclusions, recommendations and implications.

Baxter & Jack (2008, p. 546) further identify another commonality based on the extensive work of both Yin (2003) and Stake (1995) to establish boundaries on the case or cases to prevent 'an explosion [of data] from occurring'. Otherwise, they advise that the case can become unreasonable in scope. Case studies can generate a very large and complex amount of data where one can quickly become overwhelmed (Davies, 2011).

Another key component of case study methodology was consideration of a single case or multiple-case study. Case study can be either a single case based upon the unit of analysis involved as embedded or holistic design, or a multiple-case approach may also be used. Multiple-case studies utilise an analysis design that aims to either replicate findings of the cases involved or, alternatively, provide contrasting results when comparing cases (Yin, 2009). If the latter, Yin (2009) identifies the logic underlying the use of multiple-case studies as a means of contrasting results, though for anticipatable reasons. Otherwise, in a single case study, similar results would be anticipated. Yin (2009) states that an important advantage presented by using multiple sources of evidence is the development of converging lines of inquiry, which is a process of triangulation and corroboration. Thus, any case study finding or conclusion is likely to be more convincing and accurate if it is based on several different sources aimed at corroborating the same fact or phenomenon. In this research study, multiple case studies in the form of two distinct cases was selected which added rigour and increased confirmability.

3.4.1 ALIGNING AND REFINING THE RESEARCH QUESTION

This study was primarily concerned with the phenomenon of teacher expertise in schools. It aimed to research how practitioners within schools conceptualised-operationalised expertise, including attributes and practices, and how expertise improved and evolved over time. It sought the perceptions of both classroom teachers and leaders in schools as two distinct cases. The research question was designed to gain in-depth insight into the meanings teachers and leaders in schools ascribe to expertise. A study's research question was important to help guide the research approach, as suggested by Onwuegbuzie & Leech (2006):

In particular, they provide a framework for conducting the study, helping the researcher to organise the research and giving it relevance, direction, and coherence, thereby helping to keep the researcher focused during the course of the investigation. Research questions also delimit the study, revealing its boundaries. Additionally, research questions give rise to the type of data that are eventually collected. (p. 478)

The research question was designed to be open-ended to remain flexible to the perceptions and attitudes the participants bring in responding to the research inquiry.

It allowed for further probing where suitable, and for follow-up questions to be asked.

The research question for this study was:

How do Professionals in Schools Conceptualise-Operationalise Expertise in Teaching?’

The research question has been refined over an extended period of time. The motivation to conduct research on expertise in teaching commenced with my growing realisation and awareness (in a new, more senior leadership role) of the challenges some teacher colleagues were experiencing in their own professional practice. This was not unexpected, and was even anticipated for beginning teachers. However, it was the experienced teachers who captured my heightened concern that students in their classes were complaining about the learner experience, as were some students’ parents. In turn, the respective teachers were experiencing excessive frustration and fatigue in response to the complaints. I was further surprised that, as these experiences came to light in senior leadership teams, few solutions and strategies were discussed to address the deeper issues, other than avoidance of the issues, by deflecting complaints and shifting teachers to other, ‘less important’ classes. As I informed myself further through consultation of relevant literature and liaised with colleagues more broadly over time, the inquiry about expertise appeared to be relevant to a wider range of teachers in practice, not merely those experiencing particular challenges. Over a period of several years, additional questions became part of the revelation of the inquiry, as discussions occurred with colleagues in several settings and in a variety of roles in schools. The complexity of the phenomenon became more apparent the more discussions evolved. These informed the development of the sub-questions below:

Sub-questions:

- a) What professional attributes and/or practices characterise expertise in teaching?
- b) How do these attributes and practices differ between experienced non-expert and expert teachers?
- c) What are the enablers and inhibitors to achieving expertise and how do they impact on teaching development?
- d) How are teachers and leaders informed on the specific understandings of expertise in teaching?

The research question and sub-questions applied to both cases in this study.

3.4.2 UNITS OF ANALYSIS

The units of analysis define and describe what *the case* is. A case is described as a phenomenon in a bounded context (Baxter & Jack, 2008). In case study research, the unit of analysis of a case can be an individual, a population, social programs, organisations or decisions by a development team (Perry, 2000). In this study, the case employed a multiple-case studies approach, with two individual cases established. The first case examined classroom teachers without any additional formal added responsibilities in addition to their classroom duties. The second case comprised teachers who also concurrently held additional responsibilities of leadership through to the level of principal. In both cases, it was anticipated that participants had at least four years' experience in teaching, as a basis to competently discuss aspects of teacher expertise. To establish the units of analysis in the case or case studies, Yin (2009) advises that, as a general guide, the tentative units of analysis are related to the way the research question is defined.

The two cases in this study were each designed to be a contemporary real-life phenomenon. The phenomenon formed an inquiry into the perceptions of teachers and school leaders on expertise in teaching and the related meanings and understanding of participants. The cases were two distinct groups of populations that existed within schools. Therefore, the units of analysis in both cases were the perceptions of the two respective cases that emerged in the study. Yin (2009) advises that the units of analysis should not be considered as permanent or final in a case study, because they can be revisited as a result of the discoveries occurring throughout that data-collection phase. Sometimes, the phenomenon being studied takes a different pathway to an earlier definition presented in the research. Yin (2009) suggests that previous related literature can be useful in defining the case, and also in guiding its units of analysis. If there is no literature for similar previous relevant cases, Yin (2009) suggests it is then important to innovate in a clear, operationally defined manner to lay a pathway for others to consider in the future. While this study had some previous relevant literature to consider, the perceptions of those in the cases that formed the units of analysis were also unique, which may be of use to others in the future.

3.4.3 CRITERIA FOR INTERPRETING THE FINDINGS

In addition to collecting and analysing data, a subsequent step is to interpret the results and findings. Described as an extension of the data analysis process, Creswell (2014, p. 200) suggests asking questions of the 'lessons learned' captures the essence

of interpreting findings in qualitative research. Yin (2009) suggests that analysing case-study evidence is particularly challenging because techniques are relatively underdeveloped in case studies and still have not been well defined. It is important to have a strategy to analyse the results, which then serves to better enable readers to interpret the analysis process, including consideration of possible alternative interpretations. Yin (2009) espouses a selection of various steps in the analysis of the data collected to assist in interpreting the findings. These include examining, categorising, tabulating, displaying and testing. A good analysis should consider all the data available to the researcher, address the most significant aspects of the research data, consider rival explanations and draw upon the researcher's own prior expert knowledge. Statistical analysis is another method of explicit criteria to interpret findings, though not suited to this explorative qualitative case studies design. Yin (2009) confirms that most case study analysis will not rely on statistical analysis to interpret such findings, so therefore require other criteria. Yin (2009) adds:

A major and important alternative strategy is to identify and address rival explanations for your findings ... If you only think of rival explanations after data collection has been completed, you will be starting to justify and design a future study, but you will not be helping to complete your current case study. For this reason, specifying important rival explanations is a part of a case study's research design work. (p. 34)

Patton (2001) suggests that it is important to engage in a systematic search for alternative themes, which involves looking for those divergent themes and rival explanations (p. 553). This can be achieved by looking for other ways to organise the data and to consider other possibilities when interpreting data. In doing so, the purpose lies in searching for data that might support other explanations and understandings in a research project. Tobin (2010) claims that rival explanations get to the core of robust analysis in case study research by providing one critical check and balance that increases the credibility of the research findings. In this study, this involved comparing findings to anticipated findings, comparing the findings of both cases, searching for alternate themes in the data, considering possible alternative interpretations of participants' data, as well as other relevant comparisons of previous similar literature, as Yin (2009) suggests. In relation to the latter, the APST (AITSL, 2011a) provides a set of national standards for all Australian teachers to access and guide professional practice. This includes describing the domain of career

expertise situated within the Highly Accomplished and Lead teacher career stages. Given that 6000 Australian teachers provided input into the development of the APST framework, this resource was utilised in this study to assist as a research comparison of perceptions of expertise.

3.5 STUDY SITE SELECTION

As I was a principal in an independent school in New South Wales at the time I commenced research into the study (including the data collection phase) I made a conscious decision to exclude the school I was leading from my data. Simons (2009, p. 97) suggests a most fundamental principle when conducting all research, irrespective of the approach, is to 'do no harm'. Given the potential for tension to arise through power imbalances if I was involved in the study, or conducting it at my school and involving teachers and leaders providing views on a potentially sensitive topic area when connected to participants' work, I decided to investigate other sites where I had no direct history of professional involvement at all. However, I further decided to confine the sites to independent schools, as I had worked in this sector exclusively during my career. This enabled greater familiarity of governance and school leadership structures, and aided in more convenient access to sites directly through other school principal colleagues.

Sector familiarity in terms of school systems, accreditation of teachers, typical leadership roles, expectations of teachers by fee-paying parents and similar routines and structures also provided some benefit through understanding, compared to exploring unfamiliar sites involving different sectors and systems. To undertake this study, multiple school sites offered the most effective means to collect the data, rather than one single site. This gave breadth to the study and was bolstered further by selecting sites in differing states or territories, where differing structures may have influenced different practices and beliefs by participants. A relevant factor influencing the site selection was that, being located in a rural independent school as the researcher, there were no feasible options locally to collect data, and this forced the issue to collect data at some distance, irrespective of where that may be located. The sections immediately following address school selection criteria, the selected research sites, and participant selection criteria.

3.5.1 SCHOOL SELECTION CRITERIA

Despite the distance of sites from my school, there needed to be some means of accessibility to minimise any adverse impact, inconvenience and financial cost. For

the purposes of this study and collecting rich data to investigate the research aims, larger, well-resourced schools with specialist leadership teams and diversity of teaching teams across curriculum areas, age groups, genders and experiences were best suited. With specialist leadership staff whose responsibilities involved developing teaching expertise and oversight of teaching programs in these schools, teachers and leaders more likely to have had opportunities to explore high quality teaching conceptualisations were sought to participate because of these reasons. This was in contrast to small, isolated, under-resourced schools with few leadership opportunities or capacity to specialise in such areas related to the research question. To fulfil these criteria, larger schools in excess of 1000 students were deemed most suited, where there was some evidence of specialist leadership roles.

Other criteria involved searching for evidence of consistently high performance of student academic result data from (publically available) external testing instruments, to help investigate whether these indicate evidence of high performing teaching practices in those schools. This bears corroboration, as the literature reveals that the quality of teaching is the single largest in-school influence linked to effective student learning (AITSL, 2011a, Dinham, 2008; Hattie, 2003, 2009, 2016; Masters, 2003; Olsen, 2008; Rowe, 2003; Whitby, 2009). However, it is acknowledged that academic performance of students is only one dimension of a school and other areas were not able to be evaluated and considered. My interest in endeavouring to seek out high performing schools as a criterion, even if limited in scope of what 'high performing' might mean, was to increase the likelihood of including some participants in the study who operated as expert practitioners. However, no attempt to evaluate individuals for expert status was made; rather, this was a desired result of a school's selection criteria. It is readily acknowledged that research also demonstrates that a greater variance in the quality of teachers exists within schools than between schools (Dinham, 2008). Thus, no assumptions were made on the individual participant level of expertise informing the study.

Other criteria included, seeking school sites that had diverse teaching teams in terms of gender of teaching and leading staff, broad curricular offerings and a solid range of experience in the teachers they employ. A final criterion involved a student population that ranged from Kindergarten to Year 12, to enrich perspectives of student learning needs related to age.

3.5.2 PLANNED RESEARCH SITES

The planned research sites were selected in consideration of the site and school selection criteria previously stated. With these criteria considered, three school sites were then selected, one each in Sydney (New South Wales), Gold Coast (Queensland) and Canberra (Australian Capital Territory). Each school was a non-systemic, independently governed private school. Schools selected were either co-educational or single-sex, K-12, and offered day students and boarding student placements. The size of each school was aimed to be approximately 1000 or more students, respectively, and be generally well-resourced.

Overall, students within each of these planned school sites consistently performed very highly in external academic testing compared to other school populations within their state or territory (based on Year 12 results) and nationally (based on National Assessment Program - Literacy and Numeracy (NAPLAN) results) as evidenced on the *MySchool* website (<https://www.myschool.edu.au/>) and other sources, such as each school's own website (government required Annual School Reports). The schools selected had every opportunity to 'house' expert teachers.

Each planned school had diverse and well-resourced leadership teams, including specific leadership of teachers in a number of areas including curriculum, pastoral and professional development leadership. Finally, convenience was considered in the decision to select the three sites, one each in New South Wales, Australian Capital Territory and Queensland. Convenience referred to ease of access, such as in areas I visited for work purposes, and near major transport infrastructure, despite the geographic of distance between sites.

3.5.3 PARTICIPANT SELECTION CRITERIA

A qualitative case study requires some form of purposeful sampling when selecting participants (Fraenkel & Wallen, 1993; Gall, Gall & Berg, 2007; Yin, 2009). For case studies, non-probability sampling (Merriam, 1998) – where not everyone in a particular population can be guaranteed equal chances of selection – is often used. Thus, the final selection of participants cannot represent the wider population and their situation. Rather, professionals who participated in this study were selected because of some particular attributes. These included a minimum of four years' teaching experience in a classroom setting in schools, though no maximum was applied. As two distinct cases were sought – one being classroom teachers with no

added responsibilities, and another as leaders of classroom teachers – the latter group also held formal positions of added responsibility in their school.

Participants were also required to work in the independent schools selected as part of the study. Burns (1990) confirms that non-probability sampling, such as the criteria applied in this study, qualifies as purposeful and criterion-based sampling. Teachers with less than four years' experience were excluded from consideration because of the perception that at least this long is required to develop adequate first-hand experience to form in-depth, well-informed views on the topic of expertise in practice. Palmer et al. (2005) suggest that researchers selecting experienced teachers used three to five years' experience as their criteria, as a minimum. Palmer et al. (2005) further suggests that to research expertise, teachers should have approximately 6500 hours of practice, which is based on 185 school days per year, and seven hours of school work, which works out at five years. However, typically in independent schools, the teaching day is approximately seven hours and this therefore does not take into account all of the additional work all teachers engage in beyond the official school day. Therefore, four years was considered a minimum level of experience.

As this study only sought professional perceptions of teachers and leaders in schools, students, their parents and other community members were not considered as part of the scope of this study and were also excluded through purposeful sampling techniques. This enabled clearer boundaries for the case (Punch, 2009), and form an educator's perspective both from a classroom perspective and from that of a teacher-leader, though the latter are enabled with both perspectives with dual roles. Patton (2002) suggests that purposeful sampling, as stated earlier, allows for 'information rich' cases. In this study, it was anticipated that teachers would offer information rich perspectives as practising teachers and leaders would offer rich perspectives from a leader perspective. Participants in both cases have lived the experience (Laverty, 2003) from which their perspectives originate.

3.5.4 INVITING PARTICIPANTS

Bogdan & Biklen (1992) suggest that researchers invite a reasonable number of subjects when collecting qualitative data. Two cases occurred where between four and eight participants were initially invited to participate at each site for each case. This plan represented a relatively small number, which notionally enables greater depth rather than attempt to generate breadth of data utilising statistical methods (Denzin & Lincoln, 2011).

Once the stated purposeful or purposive sampling criteria was applied, participation in the study remained voluntary. Sites were asked to ensure that all staff understood that participation was entirely optional in the selection phase, and remained the case throughout. Other factors that were requested, though not required, allowed for both male and female teachers, a range of years of experience beyond the four years stipulated, and a spread of the age/grade of students taught across a range of subject areas. This diversity of selection was important to improve the potential range of perspectives, and to avoid narrowing the perspective based on any one of these factors.

The process of inviting participants commenced with a verbal conversation with each school principal, followed by a formal letter requesting permission to conduct research onsite with members of staff. Once permission was granted, and a school liaison organised as the point of contact, I then wrote generically to prospective participants at the school. The school subsequently announced the opportunity to be involved with this study, and the Letter of Introduction (Appendix 2) and accompanying email was made available to all teaching and leadership staff. This letter, with an accompanying email, informed participants by describing the details and purpose of the study and also emphasised its voluntary nature, with an option to withdraw at any time. Prospective participants replied to the school's liaison, and suitable focus-group meetings were then arranged to collect the data.

3.6 DATA COLLECTION PROCEDURES

The collection of any data needs to be suitably placed within the research paradigm in which it is suited. This research project was situated to an interpretivist paradigm utilising a qualitative case-study methodology to investigate perceptions of professionals and how they conceptualise and operationalise expertise in teaching. Collecting the data plays an important role in preserving the integrity of the research study. The results can be impacted adversely if the data collection procedures do not follow appropriate protocols. In section 3.6.1, the data gathering tool selection is determined, and the rationale presented. The sections that follow detail the data tool selection method used and include the relevant protocols.

3.6.1 DATA GATHERING TOOL SELECTION

Obtaining accurate and reliable information about a phenomenon under study is important when conducting research in the field (Lethbridge, Elliot-Sim & Singer, 2005). In this qualitative study, a number of potential data-gathering tool selections were considered.

A questionnaire survey was one of those considered, although was discarded because an important focus of the research was to develop a deeper understanding of the participants' perceptions. Survey methods generally enable a greater breadth of participants to be accessed at the expense of depth of understanding, and thus typically produce an incomplete picture (Lethbridge et al., 2005) of the phenomenon. Cohen, Manion & Morrison (2007) identify the questionnaire method as a widely useful instrument of collecting structured data, often numerical, able to be administrated without the presence of the researcher. However, without the presence of the researcher, there is often no feasible opportunity for the participant to clarify understanding of questions, and, therefore, responses are reliant on the participants' interpretations of questions. Items in the instrument may not have the same meaning to all participants, irrespective of how carefully they are constructed, and this may mean keeping questions simplistic to minimise misinterpretation. A further disadvantage of the questionnaire method is its reliance upon the respondent including their identity to be able to access follow up questions if necessary; hence, there is no real opportunity to probe for understanding if identity is omitted or not sought for any reason. A further reason for rejecting this method of data collection was the large number of participants required to provide data. Cohen et al. (2007) suggest the questionnaire will always be an intrusion into the life of the participant, due to the time taken to complete the instrument, the level of threat or sensitivity involved, or even an invasion of their privacy. The reaction of participants while responding to questions is also lost, and thus the opportunity to probe further based on reactions to questions cannot be accessed. Typically, questionnaires offer closed-type questions limiting depth and sophistication in the responses; alternatively, offering open-ended questions can lead to copious amounts of data being generated that can be difficult and excessively time consuming to analyse. After thorough consideration, this tool was deemed to be problematic and less suited to this study compared to other methods of collecting data.

The observation method was also considered as another option to collect data. Cohen et al. (2007) suggest there are benefits to utilising observation as a data collection tool. A key example provided by Cohen et al. (2007) is the opportunity to access live data from naturally occurring situations, with the potential to yield more authentic data as the observation method's unique strength. Robson (2002) adds another benefit of the observation method, suggesting what people say and what people do can be quite different, thus providing an opportunity to access authentic data that is in situ. Patton (2002) reports that observing participants in a study allows

the researcher to gain a greater sense of understanding by 'entering' the situation, although sometimes people perform better when they know they are being observed, which inhibits the benefit of authenticity.

However, despite some useful benefits to this method, it was not effective as a data-collection tool for this particular study, for several reasons. One reason was that observing a teacher in action does not necessarily give insight into the extensive decision making occurring. Without knowing the reasoning for some decision making in practice, understanding may be concealed. Importantly, the observation method does not elicit the deeper views and perceptions held by the participants, which are integral to this study. It would also have been a time-consuming method, given the complexity in teaching, to observe a wide range of situations in a variety of classes for all participants. This would have quickly moved beyond the scope of time available for this study.

Interviews were another method considered. Different forms of interviews are recognised (Bogdan & Biklen, 1992) to exist. Semi-structured individual interviews are one type of interview structure that was considered. Interviews (individual) are a process where participants and the researcher engage in focused discussion related to the investigation of the study, in order to elicit particular information (DeMarrais, 2004 in Merriam, 2009). Cohen et al. (2007) suggest that interviews should be a construction between participants where data is generated and where intersubjectivity exists. A key benefit suggested by Cohen et al. (2007) is that interviews allow for discussion of interpretations of the phenomenon being investigated, where human embeddedness is inescapable. Interviews enable access to attitudes and experiences of people that would typically be otherwise inaccessible (Perakyla, 2005). Merriam (2009) advises that semi-structured interviews are flexible without the need for a specific order of questions, though each interview is guided by particular questions and issues to be explored. Accessing truthful responses by participants can be potentially problematic, according to Denscombe (2010), because it is influenced by rapport and trust between interviewer and interviewee, and misrepresentations can thus occur. Denscombe (2010) suggests that cross-checking between accounts can give an indication if information provided is misleading, and of the plausibility and reliability of information.

In individual interviews, there is a greater chance of this occurring because the information is not available to others, such as it might be in focus group situations. Overall, individual interviews were considered less suitable to this study, due to the element of time and demands placed on the researcher and the schools involved.

Cohen et al. (2007) state that interviews are 'expensive in time, they open the interviewer to bias, they may be inconvenient to respondents, issues of interviewer fatigue may hamper the interview, and anonymity may be difficult' (p. 349). In this study, with the number of participants to be involved, individual interviews would have proven too demanding on myself as the researcher and posed too large an imposition for schools, with busy educators typically unavailable to participate in this method. Despite being a powerful tool for researchers of qualitative studies (Cohen, et al., 2007), individual interviews were less than ideal for this particular study for the reasons stated.

Another form of interview is the focus group interview (LeCompte, Millroy & Preissle, 1992), which is one that is growing in educational research (Cohen et al., 2007). Focus group interviews were also considered as a data collection method for this study. Saulnier (2000) suggests that when studying social phenomena, focus groups have been found to be both flexible and efficient. Unlike individual interviews, where there is a reciprocal interaction of questions and answers, focus groups rely more on the group dynamic, with participants discussing the topic provided by the researcher (Morgan, 1988) in a non-linear format. Mills (2011) recognises the focus group as a useful technique when individuals interact with each other, which leads to sharing understanding(s) on the topic of interest. Beyond being interactive, focus groups are also synergistic (Russell & Lidstone, 1993) in nature, with one perspective potentially stimulating and deepening another. This creates potential for data beyond the sum of data resulting from the same participants being interviewed individually.

Focus groups were evaluated as the most appropriate method to collect the data for this study, because of a number of features that were suited to its aims. For instance, the potential to gain depth of insight, enabling participants to interact and create a synergy of perspective in an efficient and timely manner, contributed to this selection. Focus groups can reduce the burden of time on both the participant and researcher, because a considerable amount of data can be collected with relative efficiency. Additional features of focus groups will be outlined in the next section in further detail, addressing each benefit while also acknowledging any less than ideal characteristics. On balance, these features justify the selection of focus groups as a data collection method for this study.

3.6.2 FOCUS GROUP (INTERVIEWS)

Further bolstering the characteristic features of focus groups as a data gathering method, Freitas, Oliveria, Jenkins & Popjoy (1998) describe focus group interviews as a 'type of in-depth interview accomplished in a group, whose meetings present characteristics defined in respect to the proposal, size, composition and interview procedures' (p. 2). Saulnier (2000) identifies a particular the benefit that 'Focus groups provide a source of detailed information that cannot usually be obtained from traditional research methods. They are an effective way to capture people's reactions to others' ideas, thus they are well suited to studies of attitudes and opinions' (p. 608). Saulnier's identification was an important one for this study. In individual interviews, participants may be restricted to divulging their own in-depth perceptions without further stimulus of discussion, whereas focus groups offer the opportunity for others to react to those perceptions and potentially deepen the meaning provided, or broaden it, or counter it. As stated previously, a synergy can occur in focus groups (Russell & Lidstone, 1993), although Fern (2001) suggests that a strong group cohesion is critical to motivate this synergy. Even a reaction without much or any comment is worth noting. Patton (2002) further suggests that the purpose of all forms of interviews, including focus groups, is to provide access to the feelings, thoughts, behaviours and intentions that the researcher is unable to observe in the field. Interviewing, including focus group interviews, is among the most common form of gathering data, and typical in the field of education (Merriam, 1998; Brown, 2002) where qualitative studies are abundant.

Data collection methods that involve groups enable greater innovation as a technique to improve rigour for the qualitative data analysis that follows (Saulnier, 2000). Brainstorming is an important process to assure that the domain is defined by the participants in their own language (Weller & Romney, 1988) so that the findings reflect the informants, not the researcher. Saulnier (2000) also notes that it is important to recognise that 'there is no attempt in a focus group to reach consensus or define a majority or correct opinion on any topic' (p. 609); rather, focus groups attempt to elicit the ideas, thoughts and perceptions of the group in relation to the research question on quality teaching.

Cohen, Manion & Morrison (2000) recognise a natural, conversational dynamic as one other benefit of focus groups. Designing some carefully considered questions to ask participants provides a form of designated pathway and focus for discussions to occur in a semi-structured format (Mazeland & ten Have, 1996). According to Freitas (1998), often there is a 'homogeneity of participants with respect to the

research interests, generation of qualitative data, and discussion focused on a topic, which is determined by the purpose of the research' (p. 2). In this study, the cases formed had some homogeneity, because, at each site, one focus group consisted of classroom teachers who had no additional formal responsibilities, and a separate focus group consisted of teachers who all had additional, formalised leadership responsibilities. This provided some grounding in common for members of each group. It is also important for the researcher to create opportunities for participants to contribute or respond to discover the thoughts, feelings and beliefs 'on someone else's mind' (Patton, 1990, p. 278). Focus groups enable the voice of the teachers and leaders to be heard within the complex cultures that exist in schools. These enable detailed, rich discussion to occur, yet participants are also enabled to synergise during the conversations. A broader spectrum of ideas and perceptions can be captured more efficiently as a collective view, rather than a collection of individual views (Cohen et al., 2007).

Focus groups, like all data collection methods, also have disadvantageous facets. For example, Cohen et al. (2007) explain that:

They [focus groups] tend not to yield numerical, quantifiable or generalisable data; the data may be difficult to analyse succinctly; the number of people involved tends to be small; they may yield less information than a survey; and the group dynamics may lead to non-participation by some members and dominance by others (e.g. status differentials may operate), the number of topics to be covered may be limited; intra-group disagreement and even conflicts may arise; inarticulate members may be denied a voice; the data may lack overall reliability. (p. 377)

Successful focus group management requires skilful facilitation when asking and directing questions, as well as a positive rapport with participants from an early point that will endure throughout the study. In this study, facilitation required prompting for some participants who were not as forthcoming, and redirecting away from a dominant voice was on occasion necessary (Greenbaum, 1998). Sometimes, probing was also required to deepen understanding of a particular concept. To get to a deeper point of reflection, it was important that group members all hear one another's contributions and perspectives (Vaughan, Schumm & Sinagub, 1996) which provided a certain synergy at times within each focus group. Robson (2002) suggests focus groups can be empowering for participants to speak out in their own words. To

encourage this, focus group management also requires having some seeding questions which then progress flexibly, as each group is unique (Fern, 2001) because of the individuals and dynamics that occur. These seeding questions were prepared in advance in readiness to guide the discussion where suitable for each focus group while allowing flexibility to follow threads as they emerged. Rarely did disagreements arise, although as the researcher-facilitator, it was important to ensure that each member was focused on the issues and had their perspective heard. In this study, decorum was always maintained throughout because participants respected these principles.

At the data collection sites, this method was best suited for schools in terms of their daily routine and structures, as it enabled staff to attend more readily. This occurred immediately after student hours without teachers missing classes. All such meetings occurred over multiple days to ensure meetings did not last for more than 75 minutes thereby minimising the imposition on personal routines as well. In schools, such meetings are challenging, and sometimes impossible to achieve during the day because of teaching and leadership commitments that have little to no flexibility in scheduling. Lunchtime should be avoided as the nominated time because, even if participants could avoid commitments such as playground duty and co-curricular commitments, there would not be enough time to hold high quality focus groups and *clock-watching* would be a distraction. The times selected were also designed to minimise the impact on their existing workflow (Creswell, 2014). The specific protocols for interviews including focus groups follows in the next section.

3.6.3 GENERAL INTERVIEW AND FOCUS GROUP PROTOCOL

In this section, the protocol for conducting the focus group interviews is outlined. It is also acknowledged there are other phases to conducting focus groups, including a planning phase, an interpreting phase and a reporting phase, though this section's focus relates to conducting the focus groups. Owing to the nature of focus groups having multiple participants, individuals typically tend to arrive at slightly different times – rarely do all participants arrive at the same moment. This proved to be the case in this study. This afforded an opportunity to informally welcome individual participants as they arrived in an attempt to make them feel comfortable and build rapport. Rapport building continues throughout an interview (Miller & Crabtree, 1999) and not merely at this initial stage. This continues until the conclusion of the focus group sessions, where participants are thanked for their time. The first few moments in focus groups are a critical period (Krueger, 2002) where the

facilitator should create a thoughtful and permissive atmosphere. It is important that the researcher has good access to the thoughts, feelings and perceptions of participants (Anderson, Herr & Nihlen, 1994). This applies equally to the formal commencement of the focus group where the tone of the discussion is also initially set.

As the researcher in this study, I was the facilitator of all focus groups. During the initial period of informally welcoming participants, I then formally introduced myself when all participants had arrived to commence the formal part of the interviews. This second stage introduction included the purpose of the study and a little bit of background about the topic of teaching and expertise. The purpose of providing background was to inform participants and continue to make them feel comfortable as they connect with the topic and develop a desire to contribute their perspective and views. Participants were then allowed a brief opportunity to introduce themselves.

The format of the focus groups was semi-structured in order to offer the flexibility for participants to express their views (Gillham, 2000; Robson, 2011). The research question was presented and initially acted as a guide to the participants' early association of their own knowledge on the topic. The sub-questions were used as seed-type questions leading to other types of questions that drilled down further, redirected off-topic discussion and included probing and prompting. Corcoran et al. (2007) advise that case study methodology is an ideal research tool where the researcher can 'go deep' (p. 10); the questioning technique of the focus groups enabled that to occur. Prompting questions (Whiting, 2008) are crucial because they enable the interviewer to gain deeper insight, especially when the participant responds with fewer details than desired. Keeping the questions open-ended assists in enabling participants to offer more information, rather than asking 'yes or no' style questions. Open-ended questions further encourage participants to reflect on their true feelings (Warren & Karner, 2005). When asking an open-ended question, it is important to pause afterward and allow participants to consider their response rather than rushing them to respond. In a focus group situation, most respondents are given thinking time while the first respondent provides their thoughts. Those participants are then afforded stimulus from the question, and also from the views offered by other participants responding to the same question before they do.

This potentially enables a synergy to occur where participants 'bounce off' each other in their responses, enabling the issue to deepen. Though there is a reliance on participants engaging in one another's responses, this can be enhanced through the

types of strategically framed questions that are well planned initially. This enables deeper engagement (DiCicco-Bloom & Crabtree, 2006) as an interview progresses and these features occurred during all focus group interviews in this study. However, as depth is achieved, there is an increased risk that information being discussed becomes more sensitive, particularly when shifting towards expressions of feelings or attitudes. Professional relationships could become damaged if not approached delicately (Whiting, 2008) and strategically. In this study, participants respected their professional boundaries.

Examples of some questions that were asked have been listed in the tables below. Table 3.1 includes some of the seed questions, while Table 3.2 features examples of prompting or redirecting questions.

Table 3.1: Examples of the research sub-questions used as seed-type questions.

-
- What professional attributes, practices or behaviours characterise expertise in teaching or an expert teacher?
 - How might these attributes or practices be different between what an expert practitioner '*looks like*'?
 - What might an expert teacher do differently to an experienced non-expert?
 - How and why do these differences between the expert and non-expert occur?
 - What are the factors that enable expertise to flourish in teaching?
 - What are the factors that inhibit expertise flourishing in teaching?
 - What has contributed to your understanding of expertise in teaching?
 - How many teachers, as a proportion or percentage, would you say are practicing with expertise in your school (or sub-school or faculty)?
-

Examples of some clarifying and redirecting questions that were used to better understand a response in further depth, or to better interpret the meaning with greater accuracy, are included in Table 3.2 below.

Table 3.2: Examples of clarifying and redirecting questions

-
- In what areas do you specifically mean?
 - When you say [insert], can you just detail that a bit more?
 - Picking up on your point, do you think that [...] or do you think something else?
 - Are there any other areas you'd like to add?
 - [...] is that what you mean?
 - In what way?
 - Just going back to a point you made earlier, how would you describe [...]
 - I just want to keep giving you an opportunity to come back to things, because I know as you talk, things pop into your head, and you might think, 'oh I'll mention that later'.
 - How do they [...]
 - Do you agree with [insert participant's name] comment, or do you have a different view?
-

All focus groups were face-to-face meetings, audio recorded with permission of participants (Rossman & Fallis, 2003), and later professionally transcribed with further checking of accuracy by listening to the recordings and reading the transcript synchronously. It was important to ensure accuracy in the transcription of text by listening to the audio recording and concurrently following the text to ensure the correct speaker had been attributed with specific statements. Each focus group lasted approximately sixty to seventy-five minutes in length. It was important to provide participants with an indication of their commitment, knowing that they were busy professionals needing to make adjustments to their routine to incorporate the focus group discussion as part of their schedule. This also provided reassurance that I was aware of an approximate finish time so that participants could relax knowing it would not continue indeterminately.

3.7 DATA ANALYSIS PROCEDURES

Case study data analysis follows a detailed description of the setting and/or of the individuals in the research, aiming to identify themes or issues (Creswell, 2014) throughout the process. Researchers are able to interpret, explain, understand and even make predictions arising from the data analysis process by asking how, what and why of the data (Dey, 1993). Thorne (2000) points out, 'Unquestionably, data analysis is the most complex and mysterious of all of the phases of a qualitative project, and the one that receives the least thoughtful discussion in the literature' (p. 1). Houghton, Murphy, Shaw & Casey (2015) claim that:

There is little practical guidance on how data analysis is conducted in qualitative case study methodology... There are no systematic rules for analysing qualitative data ... However, the aim is to rigorously and creatively organise, find patterns in, and elicit themes from data. There must be logic behind the analysis and therefore a framework. (pp. 8-9)

Several frameworks are identified by Yin (2009) to effectively analyse the data for a multiple-case study approach. His five technique options include: (a) Pattern Matching, (b) Explanation Building, (c) Time-Series Analysis, (d) Logic Models, (e) Cross-Case Synthesis. However, Yin (2009) states that none of these should be considered easy to use. Given the need to state a clear and logical protocol for analysing the data of the focus group interviews and discussions, further information

is outlined in this section, beginning with the factors considered in the data analysis process.

3.7.1 FACTORS CONSIDERED

When designing data analysis protocols, there are a number of steps to consider. Creswell (2014) offers one framework as a seven-step process to analyse the data (see figure 3.1 below), although he points out these steps are more interactive than linear in terms of engaging in the process. Within this study, each case was applied separately throughout the data analysis process. The Discussion (Chapter 6) will compare and contrast the emergent themes of the two cases with implications and recommendations posed in the Conclusion (Chapter 7).

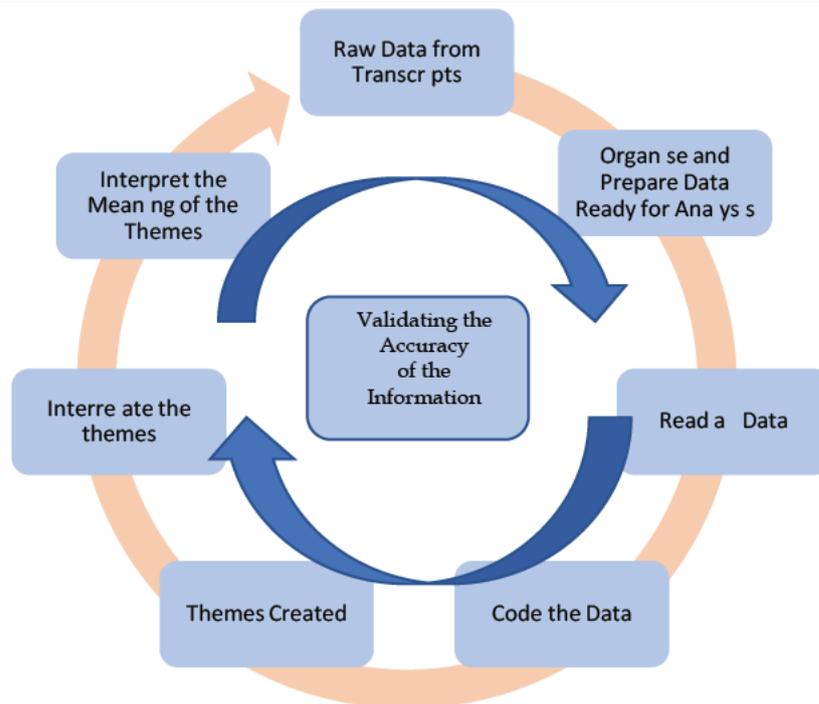


Figure 3.1: Adapted from Creswell (2014, p. 197) Seven steps in analysing data in qualitative research.

Adopting Creswell's framework as a guide illustrated in Figure 3.1, the following steps occurred in this study to analyse the data.

STEP 1: RAW DATA

Once the raw data was captured utilising digital audio recordings, it was professionally transcribed into a text document identifying each speaker. Once transcribed, this process then required careful reading of the transcripts while

concurrently listening to the matching audio, to check for accuracy of text conversion and that the correct speaker was identified. This occurred for each focus group and adjustments were made where necessary. In each focus group, the data was captured using a dedicated digital device with an external microphone attached. A back-up digital device (iPad) with a dedicated Application ['app.'] was also be used. The raw data was sent to professional transcribers in digital form.

STEP 2: ORGANISING AND PREPARING DATA FOR ANALYSIS

In the second step, data was prepared for reading and note-taking, in accordance with the case study framework.

STEP 3: READING THROUGH ALL DATA

This step involved reading all the data initially to gain an overview of the information. This provided some early insight into meanings that the data revealed. Some highlighting and notation comments were used where it was deemed important, as a reminder and marker of some significance for reviewing later when coding.

STEP 4: CODING THE DATA

The coding process was planned to initially process the data into larger chunks of information and to organise the concepts into groups. I adopted the participants' language to inform the terms that will describe the categories, as advised by Creswell (2014). As with all processes described, this occurred separately in both case studies. In this study, codes were created arising from the emerging data collected from participants. Codes were built manually using excel spreadsheets and involved the process of inter-rater reliability whereby another member of the research team provided checking of the data. This included establishing agreement on codes to be selected which also aligned to the purpose of the study (Joffe & Yardley, 2004).

STEP 5: THEMES

Themes emerged from the coding process that gave a deeper meaning to the data. Categories were also defined after agreement with another member of the research team as an iterative process of considering those codes which aligned with the participants' word choices and the study's purpose. Some categories

were collapsed within over-arching themes (O'Connor & Gibson, 2003). Creswell (2014) suggests that this process will ultimately yield a small number of themes (typically around five to seven themes) and in this study five themes emerged in both cases.

STEP 6: INTERRELATING THE THEMES

The themes that emerged were then presented in the Results section (Chapters 4 and 5), and carried forward to the Discussion (Chapter 6) for closer examination and to compare and contrast the two cases.

STEP 7: INTERPRETING THE MEANING OF THEMES

The seventh step in Creswell's (2014) seven-step process involved interpreting the meaning of the themes that emerged in the two respective cases, and were carried forward to the Discussion and Conclusion chapters (Chapters 6 and 7) informing implications and recommendations made.

3.7.2 SELECTED DATA ANALYSIS PROTOCOL

Data analysis in qualitative research occurs concurrently with other parts of developing the study, beginning at the start of the data capture process (Hammersley & Atkinson, 2007). As Creswell (2014) pointed out, the process outlined above is not a linear one and should not be thought of that way in qualitative research, although it is more likely to occur sequentially in quantitative research. In qualitative research, there is a need to examine and winnow the data as it is so rich and dense that not everything can be included (Creswell, 2014), which is unlike quantitative research where all the data is often preserved. Miles & Huberman (1994) refer to 'data reduction' as a process of 'selecting, focusing, simplifying, abstracting, and transforming the data that appear in written up field notes or transcriptions' (p. 10). The data needs to be condensed so that it is manageable to progress the analysis of the most important information rather than every piece of information. This may take repeated passes through the data, given its richness. Miles & Huberman (1994), suggest that data display goes a step further than data reduction by organising the data to help draw conclusions. Data reduction occurred in this study. In addition, coding occurred manually and contained visual representations which aided in the data reduction process. Patterns emerged inductively which informed the creation of the themes. The coding process involved inter-rater reliability with another member

of the research team. These codes were cross-referenced with participants to refer back to later and to help build detail within the themes that emerged.

In addition to the analytic techniques used in the data analysis process, a multiple-case study research project allowed for cross-case synthesis, which is particularly relevant where a case study consists of at least two cases (Yin, 2009). In this situation, findings proved to be more robust than having only a single case. Yin (2009) suggests an important part of case study research and the analysis phase is organising data as well as developing a story line.

3.8 TRUSTWORTHINESS

Shenton (2004) contends that 'many critics are reluctant to accept the trustworthiness of qualitative research', despite 'frameworks for ensuring rigour in this form of work [being] in existence for many years' (p. 63). The construct of trustworthiness in qualitative research favoured by Lincoln & Guba (1985) and supported by others (Bryman, 2012; Miles, Huberman & Saldaña, 2014; Shenton, 2004) includes credibility, transferability, dependability and confirmability - instead of the roughly equivalent positivist terms of internal validity, external validity, reliability and objectivity (Bryman, 2012). Given this study was situated in qualitative research, trustworthiness as interpreted by Guba & Lincoln's (1985) criteria was used as the preferred, and more suitable framework, particularly in connection to case studies as the methodology. These are detailed below.

3.8.1 CREDIBILITY

A challenge in case study research is making inferences in situations where events cannot be directly observed (Yin, 2009). In the case of this research study, inferences were made based on the information provided by participants in the interviews and focus groups. It was important to accurately recall and portray participants' comments, views, opinions and perceptions as much as possible to ensure those inferences were 'airtight' (Yin, 2009, p. 43), with possible rival explanations assisting in that process. Credibility was better enabled by gaining 'direct access to the insider's world of meaning and action' (Jorgensen, 1989, p. 36) employing methods of focus groups rather than surveys or observations, where the researcher is not informed about the thoughts and feelings beyond what is written or observed. The intent and context of the participants' comments were considered extensively during the analysis stage and beyond. Accessing participants directly enables data to be captured as 'thick description ... part of the qualitative researcher's vocabulary' (Ponterotto, 2006, p. 539). This meaning refers to capturing important

detail, gaining context, applying meaning and interpreting from intentions arising from behaviour and actions.

Yin (2009) suggests that multiple case studies can enable greater opportunity for convergence of evidence to occur. This further goes to the concept of triangulation, where collecting data from multiple sites involving multiple groups at each site enables a strategy to support rigorous qualitative data to be captured. A contributor to triangulation is the concept of honesty (Shenton, 2004), which is aided by focus group discussions where colleagues at the same site listen to each response and this acts to preserve honesty and accuracy, given they are knowledgeable, to some extent, of each other's experiences and shared events. This is quite different to individual interviews where participants provide information in the absence of attentive peers.

In this study, the focus group interviews enabled specific and relevant perceptions to be voiced by participants. This included the opportunity to provide context, clarify and interpret through observing statements during the data capture process, as well as reviewing transcripts and even listening over audio recordings to include consideration of tone and suggestion beyond a mere collection of static words in isolation of deeper meaning. McLeod (2008) suggests the strength of case study methodology is its ability to provide such rich, detailed, qualitative and insightful information, permitting investigation in otherwise impractical or unethical situations. In such approaches, this adds to credibility rather than compromises it. Credibility is also enhanced through multiple cases, as was the case in this study.

This multi-case method approach also added to triangulation of data coming from quite different settings while responding to the same research questions. McMillan (2000) defines triangulation as 'the use of different methods to gather data or collecting data with different samples, or at different times, or in different places to compare different approaches to the same thing' (p. 272). This use of triangulation reduces bias and errors in the research process (Burns, 1990). Lincoln & Guba (1985) refer to a number of strategies to improve the likelihood that findings are credible when involved in naturalistic inquiry methods. One of these is peer debriefing, in which Lincoln & Guba (1985) suggest exploring, with a disinterested peer, aspects of the inquiry that may otherwise remain as implicit to the researcher.

3.8.2 TRANSFERABILITY

A traditional view of external validity relates to the application involving the degree to which findings of one study can be related to other situations (Merriam, 1998). However, as noted previously, a preferred term relevant to qualitative research

is 'transferability'. The purpose here is to not necessarily apply the findings of one particular study to the wider population. Each case can be unique in the meanings ascribed by participants (Stake, 2000), where context is an important facet of the research.

This insight provided by Stake is relevant to this study whereby the participants may have unique personal experiences bounded within the case of which they are part, or they may also give further insight into how their experiences are likely to transfer to similar situations, in some instances. While transferability is neither the aim or preoccupation of this research method nor the suitable application to research complex phenomenon, some aspects may still be transferable in a naturalistic sense. Stake (2000) further positions the purpose of the case study method as being useful for exploring humanistic understanding. A literature review was undertaken to assist in better understanding the problem and topic of research, further enabling improved interpretation of the findings. This is coupled with my own considerable experience in education in teaching and in leadership roles, where both can assist to preserve context and meaning. Other practitioners will ultimately consider similarities to their own situation and decide the potential for transferability of findings relevant to their own settings and contextualised environments (Bassey, 1981).

Gomm, Hammersley & Forster (2002) suggest that, while the aim may be to draw conclusions about a phenomenon or a population of wider cases, or provide a basis to do so, case studies need not make any claims about their transferability or the generalisability of their findings at all. Purposive sampling (Fraenkel & Wallen, 1993; Gall, Gall & Berg, 2007; Yin, 2009) also serves to optimise the data, which involves carefully selecting participants that are more likely to inform the research inquiry, rather than random selection. In this study, application of purposive sampling of teachers included particular experience in the classroom, and selecting some educators with leadership responsibility which enabled the formation a separate case.

3.8.3 DEPENDABILITY

Lincoln & Guba (1985) note that there is a closeness between credibility and dependability, where one contributes to the other, in practice. Dependability was not a feature that was intended to be a focus for this research purpose. If the study were to be repeated, it could not occur in precisely the same context with the same question and response dialogue, and would encounter different synergies in the process. This is largely due to the phenomena of the case studies, which will derive different

meaning with different participants. This study does not seek replication of data, although every attempt is made to ensure that all details of the case are documented accurately and are relevant to the research questions (Yin, 1994).

Donmoyer (2006) points to a practical example of the need for diverse learning in schools. For instance, what might be applicable to promote learning to a kindergarten teacher might attract a different meaning to promote learning to an art teacher. The dependability of the learning concept could be interpreted quite differently given a different context and need.

During this study, I conferred with the research supervisors regularly, sought advice as well as liaising with professionals in the workplace about aspects of the research, including the processes, data analysis and interpretations of data to expose myself in my thinking and any biases influencing the research findings. I also kept all relevant records about the phases of the research, including formulation and development of research questions, literature review readings and notes, diary notes when liaising with colleagues, and data analysis notes.

3.8.4 CONFIRMABILITY

Confirmability relates to the researcher collecting and interpreting data from participants, where the interpretations are not attached to the researcher's imagination (Guba & Lincoln, 1985). Similarly, Patton (2002) argues that findings should be a result of experiences and not preferences of the researcher. Confirmability sits somewhat concomitantly with objectivity, as credibility does with internal validity (Guba & Lincoln, 1985; Steele-Pierce, 2006). Yin (2009) refers to construct validity as a comparable term, by which using multiple sources of evidence and multiple points of data sources reduces subjectivity, which, in turn, reduces the researcher's bias being embedded in the results. Stake (1995) notes that confirmation also occurs when the data is constantly being referred back to the literature collected.

In this study, I described the research design including methods, procedures, data analysis, results, discussion and conclusion explicitly. I also used an inductive approach to allow the themes to emerge when analysing data, and immersed myself in the literature to broaden the research context and to enhance my own capacity to interpret the data accurately. Further attempts to enable confirmability included taking particular note of data that added to my own existing knowledge, or contradicted my own perceptions about the topic under investigation, ensuring that any such data was presented in the results and discussed further. Confirmability was further assisted with the use of a critical professional friend who had extensive

knowledge of teaching as both a classroom teacher and experienced leader, and with research experience to challenge my processes: in particular, my interpretations of data.

3.9 LIMITATIONS OF THE STUDY

This study was positioned within a qualitative interpretivist research paradigm and utilised a multiple-case study methodology. The epistemological, ontological and methodological orientations of this study were not suited to positivism or other paradigms previously acknowledged. The trustworthiness of qualitative research, and its perceived lack of rigour can cause some concern (Silverman, 2001) within the research community. Denzin & Lincoln (2005) affirm that 'no specific method or practice can be privileged over any other' (p. 7). The orientation of the qualitative epistemology situated in the interpretivist paradigm was selected for reasons of suitability to the nature and type of research questions being sought. The research approach provided in-depth, real-life, contextualised, contemporary and meaningful perspectives of school-based teachers, and teacher-leaders on the attributes of expertise of a classroom teacher.

Limitations of this study are acknowledged as inherent features in the research design. The findings in this study were typically not generalisable to wider populations within the education community. Yin (2009) argues that analytical generalising would be the only suitable mode, should any attempt to generalise ensue, where case study can be referenced to a pre-developed theory as a comparison. However, this study was seeking to understand the perspectives of the participants and not aimed at generalising against a predetermined theory as a template. Rather, confirmability was enabled through multiple sources of data from multiple cases where data were compared and contrasted from each case. Yin (2009) adds, 'if two or more cases are shown to support the same theory, replication may be claimed' (p. 38). To partially address this limitation, this study also employed two theoretical frameworks (Bronfenbrenner, 1994; and, Kemmis et al., 2012; 2014a) which are explored in Chapter 6 to use as 'conduits' of this study's findings of the cases. By using these two theoretical frameworks, the findings are potentially more relatable to professionals in schools. This concept is elaborated upon in Chapter 6.

This study is limited in its scope, focused on only three schools with only 26 individual participants in total. All participants were randomly selected, all volunteered, with the only stipulation that they are required to have four or more years' experience in teaching. The study was also limited by time, given the

researcher's resources and participants' availability, particularly in groups. The data collection method had limitations, including researcher bias embedded in the question design and articulation to participants during the focus group interviews. This extended to interpretations of the data. Another limitation was response bias by participants, particularly in group situations, where there was some a sense of accountability for perceived scrutiny by colleagues. The result was that some participants appeared to shape their responses with this in mind, compared to those who had the privacy of one-to-one interviews without perceived colleague inspection. Further limitations in collecting data occurred in terms of limited recall of participants at those particular moments in time. Another limitation occurred in terms of reflexivity-interviewee response. This is where a participant may state what they think the interviewer wants to hear (Yin, 2009). Given the parameters, this study may not be generalisable to other teachers, leaders or school populations within the field of education. There is no claim that the results of this study will be applicable to other situations involving educators in different circumstances. Hammersley & Gomm (2002) suggest, 'The aim of case study research should be to capture cases in their uniqueness, rather than to use them as a basis for wider generalisation or for theoretical inference of some kind' (p. 3).

Patton (2002) refers to qualitative research as providing *perspective* rather than *truth*. Similarly, Merriam (1998) refers to the multiple realities as a function of personal interaction and perception, not an objective thing. Despite the limitations of this study, it can offer an important contribution to the understanding of expertise in teaching practice by providing perspective, particularly from those closest to the practice of teaching in classrooms or leading teachers in schools.

3.10 ETHICAL CONSIDERATIONS

A number of processes were implemented to address ethical considerations and to protect participants' wellbeing, as well as preserve the integrity of the educational research undertaken. As Creswell (2014) suggests, researchers must protect participants while promoting the integrity of research, which includes guarding against misconduct and impropriety that reflects on the organisation or institution. As the researcher, I complied with the required processes implemented by the University of New England's Human Research Ethics Committee to gain approval prior to capturing data for the study. This process enabled external consideration and validation of the ethical procedures to be undertaken. Some features of this compliance have been outlined in this section.

Data collection was scheduled to occur while I was a school principal, although there were no plans to conduct any part of the study at the school where I acted as the employer. This decision aimed to ensure preservation of professional distance and avoid any compromise of trust with teachers and other leaders in that environment. Instead, three sites were chosen to enable professional distance and maximise opportunities to build trust and maintain researcher integrity (Burgess, 1985).

For each site selected, a letter was sent to each school principal as the 'gatekeeper' (Creswell, 2009, p. 178), requesting permission to conduct the study. The requests stated that involvement should be voluntary without any coercion or selection by school leaders. A separate letter was sent for the principal to make available to interested participants. This letter outlined the voluntary nature of participation in the study, stating that participants were able to withdraw at any stage of the process, including during the data collection process. This was verbally articulated at the commencement of the focus group discussions. Letters of consent were made available to participants at that time as a further step in providing information to prospective participants.

All dealings, from initially requesting permission (verbal and written) to each school principal through to personal interaction with participants in the process of collecting data, strived to maintain a respectful approach as an important foundation. This respectful relationship between myself as the researcher and participants was important (Lincoln & Guba, 2000). It enabled trust to develop, and improved the openness of participants in their responses and discussion. Kvale (2007) contends that interviewing is increasingly seen as a moral inquiry within qualitative research.

Anonymity was also assured for each participant as pseudonym codes were used to provide for confidentiality of identity. Each school used was not identified other than site numbers to further protect participants and those schools. This was communicated to participants at the commencement of the focus groups. All responses and discussions were recorded, with full disclosure to participants in advance. Each transcript was professionally transcribed with a checking process for accuracy included. Two copies only of the transcripts and recordings have been kept: one in a password protected university administered Cloud storage facility, only accessible to myself as the researcher, and the principal supervisor. The other electronic version is via password-protected computer access, stored on the researcher's secure files. These will be disposed of appropriately at a suitable time in the future as governed by the university's requirements. Overall, the approach to data collection and storage of data will be preserved ethically (Merriam, 1998).

As the researcher, I have an obligation to represent data accurately during the analysis process by minimising my own bias in interpreting the meaning of the data. Yin (2009) advocates the responsibility of the researcher to do so fairly and fully and not selectively. Creswell (2014) further adds:

In research, it is academically dishonest to withhold important results to cast the results in a favourable light to the participants' or researchers' inclinations. In qualitative research this means that the inquirer needs to report the full range of findings, including findings that may be contrary to the themes. (p. 99)

I was also conscious of advice offered by Miles & Huberman (1994) to minimise researcher bias during the collection of the data itself. This included remaining unobtrusive in the discussions as much as possible, particularly when participants were engaged in each other's responses and where a synergy was occurring between participants and their responses.

3.11 THE RESEARCH PLAN

The research project involved a broad literature review, professional discussion with colleagues in the workplace, reflection of my own experiences as both a classroom teacher and school leader, observations of other teachers and problematisations of some issues arising from these experiences. From these preliminary activities, the development of the research question was initially shaped, and revisited and refined numerous times during the earlier phases of the research. A presentation for confirmation of candidature followed, including a panel meeting to discuss the presentation, and provide me with feedback on my planned approach and methodology. This included plans to collect data. Although the panel made some suggestions, approval to proceed was granted without any conditions imposed.

I then sought Ethics approval, which was granted. Suitable independent schools were sourced, having decided three sites would be a manageable number whilst giving diversity and breadth to the study. To further strengthen this aim, schools that were likely to be completely independent of each other and located in differing states/territories were only considered for selection.

Choosing these locations was based on accessibility, despite the considerable distance between each one across three differing states and one territory. Upon receiving permission from the principal of each school, the next step involved organising suitable participants, which were teachers with at least four years'

experience, spread across K-12 curricula, mixed gender and separated into teacher-only and teacher-leader groups. The physical visits were planned across three months from March 2014 to the end of May 2014, with flexibility to be applied as needed. In total, twenty-six participants were interviewed. This was comprised of twelve teachers and fourteen leaders. Site 1 involved five teachers and five leaders, site 2 had three teachers and six leaders, while site 3 involved four teachers and three leaders. A further breakdown of participant details, including gender, subject areas taught and years of experience are included in Sections 4.2.1 and 5.2.1 in Chapters 4 and 5 respectively. Transcribing data and ongoing data analysis follows, with considerable time required for this process over many months to further explore and revisit the data to search for emergent themes. The process of writing up the dissertation then commenced, including considerable extended periods of revisiting, reflecting and refinement.

3.12 CHAPTER SUMMARY

This chapter outlined the purpose and research approach of the study, gaining greater understanding of the methodology involved. Schwandt (2000) states, 'In order to understand a particular situation, one must first grasp the human actions to be able to understand the situation to acquire or apply meaning' (p. 191). The research approach was framed by an interpretive paradigm, with features consistent with those commented on by Schwandt (2000):

Human action is viewed as meaningful; ethical commitment and respect is evinced for and to the life world; there exists an epistemological view that it is possible to understand subjective meaning of action and do so in an objective manner. (p.193)

The interpretivist paradigm was situated in a qualitative case study method in which Vine (2009) suggests that suitable data collection methods should include focus groups and interviews. The research approach planned featured two separate cases – teacher and leader – across three sites, utilising multiple interviews in focus groups. Consideration was given to the process of data analysis, overall academic rigour in alignment with the selected research approach, and various ethical considerations, trustworthiness and acknowledgment of the study's limitations. The following two chapters (Chapter 4 and Chapter 5) present the results of the study.

CHAPTER 4

RESULTS OF THE TEACHER CASE

4.1 INTRODUCTION

This chapter presents the results of the teacher case interviews and comprises seven sections. A report detailing the administration of the focus groups is provided and includes changes to the initial research plan. The in-depth coding of the focus group transcripts is then described; this includes an example of a transcript notation summary created after each interview and a further example of a transcript coding summary. Adopting Creswell's (2014) seven step approach to reveal the emergent themes, details are presented in this Results chapter. The five themes are then presented with their underlying structure grounded in the codes and the categories are described, supported by participants' comments.

4.2 TEACHER CASE INTERVIEW/FOCUS GROUP ADMINISTRATION

To obtain perceptions of the attributes of an expert teacher from experienced teachers in practice, several semi-structured focus group interviews were designed and implemented. The following section provides information about the participants, the interview protocol, and the changes made to the initial research plan.

4.2.1 PARTICIPANTS

The qualitative data of the teacher case were obtained through a series of seven separate interviews/focus group interviews spread over several months across three research sites. The sites were located in New South Wales, Queensland and the Australian Capital Territory – all in independently governed non-systemic schools. One was co-educational and the other two were single-sex schools (one male and one female). The teachers who participated ranged from approximately four years' experience up to thirty-eight years' experience as a classroom teacher. This criterion was based on the premise that teaching for several years provided an opportunity for teachers to gain adequate school-based experiences to develop their views and perceptions on the notion of expertise in practice. In total, twelve teachers were interviewed, across the three sites, in addition to fourteen leaders. The teachers interviewed involved several focus groups and some were involved in individual interviews. This comprised site 1 (five teachers – 3 male, 2 female), site 2 (three teachers – 1 male, 2 female) and site 3 (four teachers – 2 male, 2 female). Other

characteristics of the group varied to incorporate teachers from primary, middle and senior schooling and a range of subject specialisations, illustrated in Figure 4.1 and Figure 4.2.

To facilitate a responsive and successful interviewing process, the interviews were conducted in accordance with the protocol described in Chapter 3. The interview questions comprised four broad seed questions with linked strategies to probe for deeper responses. Strategies allowed for prompting, probing and redirecting depending on the circumstance in the interview and included predominantly open-ended questions to stimulate discussion.

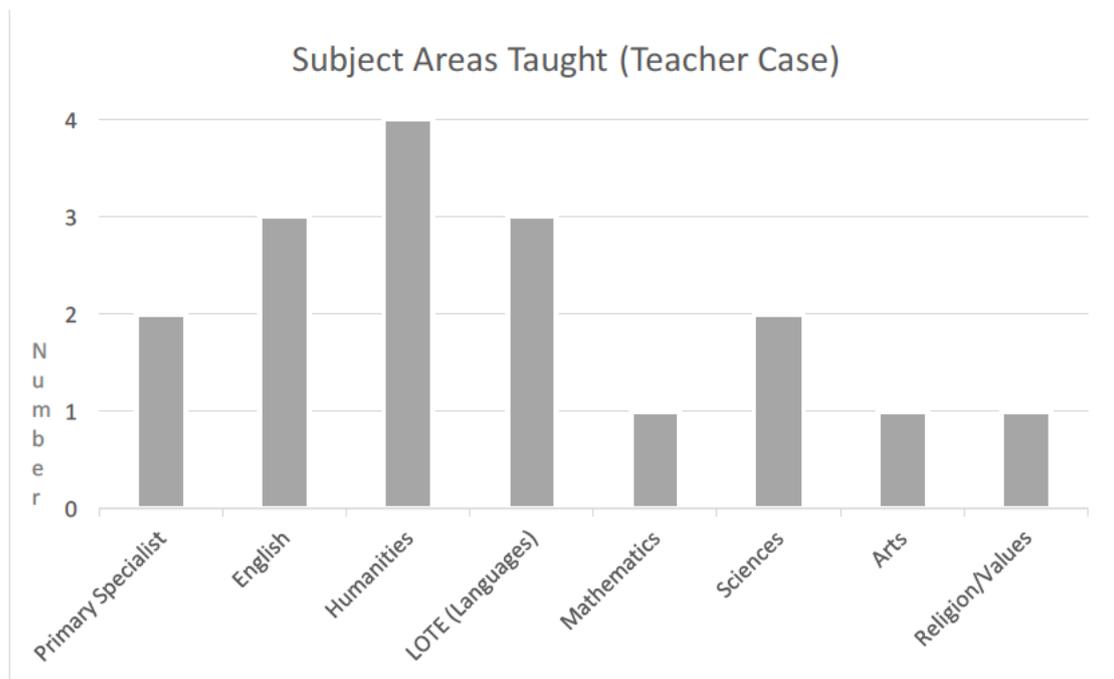


Figure 4.1: Subjects taught by teacher case participants.

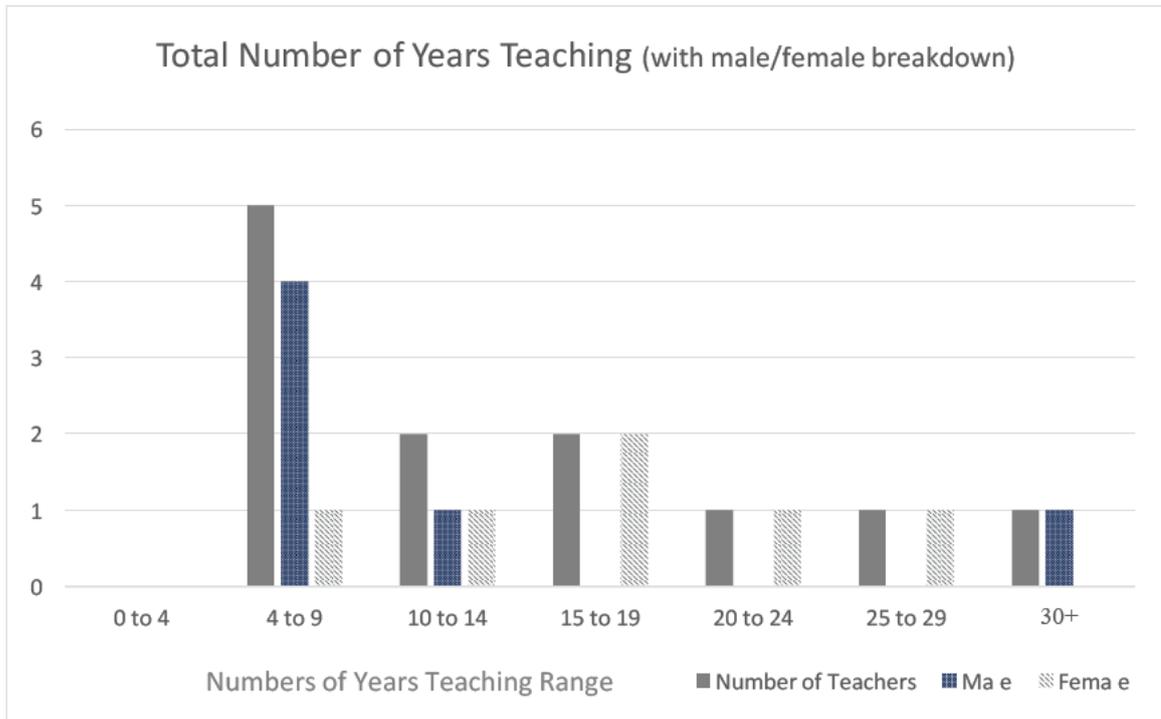


Figure 4.2: Total number of years teaching; male and female breakdown

4.2.2 CHANGES TO THE RESEARCH PLAN

The initial plan was to conduct focus group discussions involving approximately four to six teachers in each group at each of the three sites. The research occurred as planned at two of the sites; however, at the third site, one-to-one interviews were organised by the school instead of focus group interviews, due to misunderstanding. The number of participants involved, and all other aspects were in accordance with the requested plan, except that individual interviews had been arranged. As a considerable amount of organisation had gone into scheduling each of the interviews by the school (in addition to the leader case interviews) over multiple days, the new structure and arrangement was adopted. Although unplanned, the implications of the alternative data capture method served to enrich the overall data informing the study. The individual interviews provided depth to the responses, enabled participants to provide their views without feeling self-conscious in the presence of other colleagues, and provided more detail compared to the focus groups. The focus groups, however, provided a synergy of perspectives not captured in the one-to-one interviews. The blending of focus group and individual interview data enhanced the study.

4.3 IN-DEPTH CODING OF FOCUS GROUP TRANSCRIPTS

Following Creswell's (2014) seven-step analysis procedure, the transcripts were coded in depth. Prior to the actual coding, all the focus group and individual

interview transcripts were read and individually summarised in order to become familiar with the data. As the coding process was performed, data was organised initially by bracketing chunks and writing one or two words, or a short phrase, to represent a category (Creswell, 2014). Often these were the words used by the participants.

4.3.1 TRANSCRIPTION

The individual and focus group interviews were transcribed and summarised, employing a basic thematic analysis procedure initially linked to the interview questions. The purpose of these summaries was to allow familiarisation of the data to occur for the researcher. Table 4.1 below is a sample of one transcript summary of an interview with a teacher.

Table 4.1: Transcript Summary for T5

Transcript 5: Summary of an Interview Transcript after initial reading. Participant T5
<p>Attributes/Practices of Expertise in Teaching and/or of an Expert Teacher</p> <ul style="list-style-type: none"> • Initial impression was ‘comprehensive knowledge’; in concert with continual upskilling of the subject area to develop knowledge • Knowledge of subject area needs to be practical and able to be applied; teachers ‘directors of knowledge’ • Noted expertise in teaching is a ‘completely different beast’ to expertise in a subject area without any need to teach it to others • In teaching, expertise requires motivation & inspiration and maintain it over the years. • Rapport is crucial – with a strong understanding of the environment one is teaching in and how to react suitably in different situations • Personality type a factor in teaching performance, but no particular profile is most desired, although rapport building and communication skills crucial (repeated rapport building a third time shortly after this comment) • Other attributes of the expert included: professionalism (student-teacher relationships); and knowledge of how to interact with teenagers • ‘there’s a bit of a code...in teaching...that you don’t undermine’ – discussed not addressing issues by teachers who are observed as performing poorly. Rather, nothing is usually said, even though it is noticed. • Pedagogies offered included questioning timing (wait time); feedback; planning • Leadership – noted teachers as leaders in the classroom • Leadership – of teachers by school leaders important to motivate/support teachers • Differentiating – experienced non-expert not as flexible in their approach even though competent – flexible in teaching approach in various ways • Expert engages in a school community (non-expert avoids parents and colleagues) • Traits/qualities – honesty which then promotes respect (provided competence exists in practice) • Knowing students – their learning but also their personal lives (footy team participation and progress for instance) – way to build rapport • Knowing students promotes student motivation to work harder for the teacher • Considered 75%–85% of colleagues in sub-school to be performing as experts (T5 positioned self in the expert category) <p>Enablers/Inhibitors of Expertise</p> <ul style="list-style-type: none"> • Rapport, relationships, professionalism, staying motivated, PD, being happy – all enablers • Family life, unhappiness, (lack of) sleep, imbalance, home situations, support from leaders impacting on morale, confidence, being unhappy at work/in role all inhibit progress towards expertise <p>Informs Progression of Expertise</p> <ul style="list-style-type: none"> • Observations of others (emphasised this point) ‘Observation, observation, observation...’; open to learn; being open-minded; trial and error; reflecting on practice; PD; remaining current on curriculum developments

4.3.2 CODING PROCESS

The audio recordings gathered through the semi-structured individual teacher interviews and focus group interviews were analysed using the seven steps of thematic analysis proposed by Creswell (2014): raw data (transcripts); organising and preparing data for analysis; reading through all the data; coding the data; identifying themes (presenting categories); interrelating themes; interpreting the meaning of the themes that have emerged within the case from the teachers. The text of the transcripts was arranged in a table with four columns: *Transcript* (with *quotation identification*), *Code*, *Category*, and *Notes/Reflection*. This format afforded an efficient coding process. The timeline of each comment in the interview is also noted to provide a reference point and to establish the context of a relationship between multiple comments. Part of the coding is shown in Table 4.2 (for a full example of a transcript, refer to Appendix 5). Codes then developed from the participants' data.

The manner in which codes were selected and named involved using participant statements and language to preserve accuracy of data wherever possible. Codes were selected based on the frequency of statements by different individuals and groups as one key consideration. This was recorded in the excel spreadsheets when analysing data to guide selection. Another was the importance given to respective statements, developed as codes, after contextualisation was considered and interpreted by the researcher, irrespective of the frequency of the code stated. These were two key selection considerations for the code book. A table mapping the category selections for each site can be viewed in Appendices 11 and 12. A second member of the research team also selected the codes to provide inter-rater reliability to address the issue of consistency. This was an iterative process which was carried out until agreement was reached and influenced by the purpose of the study and principles that underpin the research (Joffe & Yardley, 2004).

Table 4.2: Sample section of a transcript summary used for the coding process

Transcript	Code	Category	Notes: Emerging Theme
<p>In the pastoral area, I think a genuine interest in the students. 22.05</p> <p>Yeah. I think there's a line between how much you ask students and how much you know about students. But I think just a one or two little hook, couple little hooks to be able to say, 'How did you go at AFL on the weekend. Did you enjoy your trip to Sydney?' just little things like that. I think absolutely and that comes back to rapport-building ... I think an expert teacher is someone who takes a lot of note of that and uses that as a way of rapport-building with students. But not in a mechanical way, in an actual way ... 23.06</p> <p>You're encouraging them and you're actually showing them that you care which genuinely I try to. Genuinely I really, really, really try to care about every single student in my class. Sometimes it's more difficult than others, but if you can just make that breakthrough where the student gives you their trust, then there's absolutely no doubt. I think it then comes to a stage where you're wanting to bring them – if they're off track or they're misbehaving – you've got that rapport to be able to then approach that with more ammunition I guess, you going there as a supportive teacher or mentor rather than as this teacher that always having a go at me. 25.24</p>	<p><i>pastoral approach</i></p> <p><i>knows personal interests</i></p> <p><i>engages</i></p> <p><i>connects</i></p> <p><i>develops rapport</i></p> <p><i>cares</i></p> <p><i>connects</i></p> <p><i>develops rapport</i></p>	<p>Whole Student</p> <p>Connects/ Bonds (with student)</p> <p>Connects/ Bonds (with student)</p> <p>Whole Student</p>	<p>T5 provided several examples of how important getting to know the student is.</p> <p>Mentioned 'rapport-building' more than once in the section. (Professionalism)</p> <p>Gave examples of speaking and engaging with students about their interests as a vehicle to get to create a connection.</p> <p>Non-mechanical</p> <p>Expert teacher aware and takes steps to build rapport</p> <p>(describing through own experience lens)</p> <p>(professionalism)</p> <p>Rapport, relationship linked to influence (on behaviour correction)</p>

4.3.3 CATEGORIES

Once the iterative re-coding process had been completed, the codes were analysed and grouped to create categories. This involved an iterative process of reading transcripts, proposing categories, re-reading transcripts and reviewing categories, in order to generate a set of agreed categories and description for each category. The basis for generating the categories is integral to thematic analysis because these categories provide new understanding of the data and form the foundation for identifying themes. Selecting the codes and establishing the category definitions with agreed meanings was an iterative process involving another member of the research team to provide inter-rater reliability.

The categories identified were: *demonstrates a holistic approach to students, connects/bonds with students, demonstrates collegiality, includes parents, exhibits openness to change, demonstrates a flexible/adaptable approach, demonstrates collegiality to enhance practice, invests in self-learning, demonstrates awareness, displays self-oriented character traits and qualities, displays character traits and qualities oriented to others, displays skill oriented traits and qualities, displays a particular personality, demonstrates effective planning/structure/delivery, differentiates/personalises learning, engages students in their learning, questions students effectively, implements behaviour management strategies, possesses domain knowledge*¹.

A description of the themes that were developed follows in the next section. More detailed protocols were presented in Chapter 3.

4.4 PROCESS TO REVEAL EMERGENT THEMES

This study followed Creswell's (2014) seven steps to reveal emergent themes. This involved the process of grouping categories and their linked codes that shared similar features. The detailed process was presented in Chapter 3. The researcher, in conjunction with the supervisory team, proposed, examined and debated emergent themes. The process resulted in the identification of five robust themes to explore around expert teaching: Builds Relationships with the School Community; Open to, and Seeks Out, Opportunities for Professional Growth and Improvement; Displays Particular Character Traits and Qualities; Demonstrates High Quality and Effective Pedagogical Practice; Possesses a Deep Mastery of Subject Knowledge. These themes are described in detail in the following sections.

¹ Refer to Appendix 7 for the code and category definitions and mapping.

4.5 THEME: BUILDS RELATIONSHIPS WITH THE SCHOOL COMMUNITY

The theme, Builds Relationships in the School Community, has four categories and fourteen associated codes (Table 4.3). These codes subdivide categories of: ‘Demonstrates a Holistic Approach to Students’, ‘Connects & Bonds with Students’, ‘Demonstrates Collegiality’, ‘Includes Parents’. Descriptions of each category, which reveal the theme Builds Relationships with the School Community, follow.

Table 4.3: Emergent Theme: Builds Relationships with the School Community arising from codes and categories.

Category	Code
Demonstrates a Holistic Approach to Students	<i>Takes a pastoral approach</i>
	<i>Knows personal interests of students</i>
	<i>Caters to individual commitments</i>
	<i>Accepts responsibility for student success</i>
Connects & Bonds with Students	<i>Develops rapport with students</i>
	<i>Engages students</i>
	<i>Connects with students and forms a relationship</i>
	<i>Cares for students</i>
Demonstrates Collegiality	<i>Engages with colleagues positively</i>
	<i>Communicates expertise to colleagues</i>
	<i>Adopts ideas of colleagues</i>
	<i>Shares resources with colleagues</i>
Includes Parents	<i>Builds relationships with parents</i>
	<i>Communicates with parents</i>

4.5.1 CATEGORY: DEMONSTRATES A HOLISTIC APPROACH TO STUDENTS

‘Demonstrates a Holistic Approach to Students’ is defined as the classroom teacher displaying a holistic interest in each student beyond academic responsibilities that are limited to imparting specified curriculum knowledge. ‘Demonstrates a Holistic Approach to Students’ incorporates the whole needs of students and the four codes in this category are presented in Table 4.3.

The term ‘pastoral care’ was used by numerous teachers during the interviews. Reference to pastoral care referred to general care for students’ wellbeing,

relationships, the holistic aspect of the student as a person, and was not related to specific academic learning or the formal curriculum. T4 was one participant who referred to the code *takes a pastoral approach*, and suggested:

You can't teach the curriculum without the pastoral care ... I think that they interconnect quite significantly every single day and every single lesson ... Yeah, your curriculum is nothing without pastoral, because otherwise you're ineffective and they're not getting any of the curriculum, but I also think that without the curriculum, you're just babysitting. You need both. (T4)

Getting to know a student's personal interests and hobbies² laid a foundation for building rapport, further explained by T5:

I think there's a line between how much you ask students and how much you know about students. But I think just a one or two little hook, couple little hooks to be able to say, 'How did you go at AFL on the weekend. Did you enjoy your trip to Sydney?' just little things like that. I think absolutely and that comes back to rapport-building. (T5)

T4 conveyed a similar sentiment about knowing a student's personal interests, and added that an expert knows how to cater to those interests and commitments as the teacher,³ explaining:

I like to know as much as I can about my students. I like to know their commitments outside of school so that I can cater to those, if need be, if I know that a student has five hours of dancing on a Monday night, then I say, 'This homework will be due on Wednesday,' so they'll have time to actually do it or whatever it may be. I think it's just knowing everything you need to know about the student that will influence your teaching. I think that there's things that you definitely don't need to be a part of, and that's for their friends to talk about and that's for their family, and most of the time, they don't feel comfortable sharing it anyway. I do

² code: *knows personal interests*

³ code: *caters to individual commitments*

think to be an expert is to know your student, and to know what they need. (T4)

Some teachers perceived they had an obligation and responsibility⁴ to ensure their students learned effectively; a view that was said to characterise expertise. One teacher (T5) suggested, 'If my students get a C or a D, I feel as if I've sort of failed ... I always want to reach a really good result for anyone that I teach, the best I can for them ... I feel I let you down a bit'. Participants in this case study often responded by looking through their 'own lens' of practice to describe an expert teacher.

Overall, teachers conveyed the importance of seeing the student holistically as a unique individual, not just as another learner in the classroom, and therefore participants suggested this attribute was a distinction of the expert teacher. This category involved the view expert teachers have of their students and their obligations to them as a person. The next category builds on this to involve engagement with the student.

4.5.2 CATEGORY: CONNECTS AND BONDS WITH STUDENTS

The category 'Connects and Bonds with Students' is defined as the teacher establishing a connection with the student, including building rapport and demonstrating a sense of care for each student. The two terms used, 'connects' and 'bonds' with students, were both used by participants and have been preserved to accurately reflect any nuance intended by participants, rather than assume they are synonymous terms. Codes within this category are presented in Table 4.3.

Arising from the practices expressed in the previous category ('Demonstrates a Holistic Approach to Students'), a rapport begins to develop⁵. T5 contributed to this perception:

I think an expert teacher is someone who takes a lot of note of that [taking an interest in a student's hobbies] and uses that as a way of rapport-building with students. But not in a mechanical way, in an actual way. (T5)

The meaning of non-mechanical was connected to authenticity in getting to know students. Another teacher suggested that building rapport occurs through participation, saying, 'I mean, you have to be involved, that's what rapport is all about' (T11). T5 stated that not every teacher has the ability to develop the same high

⁴ code: *accepts responsibility for student success*

⁵ code: *develops rapport with students*

level of rapport, claiming that '... different teachers have different abilities to build rapport'. T11 also described one colleague's adeptness at rapport building as follows: '... [he/she] just was a natural, and [he/she] had a gift getting the boys on side ...'. Another teacher (T12) also suggested: '... all the good teachers seem to have that rapport. They know how to speak to whatever year level that they're engaging with'. T11 expressed a similar sentiment, corroborating this view on rapport and engagement⁶:

If I think of teachers that I've really admired ... the standouts are the ones who have a very specific rapport that allows them to engage with the kids and the kids to want to be engaged with whatever it is they're talking about. (T11)

Others discussed expertise as having a strong connection⁷, which involved moving beyond rapport into the realm of a relationship. Teachers discussed the importance of teaching the curriculum content and the student-teacher relationship as crucial to fuse together. T4 suggested, 'I think you really do have to have that relationship with the students to be an effective teacher and to get the curriculum across'. Some viewed the relationship as most important, noting, for instance, 'I think that relationship thing is more important because without that you're really battling' (T2). A potential outcome of a strong student-teacher relationship was expressed by T8 as care⁸:

... if the students like you and feel that you care about them and you've got their best interests in mind then they're going to want to work harder for you and do more for you, which is going to end up getting better results the more engagement there is. (T8)

T7 reported an example of this sentiment in practice, revealing:

I asked the students a few years ago, soon after I came here I said, 'What drives you to want to do your work? What do you think is the motivation in order to get high results?' And they said the school, and they said they feel like they can't let their school down. (T7)

⁶ code: *engages students*

⁷ code: *connects with students and forms a relationship*

⁸ code: *cares for students*

Other respondents provided numerous similar views to those expressed as examples in this section, where knowing students, caring, and building rapport was a basis of positive student-teacher relationships, and also had implications for the learning outcomes of students. The attributes and practices involved in connecting and bonding with students formed part of their perception of an expert teacher.

4.5.3 CATEGORY: DEMONSTRATES COLLEGIALITY

The category of 'Demonstrates Collegiality' is defined as the way a teacher interacts with colleagues relationally, which sometimes extends to actively seeking out opportunities to engage with others in addition to incidental interactions. Integral to these interactions is a view to fostering and nurturing professional collegial relationships. Codes within this category are presented in Table 4.3.

Engages with colleagues positively was one identified code. The antithesis was noted by some participants where negativity was a sub-culture in their school – an attribute or practice that they did not associate with an expert teacher. T1 commented on this:

I don't like hanging around with negative people and people start talking negative. I just stay out of there. Gossip, don't want to know about it. They start putting people down, don't want to know about it and when it comes to learning, I'll listen to people who I just respect. (T1)

T1 reported closing off to those perceived as negative, conversely remaining open to listening (and learning) from those who were respected. A similar sentiment was expressed by participant T5 who observed, 'There's energy givers and energy takers'. Communicating expertise collegially⁹ was deemed important by T9, who suggested there was a professional benefit to be derived as ideas are shared^{10 11}, as well as enjoying a positive culture, stating:

I like to bounce off people so I could just throw random ideas and develop them just through a conversation, or sharing of ideas and developing ideas through discussion. I think that's [being] open to discussion, open to new ideas, as a colleague. (T9)

⁹ code: communicates expertise to colleagues

¹⁰ code: adopts ideas of colleagues

¹¹ code: shares resources with colleagues

This benefit was also observed by T11, who provided this example involving one colleague: ‘Very quickly we developed a bit of a rapport, where we’d just bounce off each other with the kids’ (when working together in the same faculty and peer teaching.)^{10 11} T11’s comments allude to expertise growing, in part, because of the exchange. Overall, teachers had a clear view that to be considered an expert, one had to be a collegial teacher. This was articulated as engaging positively with colleagues, communicating, sharing and adopting ideas and resources with others in a school community. Those who did not engage in this context were not considered expert by colleagues, according to participants, because they were closed off to others, which in turn resulted in their colleagues avoiding them. Consequently, professional growth was stymied.

4.5.4 CATEGORY: INCLUDES PARENTS

This category is defined as accepting parents as integral to the practice of expertise in teaching, and involving them in the teacher-student-parent relationship. The codes are presented in Table 4.3.

Some participants acknowledged that parents can be demanding and challenging for the classroom teacher; despite this, however, they maintained that it is important to build positive relationships¹². T11 suggested that it is challenging to deal with parents who are ‘demanding X, Y, Z’ while having to juggle other areas of administrative tasks and teaching. T3 further indicated that some parents can be ‘... very rigid in what they expect ...’ in terms of the performance of their own children in the learning environment. This occurs from the early years of the student, and an expert teacher would implement teaching strategies to counter certain challenges imposed by parents. Despite the challenges teachers experienced involving some difficult parents, T2 saw the parent-teacher relationship¹² as integral to demonstrating expertise, stating:

Relationships with the parents, I think, is important as well, building those relationships, because at the end of the day, they have the children after the school hours and you’re hoping that they can work with you as a partnership to achieve those goals that you’ve set for the children, and the goals that the curriculum set for the children. (T2)

On parent relationships, T5 reflected and stated:

¹² code: *builds relationships with parents*

I guess, a connection to the community, I think's crucial for an expert teacher. But at the same time, it's a hard one, like how much do you contact the parents? Do you lose contact with the student if you're dealing with the parents too much? Where do you bring them in? If the student's doing well, do you need to? That's something [to consider] ... just those little fine decisions. (T5)

T5 suggested that the expert teacher knew when to communicate with parents¹³ and when it was not so necessary. In distinguishing a non-expert teacher, T5 further added:

Well, non-expert teacher ... or an ineffective teacher, they would hide from all parent contact, and would not try and incorporate any community projects or any relevant community-based projects in the classroom. They're just, 'This is what I'm teaching. I'm not open to ...' because it's one of the standards of teachers, just to incorporate, community and blah, blah, blah. (T5)

Others also mentioned that interacting and communicating with parents¹³ on a pragmatic level is important, though not aimed at developing rapport or a relationship. For instance, T4 identified parent teacher meetings as a way to communicate with parents, though such meetings are designed more as a means to find out about student information; any rapport these meetings develop with parents may be an incidental benefit. T3 added that parents could be a source of feedback about a teacher's practice, which an expert would be open to receiving. Overall, the expert viewed parents as essential key stakeholders to their practice.

4.6 THEME: OPEN TO, AND SEEKS OUT, OPPORTUNITIES FOR PROFESSIONAL GROWTH AND IMPROVEMENT

The theme 'Open to, and Seeks Out, Opportunities for Professional Growth and Improvement' emerged under the following categories: 'Exhibits Openness to Change', 'Demonstrates a Flexible/Adaptable Approach', 'Engages in Reflective Practice', 'Demonstrates Collegiality to Enhance Practice', 'Invests in Self-Learning', 'Demonstrates Awareness'. A summary of the categories and codes for this theme is included below in Table 4.4.

¹³ code: *communicates with parents*

Table 4.4: Emergent Theme: ‘Remains Open to, and Seeks Out, Opportunities for Growth and Improvement’ arising from codes and categories.

Category	Code
Exhibits Openness to Change	<i>Open to continual improvement</i> <i>Open to change /open mindset</i> <i>Goes beyond routine (pursues change)</i> <i>Avoids complacency</i>
Demonstrates a Flexible/Adaptable Approach	<i>Adapts to change</i> <i>Displays flexibility</i>
Engages in Reflective Practice	<i>Reflects on past practice to improve further</i> <i>Reflects on observations of others</i> <i>Identifies areas to improve</i>
Demonstrates Collegiality to Enhance Practice	<i>Views others’ classes to learn</i> <i>Provides feedback to colleagues and accepts feedback</i> <i>Engages effectively to improve teaching</i> <i>Engages in professional conversation</i>
Invests in Self-Learning	<i>Values and engages students in learning</i> <i>Engages in their domain field outside the classroom setting</i> <i>Seeks self-improvement</i> <i>Undertakes professional reading</i> <i>Values formal studies/qualifications</i> <i>Learns about teacher related technology</i>
Demonstrates Awareness	<i>Demonstrates self-awareness</i> <i>Demonstrates general awareness in the school setting</i> <i>Demonstrates awareness of own level of professional knowledge</i>

4.6.1 CATEGORY: EXHIBITS OPENNESS TO CHANGE

The category ‘Exhibits Openness to Change’ is defined as keeping an open mind to possibilities of change occurring related to teaching. The codes are presented in Table 4.4.

T5 referred to an attribute of the expert as being open,¹⁴ describing it as: 'Always being open, just being open to the situations that you see yourself in, and learning'. T8 described being open as 'open-mindedness'¹⁵ and T3 provided a similar explanation of the expert teacher who practises 'being open-minded, like looking for new ways. Accepting change ...' incorporating *goes beyond routine (pursues change)*. T9 stated that being 'Open to learn, open to change ... open to developing ... if you love your subject and you love your job, you're always looking for new [learning opportunities]'¹⁶. T9 elaborated, adding that the expert is 'always extending' with a mind that was 'never closed'. In differentiating an expert and an experienced non-expert, participants acknowledged that some teachers adapt to change better than others. T3 provided a brief perspective on^{14 15} those who are challenged by change:

There's that safety. They're confident with what they're doing and they keep doing it that way. Some people don't like change. I think change is important and yes, we get a little bit stressed with it, but when you get out the other side, it's great. Sometimes you go no, I don't want to do that. I think you just have to be open to everything. Try it and see if it works. See if it's beneficial for what you want to do. (T3)

In one focus group, discussion occurred surrounding factors that enable a teacher to remain open to learning new and relevant aspects that might benefit the teacher¹⁶. T9 expressed a view:

I think you have to be really engaged in things beyond ... your classroom ... be very interested in what's going on in your field. So, your professional connections, your teacher networks, even just in popular culture. So, for example, as an English teacher you'd have to be reading books, viewing films - you're constantly bringing the outside into the classroom. I think that's a really important thing [to be considered an expert teacher]. (T9)

Remaining open-minded, open to learn, open to new possibilities and open to developments in teaching were perceived to be attributes of the expert teacher. T1

¹⁴ code: *open to continual improvement*

¹⁵ code: *open to change/open mindset*

¹⁶ code: *goes beyond routine: pursues change*

also suggested it was important to avoid becoming complacent,¹⁷ and recounted a time when 'I crystallised a bit ... because you're just in routine ... and not really challenging yourself. You're just trying to get through every day and every week'. T1 then explained a need to remain relevant and keep reinventing the approach to teaching to keep up with the developments that occur in the profession by being open to change.

4.6.2 CATEGORY: DEMONSTRATES A FLEXIBLE/ADAPTABLE APPROACH

The 'Demonstrates a Flexible/Adaptable Approach' category is defined as possessing the capacity and willingness to adapt practice to imposed influences and requirements in teaching. It is an extension beyond remaining open to change and requires some action to occur. Codes in this category are presented in Table 4.4.

Identifying the attribute of adaptability¹⁸, T4 suggested this was important to characterise expertise in teaching, confirming, 'I think an expert teacher does adapt very readily. I think adaptability, and flexibility as a teacher is really important as well, and I think that they just know what to do'. Another teacher (T1) provided a reflective comment on the need to remain current in practice, observing a personal challenge in adapting to the demands placed on teachers. T1 said, 'A lot of the time you're [I'm] going, "Whoa, slow down I'm trying to keep up with you"', in relation to the way in which colleagues were adapting to the changes they were being required to put in place (such as curricular changes). In essence, T1 valued the colleague's capacity to adapt as indicative of expertise by T1. T2 linked the need to remain flexible to meet the needs of students¹⁹, reporting:

I think some of the best teaching actually happens a little bit off the cuff, where a question is posed and you can then run with that, even though you might have had a structured lesson organised, to be able to follow a topic of interest or an area that comes up that the children show a little bit of interest in. You can run with that and help them explore that knowledge. (T2)

T4 linked adaptability to student need, stating: 'I'd like to think that an expert would be able to know where each and every student is in their learning and be able

¹⁷ code: *avoids complacency*

¹⁸ code: *adapts to change*

¹⁹ code: *displays flexibility*

to adapt their teaching for each – just diversity really’. T1 explained a different need to remain flexible¹⁹, linked to engagement and behaviour management:

You have to be flexible in your thinking and always – because the kids that will give you trouble are not the high fliers – it’s a little kid who just – ‘What are you going to do about this’, you know? You always have to be flexible, coming up with new ideas. (T1)

T5 and T3 both identified flexibility as being important in the classroom setting to engage students. T3 elaborated on the need to sometimes be less prescriptive and take a lesson ‘in a different direction because that is what’s needed at that particular time’. T5 suggested the expert was not only remaining flexible to be able to execute a change of direction in such a circumstance, but also knowing when to change direction and when to stay on course, and if following a direction, how long to remain on that path before redirecting. In providing a distinction between the expert and non-expert, T5 suggested of the latter, ‘Yeah. Maybe, they’re not as flexible on, and even within, a lesson’. T8 suggested that ‘constantly reading and adapting and adding to what you know and being that lifelong learner’ is a means to remaining adaptable, noting that some teachers do not engage in that way of thinking.

4.6.3 CATEGORY: ENGAGES IN REFLECTIVE PRACTICE

The ‘Engages in Reflective Practice’ category is defined as the conscious thought teachers give to their own professional practice, either before, during or after classroom teaching, or even related interactions beyond the classroom. Tethered to this thinking are considerations of changing or improving practice as a result of the thought processes. Codes in this category are presented in Table 4.4.

Teachers reported a connection between reflecting on practice and improvement²⁰. T4 proposed, ‘I think that constant reflection is something that really enables you to become a better teacher’. T13 suggested reflection was ‘... one of the most important ...’ attributes of expertise, explaining:

If people don’t [reflect on practice], then, they don’t really improve all that much, and it’s a very automatic thing to do a lot of the time. I’ve noticed that things that I can see in my teaching that have gotten better, are things that I’ve actually thought about and had an idea of how to make them better. Often, I got those ideas from

²⁰ code: *reflects in/on practice, reflects to improve*

talking to other people, and going to things like the HSC Study day and seeing some of the presentations there and seeing the angles that they deal with the material there, and, just consciously improving things that I can see that need improving. (T13)

As to when reflection occurred (in relation to teaching a class)²⁰, T5 stated the following: 'I'm reflecting while it's happening. I won't go home and write down a whole heap of notes. I just reflect while it's happening'. T1 expressed this different experience on the timing of reflection: 'You don't always do it straight at the end of the lesson. It's often after, when you get a bit of time to breathe'. Participants also noted a link between reflection and observation of others.²¹ T5 explained that sometimes reflection occurs from observing other colleagues in a variety of situations, such as in a meeting, not necessarily in a classroom setting:

I watch people all the time, how they're delivering. Even down to staff meetings, how they're delivered and I'm breaking that down, 'Oh that worked well' or so making self-observations at the end of a lesson, 'Oh that didn't work well' or I try to get organised the night before for lessons and just run through my head, 'Okay, I've got that lesson, I've got that lesson' I know what I'm doing – I'm getting off track aren't I? – observation and self-observation and constantly being honest with yourself and not being afraid to identify good teachers and say, 'Wow, that guy held that class'. (T5)

T11 also identified that watching other teachers teach²¹ enables further reflection to occur, stating, 'it makes you stop and pause and reflect on your own, whether you're watching or being watched'. T13 responded to T11's comment, saying, 'Yes, and being able to watch somebody else teach, really gets you thinking about teaching'. T10 similarly stated, 'I find that one of the most useful things is just being able to observe somebody's lesson, or having somebody sit in on your class'. Observing others was a key stimulus directly causing teachers to reflect on their own practice, and a number of teachers found observing others highly beneficial to their own reflection and consequent improvement²². T2 linked innovation to reflection as a form of improvement²²: 'It's very easy to rest on your laurels a little bit, I think, and say, 'Yeah, this is working well', but I think in order to innovate a little bit, you really

²¹ code: *reflects on observations of others*

²² code: *identifies areas to improve*

need to be constantly reflecting on the work that you do'. T9 suggested to avoid getting 'stale':

I think you need constantly to be refreshing and to keep changing the way you look at things, and there's always more things to learn. That's the fun part of the job is that you can always keep learning. The whole idea about being professional is that you swap ideas and that you're always observing and you can improve your own skill constantly. (T9)

Reflecting with accuracy, and consequently seeing a need to improve²², was an issue raised by T7, who stated: 'I think some people think they're experts, but they're perhaps not in other people's eyes. So, they reflect on something and go, 'Oh, that was really good', and you think, 'Um, maybe it wasn't''. Another focus group member suggested a link between ego, accepting criticism and an ability to accurately self-reflect, affirming this study's exploration of ego as a code under Character Traits and Qualities. Participants reported that reflecting is an important practice, and suggested clear links with professional growth and improvement.

4.6.4 CATEGORY: DEMONSTRATES COLLEGIALLY TO IMPROVE PRACTICE

'Demonstrates Collegiality to Enhance Practice' is defined as interacting with colleagues effectively where a potential or actual benefit is derived in the professional practice of the teacher (or teachers) involved. It is possible for teachers to seek out these opportunities purposefully and/or respond to incidental opportunities. Codes included in this category are presented in Table 4.4.

Being collegial was a clear and repeated dimension of expertise in teaching, according to participants. They reported that collegiality enables opportunities to learn and to improve professional practice, and observing colleagues was their preferred method²³ to enable a teacher to develop further expertise (coupled with reflecting, already presented in a previous category). T4, T5, T8, T9, T10, T11, T12 and T13 all asserted that watching others teach was important and valuable. T4 observed that it was '... seeing how they do it differently' and reflecting on your own practice that was of particular value. Some teachers (T13, T12, T10) also added that being

²³ code: *views others' classes to learn*

observed²⁴ in return was also a valuable way to receive feedback from colleagues. T10 explained:

I find that one of the most useful things is just being able to observe somebody's lesson, or having somebody sit in on your class. I actually prefer whoever it is to drop in unannounced. (T10)

One of the challenges encountered by some of the teachers was the opportunity to go and actually observe colleagues, or to have others observe them. When asked how often this occurs, T10 stated, 'rarely'. T13 agreed, and suggested it was so important because 'being able to watch somebody else teach, really gets you thinking about teaching'. Several codes are embedded in this statement^{23 24 25}. T11 affirmed these views: 'It makes you stop and pause and reflect on your own, whether you're watching or being watched'. T12 suggested a further value: having an opportunity to brainstorm with colleagues when developing resources for students^{25 26}.

T12 also raised the importance of physical location, with the suggestion, 'I actually think it's very important to have departments in staffrooms too. I think that's really valuable. I was by myself last year, and I really missed having any collegiality'^{25 26}. T12 further explained that physical isolation adversely impacts on collegiality and can occur in several ways. These can be the physical locations of buildings in a school, where departments are in satellite locations. T12 suggested leaders often have their own offices, and can be isolated professionally as a result. Another participant, T11, reported that being in different departments usually means being well-informed in one, though not in the other, again due to physical separation. T11 explained:

... I always feel like I've got to catch up, like I don't have that collegiality; there's plenty of people there who are gorgeous [nice/kind] and who would happily share ideas if we had frees [non-contact time] at the same time, and if we have to make time to have those conversations, and I find it really difficult. (T11)

T13 responded to T11: 'Yes, I find exactly the same thing in [*x subject*] ... it's an incidental conversation that's so important that you wouldn't specifically go and talk to them about.' T11, T12, T13 agreed that the physical separation restricted the

²⁴ code: *provides feedback to colleagues and accepts feedback*

²⁵ code: *engages effectively to improve teaching*

²⁶ code: *engages in professional conversations*

opportunity for highly valuable professional conversations that, in reality, do not occur otherwise. Collegial teachers want to engage in regular professional conversation, according to participants in this case study, and the physical building locations (staff rooms) impacted on collegiality. Diminishing this opportunity was said to inhibit collegiality and therefore inhibit expertise.

4.6.5 CATEGORY: INVESTS IN SELF-LEARNING

The category 'Invests in Self-Learning' is defined as teachers identifying and pursuing opportunities to continue to learn in areas that enhance professional practice. Such opportunities may range from small and informal through to significant formal learning. Codes are presented in Table 4.4.

Most teachers conveyed that they valued learning and saw themselves as learners, not just teachers, in their school communities. This view resonated in several of the codes in the teachers' statements^{27 28 29 30 31}. T12 suggested that '... all good teachers really like to learn, and you don't stop learning'. The concept of teachers as learners and the need for a teacher to be a learner, was affirmed by T9, who suggested it occurred 'all the time' for an expert, adding:

And it's never closed, it's never like, this is the finite body of knowledge that I need and it's just going to sit there. It's always extending ... I'm always reading new things, new arenas, new realms. It's just beautiful, it's constant. (T9)

For a teacher to be an ongoing learner, T9 identified the following³⁰:

I think you have to be really engaged in things ... beyond your classroom. So, you have to be very interested in what's going on in your field outside the classroom. So, your professional connections, your teacher networks, even just in popular culture. So, for example, as an English teacher you'd have to be reading books, viewing films - you're constantly bringing the outside into the classroom. I think that's a really important thing. (T9)

²⁷ code: *values learning*

²⁸ code: *values formal studies/qualifications*

²⁹ code: *undertakes professional reading*

³⁰ code: *engages in their domain field outside the classroom setting*

³¹ code: *seeks to self-improvement*

Some participants gave the example of professional reading²⁹ as being important for ongoing self-learning and a contributor to improvement, as it provides a means to remain current in the profession and to spark ideas. T8 discussed 'constantly reading and adapting, adding to what you know and being that lifelong learner'.

There was some discussion on the motivating factor of self-directed learning³¹ in relation to expertise in teaching; T7 expressed a view on passion as a form of motivation:

Expertise is linked very strongly with passion for something particular ... I'm quite passionate about all the aspects of that and do a lot, sort of self-motivated to explore that more and engage students in that more. So, it's sort of being channelled, if you like, by a passion. (T7)

Passion is detailed later in this chapter as a code within the 'Displays Particular Character Traits and Qualities' theme. It also links to this current category because participants discussed the intrinsic nature of passion as a motivator to be an ongoing learner. T4 posited that without a passion for teaching, motivation to learn would be stifled, stating: 'If you're not passionate about the job, then you've really got no motivation to be an expert. Also, I think it's got to do with intrinsic motivation'. T4 was suggesting that, without the passion, it would be difficult to be motivated to seek out professional reading for the sake of self-learning. Participants also discussed and recognised formal learning. An example of formal post-graduate degree learning was provided by T3, T4, T5, T8, T9, who all suggested that post-graduate study was important as a self-learning method for a classroom teacher to develop expertise. T9 also provided another example of online short courses from universities that were available, and stated, 'I'm always looking for personal plus private and public ways of refreshing and enriching my own knowledge'.

The final code in this category is *learns about teacher-related technology*. T2 was the only teacher to focus on technology as an important attribute as a teacher to demonstrate expertise. T2 noted, 'I know some very, very good teachers who aren't au fait with technology, but I guess if they had the opportunity to experiment with it, it might be something they'd like to look at'. T2 made other comments on the use of technology in teaching and saw this as an important attribute, though it was not a topic covered otherwise in this case study.

4.6.6 CATEGORY: DEMONSTRATES AWARENESS

This category is defined as teachers demonstrating awareness of their professional teaching environments, including perceptions of other teachers within them, further including self-awareness and awareness of knowledge. Codes are presented in Table 4.4.

During a discussion on expertise of teachers in schools, participants were asked if they would be able to identify the expert teachers in their school. Teachers were not asked to identify any individuals publically; rather, they were asked (by the researcher) whether they could identify the percentage of teachers they would consider to be expert in their school or sub-school. Some participants were able and willing to provide a response, while some others were not able and/or unwilling to provide a percentage or figure. All those in individual interviews provided a percentage. Those participants were then asked if they considered themselves as part of the expert teachers just identified. Some of the focus group participants provided a response, although they were not asked to evaluate themselves in front of their colleagues. Responses are presented below in Table 4.5.

Table 4.5: Teacher responses identifying the percentage of expert teachers in their schools.

<p>T1 School: 95% easily.</p> <p>T1 Self: I hope so, I hope I'm up there in the ninety.</p> <p>T2 School: I would say 75%.</p> <p>T2 Self: I would put myself in the 75.</p> <p>T3 School: I'd say it be close to 50%, I would think.</p> <p>T3 Self: I probably would be in that expert purely because of doing it for so long and going through all the changes that have gone.</p> <p>T4 School: In year [deleted], in just the year [deleted] team, I'd say almost 100%.</p> <p>T4 Self: (Not specifically asked, but T4 explained the 'almost 100%' related to one new teacher. T4 was a specialist on the year level referred to).</p> <p>T5 School: Good question ... It would've been 75% of the teachers I've come into contact with, at least [in the sub-school identified]. [sub] school probably 80%, 85% of teachers.</p> <p>T5 Self: Yes. Yes.</p> <p>T6 School: N/A (a leader, data included in leader's case only)</p> <p>T7 School: I actually don't know, I don't know.</p> <p>T8 School: I guess the first one that came to mind was 80%.</p> <p>T9 School: On impressions, I would say about 60% [of those able to evaluate] ... But of my faculty, I think it would go higher. It would go to, I'd say, 80% or 70%.</p> <p>T10 School: I haven't been here long enough. It's a hard one ...</p> <p>T11 School: Well, I wouldn't be able to ...</p> <p>T12 School: It's too hard.</p> <p>T13 School: I don't know enough about other teachers and their teaching practice.</p> <p>Note: T6 to T13 were not asked to assess their own inclusion in front of their colleagues.</p>

In responding to the topic of identifying expert teachers, some did elaborate on their rationale for stating particular percentages or for not being able to do so. A number of participants raised the problem of rare opportunities to see others teach, and therefore they were only working from impressions. Very few made an evaluation based on observing the teaching of all others in their school. Examples of comments of this nature, illuminating the challenge in evaluating, included:

I haven't seen that all of them operate. If I had watched every single one of their lessons, I would feel confident in giving an answer, but I've seen most of year [deleted] teach, there are a lot of experts in that group of teachers, just outstanding teachers, that you go, 'Wow. You're in the right profession'. (T4)

With the very limited experience I've had with [deleted] school - I've only had contact only with a small percentage of [deleted] school. (T5)

Teachers referred to forming impressions of other teachers' level of expertise a number of times, though stated that rarely had they observed them actually teach in a structured classroom environment. In discussing this, T12 stated:

You can only really go from what you've seen outside the classroom, with the way the students relate to them when they walk past them or talk to them, or, in extra-curricular activities that they do. (T12)

When asked if that was enough of an indicator to evaluate expertise, T12 responded:

Yes, I think you can tell immediately whether that teacher is, from the way the kids behave with them outside of the classroom as well. (T12)

T12 also confirmed that, from these observations, a teacher could assess if they would be an expert teacher or not. The following theme focuses on character traits and qualities of the teacher as an expert.

4.7 THEME: DISPLAYS PARTICULAR CHARACTER TRAITS AND QUALITIES

The theme 'Displays Particular Values' is reported under the four categories of 'Displays Self-Oriented Character Traits and Qualities'; 'Displays Character Traits and Qualities Oriented to Others'; 'Displays Skill Oriented Character Traits and Qualities'; and 'Displays a Particular Personality'. The categories and codes for this theme are displayed in Table 4.6. Definitions of each category are presented in this section along with evidence of codes.

Table 4.6: Emergent Theme: Displays Particular Character Traits and Qualities Suited to Teaching arising from codes and categories.

Category	Code
Displays Self-Oriented Character Traits and Qualities	<i>Displays passion</i>
	<i>Demonstrates enthusiasm</i>
	<i>Demonstrates humility</i>
	<i>Has a sense of self-perception/ego</i>
	<i>Displays confidence</i>
Displays Character Traits and Qualities Oriented to Others	<i>Displays open-mindedness</i>
	<i>Demonstrates respect to others</i>
	<i>Demonstrates honesty</i>
	<i>Generates trust from others</i>
	<i>Shows care for others</i>
	<i>Shows patience to others</i>
	<i>Demonstrates social intelligence</i>
	<i>Exhibits an understanding of others</i>
	<i>Demonstrates empathy for others</i>
<i>Demonstrates awareness of others</i>	
Displays Skill Oriented Character Traits and Qualities	<i>Demonstrates collegiality</i>
Displays Skill Oriented Character Traits and Qualities	<i>Demonstrates organisation</i>
Displays a Particular Personality	<i>Has an outgoing personality</i>
	<i>Is viewed as a 'born teacher'</i>
	<i>Demonstrates humour</i>

4.7.1 CATEGORY: DISPLAYS SELF-ORIENTED CHARACTER TRAITS AND QUALITIES

This category is defined as an expert teacher's practice of displaying character traits and qualities that are less reliant to be interactive with others, yet still notably influence practice (compared to Category 4.6.2). Codes in this category are presented in Table 4.6.

Of all character traits and qualities identified by teachers for all categories within this theme, the most prolifically mentioned was passion³². T7 stated: 'Expertise is linked very strongly with passion for something particular [a particular area of

³² code: *displays passion*

expertise or discipline]’. When asked to identify an attribute of the expert teacher, one participant, T4, assertively suggested: ‘Definitely passion. If you’re not passionate about the job, then you’ve really got no motivation to be an expert’. T1 also suggested: ‘Yes, it’s got to be your interest and that’s your passion and that’s what you want to do’. T7 further connected expertise and passion: ‘I find that when you’re an expert in something or you’re using your expertise in the classroom, that the natural passion that you have for that comes through’. Another teacher, T2, specifically mentioned students and phrased it as: ‘Definitely attitude towards the job, having a passion for children and wanting them to develop and learn, being a part of their education and wanting to see their development’.

However, it was not only having a passion for the profession of teaching and for students; other participants introduced subject content area as a third area of passion. T12 stated: ‘You have to have a passion for it [the subject] too, like, that you can just tell that everybody here thinks that their subject’s the best subject’. T4 added: ‘I think you’ll always be passionate about teaching if you’re an expert’. T7 linked enthusiasm³³ to passion³², suggesting: ‘Enthusiasm, I think is very much one of those characteristics. It’s an obvious sign often of expertise or passion’. T1 held similar views, saying of his colleagues, ‘They are so into it and passionate,’ expressing further that it was hard to keep up with the enthusiasm they displayed in their work. T8 provided a rationale for some teachers’ commitment to students, stating: ‘going that extra step to help the students with what they’re doing and they’re putting in that work because you are passionate about it’. T9 remarked that, in describing an expert teacher, passion was assumed.

Humility was another term used by teachers to describe an expert teacher³⁴. However, not all teachers agreed this was an attribute that characterises an expert. Although participants rarely actively disagreed with one another in the focus groups, this was one occasion when they did. The following is a chronological section of the discussion on humility in one focus group, presented this way to provide an accurate sense of the context:

T2, you just picked up on the humility side. Do you think that humility is an attribute of expertise, or not at all? (Researcher)

³³ code: *demonstrates enthusiasm*

³⁴ code: *demonstrates humility*

No, I don't think so. I think some people just have that air about them, that quiet humility that you respect a lot. (T12)

But do you think a non-expert experienced teacher can be just as humble? (Researcher)

Yes, absolutely. (T12)

For some reason, I disagree. (T10)

So, what are your thoughts [T10]? (Researcher)

I don't know. I just feel it's an inherent thing and teachers discern in their humility? I don't know why. (T10)

Do you think most teachers do? (T12)

No, just the good teachers. (T10)

Yes. (T12) (now intimating agreement with T10)

T10 further explained that experts need humility in order to accept feedback and engage in the constructive criticism that can improve teaching practice, and that not everyone has that attribute; rather, it distinguishes the better teachers.

Another attribute that featured in this case study was discussion on self-perception and ego³⁵ in connection to the expert teacher. Discussion focused on whether ego impacted on the teacher's performance, and if so, whether the impact was positive or negative. One teacher (T8) believed ego did impact adversely on expertise, stating, 'Yeah, it [ego] should really be checked at the door ...', implying that it should not be a factor in the classroom with students or with colleagues. T8 suggested that ego intruded on collegial discussions, openness and sharing, which diminished expertise and that this could occur from differing elements of ego - overconfidence and arrogance through to insecurity. T8 elaborated on the latter, insecurity: 'You can be the other extreme as well, people might be very insecure as well about how other people perceive them as well and so then that's going to impact the discussions that they have with people as well' (T8). T9 agreed with T8 in this discussion, stating, 'it's a very real issue I think ... your ego should not be so connected to your classroom'. T7 elucidated ego as a way to 'mask a lack of expertise', initially referring to a non-expert teacher and added:

³⁵ code: *has a sense of self-perception/ego*

... they want to be popular, but at the same time they use that to sort of mask a lack of expertise, so that they find some way to engage with the students that isn't connected directly to this real focused drive in terms of the teaching and the learning experiences. Whereas I find that when you're an expert in something or you're using your expertise in the classroom, that the natural passion that you have for that comes through, but it's in a more engaged and productive learning environment. I just wonder if some people use their ego to sort of fluff about and not get into the real nitty gritty of what they want their students to be able to do. (T7)

T9 agreed with T7 and suggested ego could be a 'very good distraction ... having your ego stroked.' T9 further stated, 'that's where professional rivalry comes in'. T7 added that ego restricts sharing of resources with some, contrasting colleagues' attitudes as follows: 'this is mine, and other people are like, yeah, have this'. T9 supported and agreed with this view. Ego, and one's perception of oneself, received considerable discussion, with teachers expressing clearly that an expert had an ego that did not inhibit their ability to teach with expertise.

T9 suggested that the code of *displays confidence* comes from experience. T10 suggested 'confidence comes from the amount of time you have preparing that class, and, getting your head around the content to be able to confidently give that to the students', and noted other skills of an expert in a similar vein. T9 suggested that an expert has to be a performer, which came from confidence and enabled one to 'intuitively pitch things in a certain way and also have the confidence to go with trial and error methods, rather than just being very safe and very contained and methodical'. T11 suggested confidence supported a teacher's general approach in a variety of areas such as behaviour management, differentiation and engagement of students.

The final code, *displays open-mindedness*, has previously been presented under the category 'Open to, and Seeks out, Opportunities for Growth and Improvement' and the *open to change/open mindset* code. It is noted here as an important character trait and quality because of its prominence in the case study in this light.

4.7.2 CATEGORY: DISPLAYS CHARACTER TRAITS AND QUALITIES ORIENTED TO OTHERS

This category is defined as the character traits and qualities of expert teachers that are more oriented towards the interaction with others, contrasted with those that

are immediately self-oriented. Codes in this category (presented in Table 4.6) are: *demonstrates respect to others, demonstrates honesty, generates trust from others, shows care for others, shows patience to others*. Each of these codes are presented in further detail below, while the following ones are not directly expanded, though were incorporated into teacher perceptions. These are: *demonstrates social intelligence, exhibits an understanding of others, demonstrates empathy for others, demonstrates awareness of others, demonstrates collegiality*.

Respect³⁶ was identified by participants as being associated with expert teachers and attributed to a number of different dimensions. For example, participants identified that expert teachers may be respected within their school community for a number of different reasons, which include: their performance in the classroom related to pedagogy; for the high level of content knowledge they have; for how dedicated they appear to be to students in co-curricular activities outside their classroom; for being respectful to students and colleagues in their own approach; or, their ability to relate well to others and their likeability. As some of these naturally intertwine, the meaning of respect was not always entirely apparent when participants used the word to describe an expert. For instance, T1 stated: 'you just respect them and you go, 'Wow, this person's good''. T1 did not elaborate on their meaning of the expert being 'good' or the specific area respected. Another example was provided by T5, who stated of a colleague: '... we have a bit of a laugh and a banter and I respect him because [he/she] knows me ... That increases my morale' (T5).

T1 indicated that colleagues only listen to those who are respected as an influence, while avoiding those who are not. Some other teachers connected respect to direct interactions with students. For example, T5 connected two different character traits and qualities and suggested, 'I think honesty promotes respect'³⁷. The context of this comment was in relation to a teacher's subject content knowledge in the classroom and T5 added, 'I think that would definitely reduce your respect in the classroom [without a high level of subject content knowledge]'. T5 also linked students' respect for the teacher to establishing a positive rapport and relational experiences with students. T2 stated that with senior students (Years 10-12) in particular, 'there is a lot of respect for what you're doing for them ...' because they

³⁶ code: *demonstrates respect*

³⁷ code: *demonstrates honesty*

are more capable of recognising the efforts a dedicated teacher goes to for them, which generates that respect.

Trust³⁸ was another code in this category that suggested one character trait and quality leads to another (for instance, demonstrating honesty leads to generating trust). T5 and T2 identified creating a trusting relationship with students as an important outcome of the expert teacher's approach:

It's all about making the children feel comfortable and having a trusting relationship ... I think when the children respect you as a teacher, they feel safe to be able to contribute, without fear of any sort of negative feedback or negative outcome. Definitely having the children feel safe and comfortable in your classroom, I think, is a huge attribute of teaching. (T2)

T5 connected trust³⁸, encouragement and care,³⁹ expressing their combined impact:

It's encouragement. You're encouraging them and you're actually showing them that you care, which genuinely I try to. Genuinely I really, really, really try to care about every single student in my class. Sometimes it's more difficult than others, but if you can just make that breakthrough where the student gives you their trust, then there's absolutely no doubt. (T5)

T4 was another who identified care as a character trait and quality stating:

There are some people who shouldn't be teachers, just because they don't have the qualities that you really need to be a teacher. You really need to care for the students, you really need to want them to succeed, you really need to want to be able to help them to get there and put in the time to do that. (T4)

Another character trait and quality stated by T13 was 'exceptional patience', also expressed by T10 and T11. T13 explained patience was tied to the whole classroom approach where it enabled productive pedagogy to occur. T11 talked about losing patience without becoming unprofessional.

³⁸ code: *generates trust*

³⁹ code: *shows care for others*

I think patience is important ... everyone loses their patience, but I think there's just ways of allowing that to happen, so that you can be human, but you're always a professional. (T11)

Demonstrates collegiality has already been presented in previous categories of this paper. Being collegial is stated as a character trait and quality again because it was strongly and repeatedly mentioned by participants and therefore warranting presentation in other related categories.

4.7.3 CATEGORY: DISPLAYS A PARTICULAR PERSONALITY

This category is defined as the character traits and qualities related to personality that are demonstrated by expert teachers, as perceived by participants. However, it is readily acknowledged that such character traits and qualities can be interpreted as pertaining to a number of different categories within this theme. Furthermore, to some degree, each of the codes in all the categories in this theme have some links to personality. Having acknowledged this, the codes most closely suited to this category are: *has an outgoing personality, is viewed as a 'born teacher', demonstrates humour*.

T4 linked personality to expert teachers, and suggested that an expert was one who was outgoing⁴⁰. T4 stated, 'I think you need to be quite outgoing as a teacher ... and really, to be a good teacher, you have to be an expert in it' (also referring to several other traits). The researcher sought clarification from T4 to check meaning 'What do you mean by need to be outgoing? Do you mean you need to be extroverted [to be expert]? T4 responded: 'No, no. No, extroverted is a strong word for what I was trying to say ... I probably shouldn't have used "outgoing" ...' To explain, T4 then added:

I think it's hard to make certain things interesting if you don't teach it with inquiry and you don't teach it with passion, and I think you do become extroverted as a teacher, you end up doing seven 45 minute presentations a day. You get really good at public speaking. I used to be very shy, and now honestly, I couldn't have done this profession if I was shy, because kids will see it and they see your weaknesses and they will go for it, I reckon. (T4)

⁴⁰ code: *has an outgoing personality*

Probing to check meaning and be more specific, T4 was then asked the following: 'Can you be shy and more reserved privately, and be on a stage like a performer?'. The response was:

For sure. I put on a presentation every single lesson, and yes, I think so. I think you can have two different personas, for sure. I think you'll always be passionate about teaching if you're an expert ... so yeah, I think you can certainly have two different personalities. (T4)

T9 suggested an expert needed to be somewhat of a performer in the classroom, which may relate to one's personality relevant to the code *has an outgoing personality*.

The teacher-participants further discussed personality, with T12 suggesting, 'I think you're born with it; you either have it or you don't have it'. T12 further elaborated: 'I think a lot of teachers are good at it because they just like doing it. They're that sort of person'. Another teacher, T11, expressed uncertainty as to whether being an expert was inherent to a teacher's personality because they were born to it.

Having and demonstrating a sense of humour⁴¹ was another area identified by some teachers. T10 described having a 'professional sense of humour in front of the kids ...' as an important feature of the expert teacher. T1 suggested using humour was important as a means to help relax students and to relate to them. The importance of humour was not strongly expressed overall by the teacher case, nor was having a particular personality in order to be an expert practitioner. These personality types were presented because each was mentioned by several teachers as attributes or practices of an expert.

4.8 THEME: DEMONSTRATES HIGH QUALITY AND EFFECTIVE PEDAGOGICAL PRACTICE

The theme 'High Quality and Effective Pedagogical Practice' encompasses the five categories of 'Demonstrates Effective Planning/Structure', 'Differentiates and Personalises Learning', 'Engages Students in Their Learning', 'Questions Students Effectively', and 'Implements Behaviour Management Strategies'. The categories and codes for this theme are displayed in Table 4.7. Definitions of each category are presented in this section.

⁴¹ code: *demonstrates humour*

Table 4.7: Emergent Theme: ‘Demonstrates High Quality and Effective Classroom Based Pedagogical Practice’.

Category	Code
Demonstrates Effective Planning/Structure/Delivery	<i>Plans intentional lessons</i>
	<i>Plans well organised lessons</i>
	<i>Embeds structure in lessons</i>
	<i>Remains flexible in lessons</i>
Differentiates & Personalises Learning	<i>Differentiates for multiple learner needs</i>
	<i>Identifies gaps in individual learners</i>
	<i>Identifies styles of learning</i>
	<i>Teaches the same concept multiple ways</i>
Engages Students in their Learning	<i>Engages and captivates students</i>
	<i>Analogises to capture interest</i>
	<i>Sets learning goals every lesson</i>
	<i>Communicates effectively</i>
Questions Students Effectively	<i>Poses questions to draw out knowledge</i>
Implements Behaviour Management Strategies	<i>Employs effective behaviour management</i>
	<i>Manages behaviour through rapport</i>
	<i>Empowers students but remains in control</i>

4.8.1 CATEGORY: DEMONSTRATES EFFECTIVE PLANNING, STRUCTURE AND DELIVERY

‘Demonstrates Effective Planning, Structure and Delivery’ is defined as the practice of purposeful teacher preparation to deliver classroom pedagogical practice. This includes organisational and structural aspects of the lesson, such as phases and transitioning. The related codes are presented in Table 4.7.

A need for behaviour management was one identified consequence of inadequate structure⁴² in a lesson. T4 stated: ‘I think without structure, kids can go a bit wild. I think it’s really important that you have a certain lesson structure’. T4 also described that students were familiar with and expected to follow routines, which aided learning, again reinforcing the importance of structure of the different phases of a lesson. T5 also stated that effective planning^{43 44} was crucial. T5 described that it

⁴² code: *embeds structure in lessons*

⁴³ code: *plans intentional lessons*

⁴⁴ code: *plans well organised lessons*

was important to have a clear vision of the desired outcomes for students and to work backwards to plan what is required to be achieved each week. Planning effectively, according to T5, allowed for versatility while remaining attuned to where students were in the process and where they were heading. T5 explained, 'So, planning is absolutely crucial, but being versatile to that planning as well'.

Whilst a small number of participants linked structure and planning to expertise, these same teachers also noted that it was important to remain flexible⁴⁵ and adaptable to the needs of the students during the delivery of a specific lesson. T4 noted, 'you can be flexible and can move off [the topic] and you can inspire learning ... by the end of the lesson you should have a set skill that you want the children to be able to achieve and able to successfully do'. T5 also noted the importance of being able to go off the lesson topic and skilfully come back on topic, all for a particular purpose. Additional examples of demonstrating flexibility were included in the 'Open to, and Seeks Out, Opportunities for Growth and Improvement' theme.

4.8.2 CATEGORY: DIFFERENTIATES AND PERSONALISES LEARNING

'Differentiates and Personalises Learning' is defined as the classroom teacher being aware of students' learning needs and intentionally tailoring the learning experiences to cater for those needs to suit each learner, as opposed to taking a homogenous approach to the whole class. Codes are presented in Table 4.7.

Teachers recognised the expert as one who was aware of the diverse range of student needs and was able to cater to those needs to optimise learning⁴⁶. T10 described differentiation as 'being able to provide various activities in the class, and also being able to identify the students who had differentiations required'. T2 and T4 both commented on catering to the diversity:

... we've got such a diverse range of children at this school with different needs and different abilities. I guess the challenge then is being able to differentiate. I think for me, personally, that's probably the most challenging thing, is to differentiate effectively across all the range of students that you see. (T2)

⁴⁵ code: *remains flexible in lessons*

⁴⁶ code: *differentiates for multiple learner needs*

I'd like to think that an expert would be able to know where each and every student is in their learning and be able to adapt their teaching for each – just diversity really, catering to diversity. (T4)

A component of expertise, according to T3, is 'Like dealing with different levels all at once', in relation to differentiation in teaching. T2 also identified the importance of differentiating as 'being able to cater and give the children the opportunity to be the best that they can be. A lot of that is through differentiation'. T2 suggested that part of this identification was extending the more capable learner. Furthermore, T2 also suggested that an expert teacher evaluates the gaps⁴⁷ in the learning of any new student arriving into a class, and then works to fill those gaps in each individual's knowledge.

T1 suggested that telling stories to assist students to connect with the teacher in a personalised way⁴⁸ lays a foundation for teaching with a more personalised method. T1 further explained the importance of the approach for personalising learning (described through self-practice):

Okay, so once I do the connecting stage, then I try to assess where the kids are with their learning, try to work out whether they're good oral learners, are they pictorial or they just want to get into it and they can learn anything by reading the text. Once I work out what type of learner they are, and as you're doing that, you're also working out other strugglers. You can then start, in your mind, putting them into little departments, but then you always have to revisit that because you're not always right on the first scan or first week or the first term. You have to keep checking on that. The next stage would be, yes, just trying to assess what is their way of learning. (T1)

T3 noted that an expert teacher teaches a particular concept in multiple ways⁴⁹ so that all the students understand it, a practice also advocated by T13. Teachers expressed a view that the expert teacher caters to the diversity of the types of learning styles in their class, including student learning needs, and includes aspects of

⁴⁷ code: *identifies gaps in individual learners*

⁴⁸ code: *identifies styles of learning*

⁴⁹ code: *teaches the same concept multiple ways*

personalisation. Collectively, teachers conveyed that a non-expert teaches to the whole class without carefully catering to such diversity.

4.8.3 CATEGORY: ENGAGES STUDENTS IN THEIR LEARNING

‘Engages Students in Their Learning’ is defined as the teacher demonstrating the capacity to connect students to the learning process. This involved teachers using multiple strategies as the focus of this category according to participants, rather than being reliant on any one particular practice. For example, this involved analogising and story telling to capture interest, setting learning goals every lesson, communicating clearly and effectively. The codes that form this category are presented in Table 4.7.

One indicator of an expert teacher was identified by T11: ‘You can walk in and somebody’s got the kids in the palm of their hand, and they’re engaged, and everybody, regardless of their ability, is in the zone’.⁵⁰ Explaining why this engagement might occur, T11 further adds:

An expert teacher is going to be able to deliver the message in a way that allows the students to engage, because of some inherent something that allows them to form a direct relationship, or a connection, or a something with their students, and that’s a bit hard to define. (T11)

For T1, connecting and engaging occurs through storytelling and analogising⁵¹. This method lays a foundation for connecting relationally first, followed by a flow-on effect that opens up the learning for students with individual consideration.

I always try to put it into some sort of story. I try to tie it to a context. If I can remember a situation in my life where I was involved with such a problem or such a situation, I try to tie that into a story. ‘Oh, something like that happened to me once’. The kids actually enjoy that at that age – any older they probably roll their eyes and go ‘Oh.’ – but the kids like to hear these little stories, so I try to turn them into little stories and anecdotes for them so that they can remember. (T1)

⁵⁰ code: *engages and captivates the attention of all students*

⁵¹ code: *analogises to capture interest*

T13 noted that making the learning interesting was important. T7 distinguished between engagement and popularity and suggested that a non-expert teacher can strive to seek popularity from students, which on the surface presents as engaging students while actually masking lack of expertise. T7 explained further:

In my experience, teachers that I've worked with tend to have that sort of popular - they want to be popular, but at the same they use that to sort of mask a lack of expertise, so that they find some way to engage with the students that isn't connected directly to this real focused drive in terms of the teaching and the learning experiences.
(T7)

Another means the expert uses to keep students engaged, according to T4, is to ensure students have learning goals and write them down for every lesson⁵². Another technique is to *communicate effectively* to engage, which T11 describes by saying, 'an expert teacher is going to be able to deliver the message in a way that allows the students to engage'. T12 said of the expert, 'They know how to speak to whatever year level that they're engaging with'. Overall, teachers expressed the ability to engage students in their learning as an attribute of the expert.

4.8.4 CATEGORY: QUESTIONS STUDENTS EFFECTIVELY

'Questions Students Effectively' as a category is defined as teachers constructing, directing and asking effective questions to students in class to check for understanding. *Questions to draw out knowledge* was the code for this category.

One teacher (T4) conveyed that strategically asking questions⁵³ was an attribute of the expert teacher. T4 suggested that, in practice, carefully constructed questions serve numerous purposes. These are: inspiring questions from students, allowing students to explore related areas of interest and to take tangents by asking their own questions, promoting flexibility in the approach to learning, and evaluating individual knowledge and skills learned. Examples of these identifications were:

... things that I teach inspire questions which are also [subject] related, but may not be directly related to what we're talking about. It's still within the realm, but it's a valid question and the rest of the class are thinking, 'Oh, how do we do that?' I think that in some

⁵² code: *sets learning goals every lesson*

⁵³ code: *questions to draw out knowledge*

ways you can be flexible and can move off and you can inspire learning through inquiry. I do really think that by the end of the lesson, you should have a set skill that you want the children to be able to achieve and be able to successfully do. In my planning, I always leave time for questions. Otherwise, really, how are you supposed to gather where your students are at if you don't allow them to ask the questions? I think that's just a really good diagnostic tool for them to be able to ask questions and for you to be able to ask questions of them ... Students have to think about it. You've got to allow for that and you've got to allow for thinking time too, otherwise if the kid doesn't get it straight away, you've moved on to another kid and you haven't allowed that student to adequately access the question. (T4)

The same teacher also discussed written assessment pieces as an important method to question students to draw out knowledge in a more considered way. T4 explained: 'I pride myself on my assessment pieces, because I put my heart and soul into them, really. I like them to be as flawless as possible and to hit the standard liberations as closely as humanly possible, and I just think that the curriculum supports me in that so I'm informed of how I'm doing with my writing of assessment pieces by the curriculum and where we need to get the kids and how my assessment piece reflects that, so, the curriculum definitely. (T4)

Another teacher, T2, also identified developing high-quality assessment pieces connected to expertise in teaching. T1 raised this same point and discussed how important it was as insight into a child's learning progress, which in turn informed where to take the future learning direction. T2 added:

You learn how to pose the right questions and how to get the knowledge that you're looking for from the children, I guess, to be able to access that knowledge, giving every child an opportunity to show their ability. I think that's a skill in itself, particularly with the open-ended style questioning. (T2)

Participants in this study considered the ability to question students to draw out knowledge as one attribute that expert teachers demonstrate.

4.9 CATEGORY: IMPLEMENTS BEHAVIOURAL MANAGEMENT STRATEGIES

The category 'Implements Behavioural Management Strategies' is defined as the teacher ensuring students are appropriately behaved in the classroom to enable productive learning to occur for all students. Codes for this category are presented in Table 4.7.

T3 provided a view of the importance of effective behaviour management⁵⁴ in relation to learning, suggesting, 'If you don't have behaviour management that works with the children you're working with, you may as well not be standing up and presenting any curriculum'. T4 also referenced behaviour management as an important feature of the expert practitioner, and suggested:

I think it's really important that you have a certain lesson structure and you have a certain behaviour management plan ... I do think that an expert knows what kind of reaction should be exhibited for certain behaviours. (T4)

While T4 referenced structure and behaviour management enabling behaviour management strategies, T5 stated that behaviour management was connected to rapport, observing that managing challenging behaviour impacted on the quality of relationships, which in turn required greater energy to be invested in that area, detracting from other areas of teaching focus. Noting this, T5 maintained that the most effective behaviour management was through rapport building.

I think there's always a battle between when you're at a school where the behaviour is more difficult and you can't have the quality relationships with as many students, obviously, your content suffers ... I think it then comes to a stage where you're wanting to bring them - if they're off track or they're misbehaving - you've got that rapport to be able to then approach that with more ammunition, I guess. (T5)

I think you've got to have your strategies, you've got to have your classroom management strategies, but probably my number one classroom management strategy is rapport building. (T5)

⁵⁴ code: *employs effective behaviour management*

T1 provided the following view of building rapport and developing relationships⁵⁵, which in turn influenced the classroom environment:

I just assume that their kids are my own and if they were my own children and I was trying to get some communication happening, I would just be light-hearted with them, just ask simple things about sport or try to find something they're into and try to connect with them that way. I think that would be my non-intrusive, non-mechanical way of doing that [managing the classroom behaviour].
(T1)

Another strategy to manage behaviour was to empower students to make good choices, with the teacher remaining in control of the classroom⁵⁶. T3 touched on empowering students and T12 described the best teachers as, 'the ones who can empower the kids to almost do their own thing, but keep control of the whole thing at the same time'. T12 further suggested that discipline is not an issue for these teachers because students are excited to be learning, and they are learning effectively, and that the students 'come with you' [meet expectations] when something new is introduced. T12 further explained that this occurs when the lesson had proper direction and was tightly managed.

4.10 THEME: POSSESSES A DEEP MASTERY OF SUBJECT KNOWLEDGE

The theme 'Possesses A Deep Mastery of Subject Knowledge' emerged from the codes and categories presented in this section of the chapter. Only a single category – domain knowledge – is presented in this theme. The key reason that only one category is presented is because the same sentiment and dimension arose repeatedly. Table 4.8 identifies the category and codes, which are detailed further below.

Table 4.8: Emergent Theme: Deep Mastery of Subject Knowledge

Category	Code
Possesses Domain Knowledge	<i>Possesses mastery of subject knowledge</i>
	<i>Possesses a depth of subject knowledge</i>
	<i>Retrieves subject knowledge effectively</i>

⁵⁵ code: *manages behaviour through rapport*

⁵⁶ code: *empowers students but remains in control*

4.11 CATEGORY: POSSESSES DOMAIN KNOWLEDGE

'Possesses Domain Knowledge' is defined as subject-based, content-based, domain centred knowledge that informs teachers on subject knowledge to be taught to students. It does not include any means of how to apply or pass on that knowledge or pedagogical knowledge. The three codes are presented in Table 4.8.

When the teachers were asked to identify attributes of an expert teacher, or expertise in teaching, 'knowledge'^{57 58} (in the context of these codes) was the most commonly and uniformly agreed attribute. In a number of instances, this form of knowledge was also the first attribute of all identified throughout the focus groups and interviews to be stated by many of the teachers. For instance, T8 stated, 'First thing that comes to my mind is just knowledge'. Another participant (T9) immediately agreed, saying, 'Knowledge, yeah'. In expanding the sentiment and differentiating from a non-expert, T12 suggested 'It's just that body of knowledge that you have that other people don't have, or that you have in common with other teachers with your subject'⁵⁷. Participants discussed knowledge as being an attribute of the expert teacher, and it was described several ways, with the same or very similar apparent meaning. T9 suggested possessing knowledge was: '... sort of opening the door - it's a metaphor'. T9 further identified it was also possessing deep knowledge⁵⁸:

I think depth of knowledge definitely is a prerequisite to being an expert teacher. I don't think you can actually be an expert without a depth of knowledge in the life of what you're teaching. (T9)

T8 suggested that having this deeper knowledge enabled the teacher to expand natural classroom discussion, because their expertise in the domain area^{57 59} allowed this versatility to deepen the learning experience. T1 also talked about an expert having extensive knowledge at 'the finger tips, but being able to put it in some sort of relevant context I think is difficult',⁵⁹ noting this was a particular challenge. Explaining further, T1 suggested good general knowledge⁶⁰ was more valuable for a core middle school teacher because they are not specialists. This presented a challenge for T1 because teachers are typically trained in two subject areas, whereas they are required to teach in at least four core content areas to an age group where

⁵⁷ code: *possesses mastery of subject knowledge*

⁵⁸ code: *possesses a depth of subject knowledge*

⁵⁹ code: *retrieves knowledge effectively*

⁶⁰ code: *broad subject knowledge*

knowledge complexity begins to increase beyond a basic level. When talking about the expert teacher and content knowledge, T4 stated '... I really think as an expert, you are your subject'.

As T1 had, other teachers raised the challenge of teaching outside their subject content area, as specialist subject teachers who are expected to have high levels of deeper knowledge in just one or two subject areas. That is, some teachers expressed the considerable challenge when asked to teach in a subject area in which they were not trained or experienced, and then postulated whether one who was considered an expert teacher would still retain that status in this situation. T11 commented on this scenario:

... which is often seen by the powers to be a - oh look, this person's three periods short, let's put them in the [subject name] department - well, thanks for nothing - on both sides [teacher put in that position and those who are specialists in the subject], as far as that goes. So yes, I don't think that diminishes the expertise of those teachers as teachers per se, even though they are obviously out of their comfort zone, and we've already talked about this, because they've landed a new subject, and they're suddenly expected to rise to the occasion. (T11).

Another reference to domain knowledge was during a discussion on student-teacher relationships when T11 and T13, while agreeing that an expert teacher required a good rapport, suggested that the teacher could not be considered an expert if they lacked strong domain knowledge. T11 stated, 'So that does come back to knowledge, doesn't it, regardless of what sort of rapport you've got?'. Having a deep mastery of the subject content knowledge and being able to call upon it readily and suitably was a strong and clear emergent theme, with domain knowledge the key category identified reflecting teachers' views.

4.12 CHAPTER CONCLUSION

This chapter presented the results of the teacher case from the individual and focus group interviews. The analysis and interpretation of the data showed that the participants in this case study each had a personalised conception of what expertise was in teaching. The strength of each of the themes varied because each has different characteristics and the strength of each theme is determined by individual perspectives or particular features. Many of the participants' responses appeared to

describe attributes and practices that are suited to a continuum, rather than absolutes. Another contextual feature of the results was that most teachers described an expert teacher, or expertise in teaching, in a narrative approach. Sometimes the approach involved providing a brief theoretical conception before transitioning into the narrative of self-practice to explain their perceptions on aspects of expertise. That is, participants tended to reflect on their own practice and articulated their responses by describing how they practiced in specific situations, often giving examples, of self-practice positioned as 'the expert'.

Despite the variations that occurred among individual participants, clear themes emerged. These were revealed by following Creswell's (2014) seven-step data analysis process. Five themes emerged from the thematic analysis process:

- Builds Relationships with the School Community
- Open to, and Seeks Out, Opportunities for Professional Growth and Improvement
- Displays Particular Character Traits and Qualities
- Demonstrates High Quality and Effective Pedagogical Practice
- Possesses a Deep Mastery of Domain Knowledge

The theme 'Possesses a Deep Mastery of Subject Knowledge' was found to be necessary to be considered an expert teacher, according to participants. This attribute was also one that tended to be raised earlier in most of the interviews and stated explicitly by all but one participant. Overall, participants conveyed that a teacher would not be an expert without knowledge of the subject matter they were teaching. The theme 'Displays Particular Character Traits and Qualities' was one that had a larger number and wider range of responses. Some of these included traits and qualities such as passion, enthusiasm, confidence, open mindedness, accurate self-perception, and an ego that does not impact adversely on teaching and collegiality. Other traits and qualities involved a greater level of interaction with others, including demonstrating patience, care, respect, empathy and understanding. Traits and qualities clearly were part of each teacher's conceptualisation of an expert teacher.

The theme 'Demonstrates High Quality and Effective Pedagogical Practice' included a range of different examples provided by participants. Some individual teachers provided a larger proportion of responses on expertise that linked to this theme, and gave specific examples of practice. Whilst unlikely to be an exhaustive list of practices, participants provided examples to suggest that an expert teacher demonstrates knowledge and skills in this dimension of teaching. Examples provided

included planning, delivery, differentiation, engagement of learners, questioning technique, and behaviour management.

The 'Builds Relationships with the School Community' theme and suggested by every participant, though its value and level of importance varied among participants. Within this theme, some perceived it to be either more, less or equally valuable in comparison to other attributes and practices. Teachers focused their views on students and colleagues, most particularly when discussing the importance of developing relationships. A prominent perception was that an expert teacher forms connections with students by taking an interest in their learning and as a person. Collegial engagement focused on sharing of resources and ideas, and also included positive interactions and communication.

The remaining theme, 'Open to, and Seeks Out, Opportunities for Professional Growth and Improvement', involved participants' perceptions focusing on the importance of being open-minded (as a mindset), adapting to change, being flexible in practice, reflecting, seeking and providing professional feedback and demonstrating awareness in their school setting. Participants expressed their opinions of an expert as one who actively pursues growth and improvement, and invests in their own self-learning.

The themes that emerged in the teacher case, along with the contextual features mentioned, will be carried forward into Chapters 6 (Discussion) where the features of the teacher and leader case will each be compared and contrasted. The next chapter presents the results of the leader case.

CHAPTER 5

RESULTS OF THE LEADER CASE

5.1 INTRODUCTION

This chapter presents the results of the leader case interviews and comprises eight sections. A report detailing the administration of the focus groups is provided and includes changes to the initial research plan. The in-depth coding of the focus group transcripts is then described, which includes an example of a transcript notation summary created after each interview and a further example of a transcript coding summary. Details of the process to reveal the emergent themes is presented, guided by Creswell's (2014) seven-step approach. The five themes that emerged are then presented and, supported by participant comments, their underlying structure grounded in related codes and categories.

5.2 LEADER CASE INTERVIEW/FOCUS GROUP ADMINISTRATION

To obtain leader perceptions of the attributes of an expert teacher, several semi-structured focus group interviews were designed and implemented. The following section provides information about participants, the interview protocol, and the changes made to the initial research plan.

5.2.1 PARTICIPANTS

The qualitative data of the leader case were obtained through a series of seven separate interviews/focus group interviews across three research sites, spread over several months. The sites were located in New South Wales, Queensland and the Australian Capital Territory - all independently governed non-systemic schools. One was co-educational and the other two were single-sex schools (one male and one female). The leaders who participated were all experienced classroom teachers in addition to having a position of added responsibility ranging from head of a curriculum department through to principal level. Only volunteers with four or more years' experience were sought for this study, though all leaders were considerably more experienced than the minimum sought. This criterion was based on the premise that teaching for several years enabled an opportunity for leaders to gain adequate school-based experiences to inform their views and perceptions on the notion of expertise in practice. In total, fourteen leaders were interviewed, across the three sites, in addition to twelve teachers. The leaders interviewed involved several focus groups

and some were involved in individual interviews. This comprised site 1 (five leaders – 4 male, 1 female), site 2 (six leaders – 4 male, 2 female) and site 3 (three leaders – 1 male, 2 female). Other characteristics of the group of leaders varied to incorporate teachers from primary, middle and senior schooling and a range of subject specialisations, presented in Figure 5.1 and Figure 5.2.

The interviews were conducted in accordance with the protocol described in Chapter 3 to facilitate a responsive and successful interview process. The interview questions comprised four broad seed questions with linked strategies to probe for deeper responses. Strategies allowed for prompting, probing and redirecting depending on the circumstance in the interview and included predominantly open-ended questions to stimulate discussion.

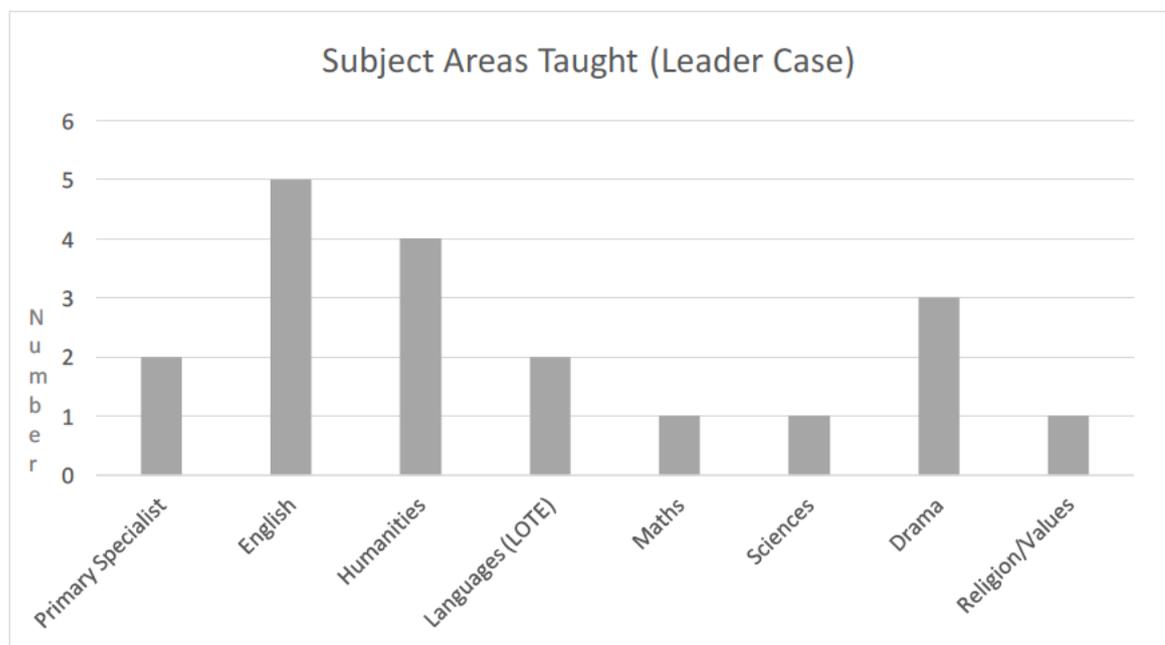


Figure 5.1: Subject areas taught by leader case participants

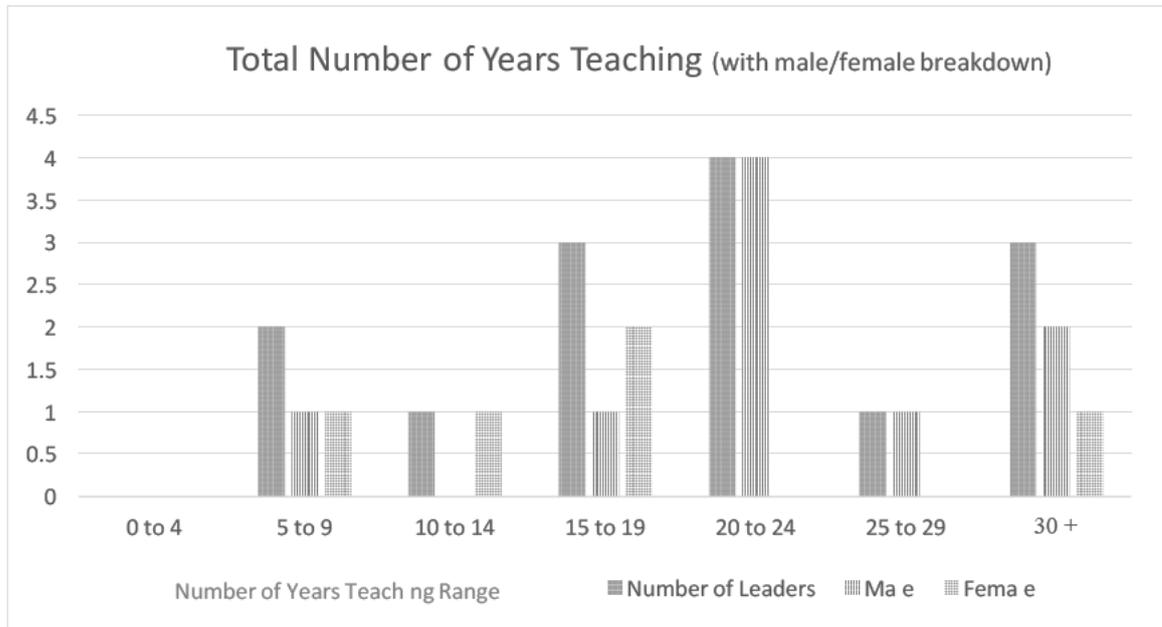


Figure 5.2: Total number of years teaching of participants; male and female breakdown for leader case

5.2.2 CHANGES TO THE RESEARCH PLAN

The initial plan was to conduct focus group discussions involving approximately four to six leaders (and additional separate focus groups involving teachers) at each of the three sites. The research occurred as planned at two of the sites. However, at the third site, one-to-one interviews were organised by the school instead of focus group interviews. The number of participants involved and all other aspects were in accordance with the requested plan, except that individual interviews had been arranged. As the school had spent a considerable amount of time scheduling each of the interviews over multiple days, the new structure and arrangement was maintained.

Although not planned at the site where one-to-one interviews occurred, the alternative data capture method served to enrich the overall data informing the study. The individual interviews provided depth to the responses, enabled participants to provide their views without feeling self-conscious in the presence of colleagues, and provided more detail compared to the focus groups. The focus groups, however, provided a synergy of perspectives not captured in the one-to-one interviews. The blending of focus group and individual interview data enhanced the study.

5.3 IN-DEPTH CODING OF FOCUS GROUP TRANSCRIPTS

Following Creswell's (2014) seven-step analysis procedure, in-depth coding of the transcripts was conducted. Prior to the actual coding, all the focus groups and individual interview transcripts were read and individually summarised in order to become familiar with the data. As the coding process was performed, data was initially organised by bracketing chunks and writing one or two words, or a short term, to represent a category (Creswell, 2014). Often these were the words used by the participants. Codes were developed from the participants' data.

5.3.1 TRANSCRIPTION

The individual and the focus group interviews were transcribed and summarised employing a basic thematic analysis procedure initially linked to the interview questions. The purpose of these summaries was to allow familiarisation with the data to occur for the researcher. Table 5.1 below is a sample of one transcript summary of an interview with a leader.

Table 5.1: Summary for L3

Transcript 16 – Summary of an Individual Interview Transcript after initial reading (L3)
Attributes of Expertise in Teaching and/or of an Expert Teacher
<ul style="list-style-type: none"> • Initial impression was ‘integrity’, ‘... which might surprise you a little’ in concert with caring, being passionate, self-disciplined and accountable. • ‘I don’t think teachers are born. I think teachers are made by their professional experience and their willingness to enter in the craft of teaching’. • Noted ‘that, to me, is what separates the expert from the others’, in differentiating expertise and noted further that less and less teachers appear to be working during school holiday periods on campus (reasoned it was due to increasing expectations, intensity and fatigue during term time). • Figured that around 30% of teachers in the school would be considered as expert teachers. • Suggested that the ‘scientific’ side of teaching is the one where schools and leaders can influence and ‘do something about’, whereas the ‘artistic’ side was linked to personality and confidence, and identified this area as complex though influential in effective teaching. • Personality and artistic side examples provided included introverted teachers can be at the very top of expertise, as this aspect was not a determinant of expertise. Also noted that some teachers rely on ‘flamboyance and charisma, which the kids love, but which isn’t really attending to their teaching and learning’. • An expert is someone who has full control, has students fully engaged, but is not needing to dominate in achieving that. • Noted really experienced teachers can slip into a ‘rhythm’ that is not quite complacency, but is close to it, which can stymie improvement. • ‘the experts are the ones who totally accept with humility, in the true sense of the word, that every year they can get better, and they can’. L3 noted that as good as anyone is, they can always further improve, and the expert recognises this. (This was also articulated in relation to school leaders too). L3 talked about some level of self-delusion in self-evaluation. • Viewing others in practice is one key to improvement. • L3 discussed the complexity in managing underperformance, where it can reduce staff morale and it was a delicate balance to lead improvement in practice and maintain positive morale. • L3 proposed that an insecure teacher invests time and energy into maintaining a particular self-image that detracts from the energy invested into teaching and learning. ‘I think those teachers who are insecure will not encourage their students to ask questions, for example, in case they ask a question they don’t know’. • ‘Ego’ was further discussed and noted it was ‘useful to reflect upon the extent to which our ego is determining our actions’. • ‘We need to be measured in the way we admonish people, but we have to be measured in the way we praise people, too’. L3 noted giving praise only because a teacher needs it is inauthentic and creating additional problems that lead to barriers of expertise. • Some additional contributors to expertise development include effective school leaders who take ownership, professional reading, growth mindset, having the will and motivation.

5.3.2 CODING PROCESS

The individual leader and focus group audio recordings gathered through semi-structured interviews were analysed using the seven steps of thematic analysis proposed by Creswell (2014): raw data (transcripts); organising and preparing data for analysis; reading through all the data; coding the data; identifying themes (presenting categories); interrelating themes; interpreting the meaning of the themes that emerged within the case from the leaders. In this study, the text of the transcripts was arranged in a table with four columns: *Transcript (with quote identification)*, *Code*, *Category*, and *Notes/Reflection of Emergent Theme*. This format afforded an efficient coding process. The timeline of each comment in the interview is also noted to provide a reference point and to facilitate context or a relationship between multiple comments. Part of the coding table is shown in Table 5.2 (for a full example of a transcript, refer to Appendix 6). Codes then developed from the participants' data.

The manner in which codes were selected and named involved using participant statements and language to preserve accuracy of data wherever possible. Codes were selected based on the frequency of statements by different individuals and groups as one key consideration. This was recorded in the excel spreadsheets when analysing data to guide selection. Another was the importance given to respective statements, developed as codes, after contextualisation was considered and interpreted by the researcher, irrespective of the frequency of the code stated. These were two key selection considerations for the code book. A table mapping the category selections for each site can be viewed in Appendices 11 and 12.

A second member of the research team also selected the codes to provide inter-rater reliability to address the issue of consistency. This was an iterative process which was carried out until agreement was reached and influenced by the purpose of the study and principles that underpin the research (Joffe & Yardley, 2004).

Table 5.2: Sample section of a transcript summary used for the coding process

Transcript	Code	Category	Notes: Emergent Theme		
<p>01:06</p> <p>... I think a really key professional attribute is integrity ... but a sort of analogy to show you what I mean is if you think of a rowing crew, no one really knows how hard you're pulling the oar. Ultimately, it's down to you and your integrity as to how hard you're prepared to go to reach the goal of winning the race, and I think the difference between an expert teacher and a medium teacher is that the expert teacher has integrity and really cares about what he does, is accountable and self-disciplined, that is passionate and also has a clear idea of where he wants to take the children, his class, and as I say, to me, that is the most fundamental thing. How does that care express itself? Through professional reading, through really considered assessment, through carefully planned lessons ... I don't think teachers are born. I think teachers are made by their professional experience and their willingness to enter into the craft of teaching ... That, to me, is what separates the expert from the others.</p>	<i>Integrity</i>	Self-oriented	First impression was a character traits and qualities – Integrity. Analogy=teamwork.		
		character traits and qualities			
	<i>Integrity Passion Care Accountable</i>	Self-oriented	Differentiated expert and non-expert ...=care; integrity; accountable; self-disciplined; passionate; clear vision for children under care*.		
		character traits and qualities			
		character traits and qualities			
	<i>Plans intentionally</i>	oriented to others	(*not yet clear if that vision is for learning or more holistic)		
		Planning/ Structure/ Delivery	Features of expert = choses to read professionally; 'really considered assessment'; 'carefully planned lessons'.		
	<i>Open to continual improvement</i>	Open to Change	Adaptable	Teachers NOT born, but made by professional experiences + willingness to 'enter into the craft of teaching'.	
					Reflective

5.3.3 CATEGORIES

Once the iterative re-coding process had been completed, the codes were analysed and grouped to create categories. An iterative process of reading transcripts, proposing categories, re-reading transcripts and reviewing categories was performed

a number of times to generate a set of agreed categories and a description of each category. The basis for generating the categories is integral to thematic analysis because these categories provide new understanding of the data and form the foundation for identifying themes. Selecting the codes and establishing the category definitions with agreed meanings was an iterative process involving another member of the research team to provide inter-rater reliability to the process.

The categories identified were: *prioritises students first, demonstrates a holistic approach to students, connects/bonds with students, demonstrates collegiality, exhibits openness to change, demonstrates flexibility/adaptability, engages in reflective practice, demonstrates collegiality to enhance practice, invests in self-learning, demonstrates awareness, displays self-oriented character traits and qualities, displays character traits and qualities oriented to others, displays skill oriented traits and qualities, displays a particular personality, demonstrates effective planning/structure/delivery, differentiates/personalises learning, engages students in their learning, questions students effectively, provides quality feedback, implements behaviour management strategies, deepens learning for students, understands neurological principles for learning, possesses domain knowledge*⁶¹.

5.4 PROCESS TO REVEAL EMERGENT THEMES

This study followed Creswell's (2014) seven steps to revealing emergent themes, involving the process of grouping categories, and their linked codes, that share similar features. A detailed description of this process is presented in Chapter Three. The researcher, in conjunction with the supervisory team, proposed, examined and debated emergent themes. The process resulted in the identification of five robust themes: Builds Relationships with the School Community; Open to, and Seeks Out, Opportunities for Professional Growth and Improvement; Displays Particular Character Traits and Qualities; Demonstrates High Quality and Effective Pedagogical Practice; Possesses a Deep Mastery of Subject Knowledge. These five themes are described in detail later in this chapter.

5.5 THEME: BUILDS RELATIONSHIPS WITH THE SCHOOL COMMUNITY

The first theme in the leader case, Builds Relationships with the School Community, has four categories and fourteen associated codes (Table 5.3). The categories are: 'Prioritises Students First'; 'Demonstrates a Holistic Approach to Students'; 'Connects and Bonds with Students'; 'Demonstrates Collegiality

⁶¹ Refer to Appendix 8 for the code and category definitions and mapping.

(relational)’. Descriptions of each category, including statements from leaders, have been incorporated in the sections that follow to reveal the emergent theme of the expert teacher as one who ‘Builds Relationships with the School Community’.

Table 5.3: Emergent Theme: Builds Relationships in the School Community arising from codes and categories.

Category	Code
Prioritises Students First	<i>Places students’ needs before content delivery</i>
	<i>Fits content to the student</i>
Demonstrates a Holistic Approach to Students	<i>Knows personal interests of students</i>
	<i>Creates opportunities to know students</i>
	<i>Understands students</i>
Connects & Bonds with Students	<i>Connects with students</i>
	<i>Inspires students to learn</i>
	<i>Engages students</i>

5.5.1 CATEGORY: PRIORITISES STUDENTS FIRST

‘Prioritises Students First’ is defined as the classroom teacher considering the student as the first and highest priority, where the curriculum is taught to fit to the student, not the other way around. The two codes in this category are presented in Table 5.3.

Some leaders identified the importance of the teacher considering the student and their needs before any other need.⁶² An example of this was provided by L13, who stated, ‘I teach lots of things in [subject], but I also teach students first and foremost’. L13 added that taking this position was a ‘... very different approach about how content is rendered and how we engage in that way’.⁶³ L9 said of the expert: ‘They need to know their students just as human beings’ if the teacher is going to engage students. This category was noted as being different to the category of ‘Demonstrates a Holistic Approach to Students’ as the emphasis was on placing the student as the first priority. However, not all leaders suggested an expert was one who prioritised students, or who placed a particular emphasis on a pastoral approach to students in favour of a specific academic focus. L4 and L5 suggested both needed to be balanced. L2 provided a different view again, stating:

⁶² code: *places students’ needs before content delivery*

⁶³ code: *fits content to the student*

Pastoral is the mechanism by which you allow them to feel confident – comfortable, more than confident, comfortable. They might not be confident, but as long as they're [students] comfortable. Without that, with tension, comes distraction and a lack of mindfulness and a lack of awareness. So, I see the pastoral as a means of being, either through conversation or through just the vibe of being able to put them in a position where they can pay attention ... if a teacher's a nice person and they make you feel good, but you know they don't know their [content], it's over. They'll tolerate you, they'll use you, but that's it. So, the pastoral, there's no substitute for ... [not having content knowledge]. They'll put up with a complete fool, as long as they know their business ... [but] then all that happy feel-good making-you-comfortable, it's of little use, I think. (L2)

Without somebody whose personal bent is towards an extremely sound knowledge of their curriculum, the depth and the breadth of it, then the pastoral care isn't going to be of that much use, so my tendency is towards getting people to really focus on, first of all, just pure content. (L2)

L2's view demonstrates that not all leaders held the same views or appeared to place the same value on student-teacher relationships overall.

5.5.2 CATEGORY: DEMONSTRATES A HOLISTIC APPROACH TO STUDENTS

'Demonstrates a Holistic Approach to Students' is defined as the classroom teacher's interest in each student going beyond academic responsibilities that are limited to imparting specified curriculum knowledge. It incorporates the whole needs of students. The three codes in this category are presented in Table 5.3.

Most leaders stipulated that an expert teacher gets to know students as individuals, beyond the dynamics of academic classroom learning. The expert teacher was noted as one who *creates opportunities to know students* and takes care to understand their personal needs in and out of the classroom⁶⁴. L1 stated that the teacher 'can also then start to work out what the individual needs are. I think when you start addressing students' needs or interests, that's when you start making those

⁶⁴ code: *knows personal interests of students*

connections'. L1 advocated for teachers to remain in their room during breaks and before school⁶⁵ for the purpose of getting to *know the personal interests of students*, to create opportunities for students to converse about themselves. L1 suggested the expert creates and then capitalises on those opportunities. L3 described 'valuing relationships' as the 'core business that happens in the classroom'. Similar to L1, L5 also suggested a benefit was knowing and understanding students on a deeper level⁶⁶:

Understanding that where they are emotionally and how that impacts upon their learning journey; the next step after that is being able to act on that empathy and to be able to cater your teaching to actually help them pass that obstacle or road block. I think that is one of the key skills - the top thing for mine. (L5)

L5 further added that, by knowing the student⁶⁶, the expert teacher 'is able to pick up on the dynamic of the group, pick up on the body language when they're not getting a concept ... that sense that the more you move forward, the more you leave behind' rather than think 'I've got to plough through this [work]'. L4 suggested experts would know of their own students that 'some children cannot stand having a voice raised at them, others, it wouldn't bother them' and it was important to know this when working with students⁶⁶.

5.5.3 CATEGORY: CONNECTS AND BONDS WITH STUDENTS

The category entitled 'Connects and Bonds with Students' is defined as the teacher establishing a connection with the student, including building rapport and demonstrating a sense of care for each student. This category builds on the first two categories, which position the student as the most important and first priority, followed by taking an interest in an individual student. The two terms used, 'connects' and 'bonds' with students, were both used by participants and have been preserved to accurately reflect any nuance intended by participants, rather than assume they are synonymous terms. The three codes within this category are presented in Table 5.3.

Leaders conveyed the importance of expert teachers knowing students and creating a connection⁶⁷. L9 claimed, 'I expect a professional teacher to know their

⁶⁵ code: *creates opportunities to know students*

⁶⁶ code: *understands students*

⁶⁷ code: *connects with students*

students as well as know their subject'. A key benefit and purpose of knowing and connecting with students was to strengthen the learning effect. L13 stated, '. . . there's a strong correlation between the relationship they [student] have with the teacher, and their personal success.' L10 held the perspective that students work more effectively for expert teachers⁶⁸ who create a connection, reasoning, 'not because they expect anything out of it, but it more comes about as a mutual respect thing'. L7 and L9 both stated that experts know how their students best learn, their strengths, weaknesses and their preferences between different learning approaches. Conversely, a non-expert does not engage students, does not connect⁶⁹, according to L1:

I think they just don't engage. They don't get into that deep level. They just skim across the surface. They might know the kids' names, but they won't want to get to know them because their own life is - I mean, that's where teaching takes out of your life, ... you become like a surrogate parent for 12 months, you form a bond for that length of time. (L1)

The majority of leaders indicated that connecting and bonding with students was a core area of importance to be considered an expert teacher. L1 reflected on experiences getting to know students on a deeper level and bonding with students, suggesting: 'Sometimes that bond goes on for life' (L1)⁶⁷.

5.6 THEME: OPEN TO, AND SEEKS OUT, OPPORTUNITIES FOR PROFESSIONAL GROWTH AND IMPROVEMENT

The theme 'Open To, and Seeks Out, Opportunities for Professional Growth and Improvement' emerges from the following categories: 'Exhibits Openness to Change', 'Demonstrates Flexibility & Adaptability', 'Engages in Reflective Practice, Demonstrates Collegiality to Enhance Practice', 'Invests in Self-Learning', 'Demonstrates Awareness'. A summary of the categories and codes for this theme is included below in Table 5.4.

⁶⁸ code: *inspires students to learn*

⁶⁹ code: *antithesis of engages students*

Table 5.4: Emergent Theme: Remains Open to, and Seeks Out, Opportunities for Growth and Improvement arising from codes and categories.

Category	Code
Exhibits Openness to Change	<i>Open to continual improvement</i> <i>Open to change/open mindset</i> <i>Open to receive feedback to improve</i>
Demonstrates Flexibility & Adaptability	<i>Adapts to change</i> <i>Displays flexibility</i> <i>Avoids rhythmic complacency</i>
Engages in Reflective Practice	<i>Reflective on past practice to improve further</i> <i>Identifies areas to improve</i>
Demonstrates Collegiality to Enhance Practice	<i>Engages with colleagues</i> <i>Shares ideas and resources</i> <i>Accepts and adopts ideas</i> <i>Provides/receives feedback to/from colleagues</i> <i>Contributes to positive staff morale</i>
Invests in Self-Learning	<i>Undertakes professional reading</i> <i>Values and engages in learning</i> <i>Seeks out opportunities to upskill</i> <i>Learns from mistakes</i> <i>Learns by observing others</i> <i>Converses with students</i> <i>Seeks feedback</i>
Demonstrates Awareness	<i>Demonstrates self-awareness</i> <i>Demonstrates awareness of own level of professional knowledge</i>

5.6.1 CATEGORY: EXHIBITS OPENNESS TO CHANGE

The category ‘Exhibits Openness to Change’ is defined as keeping an open mind to possibilities for change occurring in some form related to teaching. The three codes are presented in Table 5.4.

There was a clear perspective pervading the leader case that an expert teacher remains open to the possibility of change occurring in a number of areas involved with teaching. A key thread among the views was a connection with being open-

mindful about professional practice related to learning and improvement^{70 71}. L14 commented about an expert: '... there's an open mind to learning, that they're not closed ... there's a definite open mind to this'. Examples supporting this view included those from L6, L10 and L2 respectively, who claimed:

I think you've got to be open-minded and open to your own learning and aware of your own attributes and constantly on the lookout for new ways of expanding that knowledge. (L6)

To be open that we never finish learning so we never reach a level of, 'We know everything and can do everything.' An expert doesn't go, 'I'm here now and therefore I'll just stay here,' that if they don't continue learning and they're open to feedback and improvement then they don't maintain - I don't even think they were an expert in the first place. (L10)

I think if you're not innovating, you die two ways. You die in their mind and you die in your own. If you're just trotting out the same thing ... (L2)

L5 suggested being 'open to other ideas' was linked with 'broadening your repertoire of teaching skills', which inspire further ideas beyond current practice^{70 71}. L6 noted 'you learn from being open to [errors and making mistakes]'. L7 expressed the inverse, suggesting teachers who were not open hindered their development of expertise.

In relation to receiving constructive feedback and criticism⁷², L7 and L10 talked about how an expert remains open. L10 and L7 also noted the challenges leaders face in giving feedback to classroom teachers. L13 stated a preference between two teachers, where the only difference is that the preferred teacher is more open to feedback by being critiqued and being reflective. This suggests that the one who is more open will improve more quickly.

5.6.2 CATEGORY: DEMONSTRATES FLEXIBILITY AND ADAPTABILITY

The category 'Demonstrates Flexibility and Adaptability' is defined as possessing the capacity and willingness to adapt practice to imposed influences and

⁷⁰ code: *open to change/open mindset*

⁷¹ code: *open to continual improvement*

⁷² code: *open to receive feedback to improve*

requirements in teaching. It is an extension beyond remaining open to change in that it requires more proactive steps to occur. The codes in this category are presented in Table 5.4.

Leaders identified an expert teacher is one who is flexible and adapts when or where needed⁷³. The following comment from L14 raised both adaptability and flexibility as important attributes for an expert in practice:

I think to be an expert too, you're adaptable to different situations. So, you're able to have your knowledge but then you're able to apply it in a multitude of ways and that flexibility to work across contexts, which is interesting. (L14)

This observation referred to both the classroom and a broader professional setting. L14 expressed that 'In terms of teaching expertise, you've got to be able to have a repertoire that you draw on and know how to adapt all the way through your work'⁷³, adding, 'I think that also there's an adaptability and flexibility that they [experts] can try something new.' Another leader (L13) discussed the approach teachers had towards forced change in school environments, where teachers tended to become either a 'habitually good teacher' or a 'habitually bad teacher'^{73 74}. Further explaining this contrast, L13 expressed the following with regard to being confronted with new challenges arising from imposed change:

... some people say, 'No, I just can't, I can't change, I can't flex' - and they're the ones I worry about, are in the 'do' loop - 'I just teach this way because this is the way I teach', and when you ask the question, 'Why do you do that? Don't you know you've just had a syllabus change? Have you thought about doing this step?' 'No, this is the way we do it ...' (L13)

With further discussion, L13 connected adaptability and flexibility^{73 74} with problem solving, and explained that these concepts enable growth as a professional:

I want to know that they're willing to be learners and that they want to grow, because then I can grow them into the kind of teacher I need in my space, rather than somebody who's come in a box with all of their tricks ready, and doesn't want to change. (L13)

⁷³ code: *adapts and remains flexible to respond to situations*

⁷⁴ code: *avoids rhythmic complacency*

L3 suggested that ‘... teachers settle into – it’s not quite complacency ... but I think they settle into a rhythm that has the risk of precluding further investigation into what they’re doing.’⁷⁴ L3 proceeded to suggest it was important for teachers to conceive that ‘... every year they can get better, and they can. However good we are, we can always get better.’ L3 advised: ‘It won’t happen just by willing it, it happens by focused study and consideration’. The attributes of flexibility and adaptability did not sit in isolation. According to leaders, they were mutually intertwined with the other attributes of an expert. In this instance, reflecting and being open-minded were two that overlapped.

5.6.3 CATEGORY: ENGAGES IN REFLECTIVE PRACTICE

The category ‘Engages in Reflective Practice’ is defined as the process by which teachers give conscious thought to their own professional practice, either before, during or after classroom teaching or related interactions beyond the classroom. Tethered to this thinking is the willingness to change or improve practice as a result of the thought processes. The codes in this category are presented in Table 5.19.

Overall, leaders viewed reflecting on practice as an important attribute of an expert teacher and connected being reflective with improvement⁷⁵. L13 rated reflection as ‘very important’ and added:

A reflective practitioner is someone who’s continually analysing their success, their progress, and their approach to what they’re doing. If you’re a reflective practitioner, and something’s not working, being able to take apart and think about what it is that’s not working and being able to rectify that, in fact, makes you a better practitioner. (L13)

One leader (L11) commented: ‘We’re not good at it though’, typically in teaching, in response to L13’s description above. L11 elaborated:

There are those who are reflective people and will look and think, well, how could I do it better or do it differently, others can again just push on [without reflecting]. (L11)

L13 provided a clear view that those teachers who ‘just push on’ would not be considered as expert teachers⁷⁵, as reflecting effectively on practice was an essential attribute of expertise. L13 added that an expert teacher reflects on stimuli to inform

⁷⁵ code: *reflects on past practice to improve further*

the reflection, such as 'taking on feedback, and adjusting ...', and further observed that reflection occurs on particular targets (goals), relationships, successes and test results for the classroom teacher⁷⁶. 'Reflective mindfulness' was an attribute identified by L2, who described this more fully to distinguish an expert and non-expert:

Expert teachers tend to have focused – have actually focused their attention on individual aspects of those (curriculum, pastoral and people management), potentially one at a time, and then over time have fused them together ... I think it's certainly concentrated, purposeful, reflective mindfulness of the various attributes of the job. (L2)

Another leader (L14) suggested:

I actually think that there is a correlation between having the ability to reflect openly and honestly on your practice and being an experienced non-expert, because you can't critique yourself or reflect on how you're going, you're not learning and you're not on that trajectory. (L14)

L14 added that experienced non-experts tend to lay blame for undesirable situations on external factors^{75 76}.

Mindfulness was a term connected with reflection and improvement by leaders. L7 defined this term as, 'Mindfulness, as the mindful educators, mindful teachers, they are often – they're often improving all the time and they're reflecting on their practice'^{75 76}. Some leaders expressed that it was a particular challenge to reflect and engage in mindfulness as a classroom teacher because of competing leadership responsibilities, affirming that being a leader and an expert teacher was difficult. L11 referred to a collective role, combining leadership with teaching as a 'rollercoaster' and added, '... the skill level slowly goes up, but it does mean that some other things are left out to dry [are unattended to]'. L11 was referring to the demands of keeping up with the teaching role, including the technology demands. Another leader (L3), with executive leadership responsibilities and competing time demands did not self-evaluate to be an expert classroom teacher, alluding to the competing leadership demands as the reason.

A willingness to reflect on practice was a clear attribute of the expert, according to leaders. A number of leaders also referred to having adequate time to properly

⁷⁶ code: *identifies areas to improve*

reflect as an important enabler of effective reflection. Some of the leaders also referred to creating time for teachers, while another suggested it was important for leaders to consider a structure in their schools that ‘allows staff to talk to each other and actually make them reflect on what they’re doing’ (L5). Leaders discerned that not all teachers reflect effectively on their practice, and, without this attribute, those teachers could not be considered experts in the profession.

5.6.4 CATEGORY: DEMONSTRATES COLLEGIALITY TO ENHANCE PRACTICE

‘Demonstrates Collegiality’ is defined as the way a teacher interacts with colleagues, which includes incidental interactions while extending to actively seeking out opportunities to engage with others. Integral to these interactions is a view toward fostering and nurturing professional collegial relationships. The five codes for this category are presented in Table 5.4.

Discussion in one leader focus group contemplated whether teachers could develop their knowledge and skills to an expert level if they were not collegial, and did not share knowledge or resources with their colleagues^{77 78 79}. Views on this point were mixed within this group of leaders. L7 expressed, ‘I think if you drill it down, you can still be an expert teacher and not share’. L9 agreed and proposed an analogy in a different profession: ‘You can be an expert heart surgeon and incredibly selfish and not share your expertise with anyone else’. L8 also agreed that an expert could isolate themselves and, ‘live in your own bubble’. However, not all agreed with this perspective. L10 suggested, ‘If you don’t share, then you’re not open to learning’, and added:

I think that bubble creates a wall where you don’t – sooner or later, it’ll come undone where you’re not having those reciprocal relationships with people. Sometimes I learn things from someone who has no experience and I learn things from my kids, from the students in the classroom and I go, ‘I haven’t thought of that. What a brilliant idea.’ An expert can’t ever shut off their knowledge base from anyone, so I think you have to have that reciprocal process. You both teach and learn always continuously. (L10)

⁷⁷ code: *engages with colleagues*

⁷⁸ code: *shares ideas and resources*

⁷⁹ code: *accepts and adopts ideas*

Leaders identified collegiality as a core attribute they search for when employing new teachers. For example, in this context, L9 stated: 'I can get the knowledge, but I can't get passion and spark and collegiality'. Others agreed, including L10, as well as those who earlier suggested that collegiality was not necessary to be expert, including L8 and L7, as well as L6. L13, in a different focus group, stated that it is a challenging culture to engender in schools and it was not all that common among teachers. L13 claimed some teachers hold on to their own resources and 'they're not willing to put it on the table'. L13 associated the development of expertise with a collegial teacher, adding:

... expert teachers often share their practice, and they're engaged in communities of practice, and they are willing to listen to others giving them feedback on their practice. So, you might have two teachers who've been in the game as long and who might have the same subject knowledge, but one is more open to be critiqued and is more reflective, and I think the other one might not be and may be closed to that kind of shared experience in the classroom. I find that people tend to improve the more they engage with others and share their practice. (L13)

Leaders also suggested that an expert teacher was collegial in the sense of making a valuable contribution in a team environment^{77 78 79}. L2 provided an example of this, distinguishing an otherwise 'quite good teacher' who did not 'contribute to the fabric of assessment - as they don't see it as their job'. L2 went on to state that such contributions are an important part of the role of an expert teacher⁸⁰. L2 explained that a non-expert can be identified when 'given a draft of a piece of assessment, they'll say that looks fine and hand it straight back again. There's no actual "Well hang on, how's the kid going to respond to that word" and if they do that, where's that on the matrix?' The non-expert does not invest that level of care to support colleagues. The expert would look at it carefully and provide quality feedback to colleagues. L11 labelled some departments as dysfunctional, and L13 related part of the issue to individual teachers being unwilling to share resources, wanting to keep them for themselves, or not wanting others to view them. These leaders articulated the problems caused when teachers were not collegial,^{77 78 79} noting these individuals as non-experts.

⁸⁰ code: *provides/receives feedback to colleagues*

L5 also suggested that, in some school cultures, isolationism can become destructive, particularly where it becomes a popularity contest among teachers. L5 added, 'In that sort of culture, then people share resources, but there's no depth. There's no capacity to actually harness collaborative planning, or anything like that'⁷⁸ ⁷⁹ ⁸⁰. With regard to the non-expert, L14 said: 'they're closed, they can be professionally isolated so that they don't read beyond, or they can be so focused on their discipline and the like that it becomes a sole pursuit and they want to share it'. L5 suggested leaders should not need to require teachers to 'come to the table' to collaborate on professional planning, and assessment moderation as 'the light-bulbs' come on where professional conversations occurred; the expert teacher would initiate this process and be readily involved.

Another leader, L5, raised mutual connections between expertise, collegiality and empathy, stating that an empathetic teacher contributed to collegiality in a school⁸¹ with 'that ability, that old, walk a mile in another man's moccasins'. Collegiality, such as authentically sharing resources and engaging with colleagues was noted to be an attribute of an expert teacher.

5.6.5 CATEGORY: INVESTS IN SELF-LEARNING

The category 'Invests in Self-Learning' is defined as teachers identifying and pursuing opportunities to continue to learn in areas that enhance professional practice. Such opportunities range from small and informal through to significant formal learning. The codes for this category are presented in Table 5.4.

Leaders made numerous references to the importance of investing in learning for a teacher to develop expertise. Leaders often described what they did themselves to improve their knowledge and skill level, which implied that a classroom teacher could do likewise to develop their expertise. For example, one leader suggested professional reading⁸² was one of the most beneficial means of improving knowledge, although that leader expressed the importance of pairing such reading with practical experience: 'It [professional reading] helps in terms of theoretical understandings, but in terms of my understanding of what expertise looks like and what it means, it's all experiential' (L3). A number of leaders (L1, L2, L3, L6, L9) referred to the importance of investing in professional reading, while others suggested professional development was important⁸³. Another leader (L14) suggested leading professional

⁸¹ code: *contributes to positive staff morale*

⁸² code: *undertakes professional reading*

⁸³ code: *values and engages in learning*

learning was important, not just attending it, and viewed this as an indicator of an expert. Formal study (*seeks out opportunities to upskill*) was yet another area of professional learning in which an expert engaged, according to leaders. L14 stated: 'I really believe strongly in the power of postgraduate study'.

Leaders referred to making mistakes as having the potential for a steep learning experience. L13 stated: 'I've made a lot of mistakes. I think when you've made really walloping, stupid mistakes, you get up and you learn really, really quickly'. L3 also mentioned mistakes in this context, as did L10, who stated: 'I have made so many errors and through those errors I have learnt'. Leaders referred to responding positively and learning from mistakes⁸⁴. Aside from specific strategies and opportunities, L10 identified a most important enabler to self-learning was simply to get involved and possess a: 'willingness to learn'.

Other examples of ways to increase knowledge and skills as an educator included *watching other teachers teach*⁸⁵, *reflecting upon and evaluating successes and failures*, *conversing with students* and *seeking feedback* from various sources, including colleagues and students.

5.6.6 CATEGORY: DEMONSTRATES AWARENESS

This category is defined as teachers demonstrating awareness of their professional teaching environments in relation to the people within them, including self-awareness. The two codes for this category are presented in Table 5.4.

Leaders referred to awareness as an attribute of the expert teacher. One aspect of this was the accuracy with which teachers evaluate their own performance through reflection. L8 stated that the capacity to reflect comes with experience, and that self-awareness was an important asset to gain from this. However, leaders gave a sense that not all teachers reflect accurately, and L3 acknowledged:

I think there certainly are levels of delusion about teachers' expertise from the teachers themselves, and part of a leader's role is to *develop a culture where there is a commitment to consistent improvement, and there is an acknowledgement that none of us are quite there yet, but that's easier said than done.* (L3)

L2 also talked about the notion of self-delusion and accuracy of self-evaluating performance levels as a teacher: 'I think that depends on the degree to which

⁸⁴ code: *learning from mistakes*

⁸⁵ code: *learns by observing others*

someone is happy to be delusional, the degree to which it's self-comforting to believe that you're doing the right thing' (L2). L14 connected reflecting, awareness, relationships and expertise, stating:

I actually think that there is a correlation between having the ability to reflect openly and honestly on your practice and being a non-experienced expert, because you can't critique yourself or reflect on how you're going, you're not learning and you're not on that trajectory. I think in my experience it often is characterised by poor student teacher relationships. (L14)

L2 also noted that a non-expert has 'a lack of awareness' as an associated attribute; L1 agreed, making a similar comment. Both comments contextualised 'awareness' as a generic term in the teaching environment, including awareness in and out of the classroom. L4 noted an expert's awareness would be in relation to 'specific children's needs' whereas a non-expert would miss certain information and needs. L5 raised a similar point, noting an expert has an 'awareness of where kids are developmentally'. Leaders identified that one of the most useful ways to improve was to observe others' lessons (discussed earlier in this section). L14 suggested: 'I watch them [experts] like a hawk'. L13 noted that merely watching a lesson was not as useful as doing so with an awareness of what to look for during that experience.

As occurred in the teacher case, leaders were asked to provide an estimate of the percentage of expert teachers in their school. The responses are summarised in Table 5.5.

Table 5.5: Responses from leaders when asked to identify the percentage of expert teachers in their school.

<ul style="list-style-type: none"> • L1 School: 90% (sub-school) • L1 Self: Question not asked • L2 School: 10% (whole school: Of the 10% – split into two tiers of 5% each with the top ‘exceptional’) • L2 Self: Question not asked • L3 School: 30%(whole school) • L3 Self: No, not really. • L4 School: 60% (sub-school) • L4 Self: Yes. • L5 School: 20% (sub-school) • L5 Self: Yes • L6 School: ‘A handful’ would not end up being expert, though did not give a figure. • L6 Self: Did not answer • L7 School: I think it’s a difficult question to answer, because I think there’s a spectrum. I don’t think there’s experts and non-experts. I think everyone’s on some level of continuum ... [then offered 20%]. • L7 Self: (If you put me on the spot and ask me if I was an expert, then I’d think twice. I’d hesitate. I think I’m continually working towards expertise. I don’t know if I’m there yet. Compared to other teachers I know, I’m certainly not. I know plenty of better teachers than me, so I can’t really put a number on it. • L8 School: Did not answer • L8 Self: Did not answer • L9 School: Did not answer • L9 Self: Did not answer • L10 School: [eventually] 95% would ‘get there’ over time. Of those currently at expertise, L10 stated: ‘I think L7 gave a decent figure, and it’s probably bigger than 20% actually’. ‘95% are on different levels of a spectrum’ • L11 School: Question not asked • L11 Self Question not asked • L12 School: Question not asked • L12 Self: Question not asked • L13 School: Question not asked • L13 Self: Question not asked • L14: School: 70% (of the 30% non-expert some were on a journey towards expertise and others not) • L14 Self: Question not asked
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The range of responses and level of optimism by leaders of teachers operating with expertise was quite varied. L2 provided the lowest percentage of 10% as perceived to be operating with expertise, and 5% as exceptional. When asked to provide an example of an attribute of those top 5%, L2 suggested that 'they pay attention'. Drilling down further, L2 suggested that non-experts would 'rather not see' an issue or problem and added:

Yes, whether they have habituated not paying attention because when you pay attention you have to act. There is a moral incumbency that 'hey' - not moral, an ethical incumbency, that 'hey, this is my being, this is my job'. Yes, I think that is probably valid. They [expert teachers] are willing to act on what they see.
(L2)

Overall, leaders identified self-awareness as being a clear attribute of the expert. They valued an ability to accurately evaluate one's own performance in professional practice, including being aware of one's own teaching environment.

5.7 THEME: DISPLAYS PARTICULAR CHARACTER TRAITS AND QUALITIES

The theme 'Displays Particular Character Traits and Qualities' emerges from the four categories: 'Self-Oriented Character Traits and Qualities', 'Character Traits and Qualities Oriented to Others', 'Skill Oriented Character Traits and Qualities', and 'Displays a Particular Personality'. Table 5.6 displays the categories and codes for this theme. This section presents descriptions and participants' views about each category.

Table 5.6: Emergent Theme: ‘Displays Particular Character Traits and Qualities Suited to Teaching’.

Category	Code
Displays Self-Oriented Character Traits and Qualities	<i>Demonstrates humility</i>
	<i>Demonstrates passion</i>
	<i>Demonstrates integrity</i>
	<i>Demonstrates commitment</i>
	<i>Has a sense of self-perception/ego</i>
	<i>Demonstrates confidence</i>
	<i>Demonstrates enthusiasm</i>
	<i>Demonstrates sincerity</i>
	<i>Demonstrates self-discipline</i>
	<i>Demonstrates ethical behaviour</i>
	<i>Demonstrates accountability</i>
	<i>Demonstrates open-mindedness</i>
	<i>Demonstrates adaptability</i>
Displays Character Traits and Qualities Oriented to Others	<i>Demonstrates empathy</i>
	<i>Generates trust</i>
	<i>Approachable to others</i>
	<i>Demonstrates respect</i>
	<i>Demonstrates calmness</i>
	<i>Demonstrates collegiality</i>
Displays Skill Oriented Character Traits and Qualities	<i>Demonstrates organisation</i>
Displays a Particular Personality	<i>Displays humour</i>
	<i>Has an outgoing personality</i>

5.7.1 CATEGORY: DISPLAYS SELF-ORIENTED CHARACTER TRAITS AND QUALITIES

This category is defined as character traits and qualities that are more self-oriented than oriented towards others. The codes for this category are presented in Table 5.6.

Most leaders valued humility⁸⁶ as an attribute of an expert teacher. L3 connected humility with seeing and accepting a need to continue to improve over time, stating, ‘The experts are the ones who totally accept with humility, in the true

⁸⁶ code: *demonstrates humility*

sense of the word, that every year they can get better, and they can'. L14 stated that humility 'counters the ego, which I find problematic in teaching'. L6 associated being 'humbly passionate' with an expert teacher and humility as an attribute and L10 agreed.

Passion⁸⁷ was another character trait and quality that leaders associated with expertise. L6 identified that passion can be present in a number of areas related to teaching, and was one of the most important attributes:

... it can be passion for pedagogy, it can be passion for certain aspects of what you do or certain aspects of what you teach or your subject matter that you're absolutely desperate about, and that is infectious. (L6)

While other leaders also identified passion as an attribute of the expert, not everyone agreed. L7 replied to L6's comment, stating:

That's interesting. I wouldn't normally say I have expertise in teaching because - or one of the reasons being because I'm a passionate teacher. I wouldn't normally have that as a criteria [criterion] for expertise. They make a good teacher, but I wouldn't use it as a criteria [criterion] for expertise. (L7)

L10 added to this discussion, followed again by L6:

No, I think they go together. I think when you've reached that level of expertise as opposed to just being a good teacher. Looking at that different level, there is a passion that becomes an attribute of that because it drives the search for knowledge and understanding. (L10)

It models that desire to embed yourself in something. (L6)

Continuing the discussion, L7 replied: 'It may be true. I just meant that if I were to think of criteria, attributes and practices that characterise expertise, I wouldn't usually have included passion ...'. L7 then compared an expert teacher and heart surgeon and suggested whilst they were different professions, an expert heart surgeon would not need to be passionate. Others disagreed on the basis that passion

⁸⁷ code: *demonstrates passion*

was a key driver of a desire to improve knowledge and become increasingly expert. As the conversation continued, L10 added:

I would hope that, within a school context, you would have to be an expert teacher, you would have to have that passion for students, because without it, you're doing the mechanics of teaching. You're not actually thinking about the outcome of teaching. We'd be like a machine, we've just been programmed, 'This is how you teach. This is what you do,' and students will learn, but they won't learn to the level that an expert teacher would be able to teach them. (L10)

L6 contemplated further and added: 'It's the effect is lost, isn't it? That sense of the emotional engagement and the interpersonal relational stuff that underpins most of what we do.' L7's comparison to other professions suggested that an enthusiastic, inexperienced, less knowledgeable and less skilled teacher could also be passionate as a teacher, although still be practising without expertise.

Integrity⁸⁸ was the first attribute suggested by L3 to describe an expert teacher: '... integrity of the teacher and the way they view their responsibilities as a teacher', having stated earlier:

My initial thought, which might surprise you a little, I think a really key professional attribute is integrity, and now I know that's a word that's a bit wishy-washy, but a sort of analogy to show you what I mean is, if you think of a rowing crew, no one really knows how hard you're pulling the oar. Ultimately, it's down to you and your integrity as to how hard you're prepared to go to reach the goal of winning the race, and I think the difference between an expert teacher and a medium teacher is that the expert teacher has integrity and really cares. (L3)

L3 also tied dedication and commitment⁸⁹ to integrity, particularly in context with this leader's perception of increasing demands placed on teachers. Other discussion focused on having an ego⁹⁰ that enabled teacher expertise to develop, as opposed to inhibiting expertise, which some leaders identified as an attribute of the expert. An example of ego as an inhibitor was identified by L14:

⁸⁸ code: *demonstrates integrity*

⁸⁹ code: *demonstrates commitment*

⁹⁰ code: *has a sense of self-perception /ego*

I think ego can be an incredible – I was going to say like a blocker or a barrier to being an effective teacher, because as much as it sounds like a cliché, it actually does need to be about the children. And when it's all about you, you can't be an expert because you're actually never going to truly impart your skill and your knowledge because it's always going to be about you. I find ego a really difficult thing to manage in terms of teachers and teaching. (L14)

L14 added: 'competition between teachers when egos involved can be a really destructive influence, I think, on practice and on the outcomes for kids'. Leaders L6, L7, L8, L9 and L14, expressed supported views that ego could potentially inhibit expertise and effective learning for the students of a teacher with a big ego. L6 suggested 'teaching is ultimately a humble profession' and an excessive ego was a counter to that. Another example of ego hindering expertise was provided by L3:

[there are some] who have a real issue with ever acknowledging they've made a mistake – they don't know what to do. It's so debilitating for them, because all they need to do is say, 'Look, I'm stuck. I need your help. I have no idea what to do in this situation', or 'What would you do' or 'I'm sorry. I really stuffed that one up. I honestly was trying to resolve it, but I've made it much worse. Where do we go from here?'. Just to be able to say those things, I think A, it's authentic, and B, it makes the staff feel that you're not setting yourself up as some sort of guru (L3).

As was often the case for leaders, many tied together several attributes that operated in concert. As an example, L12 and L3 both suggested ego, confidence and reflection interacted. L13 suggested a teacher could not be expert if they did not have the self-confidence and belief in themselves, and that part of the reflective process was evaluating confidence and ego as a positive contributor to teaching. L3 commented on these three attributes:

Obviously, we have to allow our ego to project a level of confidence, and a message that says, 'We're coping, and we're happy with what we're doing,' and so on. Again, with the teachers, if they get off too much on the power imbalance between them as a teacher and the classes of children, then that's never a good thing.

You can go too far the other way, and just want to be their friend, and that's a disaster, too. I think it's not whether an ego is necessary, because it operates whatever we choose, or try to do, our ego is always operating. I think it's very useful to reflect upon the extent to which our ego is determining our actions on a daily basis. (L3)

L13 was another leader who blended ego and confidence, acknowledging its complexity:

To have a greater sense of self in order to be really critical of self ... a number of staff who are not confident in their teaching, and who cover that with ego, and they hide behind a I of ego. I think that when you challenge that, you unpack some more. It's a really complex issue. (L13)

Most leaders viewed ego as a positive or negative contributor to the teacher's approach. L3 noted (above) the importance of reflecting on ego to learn the extent it determines actions on a daily basis. L13 expressed a similar sentiment, saying, 'how we use it to get what we want and drive ourselves forward ... but self-entitlement, without the back-up of the skills and experience, might demand more and expect more for what you're actually putting out'. Most of the leaders in this case study had a view on ego and the impact expertise had as a characteristic on a teacher's expertise.

Other character traits and qualities that received recognition in this category, though not presented here include: *demonstrates enthusiasm, demonstrates sincerity, demonstrates self-discipline, demonstrates ethical behaviour, demonstrates accountability, demonstrates adaptability, demonstrates open-mindedness*. Apart from the two latter character traits and qualities (which have been presented in other categories), these received less prominence overall compared to the codes that this section has elaborated.

5.7.2 CATEGORY: DISPLAYS CHARACTER TRAITS AND QUALITIES ORIENTED TO OTHERS

This category is defined as character traits and qualities that have direct interaction with others. However, it is readily acknowledged that different professionals can interpret these character traits and qualities differently. The codes for this category are presented in Table 5.6.

Leaders identified numerous different attributes as character traits and qualities; the codes outlined above are the more prominent examples of these. L5 responded to a question about the attributes of an expert teacher by stating that empathy⁹¹ was a core character trait:

Well, my instant reaction to that is empathy. I think empathy is a skill, it's such a profound skill for a teacher to have in terms of students' learning, but also professionally in terms of collegiality – that ability – it's that old walk a mile in another man's moccasins. I think that teachers that have that capacity for empathy, and it doesn't have to be that empathy in terms of them understanding their parents are separated or whatever, it can just simply be an understanding of the level of frustrations a kid might have in not being able to do long division or not being able to analyse a piece of poetry – that level. Understanding that where they are emotionally and how that impacts upon their learning journey and then being able – the next step after that is being able to act on that empathy and to be able to cater your teaching to actually help them pass that obstacle or road block. I think that is one of the key skills – the top thing for mine. But it's a dense concept. (L5)

This same leader further explained that a teacher who lacked the level of empathy described, as a non-expert, would have difficulty picking up on the body-language of a student or the particular dynamic of a group situation. While sound pedagogical practice may compensate somewhat, L5 suggested that by missing important cues, 'the momentum of a busy day just means that I've got to plough through this, and there's that sense that the more you move forward, the more you leave behind'. L5 also talked about the importance of a teacher being trusted by students, and this leader linked effective pedagogy and organisation as a foundation to practice effectively, where trust⁹² then emerges from students.

L4 stated that an expert teacher also needs to be approachable, particularly for students and parents. L4 elaborated that public humiliation is the sort of practice that indicates a non-expert. Expanding on that point, L4 explained: 'It kind of makes me cringe when I hear people [publically humiliate students]. I just think children,

⁹¹ code: *demonstrates empathy*

⁹² code: *generates trust*

they're our future, they're our tomorrow. If we treat them that way, that's how they'll think that's how we should treat others'. Approachability was another character trait and quality (*approachable to others*) where L4 suggested a teacher can be quite amazing in terms of the work they generate from students, yet a student can be 'horrified, really scared of ... [the same teacher]'; therefore, L4 intimated, they would not be considered an expert. This intersects with aspects of rapport and relationship presented in another theme.

Respect⁹³ was also demonstrable in the way a teacher generally speaks to students and reciprocal respect shown back to the teacher, according to L4. L10 was another leader who identified mutual respect as an attribute of an expert, also associating its establishment with the relationship between student and teacher. Respect was an attribute identified by other leaders, including L11 and L12, who referred to respect being established by both the approach taken with students and level of competency with knowledge and pedagogy. L11 also referred to 'professional respect' among colleagues, though most of the focus on respect was between student and teacher for most leaders.

A final character trait and quality identified in this category was calmness. It was included in this category rather than the previous one, because of its perceived impact on others. L2 was a leader who identified calmness⁹⁴ as an attribute, and suggested an expert teacher's 'expertise is evident because they're able to respond to whatever comes along,' adding:

There's a calmness, so that even when things go wrong, or when things start to go awry slightly, there's not a problem. There are no startled rabbits. There's a calmness to the way that they respond because their brain is going through options. (L2)

The character traits and qualities in this category characterise an expert, according to leaders.

5.7.3 CATEGORY: DISPLAYS SKILL-RELATED CHARACTER TRAITS AND QUALITIES

This category is defined as character traits and qualities that have a clear element of skill that is embedded in the context of an expert's practice. The three codes for this category are presented in Table 5.6.

⁹³ code: *demonstrates respect*

⁹⁴ code: *demonstrates calmness*

Leaders identified organisation as an attribute associated with expertise. L5 described organisation both in generic terms and as a specific reference to an organised mind. On a number of occasions in this case study, leaders interconnected various attributes and, in this instance, L5 identified that an organised teacher created a level of trust with students and parents. L5 also noted that being organised⁹⁵ did not mean being rigid and inflexible in approach:

I think another important skill is just organisation, a well organised mind. There are certain disciplines in the performing arts or otherwise where an improvised approach can work. ... there's certainly no compensation for a well organised program. What I alluded to before though, a well organised program can build into it flexibility to allow you to meander down alternate pathways, as well. That presents - by being organised - that presents that level of assurance to the kids and to the parents that this person knows where they're going and then they will trust them, as then that becomes that level of trust from the kids to the teacher that they'll actually allow themselves to go along this path, rather than feeling they have to find alternative support through parents or tutors or that sort of [thing]. That's all tied up. Empathy first, but then organisation for mind is such an important part of what we do. (L5)

In a subsequent comment, L5 then tied organisation to empathy, suggesting that by planning effectively⁹⁵ and becoming accountable in the process, teachers would become 'receptive to the needs of their kids'. L4 was another who suggested that expert classroom teachers are highly organised and contrasted to a non-expert:

I've seen some teachers that are like a bit disorganised and scatty, and I think that reflects in their classroom. Particularly at younger ages, children really need that really consistent, calm, timetable structure to their day, and that's a personal thing. You can't change whether someone's particularly more organised than the other or scattier than the other. (L4)

This leader momentarily reflected on this statement, and then added, 'So I think there are professional characteristics and also personal characteristics as well'.

⁹⁵ code: *demonstrates organisation*

5.7.4 CATEGORY: DISPLAYS A PARTICULAR PERSONALITY

This category is defined as character traits and qualities that are apparent as key contributors to an expert's personality embedded as part of their practice. Furthermore, each of the codes in all the categories in this theme have some links to personality to some degree. The two codes for this category are presented in Table 5.6.

Some leaders suggested that exhibiting humour⁹⁶ was a trait associated with an expert teacher. Humour was noted by L10, who further connected humour and working within a team environment with colleagues, stating, 'a good sense of humour - if you can't come here and laugh, then don't come here at all and that's laugh at yourself as much as laughing at others - and to be able to work as a team'. Humour was first noted by L6 and also agreed to as a key attribute by L7 and L10. While the focus group above had referred to humour more in a collegial context, another leader (L5) who also identified humour, positioned it in a student classroom learning context. L5 suggested: 'if you hear a classroom laugh [the students/ teacher], ... [it is] the teacher's sense of humour. It's that intrinsic part of their [teacher's] success in the classroom'. L5 further suggested humour helped to constantly shift and change the classroom dynamic.

An outgoing or extroverted personality⁹⁷ was also valued by several leaders. For instance, when discussing aspects of a teacher's personality, L1 stated: 'I think personality is a part of it. I don't think - I think unless you've got an outgoing personality, you wouldn't teach. It would be hard.' Upon further thinking about this perspective, L1 quickly added, 'Although, we do have good teachers here at the school that don't have that, so maybe that's an incorrect statement. I think it's just a confidence. It's an innate confidence, in that you're able to work with people'.

However, having an outgoing personality was not commended by all leaders as an attribute of an expert. Another leader, L4 linked confidence, personality and the nature of introversion and extroversion with expertise and clarified: 'I've seen some really quiet teachers that run very quiet classrooms, and, they do an amazing job. Then I've seen the others loud, so no, I don't think so'. After consideration, L4 did not equate any level of introversion or extroversion with teaching expertise. L3 was another leader who referenced confidence and personality in this context and linked to teaching:

⁹⁶ code: *displays humour*

⁹⁷ code: *has an outgoing personality*

The artistic side is linked to personality and confidence, and some teachers have it, and some don't. If you don't have that side, you could still be a really good teacher by attending to the more pragmatic advice in the book and in many other books. I think slightly introverted; slightly shy person can often be a superb teacher. (L3)

L3 was suggesting that some teachers have a particular personality type that engages students more than others. For those that do not, they can practice with a different approach, relying on different strategies, to also practice with expertise. While leaders identified many attributes in common, there was no suggestion by any leader that there was one particular set of attributes. Overall, their responses varied very considerably in this regard.

5.8 THEME: DEMONSTRATES HIGH QUALITY AND EFFECTIVE PEDAGOGICAL PRACTICE

The theme 'Demonstrates High Quality and Effective Pedagogical Practice' emerges from eight categories: 'Demonstrates Effective Planning/Structure/Delivery'; 'Differentiates & Personalises Learning'; 'Engages Students in their Learning'; 'Questions Students Effectively'; 'Provides Quality Feedback'; 'Implements Behaviour Management Strategies'; 'Deepens Learning for Students'; and, 'Understands Neurological Principles for Learning'. The categories and codes for this theme are displayed in Table 5.7. Definitions of each category are presented in this section.

Table 5.7: Emergent Theme: 'Demonstrates High Quality and Effective Pedagogical Practice'.

Category	Code
Demonstrates Effective Planning/Structure/Delivery	<p><i>Plans intentional lessons</i></p> <p><i>Plans well-organised lessons</i></p> <p><i>Adapts flexibly to lesson needs</i></p> <p><i>Embeds suitable pace, timing and fluency in lessons</i></p> <p><i>Anticipates students' errors</i></p>
Differentiates & Personalises Learning	<p><i>Differentiates for multiple learner needs</i></p> <p><i>Amends lesson for learner needs</i></p> <p><i>Knows individual learning styles</i></p> <p><i>Personalises learning</i></p>
Engages Students in their Learning	<p><i>The environment is engaging</i></p> <p><i>Knows students as individuals</i></p> <p><i>Engages all students</i></p>
Questions Students Effectively	<p><i>Plans for a range of complexity for students</i></p> <p><i>Shows Confidence in subject matter (to ask questions)</i></p> <p><i>Directs individualised questions</i></p> <p><i>Allows sufficient processing time</i></p>
Provides Quality Feedback	<p><i>Gives feedback to leaders</i></p> <p><i>Gives detailed feedback to students</i></p>
Implements Behaviour Management Strategies	<p><i>Is in control but not dominating the space</i></p> <p><i>Behaviour management is effective</i></p>
Deepens Learning for Students	<p><i>Teaches students to apply principles</i></p> <p><i>Layers learning concepts to deepen understanding</i></p> <p><i>Understands difference between engaged happy students and effective learning</i></p>
Understands Neurological Principles for Learning	<p><i>Is aware of brain plasticity principles</i></p> <p><i>Has cognitive and neurological learning awareness</i></p>

5.8.1 CATEGORY: DEMONSTRATES EFFECTIVE PLANNING, STRUCTURE, AND DELIVERY

Demonstrates Effective Planning/Structure/Delivery is defined by purposeful teacher preparation to practise effective pedagogy in the classroom, and includes organisational aspects of the lesson such as phases and transitioning. The codes for this category are presented in Table 5.7.

Overall, leaders identified a broad range of knowledge and skills applications and examples pertaining to pedagogical principles in teaching. Two areas identified were *plans intentional lessons*; *plans well-organised lessons*. L3 suggested that it was 'through carefully planned lessons ...' that expertise was demonstrated by a teacher (among other attributes). L3 further discussed the expert teacher as one who is willing to 'put in the extra yards' in the planning and preparation of teaching. 'Good planning' and 'forward planning' were also suggested by L5 as attributes of the expert teacher. L1 suggested that the expert knows where they want the learning in the lesson to go, linked to planning, while the non-expert has less certainty about the direction of the learning intention.

In another theme, adaptability and flexibility were identified as attributes of the expert; more broadly though, these attributes were also applied to lesson planning, preparation and delivery. L2 was a leader who expressed that the expert is also able to adapt⁹⁸ to the lesson demands and demonstrate agility in approach. L2 noted that for a non-expert teacher, 'if it's not what they [the non-expert] envisioned, then they start to fray at the edges' rather than adapt flexibly⁹⁸. Some leaders attributed to experts the ability to plan better, remain calm, and adapt to lesson demands while remaining on the track of the learning goals throughout a lesson.

Another area discussed in this category was timing of the lesson progression where, according to L1, an expert teacher will pay greater attention to the timing⁹⁹ of the lesson based on the understanding of the students in a particular classroom, while the non-expert is more likely to push on regardless¹⁰⁰. L5 identified this same feature, characterising the non-expert's approach as 'I've got to plough through this' whatever the plan. L14 observed the expert teacher has 'adaptability and flexibility that they can try something new and there's an open mind to learning, that they're not closed'. There is little sense of rigidity and adherence to a lesson's script.

⁹⁸ code: *adapts flexibly to lesson needs*

⁹⁹ code: *embeds suitable pace*

¹⁰⁰ code: *timing and fluency in lessons*

L14 offered a different perspective by suggesting that being highly organised, well prepared and structured can result in being repetitive in teaching, and perhaps restricting optimal learning growth. L14 suggested that expert teachers had to consider externally imposed demands, such as the Higher School Certificate (relevant to New South Wales and some in the Australian Capital Territory), and prepare students well for such examinations, and also be innovative at the same time. L14 saw this as a juxtaposition that, on one hand, exhibited expertise, though on the other, inhibited expertise. L6 also briefly mentioned that the expert teacher was able to predict errors students would make in advance¹⁰¹.

5.8.2 CATEGORY: DIFFERENTIATES AND PERSONALISES LEARNING

‘Differentiates and Personalises Learning’ is defined as the classroom teacher being aware of their students’ individual learning needs and differentiating and personalising learning experiences to suit the learner, as opposed to taking a homogenous approach to the whole class. The codes for this category are presented in Table 5.7.

Leaders identified the differentiation of learning experiences as an attribute of the expert’s repertoire of teaching capabilities. L4 was among the leaders who referred to differentiating¹⁰² through extension work, classroom approaches, related projects and in the planning of lessons. L5 was another leader to explicitly identify differentiation, and suggested that through ‘good pedagogy, good planning, you might be able to differentiate a classroom to the extent you can actually compensate for a lack of empathy’. L2 also identified differentiation and suggested that the expert understand the principles behind differentiation, including the principles of cognitive learning and psychology that are presented in the final theme in this section. In the leader’s case, there was some separation of differentiation and personalising learning principles, although some of the comments seemed to imply that the two terms were often used interchangeably.

Knowing individual students¹⁰³ and how each student learns most effectively is an attribute of the expert teacher, according to L7, who claimed that, ‘you also know how your students learn. You know their strengths. You know their weaknesses. You know how they like to learn.’ According to some leaders, analogising was one specific

¹⁰¹ code: *anticipates students’ errors*

¹⁰² code: *differentiates for multiple learner needs*

¹⁰³ code: *knows individual learning styles*

example of how an expert teacher may personalise¹⁰⁴ the learning environment. L2 referred to personalised analogising as tailoring to the individual interest of a student, not just to the negotiated interests of a whole class:

I think a lot of rich learning in kids comes from their ability to analogise, and for you to be able to say, 'So this is the principle' ... and to be able to say, 'Now, that's very similar to this, and that's very similar to this' ... So that you have a principle, and then you allow time to be able to go, 'It's like this. It's like this. It's like this' ... And that - yes, you tend to see a richer version of it [from the expert]. (L2)

Another leader revealed a similar perception of the value of the teacher being able to analogise. L5 referred to a teacher giving 'a profound gift [to students]' when able to analogise on such a personal level as to deepen learning and make it more meaningful with greater levels of recall and understanding. Leaders viewed experts as those who knew their students and utilised that knowledge to achieve better learning outcomes. L4 provided another example of this, noting that it is 'something that's on their [student] level and that's interesting to the children'.

5.8.3 CATEGORY: ENGAGES STUDENTS IN THEIR LEARNING

'Engages Students in Their Learning' is defined as connecting with students relationally in conjunction with explicit student learning experiences. The focus in this category was on ensuring the environment was engaging for learners, knowing students as individuals and in their learning needs, and an expert engages all learners, not merely a selection of learners. The three codes for this category are presented in Table 5.7.

Some leaders identified engagement with students, and being able to successfully engage or inspire students to learn more effectively, as another attribute of the expert. L9 suggested that the expert would 'have expertise in using their environment as a learning tool and creating engaging learning environments.'¹⁰⁵ L9 added that the teacher would 'need to know their students in terms of what knowledge and skills they bring before you and engage in new or deep or connective learning.'¹⁰⁶ They need to know their students just as human beings.' L9 saw

¹⁰⁴ code: *personalises learning*

¹⁰⁵ code: *the environment is engaging*

¹⁰⁶ code: *knows students as individuals*

engagement as multifaceted. L13 discussed engagement with students, and noted that it was not sufficient to suggest that an expert engages only some students. Rather, L13 clarified that the expert teacher not only engages more attentive and involved students¹⁰⁷, but that the distinguishing feature was that ‘an expert teacher should be able to engage a less able student, as well as your able student ... and know the difference?’. L11 observed that the expert could also engage the more intellectual students, not just the ‘less able student’, while affirming the same principle that L13 raised. L4 explained engagement in the classroom setting as:

I think someone that really grabs the children’s attention, so is really on their level and knows what interests and engages them. So, I really love an engaged classroom, and I’d probably keep an eye out too for those dwellers off the side, to see whether teachers are realising they need some extra direction or some support, whatever they need and whether they’re engaged. I also look at the way teachers speak to children, that level of respect that they demonstrate, and a level of respect the children are demonstrating towards them as well. (L4)

The capacity to engage students in learning was another feature of the expert teacher raised in this case study.

5.8.4 CATEGORY: QUESTIONS STUDENTS EFFECTIVELY

‘Questions Effectively’ as a category is defined as teachers constructing, directing and asking effective questions of students in class, to check for understanding. The four codes for this category are presented in Table 5.7.

Leaders reported questioning techniques as a feature of the expert’s pedagogical repertoire. L1 suggested that the expert plans a range of complexity¹⁰⁸ when questioning students, and framed the explanation in terms of self-practice: ‘If I need to extend a student, I’ve got that ready. If I need to remediate a student, I’ve got that ready. You’re confident that you can handle all situations.’ L1 also talked about an expert having confidence to be asked questions by students¹⁰⁹, enabling any question to be asked, which would expose a less knowledgeable teacher if not expert in the subject matter. L3 also referred to this same possibility and explained it further

¹⁰⁷ code: *engages all students*

¹⁰⁸ code: *plans for a range of complexity for students*

¹⁰⁹ code: *shows confidence in subject matter*

in the context of an 'insecure' non-expert teacher relating to both a student and teacher situation:

If you put that in a teaching perspective, I think those teachers who are insecure will not encourage their students to ask questions, for example, in case they ask a question they don't know ... They will not particularly want to engage in professional conversations, unless it's an area where they feel particularly confident. They won't really want to ask questions where they're genuinely seeking understanding, in case it positions them as being inadequate. (L3)

L4 talked about differentiating and directing the questions to particular students¹¹⁰. L5 was another leader who identified this same principle, noting some questions should be teacher directed (to particular students) for strategic reasons and emphasised building in time for all students to process and respond to the questions.^{110 111} L5 added that the expert was able to differentiate the questions to specific students without making them feel ostracised:

Give time for kids to think before they respond and to frame your questions in a way that are accessible to all levels and they're not ostracising the low ability kids, or alternatively boring the high ability kids. . . I think if there's a skill that's highly underrated, it's slow thinking and it's giving kids the opportunity to really process and answer a question. I think a lot of inexperienced or poor teachers treat silence as ignorance, and will therefore fill the space with answers far too quickly. (L5)

The concepts presented relating to questioning technique were recognised by a number of leaders in this case study as an attribute of an expert teacher's practice.

5.8.5 CATEGORY: PROVIDES QUALITY FEEDBACK

The category 'Provides Quality Feedback' is defined as the teacher providing high quality and personalised feedback for their students. The two codes for this category are presented in Table 5.7.

This teacher practice did not receive as much discussion in the leader's case as it did in the teacher's case. One comment from L14 worth noting regarded teacher-to-

¹¹⁰ code: *directs individualised questions*

¹¹¹ code: *allows sufficient processing time*

leader feedback. L14 suggested that it was an indicator of an expert teacher who provided a leader with constructive feedback, stating, '[the one's who] come to the solution, they're often experienced experts. They've thought about something differently to the way I have' and are prepared to raise it with leaders. This was in the context of a leader giving direction to teachers (on any topic) and a teacher replying with an improved alternative proposition, signalling their expertise, or even identifying an issue before the leader did so¹¹².

In relation to a teacher providing students with feedback in the classroom environment, L1 suggested an expert gives more detailed feedback¹¹²:

With assessment, an expert will go a little bit further. It's just quality, so when you're assessing student work, putting personal comments, not just things like, 'Great work,' or 'Good on you,' or 'Work harder,' but actually detailing what areas need to be improved. (L1)

Overall, although recognised, teacher feedback to students was not a particularly strong identification for leaders of the expert teacher.

5.8.6 CATEGORY: IMPLEMENTS BEHAVIOUR MANAGEMENT STRATEGIES

The category 'Implements Behaviour Management Strategies' is defined as the teacher ensuring students are appropriately behaved in the classroom to enable productive learning to occur for all students. The two codes for this category are presented in Table 5.7.

Leaders did not express explicit views on 'behaviour management' and expertise. Rather, they alluded to behaviour management less directly. Aspects of behaviour management were embedded in the management of various routines, including planning effective lessons, observing student engagement patterns and connected to student rapport and relationship development. As an example, L3 noted that the expert was distinguishable in the following manner¹¹³:

You know you're seeing and hearing an expert when you are ... watching someone in total control of the space they are in, who is not dominating, who is issuing really clear and focused instructions, who is eliciting engaged responses from the class. It's

¹¹² code: *gives feedback to leaders or students*

¹¹³ code: *is in control but not dominating the space*

all those things, but essentially comes down to seeing someone who has thought about what they're doing. Who is running to a particular agenda. Who has clear focused outcomes for that class.
(L3)

L4 expressed it in terms of an engaged classroom where an expert would 'keep an eye out too for those dwellers off the side,' intimating that any intervention would occur before a particular problem arose¹¹³. L1 identified experts as 'confident in their ability to control a class, to get on with the kids, to address issues of behaviour and to get the teaching occurring'¹¹⁴.

5.8.7 CATEGORY: DEEPENS LEARNING FOR STUDENTS

The category 'Deepens Learning for Students' is defined as the teacher promoting the learning concepts at a deep level of sophisticated learning, as opposed to only applying surface learning concepts. The codes for this category are presented in Table 5.7.

Leaders discussed some methods relevant to pedagogical practice they perceived the expert teacher to employ more effectively than a non-expert teacher¹¹⁵. An example was layering concepts in lessons:

I think at the extreme level of excellent teaching is layering, where you're teaching about Indonesian history, but you're using this lesson to focus on ethics and a principle of ethics. Then the next level, the next lesson might be on Indonesia, but you tap into economics. So, by combining things, you're showing them how interconnected things are. And when kids are able to have that conversation, when kids are able to say back to each other, 'Give me an analogy for this, put that in another way, show me that you understand that', that's when you know. So, to be an A standard in most maths-science subjects, you have to demonstrate a discerning ability on familiar and unfamiliar contexts. Their capacity to respond to an unfamiliar context is a really good indicator of exactly how well they're swimming. It's different for them to regurgitate back what you've done, but for you to put it in a different way, and have them own that. (L2)

¹¹⁴ code: *behaviour management is effective*

¹¹⁵ code: *layers learning concepts to deepen understanding*

Another leader (L5) suggested that it was one thing for students to go home happy from school each day, compared to going home happy and after being challenged intellectually in the classroom. L5 stated 'happy kids, happy school', and suggested students might 'jump into the car at the end of the day and say, "Oh, I had a brilliant day at school, Mum"'. However, this does not reflect the work of an expert. according to L5, who suggested that an expert achieves happy students while simultaneously creating challenging learning environments. L5 also suggested that expert teachers would use questioning techniques to really 'tease out ideas' as another means of deepening learning concepts¹¹⁶.

5.8.8 UNDERSTANDS NEUROLOGICAL LEARNING PRINCIPLES

'Understands neurological learning principles' is defined as the classroom teacher having knowledge, awareness and application of some extended, relevant, specific learning principles or concepts in areas such as brain development, memory, learning psychology or more complex learning principles and using this understanding to help shape the teaching approach. The codes for this category are presented in Table 5.7.

One leader, L2, suggested differentiation (identified in a previous theme and category) was most ideal where 'styles of learning and catering to each individual child is a really valuable aspiration' but added that differentiation was 'more of a mantra that we chant out that every child is blah, blah, blah.' Furthermore, L2 questioned whether, as a profession, teachers can actualise authentic differentiation with a class full of students, suggesting a more valuable attribute of expertise for a teacher was knowledge and application of brain plasticity¹¹⁷ and other related concepts:

I'm more concerned with the kids, the students and the staff – understanding what is required for the brain to learn. Do they understand principles of plasticity, do they understand that they need to attend, it's the approach to the cognitive, intellectual development, their understanding how that works, that is that third arm that I think makes a huge difference? (L2)

L2 further added it was important for teachers to understand 'why they're [students] behaving a certain way' and referred to 'semantic memories, episodic

¹¹⁶ code: *understands difference between engaged happy students and effective learning*

¹¹⁷ code: *is aware of brain plasticity principles*

memories, procedural memories and how we can tune those through understanding our brain.’ L2 described this area as ‘neurological and sociological psychological development’ of student learning principles¹¹⁸ and added the importance of a teacher:

Understanding their cognitive development, and what stages they’re at, and then understanding the principles behind learning, behind memory, behind differentiation, behind understanding those principles, and then understanding psychologically what they’re likely to be going through. It balances and informs all of those other things. The way that we develop content units is based upon and understanding [of] the individuals and what they can achieve and what is within their realm to achieve if that makes sense. (L2)

This theme did not receive attention by the leader case other than L2, however, was included because of its significance in learning approaches.

5.9 THEME: POSSESSES A DEEP MASTERY OF SUBJECT KNOWLEDGE

The theme ‘Possesses A Deep Mastery of Subject Knowledge’ emerged from the codes and categories presented in this section of the chapter. The only category presented in this theme is domain knowledge. Table 5.8 identifies the codes and category for this this, which are detailed further below.

Table 5.8: Emergent Theme: Possesses a Deep Mastery of Subject Knowledge

Category	Code
Possesses Domain Knowledge	<i>Possesses a depth of subject knowledge</i>
	<i>Uses knowledge to make further connections</i>
	<i>Possesses mastery of specific subject knowledge</i>
	<i>Possesses general professional knowledge</i>

5.9.1 CATEGORY: POSSESSES DOMAIN KNOWLEDGE

‘Possesses Domain Knowledge’ is defined as a form of content- or skill-based, domain-centred knowledge that informs teachers about the subject knowledge that needs to be taught to students. It does not include any means of how to apply or pass

¹¹⁸ code: *has cognitive and neurological learning awareness*

on that knowledge. Within this category, four codes were identified and these are presented in Table 5.8.

Every leader involved in this case study identified domain knowledge as an attribute of the expert teacher. Domain knowledge, subject knowledge or content knowledge, (terms used interchangeably), was also typically identified more quickly by leaders than many other attributes. For instance, L1 stated, 'I think probably the first thing would be a depth of knowledge and understanding of the subject'¹¹⁹. Adding to this, L7 specified: 'Strong knowledge content ... the knowledge has got to be deep. It's not just surface knowledge.' Like some others, L9 also identified 'strong content knowledge' and added: 'I expect them to have skills in making connections in knowledge. They'd have expertise in using their environment as a learning tool and creating engaging learning environments'¹²⁰.

In the teaching context, L10 suggested (subject content) knowledge was compartmentalised and specific to a particular area, and that a teacher was not an expert generically¹²¹, but rather has, for instance, 'expertise as an English teacher'. This was an important distinction to note, because the implication was that a teacher moving from their familiar domain area to an unfamiliar one would result in a loss of expertise. L9 noted that 'our profession can be quite diverse' and without specific content knowledge the teacher would shift on 'that continuum again'. L6 agreed, suggesting that if required to teach outside a domain area, '[the teacher] would be right at the start [of the expertise continuum].'

However, L8 offered a different perspective, stating that teachers have general skills in common, not merely based on domain knowledge¹²², while also accepting that 'subject knowledge might be specific to a certain sector.' L10 amended this view after some discussion and stated that you could in fact 'do expertise as a teacher. It could be broadly applicable'. These comments retreated somewhat from the earlier position that expertise in teaching was narrowed to the domain content area. A related discussion suggested that an expert teacher in another domain area would learn a different domain more quickly, having expertise as a teacher, and progress at a more rapid rate than a non-expert would. In relation to this context, L6, followed by L13, proposed the following:

¹¹⁹ code: *possesses a depth of subject knowledge*

¹²⁰ code: *uses knowledge to make further connections*

¹²¹ code: *possesses mastery of specific subject knowledge*

¹²² code: *possesses general professional knowledge*

The idea of expertise can be really narrow. It can be very small, and people can be an absolute expert in a small field and the skills are transferrable and I think one of the key things is, perhaps as an expert, you have the skills to actually seek out the next step in the knowledge that you need to attain. (L6)

If they're an expert teacher, they will learn, and we often have teachers bridging over areas, and some people can't do that well, but an expert teacher will manage the content and be learning as the students learn but, because they are expert in the classroom, they can help students' learning although they don't necessarily have all of it in place. (L13)

L12 disagreed with L13 about learning as the students learn, suggesting that:

The problem with that is, that sometimes when you're learning and teaching at the same time, you're missing stuff. I think you miss things sometimes when you're doing things, if you're one step ahead of the kids. (L12)

When contemplating some of the different dimensions of teacher expertise, L2 indicated that subject curriculum knowledge was the most important, beyond other areas. L2 referred to this as curriculum knowledge to communicate subject content knowledge.

In terms of pastoral care, some people are just naturals with other kids, naturals with teens, naturals with pre-teens. So, there's a degree to which you can't really make a pastoral care teacher and what we should do is employ people who are pastorally sound. Then the theory was that we can upskill them with curriculum. On probably the other side of things, and I would argue that without sound curriculum knowledge, and you can certainly upskill that, but it takes a lot of time. Without somebody whose personal bent is towards an extremely sound knowledge of their curriculum, the depth and the breadth of it, then the pastoral care isn't going to be of that much use. So my tendency is towards getting people to really focus on, first of all, just pure content. Just that they understand their content inside and out and be on their content ...

then I think that [when content and curriculum knowledge is strong] the pastoral becomes less of a factor. (L2)

Most leaders did not share L2's view that this form of knowledge was most important; rather, they explicitly stated levels of importance. For instance, L4 and L8 talked about the importance of having a balance of knowledge in several areas of professional practice to be considered an expert teacher. L14's comment was an example: 'It's one thing to have the deep discipline knowledge, [but] in terms of teaching expertise, you've got to be able to have a repertoire that you draw on and know how to adapt all the way through your work.' L13 further stated, 'it's not just about knowledge, but applied knowledge'. L11 and L12 also both agreed that having deep domain knowledge to draw upon, and effectively applying that same knowledge, was important to being considered an expert teacher. L13 provided a perspective trying to differentiate the expert from the non-expert, using similar thinking:

An expert teacher will be able to help students learn ... I think that an expert teacher should be an expert learner because they understand the art of learning, and are working with students through the learning process. Expert teachers understand about classroom management, inquiry, and how we go about that learning process. What we learn about isn't necessarily all that we do in teaching. (L13)

Leaders provided a consensus in this case study that the expert teacher has strong content knowledge of relevant subject area. This was the only specific area of complete consensus in both case studies: that of expert teachers possessing a single area of expertise. Leaders did not suggest that this entirely determines an expert teacher, though they did express that it is essential to be considered one.

5.10 CHAPTER CONCLUSION

This chapter presented the results of the leader case from the individual and focus group interviews. The analysis and interpretation of the data revealed that the participants in this case study each had a personalised conception of what expertise was in teaching. The strength of each of the themes varied because they each have different characteristics; the importance of each theme depended on the participants' perspective or on the theme's particular features. Most of the participants' responses appeared to describe attributes and practices that are suited to a continuum. Another

contextual feature of the results was that some leaders described an expert teacher, or expertise in teaching, in a narrative approach. Sometimes the approach involved providing a brief theoretical conception before transitioning into the narrative of self-practice to explain their perceptions about aspects of expertise. That is, some participants tended to reflect on their own practice and articulated their responses by describing how they practiced in specific situations, giving examples.

Despite the variations that occurred among individual participants, clear themes emerged. These were revealed by following Creswell's (2014) seven-step data analysis process. Five themes emerged from the thematic analysis process:

- Builds Relationships with the School Community
- Open to, and Seeks Out, Opportunities for Professional Growth and Improvement
- Displays Particular Character Traits and Qualities
- Demonstrates High Quality and Effective Pedagogical Practice
- Possesses A Deep Mastery of Domain Knowledge

Respondents conveyed the theme of 'Possesses a Deep Mastery of Subject Knowledge' as an essential attribute to be considered an expert teacher. This attribute was also one that tended to be raised early in most of the interviews and stated explicitly by all participants. Overall, participants suggested that a teacher would not be an expert without deep knowledge of the subject matter they were teaching.

The theme 'Displays Particular Character Traits and Qualities' was one that had a larger number and wider range of responses. Some of these included traits and qualities such as humility, passion, integrity, confidence, being open-minded, adaptability and having an accurate sense of self-perception and not allowing ego to impact adversely on teaching and collegiality. Other traits and qualities involved a greater level of interaction with others, including demonstrations of respect, empathy and trustworthiness. Traits and qualities clearly were part of each leader's conceptualisation of an expert teacher.

The theme 'Demonstrates High Quality and Effective Pedagogical Practice' included a range of different examples provided by all participants. Participants provided examples of practice to illuminate an expert teacher's knowledge and skills in this dimension of teaching. Examples provided included planning, delivery, flexibility, anticipation, differentiation, engagement of learners, questioning techniques, behaviour management and methods to deepen student learning.

The 'Builds Relationships with the School Community' theme was recognised as a clear practice of the expert teacher, though its value and level of importance varied among participants. Within this theme, some perceived it to be either more, less or equally valuable in comparison to other attributes and practices. Leaders focused their views on students and colleagues, particularly when discussing the importance of developing relationships. A prominent perception was that experts form connections with students by taking an interest in their learning, and inspire students to learn by getting to know their interests.

The remaining theme, 'Open to, and Seeks Out, Opportunities for Professional Growth and Improvement' involved participants' perceptions focusing on the importance of being open-minded (as a mindset), adapting to change, being flexible in practice, reflective, seeking and providing professional feedback, searching for continual improvement and demonstrating awareness in their school setting. Participants expressed an expert was one who actively pursued growth and improvement and invested in self-learning.

The themes that emerged in the leader case, along with the contextual features mentioned, will be carried forward into Chapter 6 where the features of the teacher and leader case will each be compared and contrasted.

CHAPTER 6

DISCUSSION

6.1 INTRODUCTION

The aim of this study was to investigate how teachers and leaders conceptualise-operationalise expertise by exploring their perceptions of the attributes and practices of expert teachers. This study investigated how expert and experienced non-expert teachers were discerned by participants, though did not focus on novice-expert comparison to the extent that other studies in expertise in teaching do (Smith & Strahan, 2004; Williams & Ericsson, 2008). A secondary aim of this study was to research how teachers developed their practice leading to expertise. The themes that were presented in the two results chapters have been carried forward to this chapter for further consideration, discussion and comparison, for the purpose of informing colleagues in professional environments.

The research project was carried out across three independent schools in two different states and one territory of Australia. A qualitative multiple case study methodology was employed within an interpretivist paradigm. The perceptions of teachers and leaders in schools were analysed as two separate cases. Arising from the data analysis process (Creswell, 2014), five themes emerged in the respective cases. The findings of the cases will be examined by comparing categories within the themes.

The results of case study methodology are bound within the case and therefore not typically generalisable to other cases (Yin, 2009). For this research to be potentially informative in other professional contexts, however, this chapter returns to the literature to explore several theoretical frameworks as a conduit between this study and other professional settings. Those explored and determined as suitable were Ecological Systems Theory (Bronfenbrenner, 1994), and Practice Architectures and Ecologies of Practices Theory (Kemmis, Edwards-Groves, Wilkinson, & Hardy, 2012; Kemmis, Wilkinson, Edwards-Groves, Hardy, Grootenboer, & Bristol, 2014a).

These two frameworks are well-suited to this study and situate the findings in this discussion chapter. This chapter discusses details of the relevance of these theoretical frameworks. After the five emergent themes from the two cases have been examined, the themes are mapped within the theoretical frameworks (Ecological

Systems Theory and Practice Architectures and Ecologies of Practice Theory) before further exploring the thematic relationships. To complete this chapter, the research questions are revisited to further discuss the findings.

6.2 COMPARING THE TWO CASES

In this section, the teacher and leader cases are compared and contrasted for similarities and differences arising from the data analysis process. Although analysed entirely separately as two individual cases using Creswell's (2014) seven step thematic process, similarities ultimately led to the same emergent themes in both cases. Across the three sites, teachers and leaders each (as a case) had distinctly different vantage points within their schools. The roles across sites were typical in terms of responsibility for classroom teachers and for leaders enabling two cases to exist overall. Despite these varied positions within respective school settings, both cases had in-common features across the three sites as well as differences. The distinctive vantage points may explain the differences that emerged within the five themes of both cases. Though, there were also considerable similarities too in the categories and codes within themes. In this study, all leaders were also classroom teachers for some of their workload and this provided a commonality between cases which was likely influential in the data captured. Leaders could relate to the teacher experience, because teaching was also part of their routine, though the same cannot be said for teachers who were not also leaders.

Some differences between the cases became apparent during the data capture stage during the interviews and focus groups. At that early stage, as the researcher, the impression was that leaders were more philosophical towards teaching as a profession with more use of metaphors and embedding character traits into practice. The teacher case gave an early impression of having a greater focus on the more technical aspects to classroom practice, as well as viewing relationships as important to develop expertise. Leaders appeared to view expertise in teaching more broadly. However, the topics that arose had strong similarities and this was noticeable at the interview stage. After reviewing the data in the form of transcriptions professionally converted from audio recordings, similarities and differences became more apparent, and confirmed those earlier impressions. As a finer review of the data analysis process occurred, it revealed that many perceptions of expertise were in common between the teachers and leaders when viewed as collective cases, and more so than differences. These similarities and differences are explored further in this chapter in

detail. The implications of the similarities and differences now converge to analyse how teachers and leaders conceptualise-operationalise expertise in teaching.

The themes, illustrated in Figure 6.1, are: 'Builds Relationships with the School Community'; 'Possesses a Deep Mastery of Subject Knowledge'; 'Demonstrates High Quality and Effective Pedagogical Practice'; 'Open to, and Seeks Out, Opportunities for Professional Growth and Improvement'; and, 'Displays Particular Character Traits and Qualities'. Some though not all codes and categories were the same or similar, within each case. Codes and categories are revisited and explored within each theme in the next five sections. All codes and categories are represented in this chapter in the respective case comparisons presented in each table. These have been carried forward from Chapter 4 and Chapter 5 (Results of both cases), and the most pertinent of these to accurately communicate participants' perspectives are discussed in further detail. Due to the volume of individual codes presented in the results in previous chapters, not every single code is necessarily elaborated on as part of the discussion. Further discussion is also carried forward into the next and final chapter, Recommendations and Conclusion (Chapter 7). A positive of the similarity between cases is that it provides a platform for teachers and leaders to work towards conceptualising and operationalising expertise from common ground.

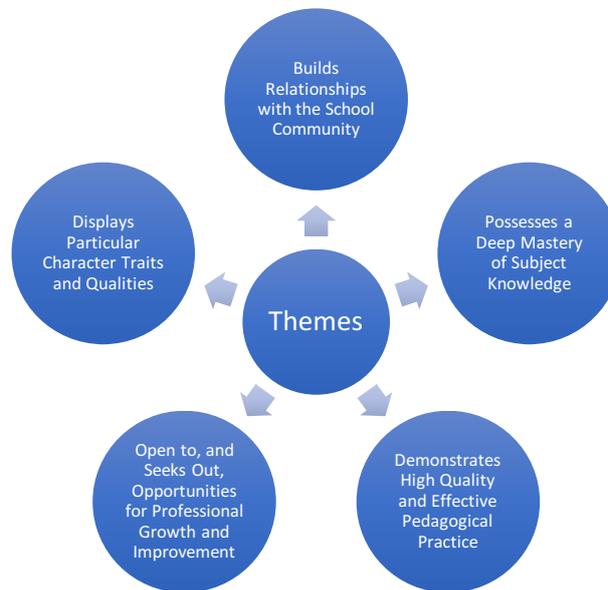


Figure 6.1: Themes to emerge in both case studies.

6.3 THEME: BUILDS RELATIONSHIPS WITH THE SCHOOL COMMUNITY

The theme ‘Builds Relationships with the School Community’ emerged prominently in the results of both the teacher and leader cases. The categories ‘Whole Student’, ‘Connects/Bonds with Students and Demonstrates Collegiality’ were each a prominent contributor in forming this theme. Participants characterised an expert teacher as one who embeds an authentic pastoral approach that was ‘not mechanical’ (T5) as a way to get to know students. Smith & Strahan (2004) suggest that the best teachers maximise the importance of developing purposeful relationships with students, and participants in this study described the inherent benefits of taking a relationship-based approach to teaching. The Queensland Government Department of Education and Training (2016) state the ‘core business of schools is to provide students with a rich learning environment that is open, respectful, caring and safe’ (para. 1). L3 described building positive relationships with students as the ‘core business that happens in classrooms’. T4 also positioned the importance of building strong student relationships as:

You can’t teach the curriculum without the pastoral care ... I think that they interconnect quite significantly every single day and every

single lesson ... your curriculum is nothing without pastoral, because otherwise you're ineffective and they're not getting any of the curriculum. (T4)

Participants expressed that student engagement in learning occurs more effectively when teachers show care for students, know students well, and support students - a view supported in the literature (Crosnoe, Johnson & Elder, 2004; Fosen, 2016; Mart, 2013). This needs to occur on personal and individual levels, not merely at an impersonal whole-class level, or an academic level only (Rubie-Davies, 2015; Wentzel, 1997). According to participants, this deepened level of interest and care led to 'rapport building' (T5) as a foundation for important student-teacher relationships to then develop (Davis, 2006). Some participants suggested that this also promotes students 'to want to work harder for you [teacher] and do more for you to end up getting better results' (T8), and to take a view 'they [student] can't let their school down' (T7). Rapport building by teachers (towards their students) and developing positive student-teacher relationships are among some of the most significant and consistent predictors of academic achievement in students (Davis, 2006; McCombs, 2003). Committed passionate teachers who care for their students constantly search for better ways to connect with their students to have positive outcomes for students (Carbonneau et al., 2008). Passionate teachers also find a deeper meaning in their work which motivates them (Fried, 1995) to the point that Fried (1995, p. 19) suggests that passion provides teachers with a rationale for their dedication, stating, 'I know why I am devoting this life I've got to these children'.

Participants conveyed that one outcome of taking this particular pastoral approach was the development of additional qualities of the relationship such as 'mutual respect' (L10), also noted in the literature by Fried (2001), which, in turn, builds trust (Di Stasio, Savage & Burgos, 2016). Knowing students on individual and personal levels, showing care, building rapport, connecting, bonding relationally, engaging with, and taking an overall pastoral approach, were all attributes and practices identified by participants in both cases as characteristic of the expert teacher's purposeful approach. In the leader case, L13 stated that an expert can engage all students, including 'a less able student, as well as your able student, and know the difference'. Some students and classes are easier to teach than others, notes Whitehurst, Chingos & Lindquist (2014), and respondents intimated that a non-expert may selectively and inaccurately evaluate their student-teacher relationships (L13). Engagement is an important factor to be present for authentic and effective learning

to occur in schools and teachers make a significant and direct contribution to student engagement (Martin, Malmberg & Liem, 2010).

In addition to student-teacher relationships, participants in both cases also identified that developing collegial relationships was a crucial behaviour of the expert teacher. This was described as engaging with colleagues to share ideas and resources which enabled teachers to improve practice. The leader case identified an expert as actively contributing to positive staff morale, in addition to mentoring other teachers and also being open to learning in a reciprocal sense, thereby strengthening relationships as well as improving professional practice in the process. The benefits of collegiality have for some time been well-recognised in schools (Hargreaves, 1994; Jarzabkowski, 2003; Nias, Southworth & Yeomans, 1989). Jarzabkowski, (2003) suggests that collegiality benefits teachers in schools in a number of different ways, such as reducing attrition, strengthening teacher relationships increasing morale and happiness, and providing emotional support to other teachers, all of which benefit the school and students. An expert teacher can contribute to collegiality in significant ways that impacts positively on school environments, as literature reveals. Some leaders, such as L10 and L13, stated the need for collegial relationships to occur to enable expertise to develop. L13 described the need for 'engaged communities of practice ... [who were] willing to listen to others giving them feedback on their practice'. This sharing and engagement with colleagues was labelled by some leaders as a catalyst for improvement. Shute (2007, p. 1) states that 'feedback used in educational contexts is generally regarded as crucial to improving knowledge and skill acquisition', as well as a key motivator to learning (Moreno, 2004), relevant to both students and teachers. There was some contention, however, in the leader case about the concept of collegial sharing and its impact on expertise. Some suggested that an expert could exist without being collegial, and 'live in your [one's] own bubble' (L8). Barth (2006) labels this form of interaction in schools as 'parallel play ... where we all live in separate caves [a metaphor for classrooms]' (p. 9). Other leaders disagreed with their colleagues, explaining the 'bubble creates a wall' (L10), a metaphoric barrier against true collegiality where so many reciprocal relationships are formed as a basis for sharing and learning (Barth, 2006).

The concept of collegiality had some subtle differences between the two cases. Data from the teacher case showed that teachers viewed several particular identifiable dimensions to collegiality. These included, collegial relationships that had a direct and tangible benefit to the improvement of professional practice as part of its purpose. Another was demonstrating collegiality for the purpose of building

relationships without an obvious direct and tangible benefit other than nurturing the relationship itself. In the leader case, the data showed that leaders also viewed collegiality as an important attribute of an expert teacher. However, a key difference between the cases was that leaders attributed a direct and tangible benefit to collegiality that involved expertise, beyond the specific purpose of relationship building. That is, both cases identified collegiality as being a key attribute and practice of an expert, however, the leader case was more pointed in its purpose while the teacher case was multifaceted in its purpose. This explains the differences in Table 6.1 in the category of 'Demonstrates Collegiality'. The other relevant table to view in this context is Table 6.5 which shows the category 'Demonstrates Collegiality to Enhance Practice'. The decision was made to separate these two categories to better illuminate the differences rather than merge them together.

In addition to these differences, the teacher case also included parents as an extension of an expert teacher's relationship-building network. However, parent relationships were not a point of discussion in the leader case. Unlike collegiality, there was little data generated in this category overall. Codes were included in the teacher case despite it not being frequently stated as an attribute of an expert, rather it was included because of its interpreted significance, though stated by the minority of teachers. The context of the teacher case raising parents (category 'Including Parents', Table 6.1) as an attribute of an expert was directly in relation to promoting relationship building, which was connected to the students of the teacher. In these schools, leaders tended to have a different relationship with parents that was less directly related to individual students (in a classroom setting) and were often not the first point of contact, unlike the classroom teacher who typically was the first point of contact with parents for both proactive and reactive reasons. Because leaders did not raise the connection to parents, the reasons and differences cannot be fully explained. There may be other explanations, such as leaders prioritising other attributes and practices of expertise, and it not coming to the mind of leaders during the interviews.

'Collegiality' and 'Includes Parents' were not the only topic to generate some disagreement within the cases, or between cases. The category 'Student First' emerged, as several leaders emphasised the importance of considering the individual needs of the student before considering the importance of teaching content. This ideal emerged in comments such as, 'I teach ... [subject stated] but I also teach students first and foremost' (L13). Highlighting that differing views prevailed on this topic, and that not all leaders perceived relationships as equally important, L2 stated:

Without somebody whose personal bent is towards an extremely sound knowledge of their curriculum, the depth and the breadth of it, then the pastoral care isn't going to be of that much use . . . They'll [students] tolerate you, they'll use you, but that's it. So, the pastoral, there's no substitute... [for not knowing content knowledge]. They'll put up with a complete tool, as long as they know their business ... [but] then all that happy feel-good making-you-comfortable, it's of little use, I think. (L2)

L2 suggested that subject content knowledge offered higher value to a student, compared to the potential benefits of taking a pastoral approach, if choosing between one or the other in a teacher's approach; however, L2 had also suggested that a teacher who offered both aspects was most valuable. L5 was another leader who asserted some cautiousness on this point, suggesting that just because a classroom had 'happy kids [having a] ... brilliant day', it did not necessarily mean the student was being taught effectively by a teacher, even if students and their parents were quite content. L5 added that ensuring students were challenged and experienced rigour in learning were also essential when considering the level of expertise of the teacher. L13 affirmed a similar view, stating, 'some people who have great relationships with kids ... doesn't [necessarily] make them good teachers'. In discussion during one focus group, L11 noted that students and parents at that same school, more than a decade or two previously, correlated being a 'good bloke' (L11) [in context of an all-male student body, and described as a mostly male staff in a previous 1980's-1990's era of education, in focus in context to the gender reference] with being a good teacher. However, L11 acknowledged that, in the current era, students expected that 'an expert practitioner is professional and has knowledge about their subjects and their teachings' and that more was now required than being a 'good bloke'. A possible reason that teachers did not explicitly express expertise as 'Prioritises Student First' as leaders did, was that teachers expressed the importance of students in many different and multifaceted ways throughout the interviews. These variations were captured in a range of different categories, without it being explicitly stated. For example, 'Connects and Bonds with Students' may be interpreted as placing students needs first. Similarly, 'Demonstrates a Holistic Approach to Students' may be interpreted as also placing a student's needs first. Conversely, a rival explanation could be that leaders viewed a student's needs as the

highest priority with greater emphasis or clarity beyond the teacher case. As teachers did not state this explicitly, it cannot be fully explained with data available.

Developing and sustaining high quality respectful relationships was a ‘huge attribute’ (T2) of the expert teacher, although leaders, most particularly, cautioned that this attribute alone was inadequate to determine expertise. All participants identified value for a teacher to build relationships as an attribute of expertise; however, the emphasis on the level of importance varied considerably. Some teachers (for example, T1) stated it was the most important attribute of a teacher. Literature acknowledges the importance of student teacher relationships on a number of factors including student behaviour (Gest & Rodkin, 2011), wellbeing (Di Stasio et al., 2016) and improving academic achievement (Boaler, 2016). Others were more balanced in their views, while some, like L2, did not place high value on the pastoral relationships compared to curriculum delivery and content knowledge. In both cases in this study, all participants identified substantially more attributes and practices of an expert’s overall approach beyond building relationships with those in the school community. However, being a builder of relationships was considered a critical contributor to expertise status.

The various multi-directional relationships within a school community are an integral dynamic involving teachers at the core. The theme is based upon the building of relationships as an attribute of an expert teacher and aligns with ecological theories in social science. For instance, Bronfenbrenner’s Ecological Systems Theory (1994), the framework is based upon the nested relationships an individual has with others close to the individual teacher (for example family, colleagues, and students) through to wider societal entities (for example, economies). Similarly, (Kemmis et al., 2012; 2014a) Theory of Practice Architectures is based upon what composes practices, while the Theory of Ecologies of Practice is based upon the interdependence of practices and the relationships occurring within the ecology of related environments. Both case studies identified relationships as a critical feature of the expert teacher. Comparisons of categories and codes for this theme are listed in Table 6.1.

Table 6.1: ‘Building Relationships with the School Community’ Theme. A display of teacher and leader case codes and category comparison.

Category	Code	Teacher Case	Leader Case
Prioritises Student First	Places students’ needs before content delivery		●
	Fits content to the student		●

Demonstrates a Holistic Approach to Students	Knows personal interests of students	●	●
	Takes a pastoral approach	●	
	Creates opportunities to know students		●
	Understands students		●
	Caters to individual commitments	●	
	Accepts responsibility for student success	●	
Connects & Bonds with Students	Engages students	●	●
	Cares for students	●	
	Connects with students	●	●
	Develops rapport with students	●	
	Inspires students to learn		●
Demonstrates Collegiality	Communicates expertise to colleagues	●	
	Engages with colleagues	●	
	Shares colleagues' ideas	●	
	Adopts colleagues' ideas	●	
Includes Parents	Builds relationships with parents	●	
	Communicates with parents	●	

6.4 THEME: POSSESSES A DEEP MASTERY OF SUBJECT KNOWLEDGE

Teachers and leaders alike valued knowledge as an attribute of an expert. Different types of knowledge emerged in the data, including subject-based content knowledge, pedagogical knowledge, knowledge of students, knowledge of curriculum, and specific knowledge of brain plasticity principles. For example, among the variety of responses, knowledge was referred to as: 'comprehensive knowledge' (T5); 'I guess knowledge of curriculum' (T2); 'depth of knowledge' (T9); 'body of knowledge' (L2); 'I'm always looking ... for ways of refreshing and enriching my own knowledge' (T9); 'first thing that comes to mind is just knowledge (T8); 'it's just that body of knowledge that you have that other people don't have' (T9); 'knowing about things' (T8); 'extremely sound knowledge of their curriculum' (L2); 'knowledge base' (L10); 'I can get knowledge' (L9); 'subject knowledge' (L13). Some of these descriptions of knowledge were quite clear which type of knowledge

was being referred to. Theorists recognise specific types of knowledge in the profession, many of which were also raised by participants, as stated, in this study (Agathangelou, Charalambous & Koutselini, 2016; Ball, Thames & Phelps, 2008; Kleickmann, Richter, Kunter, Elsner, Besser, Krauss & Baumert, 2013; Sadler et al., 2015; Ward, Kim, Ko & Li, 2015). Knowledge of teaching practice is sophisticated and described as 'rich experience' by Dinham (2008, p. 9).

On other occasions, however, it was not clear which type was being specifically referred to, if any specific type at all. Thus, there appears to have been occasions when reference to knowledge was omnipresent, reflecting the various collective types of knowledge of an expert teacher that may fuse together and be difficult to separate. This existence of ambiguity of knowledge type in teaching expertise and being able to identify which is most valuable and desired is consistent with the views of Sadler, Sonnet, Coyle, Cook-Smith & Miller (2015) who assert that 'Everybody wants teachers to be knowledgeable. Yet there is little agreement on exactly what kinds of knowledge are most important for teachers to possess' (p. 1021). In light of this, it is not just the *value* of knowledge per se that warrants attention, it is also discerning the *type* of knowledge that these respondents valued and identifying each of these differing types. It may also be that when participants simply referred to 'knowledge' of the expert, they were suggesting the expert holds knowledge in all relevant types to teaching practice, or it may have been in reference to a specific dimension of knowledge.

Of the types of knowledge referenced in both cases, one stood out for being more stated than any other type. Subject content knowledge was one clear attribute said to be that of an expert teacher and was most referenced compared to all other specific types of knowledge. Subject content knowledge emerged early in both case studies during the interviews and focus groups. It was clear in both cases that subject content knowledge was a particularly valued attribute. Within this study, subject-based content knowledge (SCK) was also the only single attribute stated explicitly by every leader, and almost every teacher (with the exception of one teacher, who referenced 'knowledge' more generally); no other single specific attribute was as frequently referenced. It was often stated in this study that SCK was an important attribute and contributor toward expertise, and the importance of SCK is well-supported in the literature (Ball, Thames & Phelps, 2008; Depaepe, Verschaffel & Kelchtermans, 2013; Guerriero & Deligiannidi, 2016; Ward, Kim, Ko & Li, 2015; Kleickmann, Richter, Kunter, Elsner, Besser, Krauss & Baumert, 2013).

However, while almost every participant raised its importance in context of this study, there was some discussion that compared the relative value of SCK and building relationships, in regard to which was the *more* important attribute of expertise in teaching. This discussion was raised because both attributes were strong and prominent and both raised early in the interviews, typically. The comparison was pursued by the researcher to gain further depth of understanding of the relative importance. The views were mixed on this importance, with some prioritising one attribute over the other, while some stated they were both equally important, which was the more common view. In both cases, SCK was said to be required to be an expert. For example, one participant (T9) conveyed it in this light, which reflected the sentiments expressed in both cases, particularly early in many of the interviews:

Depth of knowledge definitely is a prerequisite to being an expert teacher. I don't think you can actually be an expert without a depth of knowledge in the life of what you're teaching. (T9)

However, as discussion continued on the topic in the leader case, participants proceeded to include a range of other attributes along with SCK. After an hour or more of discussion on the various different attributes of expertise in teaching, these leaders were asked to revisit the notion of expertise in teaching, and to describe the single most valuable attribute (of any type at all). This was aimed at refreshing their views after working through a large number of attributes. In their responses where their most valued attributes and practices were expressed (in responding to a question of this type), no leader included SCK as one of them. To some extent, this contradicted their initial responses. When questioned about the reason, most suggested that other attributes were more crucial and SCK could be learned, or taught, whereas some of the other attributes could not. It was described metaphorically by T9 as 'opening the door' to expertise. As the researcher, this situation was interpreted to be aligned with Bereiter & Scardamalia, (1993) perspective that, 'there are no experts who lack expert knowledge in their fields' (p. 44) and further suggested that, without superior knowledge, one cannot be expert. Furthermore, Chi, (2006) equally identified that there is more to an expert's repertoire than possessing a great deal of knowledge in a subject area. This analysis of participant data is not to diminish the value of knowledge, specifically, SCK, rather it accurately reflects that participants appeared to articulate a more sophisticated view of expertise after considerable discussion and contemplation of many other attributes.

While the high value placed on SCK as an attribute of the expert was clear in both case studies, participants did introduce other attributes that they also rated highly. Some participants later failed to identify SCK in their highest priorities of expertise in teaching. In an attempt to provide some additional analysis and explanation, some literature questions the modern-day importance (Jones, 2011; Wagner & Dintersmith, 2016) of SCK as remaining *as* crucial for contemporary educators and education more broadly in schools *as it once was*. The rationale for this view is that the role of the classroom teacher is changing due to almost ubiquitous access to the internet by students and teachers (which is overwhelmingly the case in Australian schools) to the relevant subject content matter. Thus, the student is no longer as heavily, or solely, reliant on the teacher to provide the relevant subject content knowledge, though understanding the content, rather than merely accessing and interacting with it, is another dimension again. Mazur (2009) further advocates collaborative learning by solving real-world problems in favour of teaching subject content knowledge to students without more purposeful application.

Contemplating this perspective, it is not only at odds with some of the findings in this study, it presents as a conundrum as education progresses and considers the value of expertise in teaching: if SCK is the core area of a specialist teacher's expertise, as participants in the case studies have suggested, then diminishing this value has a considerable impact on the conceptualisation of an expert teacher. This is also because expertise is reported widely to be domain specific (Berliner, 2001; Berliner, 2004; Bucci, 2004; Chi, 2006; Chien, 2014; Ericsson, 2006; Ericsson & Poole, 2016). Without high levels of domain specific SCK, this shift raises questions about the priority participants in this study placed on SCK as a criterion for teaching expertise (this point is revisited in Section 6.4). This study is not suggesting that the participants' views are diminished in any way, rather it merely poses this query in relation to this finding and may be of value investigating further in future research.

In a more traditional consideration of the value and relevance of SCK, some teachers raised the predicament that occurred when asked to teach outside their subject-based domain specialisation and concurrently retain expert status. Some stated teaching in another domain would allow retention of expertise as a teacher, while others suggested any retention was on a continuum, with expertise diminished somewhat (though not entirely eroded). There was some disagreement on this projection of retention of expertise when a teacher is asked to teach outside of a trained area of SCK. One leader (L2) posited if they had to teach a Year 10 Physics lesson, they 'would not leave the room with any self-respect', given that Physics is

not L2's domain area. It seemed to depend how each participant interpreted the domain of a teacher and value placed on it. That is, either the specialist subject content area was considered the knowledge domain, or the domain was considered more broadly applied to teaching or, in some cases, a combination. An important consideration raised by this uncertainty is the position proposed by those who suggested a teacher retained their expertise when required to teach out of their subject content area (a common occurrence in schools) based on their ability to learn the new content quickly and efficiently, while transferring the knowledge and skills associated with teaching.

A proposition put forward by L2, and supported by others, was that experts are those who can attend to all the various forms of knowledge and facets of the role and fuse them together. Participants in both cases in this study identified forms of knowledge, most prominently SCK, as an important relationship attached to expertise. In addition to SCK, pedagogical knowledge (PK) was also recurrently expressed attribute of an expert teacher. Leaders further perceived that a deficiency in one of these two forms of knowledge impacted on the other. For instance, a teacher with insufficient SCK is less likely to encourage students to ask questions, out of their own insecurities about being perceived as an inadequate teacher. PK (Depaepe, Verschaffel & Kelchtermans, 2013; Hill & Charalambos, 2012; Kleickmann et al., 2013; Sadler et al., 2015) is discussed in the next section. Table 6.2 demonstrates that SCK was commonly stated in both cases, more than any other attribute of expertise, and with minimal variation among the two cases.

Table 6.2: Cross-Case Comparison Summary of Categories and Codes. ‘Possesses a Mastery of Subject Knowledge’ Theme.

Category	Code	Teache Case	Leader Case
Possesses Domain Knowledge	Possesses mastery of subject content knowledge (SCK)	●	●
	Possesses depth of subject content knowledge	●	●
	Retrieves knowledge effectively	●	
	Uses knowledge to make further connections		●
	Possesses general professional knowledge		●

6.5 THEME: DEMONSTRATES HIGH QUALITY AND EFFECTIVE PEDAGOGICAL PRACTICE

Pedagogical knowledge (PK) was the other common form of knowledge raised by participants as one basis to describe expertise. Participants in both cases considered highly developed pedagogical knowledge and the ensuing skills applied in practice as important and significant for an expert teacher, which is supported in the literature (Depaepe, Verschaffel & Kelchtermans, 2013; Hill & Charalambos, 2012; Kleickmann et al., 2013; Sadler et al., 2015). L13 commented that ‘there are lots of subject experts that are not necessarily very good teachers’. Within the focus group, L12 added an example: ‘you can be a really good scientist let’s say, and can’t do teaching’. In both cases, it was recognised that whilst SCK was a crucial feature of the expert teacher (Depaepe et al., 2013), it was insufficient without an ability to apply the knowledge effectively (Hook, 2015); thus, a high level of PK was considered imperative to be considered an expert. Non-expert teachers were, in part, ineffective because they ‘lacked understanding of how students learn’ (L13).

Participants in both cases collectively recognised a range of differing pedagogical practices said to characterise expertise, including the following examples: well-organised intentional lesson plans delivered with suitable timing and pace whilst being flexible and adaptable where needed (Dinham, 2010); awareness of individual learner needs and differentiation to meet these (Marzano, 2007) – few instructional strategies are stated in the APST, though differentiating teaching for learner needs is stated explicitly as an important strategy; analogising to capture individual interest and engage students in the learning process - NSW Government Education & Communities Office of Education (2013, p. 3) affirms that ‘high quality

teaching is the greatest in-school influence on student engagement and outcomes'; establishment of learning goals through clear instruction - (Berliner, 2001, 2004; Salkind, 2008), and engagement of learners through high expectations. Wittwer, Nückles & Renkl (2008) state that setting high expectations of learners is important, however, overestimating a learner's knowledge is detrimental to their learning; similarly, underestimating a learner's knowledge is also equally detrimental to their learning. Setting expectations that are high, and well-founded on knowledge of learner's capabilities, is important for effective learning to occur (Wittwer et al., 2008). Participants in this study identified the importance of setting high expectations, though they did not specifically discuss the impact of setting expectations beyond or below the student's capabilities. Participants did however, identify the importance of knowing their students and their learning needs, which broadly includes this practice of an expert teacher. Participants also stated that expert teachers used questions to draw out knowledge to improve learning (Findall, 2009; Loughran, 2010); employed effective behaviour management or are able to avoid behaviour management issues proactively through application of their own expertise (Yates & Hattie, 2013); and practised deliberate strategies to support this, such as pausing when it was necessary to refocus attention. Whilst both cases had these in common, value for numerous other practices resided in one case or the other. Participants consistently suggested the expert was a highly capable pedagogical practitioner.

Subtle differences also emerged between the teacher and leader cases. For instance, leaders described the expert as one who is in total control but not dominating the space. Another difference was that expert teachers demonstrated fluency in transitions between lesson phases, and were able to anticipate learning obstacles before they occur and implement learning strategies based on this anticipation. Leaders also discussed personalising learning - adapting and modifying to a diverse range of learners (Berliner, 2004), deepening learning by layering new concepts -which Torff in Moore, O'Neill & Barrett, (2005, p. 55) relate to moving learning content to focus on the acquisition of higher order thinking skills and understanding, transference of concepts across learning experiences, and having a clear vision of each learner's journey - as learning goals tailored for each student (Dinham, 2008; Salkind, 2008), as well as strategies to provide effective feedback (Yates & Hattie, 2013). Conversely, teachers discussed teaching the same concepts in multiple ways, identifying learning gaps, having a sense of responsibility to ensure each student succeeded, and empowering students. Participants suggested that an expert teacher employed highly effective pedagogical practices, and provided

numerous examples as evidence. The descriptions of those practices varied between participants and cases, however, collectively a clear theme emerged when analysing the data.

When comparing cases overall, (though not in all individual categories and codes) teachers applied a greater focus on pedagogical practice as one way to characterise expertise, more so than leaders. Teachers were more explicit and more detailed in their descriptions and provided a greater proportion of their overall responses within this emergent theme, compared to leaders. However, codes in the two categories, 'Questions Students Effectively' and 'Provides Quality Feedback,' were quite sparse with teacher identifications of expertise compared to leaders. Leaders provided numerous examples of expert teacher practice in both categories, while teacher provided only one code related to questioning students and did not discuss providing quality feedback. Leaders noted that an expert teacher provided feedback not only to students in the classroom, but also to leaders as well on the broad topic of professional practice. These differences were unexpected because overall teachers focused expertise more on pedagogical practices than leaders did. In these two instances, the differences were not obvious. One possible explanation is that leaders have responsibilities for overseeing student assessment and reporting in terms of analysis of results, and therefore they may be more readily conscious of both of these practices. The lack of teacher data in these instances makes it difficult to provide detailed explanations accounting for differences, though it is important to note they exist.

The next section moves beyond types of knowledge and focuses on the broad concept of the mindset of the teacher as an attribute that characterises expertise. Table 6.3 presents a comparison of identified categories and codes for both cases.

Table 6.3: Cross Case Comparison Summary of Categories and Codes: 'Demonstrates High Quality and Effective Pedagogical Practice' Theme.

Category	Code	Teacher Case	Leader Case
Demonstrates Effective Planning/Structure/Delivery	Plans intentional lessons	●	●
	Plans well-organised lessons	●	●
	Embeds suitable pace, timing and fluency in lessons		●
	Adapts flexibly to lesson needs	●	●
	Anticipates students' errors		●
	Embeds structure in lessons	●	
Differentiates & Personalises Learning	Differentiates learning	●	●
	Teaches same concept multiple ways	●	
	Amends lesson for learner needs		●
	Identifies gaps in individual learners	●	
	Identifies styles of learning	●	
	Knows individual learning styles		●
	Personalises learning		●
Engages Students in their Learning	Engages and captivates all students	●	●
	Analogises to capture interest	●	
	Environment is engaging		●
	Sets learning goals every lesson	●	
	Communicates effectively	●	
	Knows students as individuals in their learning		●
Questions Students Effectively	Poses questions to draw out knowledge	●	●
	Directs individualised questions		●
	Allows sufficient processing time		●
	Shows confidence in subject matter (to ask questions)		●
Provides Quality Feedback	Gives detailed feedback to students		●
	Gives feedback to leaders		●

Table 6.3 Continued.

Implements Behaviour Management Strategies	Employs effective behaviour management	•	•
	Manages behaviour through rapport	•	
	Empowers students but remains in control	•	•
	In control but not dominating the space		
Deepens Learning for Students	Teach students to apply principles		•
	Layers learning concepts to deepen understanding		•
	Understands difference between engaged happy students and effective learning		•
Understands Neurological Principles for Learning	Is aware of brain plasticity principles		•
	Has cognitive and neurological learning awareness		•

6.6 THEME: OPEN TO, AND SEEKS OUT, OPPORTUNITIES FOR PROFESSIONAL GROWTH AND IMPROVEMENT

The previous three emergent themes indicated that an expert teacher possesses a deep mastery of subject content knowledge, an extensive repertoire of pedagogical knowledge and skills, and individualised knowledge of students. This section's theme 'Open to, and Seeks Out, Opportunities for Professional Growth and Improvement', and the next theme, 'Displays Particular Character Traits and Qualities', however, focus on the attributes that characterise expertise in teachers from an elucidatory perspective. They focus on why and how expert teachers might become expert practitioners. That is, the discussions on these two themes provide perspectives on why and how expert teachers may feel motivated to develop deep subject knowledge and extensive pedagogical repertoires. Experts also recognise their parameters of expertise and identify where they do not have specific expertise (Salkind, 2009). This enables experts to continue to identify areas of improvement, noted for their insatiable desire to want to continue to learn (Webster & Schempp, 2009).

Participants in both cases provided rich information that resulted in the formation of the categories 'Open to Change', 'Flexible/Adaptable', 'Reflective',

‘Collegial’, ‘Leaders as Growth Supports’, ‘Invests in Self-learning’, and ‘Aware’.

These categories will be discussed in this section.

Figure 6.2 provides a diagrammatic representation of the progressive stages of an expert teacher who continues to develop some of the attributes of expertise on a continuum. The different stages in Figure 6.2 are derived from the findings in this study after analysing both teacher and leader case results. Some of these features are presented in the literature, such as Bereiter & Scardamalia (1993) who suggest, expertise is progressive and fluid, not crystallised and static. Experts actively and deliberately work at improving their knowledge and skills by the way they approach their work (Ericsson, 2008) identifying and solving problems and issues, and drawing upon particular attributes to do so, further extending their expertise. Gobet (2016) acknowledges that exhibiting automaticity and fluidity in a task, in the absence of conscious deliberate cognitive application, may be an indication of inhibiting expertise development. Bereiter & Scardamalia (1993) refer to the ‘progressive expert’ (p. 11), one who continually looks to understand and know more, explaining:

The career of the expert is one of progressively advancing on the problems constituting a field of work, whereas the career of the non-expert is one of gradually constricting the field of work so that it more closely conforms to the routines the non-expert is prepared to execute (p. 11).

Participants in this study identified attributes of an expert teacher that can be related to the progressive expert.

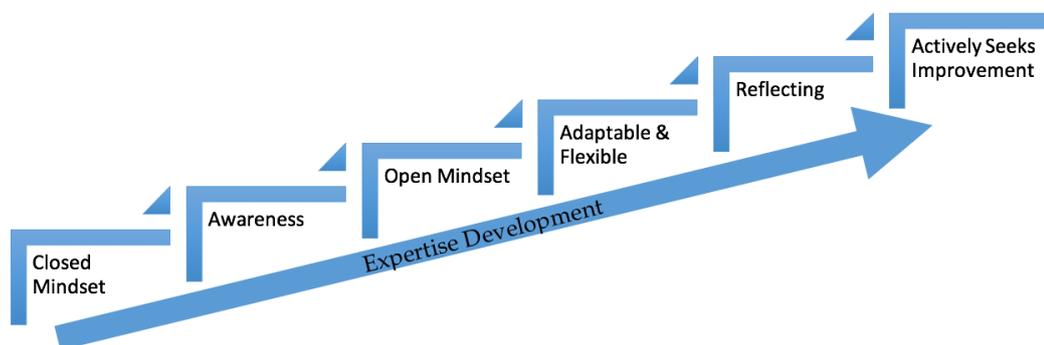


Figure 6.2: The progressive attributes of an expert teacher related to Mindset.

6.6.1 CLOSED MINDSET VERSUS AN OPEN MINDSET

Teachers and leaders both stated that expert teachers did not have a closed mindset, rather they had an open mindset towards the possibility of continually

improving in their practice, while avoiding complacency. Participants' reference to an open mindset bears similarities to a Growth Mindset (Dweck, 2016; Boaler, 2016). For instance, Dweck (2016) states,

[growth mindset] is based on the belief you're your basic qualities are things you can cultivate through your efforts, your strategies and help from others...everyone can change and grow through application and experience. (p. 7).

The leader case added that openness is an attitude and, for the expert, it prevails even during times of adversity when resilience is a feature (Dweck, 2016) and further encompasses openness to the whole school vision, not just a personal one.

Participants suggested that an expert was 'never closed' (T3) off to learning, ideas and initiatives, feedback from colleagues or students, or relationships. Rather, as educators 'we never finish learning' (L10) and never 'arrive'. Webster & Schempp (2009) identify experts are learners who continually seek to expand their knowledge. Part of the concept of being closed off to others was deliberated somewhat in one leader focus group. According to leaders, a closed-off teacher was also characterised by poor student relationships (Di Stasio et al., 2016). Some people's personalities are more resistant to embracing, or less comfortable with, change (Meyer, 2004). Participants agreed that this was something one had to overcome to develop teaching expertise (Rushton, Morgan & Richard, 2007). An open mindset precedes being flexible and adaptable enough to respond to imposed change. Responding to imposed change requires some action to occur, whereas being open to change resides in the mindset without action necessarily being required at that stage; it is being open to possibility. This is the reason that the attribute sits early on the progressive continuum of teaching expertise. Actively seeking to change and improve can also arise from having an open mindset, which sits at the other end of the continuum in Figure 6.2.

6.6.2 AWARENESS

Awareness refers to teachers demonstrating awareness of their professional environments, which includes awareness of routines, behaviours, the practice of others and self-awareness. In regard to the latter, Webster & Schempp (2008) state, 'intuitive self-awareness that experts acquire is a product of profound and virtually uninterrupted introspection over many years. Developing expertise in teaching through self-monitoring requires an unflagging interest in rediscovering and

renewing oneself in relation to professional goals'. Awareness of the qualities and performance of oneself, as well as other teachers, formed a broader conception of expertise expressed by participants. Zimmerman (2002) describes self-awareness as self-monitoring professional performances and outcomes. This is the basis upon which self-reflection can occur, enabling further adaptation for improvement. Clarke & Bautista (2017) suggest that many educators are challenged to include self-reflection into their regular teaching routines. Webster & Schempp (2008) indicated that the expert teacher focuses on key aspects of their own performance to continuously advance their level of expertise, which they asserted (at the time of publication) was new research for this profession. Because responses related to awareness incorporated both self-awareness and awareness of others, participants in this study were asked if they were able to estimate the number, proportion or percentage of their classroom teacher colleagues in their own school environment (whole school, sub-school or department) they perceived to be performing as expert teachers. A number of participants chose not to answer this question, while others were willing to do so. Those who did not answer were in a focus group setting, with most stating why they were not able to provide an informed evaluation. In the individual interviews, all participants responded to this question. Only participants from Sites 1 and 2 were able to provide an evaluation with teachers at Site 3 unable to answer and leaders at this site were not asked the question. Table 6.4 has a summary of responses.

There was a difference between teacher and leader cases, in terms of the perceptions of how many of their classroom teacher colleagues operate with expertise. This question was not initially a pre-planned seed question, although arose in one of the interviews and was carried forward into other interviews and focus groups. In the teacher case, values ranged between 50% to 100% for those who provided a response to the question. The leaders who answered offered a range between 10% to 90%. Leaders perceived fewer teachers as experts in their schools, whereas the teachers' estimates were somewhat higher, as reflected in Table 6.4 below.

Given the roles and responsibilities of leaders in schools, it is not unexpected that leaders perceived a lower percentage of expert teachers working in their schools compared to their teacher colleagues. Leaders have a different perspective on the quality of practice enabled by greater exposure to more teachers through their role, which may influence their view of expertise. They both have different vantage points. It was also noted in section 6.3 that teachers identified collegiality in different ways to

leaders. That is, the teacher case identified expert teachers as being collegial to build relationships as one dimension as well as viewing collegiality as having a direct benefit and purpose to improve practice. Leaders viewed collegiality as the latter. The teacher case view of collegiality may therefore have had some influence on rating their colleagues more highly compared to leaders.

Participants in both cases also provided a view of their own expertise. Of those who provided a self-evaluation of their own expertise, the vast majority in both cases suggested they were an expert teacher. Therefore, based on the data, there is some evidence to suggest a disconnect exists between how professionals view the practice of others and how they view their own practice in terms of expertise. This may be bias, or overestimating performance, or self-reflecting less accurately compared to evaluating others more objectively. It may also be that the participants in this case were almost all expert teachers. As no attempt was made to be selective on this basis with participant volunteers it is not possible to provide further in-depth analysis on this point, though it is worth noting the possible disconnect. Commenting on teacher self-evaluation, some leaders suggested that some teachers appeared to be inaccurate in their own self-evaluation. This was based on teacher appraisal data when comparing the views of others to the individual teacher's self-evaluation. Some leaders, who were privileged with access to both sets of data, expressed there was a substantial difference in the two respective evaluations and that this seemed to indicate that some teachers were unaware of the way others perceived their practice. These teachers were not perceived to be expert teachers by those leaders. Accuracy of self-reflection and self-awareness is practised by expert teachers, according to Webster & Schempp (2008) who refer to recent research studies. Arising from that research, four fundamental aspects of teaching were identified which were: a) instructional skills, b) teaching perspective, c) personal characteristics, d) knowledge base (Schempp, McCullick, Busch, Webster & Mason, 2006). References to these disconnects about performance and self-awareness did not arise in the teacher case.

It should be noted not everyone responded. Teachers most particularly suggested any reluctance to respond was because they lacked explicit knowledge of how others practised and, therefore, their assessment was based on impressions and informal interactions out of the classroom. It is a challenge for teachers and leaders in schools to authentically evaluate teacher performance with the limited instruments and criteria currently available. Even if a lesson is observed in full, it remains only one snapshot of a teacher's work, with so much more invisible to others. The invisible

elements include decision making that occurs during a lesson (Loughran, 2010) and the myriad roles performed outside the classroom.

Table 6.4: Illustrates the percentage of expert teachers at respective sites perceived by participants in a whole school, sub-school or department.

	Site 1 Percentage	Site 2 Percentage	Site 3 Percentage
Teachers	'90%' (T1) '75%' (T2) '50%' (T3) 'almost 100%' (T4) '75-85%' (T5)	'60% overall but 70%-80% of faculty' (T9) 'I don't know' (T7) '80%' T8	'It's too hard...each department would have at least one expert' (T12) 'I haven't been here long enough' (T10) 'I wouldn't be able to' (T11) 'I don't know enough about other teachers' (T13)
Leaders	'90%' (L1) '10%...5% are exceptional' (L2) '30%' (L3) '60%' (L4) '20%' (L5)	'70%' (L14) '20%' (L7) 'probably bigger than 20%...but 5% will never become expert' (L10) 'a handful...would not become expert' (L6) did not answer (L8) did now answer (L9)	Not asked

In relation to the quantification of evaluating other teachers practising with expertise in their own schools, participants in both cases offered commentary to explain their rationale and, in so doing, provided insight on the topic of awareness, including self-awareness, which carried over into reflection (see 6.6.4).

On a different point, both cases had individuals who noted that they watch experts 'like a hawk' (L14) to learn from them in general practice, at any opportunity, as another form of awareness. Berliner (2004) noted expert teachers as being opportunistic practitioners and this includes being open to learn and doing so vigilantly. The leader case also elicited additional comments on awareness of the needs of others, namely students, tying awareness to pedagogy where the expert notices and attends to specific children's needs.

6.6.3 ADAPTABLE AND FLEXIBLE

The teacher case focused more on their perceptions related to being adaptable and flexible in terms of pedagogical practice in the classroom, compared to the leaders, who were less explicit. Teachers explained the need for a teacher to be flexible and adaptable in terms of responding to student needs and questions during a lesson, and knowing when to enact such flexibility. It was clear from the teacher case that a teacher who taught to a particular plan or script with rigidity was not an expert, which is an opinion that literature supports (Findall, 2009; Smith, 2001; Yates & Hattie, 2013). While a good teacher plans carefully (Findall, 2009), an expert teacher also moves away from the plan purposefully, as a need arises (Tsui, 2009). One experienced teacher pointed out that knowing not only when to deviate from the plan, but also how far to deviate before returning, was 'a hard thing to do' (T5) and thus a feature of the expert.

The teacher and leader cases also provided a clear perspective on the teacher as a professional more broadly than inside the classroom. For instance, one leader talked about teachers who 'settle into a rhythm that has the risk of precluding further investigation into what they're doing', whereas the expert teachers believe 'every year they can get better, and they can' (L3). Another leader explained some teachers are 'habitually bad ... or habitually good' with the former caught in the 'do loop' (L13), unable to adapt and change to evolving needs in the profession and insistent upon continuing to practice the same old way', claimed L13. If not adapting and innovating to improve, L2 described the teacher who continued with the same routine year in and year out as dying in 'two ways. You die in *their* mind and you die in *your* own'. Conversely, L14 described the expert as thinking very differently: 'I think to be an expert too, you're adaptable to different situations. So, you're able to have your knowledge, but then you're able to apply it in a multitude of ways and that flexibility to work across contexts.' The expert teacher is both flexible and adaptable in a variety of contexts, in and out of the classroom setting.

6.6.4 REFLECTING

Participants suggested that to be an expert teacher, reflecting was an essential practice (Tsui, 2009). Being a reflective practitioner in context of being expert, drew a number of comments from participants in both cases, such as, reflection is 'very important' (L13), and 'one of the most important' (T13) of all attributes of an expert teacher. Another teacher suggested, 'constant reflection is something that really

enables you to become a better teacher' (T4). These sort of views are supported by Loughran (2010), who states,

Reflective practitioners are therefore thoughtful and well informed about their practice setting...and being open to standing back and considering not only alternative ways of responding to a given situation, but of framing the situation in ways that acknowledge and respond to alternative perspectives. (p. 164)

Rolf (1995) suggests that it is accumulated experience combined with reflection that enables expertise to occur. Most studies on expertise, however, have focused on superior performance and notably less on how expertise develops (Hashim & Ahmad, 2013; Tsui, 2009). A clear perception emerged from this study that reflecting was one attribute that both enables and characterises expertise. 'We're not good at it, though,' claimed one leader (L11), referring to the wider profession. Participants in both cases clearly conveyed that some teachers are effective in reflecting, while others are not. In both cases, teachers and leaders explained that ineffective reflection inhibited the development of expertise, with some going further, stating that those who did not reflect effectively and accurately could not be considered to be expert. T7 claimed that without 'the ability to reflect openly and honestly on our practice ... you can't critique yourself or reflect on how you're going, you're not learning and you're not on that trajectory'. Other comments flagged that, in their experiences in schools, this is an issue for the profession:

There are those who are reflective people and will look and think, 'Well, how could I do it better or do it differently?', others can again just push on [without reflecting]. (L11)

If people don't do that, then, they don't really improve all that much. (T13)

I think some people think they're experts, but they're perhaps not in other people's eyes. So, they reflect on something and go, 'Oh, that was really good,' and you think, 'Um, maybe it wasn't'. (T7)

Part of the benefit, according to participants, was the ability to detect what is working well, and what needs further refinement and improvement. The latter, in turn, makes one a better practitioner according to one leader (L13). Participants also noted that they each reflect often, including before they teach, whilst teaching and

afterwards, which is consistent with Schön's (1983) well-known work on reflective practice. Teachers also specifically raised the benefits of reflecting as a result of colleagues observing lessons, or having the opportunity to observe others teach, which 'makes you stop and pause and reflect on your own [practice]' (T11).

Leaders connected 'mindfulness' to reflection. Nagy & Baer (2017) refer to mindfulness as,

Non-judgemental, present-centred awareness' and a 'particular way of paying attention...intentionally focusing one's attention on the experience occurring in the present moment... thus, the opposite of being on "auto pilot" or behaving automatically without awareness of one's actions' (p. 353).

L7 noted that 'Mindfulness, as the mindful educators, mindful teachers, they are often - they're often improving all the time and they're reflecting on their practice'. Reflective mindfulness appears closely related to the (reflective) deliberate practice attribute espoused in the literature as one of the most important approaches to develop and attain a level of expertise in any field (Berliner, 2001; Chi, 2006; Ericsson, 2006; Ericsson & Poole, 2016; Schempp & Woorons Johnson, 2006; Tsui, 2009). Participants noted many of their colleagues did not engage in reflective practice that they considered to be as effective or as accurate as their own. Berliner (2001), also, has claimed that too few teachers engage in deliberate practice throughout their careers. Reflecting on practice is a key part of deliberate practice, and participants in this study note that adjustments need to be made continually to improve. According to participants, those who 'just push on' (L11) are less likely to attain expertise, because expert teachers reflect often and with accuracy. The views offered in both cases were consistent on this attribute.

6.6.5 INVESTS IN SELF-LEARNING TO ACTIVELY SEEK IMPROVEMENT

Wei, Darling-Hammond, Andree, Richardson and Orphanos (2009) state that 'Improving professional learning for educators is a crucial step in transforming schools' (p. ii). Participants in this study identified the need for expert teachers to continue to actively self-invest in their own professional learning, as Evans (2015) also reports and further adds a need for colleagues in schools to share a willingness to support the idea of ongoing professional learning, particularly principals as leaders. Although there was no specific consensus on a strategy to achieve this goal, observing colleagues in practice, professional reading, professional development and

formal study featured on numerous occasions in both cases. Teachers and leaders noted that continual learning made sense because teachers are learners, just as their students are. One leader described teachers ongoing professional learning as a 'parallel universe' (L14) of learning. Ongoing professional learning was a crucial feature of the perceptions of the expert teacher in this study, as it in turn flows on to improve student learning outcomes (Bolam, McMahon, Stoll, Thomas, Wallace, Hawkey & Greenwood, 2005). Linking explicit teacher professional development (as one element of the broader concept of professional learning) to student achievement is a critical indicator of its effectiveness (Wei et al., 2009), however, the same authors also recognise that generally improving teaching knowledge and instructional practice is also relevant and worthwhile even if not immediate or quite so explicit. In the leader case, they stated that making mistakes and learning from the experience were invaluable and a fast-track to improvement, *if* reflected upon effectively. Responding positively and productively to mistakes and errors in practice was also seen as a form of investing in self-learning.

Only one teacher added it was important to learn technology applications; this was a notably absent point overall throughout the study, with even this one teacher's recommendation made only in passing. Shamoail (2005) notes that the introduction of new technologies in the classroom can threaten the expertise of teachers, so this can be seen as one possible disconnection in this study. Leaders added presenting at conferences and seeking student feedback as important ways to learn. Overall, leaders suggested 'a willingness to learn' (L10) was the most important facet to ongoing learning, irrespective of what the learning was. Cross-case comparisons are presented in Table 6.5.

Table 6.5: Cross Case Comparison Summary of Categories and Codes: 'Open to, and Seeks Out, Opportunities for Professional Growth and Improvement' theme arising from the following codes and categories.

Category	Code	Teacher Case	Leader Case
Exhibits openness to change	Open to continual improvement	●	●
	Open to change/open mindset	●	●
	Goes beyond routine (pursues change)	●	
	Open to receive feedback		●
Demonstrates Flexibility & Adaptability	Adaptable to change	●	●
	Displays flexibility	●	●
	Avoids rhythmic complacency		●
Engages in Reflective Practice	Reflective on past practice to improve	●	●
	Reflects on observations others' classes	●	
	Identifies areas to improve	●	●
Demonstrates Collegiality to Enhance Practice	Views others' classes to learn	●	
	Provides/receives feedback to colleague	●	●
	Engages effectively benefiting teaching	●	●
	Engages in professional conversation	●	
	Shares ideas and resources		●
	Accepts and adopts ideas		●
	Contributes to positive staff morale		●
Invests in self-learning	Values & engages in learning	●	●
	Values formal studies/ qualifications to learn	●	
	Undertakes professional reading	●	●
	Learns about teacher related technology	●	
	Seeks own opportunities to upskill-knowledge/self-improvement	●	●
	Learns from mistakes		●
	Learns by observing others		●
	Converses with students		●
	Seeks feedback	●	
	Engages in their domain field outside the classroom setting		
Demonstrates Awareness	Demonstrates self-awareness	●	●
	Demonstrates general awareness in the school setting	●	●
	Demonstrates awareness of own level of professional knowledge level	●	

6.7 THEME: DISPLAYS PARTICULAR CHARACTER TRAITS AND QUALITIES

The results of both cases revealed a wide range of character traits and qualities (CTAQ) that participants perceived were characteristics of an expert teacher. These are categorised as 'Character Traits and Qualities: Self-Oriented', 'Character Traits and Qualities Oriented to Others', 'Character Traits and Qualities as Approach to Professional Routines', and, 'Personality'. Within these categories, numerous different codes emerged, adding complexity to the conceptualisation-operationalisation of expertise in the teaching profession. Contributing to this complexity is the wide variance of traits and qualities, as well as a paucity of literature focusing on how specific traits and qualities of teachers characterise expertise. These character traits and qualities are not found in the *Australian Professional Standards for Teachers* (AITSL, 2011a) either.

Of the CTAQ that were raised in this category, ego (accuracy of self-perception) and humility received the greatest focus, along with passion. Others received less attention in the discussions, though some were still presented as being important. For instance, one leader commenced with, 'well my initial thought, which might surprise you a little, I think a really key professional attribute is integrity ...' (L3) and further proceeded to explain that this CTAQ differentiated an 'expert and a medium teacher' in the way it manifests itself in a host of intentions and professional practices. This leader explained that integrity was a core contributor determining expertise. Overall, integrity, sincerity/authenticity, propriety, self-discipline and self-accountability were CTAQs offered only by the leader case. Conversely, a love of learning was only offered by the teacher case. Both cases had all the other CTAQs in common.

This was different to another category (see

Table 6.6), 'CTAQ Oriented to Others', where only one code was in common - empathy. The leaders case added equity for all and approachability, while the teachers case added social intelligence, collegiality, care and understanding.

This section focuses on the three CTAQs ('Self-perception as Ego', 'Humility' and 'Passion') that attracted the most discussion by the majority of participants. Two of these also generated disagreement within one focus group, as explained in this

section. Overall, this theme was another strong one to emerge, with many participants making inextricable links to expertise.

6.7.1 ACCURACY OF SELF-PERCEPTION AND EGO

One CTAQ that was discussed robustly in both cases was accuracy of self-perception, and most of the discussion occurred on the specific trait of ego. Cummings & Murray (1989) describe ego as being abstract rather than concrete and furthermore suggest it involves process, rather than being static as a product. Teachers and most leaders interpreted the term 'ego' negatively. Participants suggested an expert does not have a large ego. Some other leaders interpreted ego as ever-present and fluctuating: either negative, positive or neutral. A clear finding in this study, however, was just how destructive ego can be on teaching expertise, with participants' perceptions presented in the Results chapters of both cases. In revisiting some of these comments, ego was thought to show 'insecurity' (T8/L13) and be used by some teachers as a 'distraction' (T9) or 'façade' (L13) to 'mask' (T7) their lack of knowledge and expertise (T7). Ego presented as seeking 'popularity' (T7) from their students, 'restricting sharing of resources' (T7, T8 and T9) and intruding 'on collegial discussions and openness' (T8). Ego has cognitive, affective and emotive roles to its functioning (Cummings & Murray, 1989) and teaching involves all three of these dimensions on a daily basis. Participants appeared to describe examples that would be applicable to all three dimensions.

The other issue, described in the leader case, was that ego shifted the focus from the students to the teacher, rendering the teacher as ineffective. Messineo (2010) suggests that teacher egos can be fragile and impenetrable, linked to insecurity and exist on a continuum. In this study, participants noted that ineffective teachers blame students for not learning: 'I've taught them, they didn't learn', 'it's the kids that are at fault' (L13), rather than reflecting on their own teaching. Messineo (2010) asserts that the teacher's ego impacts on teaching effectiveness stating ego refers to 'the self that we manage and negotiate in the social environment...responding to basic desires and social expectations, [where] we seek affirmation and struggle with insecurity' (p. 188). Jones (2011) recommends that teachers ask their students whether a concept has been adequately explained as opposed to asking students whether they understand, shifting the onus and accountability to be on the teacher. Similarly, several leaders in this study described the difficulty in managing the ego of some teachers and their approach to teaching, and noted it as a highly complex issue. Another leader

expressed a reason for ego hindering expertise, which may not be so obvious in a school setting:

[There are some] who have a real issue with ever acknowledging they [the teacher-self] have made a mistake – they [the teacher-self] don't know what to do. It's so debilitating for them [the teacher-self], because all they [the teacher-self] need to do is say, 'Look, I'm stuck. I need your help. I have no idea what to do in this situation,' or 'What would you do' or 'I'm sorry. I really stuffed that one up. I honestly was trying to resolve it, but I've made much worse. Where do we go from here?'. Just to be able to say those things, I think A, it's authentic, and B, it makes the staff feel that you [the teacher-self] are not setting yourself up as some sort of guru. (L3)

In both cases, it was recognised that ego could range from over-confidence and arrogance to an extreme lack of confidence, with neither extreme characterising expertise. One leader provided this comment about the delicate balance of teachers feeling valued and needing reassurance and the ensuing distraction it can cause for some:

I don't think you [the leader-self] should give people that reassurance just because they need it, because I think what you [the leader-self] are doing then is setting yourself [the leader-self] up as inauthentic. I think we [leaders] have to be really careful about telling people [teachers] they're amazing just because we know that's what they [teachers] need and that's what they [teachers] want to hear, because then you [the leader-self] are essentially feeding their [teachers] insecurity. I mean, we [leaders] have to do some of it, because people need to feel valued and loved and supported and all those things, but I think we [leaders] have to be measured, just as in we have to be measured in the way we admonish people, but we have to be measured in the way we praise people, too. In terms of whether they [teachers] ever reach the expert level, my initial response is probably not, because they'll [teachers] be too distracted by needing to get the well filled. Therefore, they [teachers] will be doing things that they [teachers]

want others to notice. Most of the armoury of the expert teachers is stuff that goes unnoticed. (L3)

Messineo (2010) also refers to pride, claiming the latter presents itself in some teaching contexts which may initially appear as laziness or inability. However, this presentation may actually be fear and frustration as well as ego resulting in multiple perspectives occurring, which differ between student and teacher, as well as other teacher colleagues. In the leader case, the impact was expressed as, one demanding and expecting more from others than what one was giving back (outputting) to others. Messineo (2010) provides an example in which students may not be paying attention in class and the teacher becomes frustrated with the inattentive students; however, the student perspective is quite different because they perceive the teacher as boring, lacking energy, feedback lacking depth and unable to connect. Participants in both cases comprehensively presented the impact of ego as a CTAQ that jeopardises the accuracy of a teacher's self-perception.

6.7.2 HUMILITY

Humility was another CTAQ to receive substantial attention in both cases. A leader in this study asserted, 'teaching is ultimately a humble profession'. (L6). ASCD (2010, p. 74) describe humility as 'both a generosity of spirit and a quiet self-confidence. In teaching, it means understanding that although one may know a great deal, one does not know everything. It means being willing to learn from others', including colleagues, students, parents. In the leader case, this CTAQ generated some debate and disagreement as to whether it was an attribute to characterise expertise in teaching. Some leaders suggested humility was an attribute of the expert teacher and made them a better teacher because of this CTAQ, which is also acknowledged in literature (Hare, 1993; Nieto, 2010). Some leaders suggested a teacher lacking humility created barriers when interacting with others, and diminished their 'willingness to learn' (L10). Leaders also connected humility with accepting constructive critical feedback, 'to think about it and do something about it, rather than brushing it off as irrelevant' (L6) and learning from others, including their students. Humility is not necessarily a teachable quality, according to ASCD (2010), although it can be nurtured in school environments.

Not all agreed, however, with the views of L6 and L10. The argument expressed in one particular focus group was that any teacher can be humble, including a novice teacher, and therefore humility was not necessarily characteristic of an expert any more than it was for other teachers on a continuum of career progression. Again,

others disagreed, and replied that humility is indeed characteristic of an expert teacher because it better enables growth to occur. A leader uninvolved in this particular focus group discussion (L3), suggested: 'the experts are the ones who totally accept with humility, in the true sense of the word, that every year they can get better'.

6.7.3 PASSION

Passion was a most prominent CTAQ, which participants in both cases claimed to characterise expertise in teaching. Across the cases, passion was connected to a number of different areas including a passion for students (Fried, 1995; Mart, 2013) and for specific subject and content areas (Fried, 1995) and these are the most prominent types to be recognised in literature. This study also noted passion for the profession of teaching generally, for technology in teaching and for pedagogical practice. However, passion for technology was only suggested by one participant, while a passion for the profession, students and subject matter were frequent claims.

This study found that the teachers and leader perceptions of passion was that it characterises expertise and, further, is a key catalyst for further improvement to occur. Participants explained it as the purpose and meaning of the work teachers were doing and why they chose teaching as a profession. For instance, T7 said she was 'channelled' by her passion for teaching. Mart (2013) explained, 'one of the most important factors in the development of passion for teaching is teachers' ongoing commitment and dedication to students and learning. Passionate teachers are fiercely devoted to their work and greatly inspire their students' (p. 438). Crosswell (2006) suggests that passion is essential for teacher commitment. Passion makes a critical difference in the depth and the quality of student learning (Jones, 2006).

Commitment and dedication, driven by passion, were also attributes identified by teachers and leaders in this study, and acknowledged by Mart (2013). Several participants suggested those teachers who were not passionate and saw teaching as a job, as opposed to a calling or a 'vocation' (T4), would inhibit their growth as a teacher (T2). Jones (2006) describes passionate teachers as those who truly know and believe in what they do, which when understood results in teaching becoming a way of life – consistent with participant views. In the leader case, teaching in the absence of passion was described as 'doing the mechanics of teaching ... like a machine' (L10), a view supported by Fried (2001), who referred to this scenario as 'mindless duty' and 'getting through any way you can' (p. 93). Passion was claimed to give purpose

and meaning to 'that extra step to help the students with what they're doing and putting in that extra work' (T8).

Leaders in particular noted passion was a driver to want to continue to develop knowledge. It was described by leaders as a 'love of exploring and wanting to learn the subject knowledge' (L11) to share their passion as a teacher with others. Another leader, L10, also substantiated that passion 'drives the search for knowledge and understanding', which is necessary to attain a level of expertise. This aligns with the view of Mart (2013), who contends that passion enables creativity. L6 said passion was 'infectious'. Because teaching is such complex work, it requires teachers to be passionate to be effective, motivating and inspiring to others, considered fundamental to all good teaching (Crosswell, 2006). Teachers who are passionate accept teaching is both an intellectual and moral endeavour (Jones, 2006).

Simon Sinek's (2011) 'Golden Circle' model presents the principles of *what*, *how* and *why*, which are used to describe the patterns of communication in organisations. It is not specifically designed for education, rather it is a more generic concept, although some have adapted it to education. For instance, Gordon (2010) applies Sinek's golden circle model to educational environments and discusses its relevance to schools and to teaching and learning. In doing so, Gordon (2010) recognises that Sinek's core principle of communicating from the inside out, that is, *why-how-what*, in that order of thinking and communicating, as the most impactful approach for schools and teacher educators to take. Gordon (2010) explains the *what* mainly as curricula; the *how* as instructional methods of teaching; and the *why* as 'the goals, aims and beliefs...[with] clarity, direction and promise' (p. 13) emerging for teaching and learning'. The relevance and potential benefit for this study by illuminating Sinek's model, is to provide a foundation for the comments participants communicated about passion. Teachers and leaders discussed the importance of passion in relation to students, subject matter, learning and the teaching profession more broadly, which individually and collectively created a clear purpose to be a teacher, and to want to strive to be expert. These reasons could be considered to be catalysts for expertise to develop in teaching; also equated to the *why*. The enablers could be considered to be the *how*, which participants frequently described as character traits and personal qualities. The *what* could be considered to be the outcomes that an expert teacher produces, such as high levels of subject matter knowledge, advanced pedagogical knowledge and skills, for example.

Sinek (2011) further suggests it is the *why* that is the most important to explain the motivation that connects employees with purpose in their work within

organisations. Gordon (2010) also advocates the *why* is the most important in education. In Figure 6.3, the CTAQ identified by participants are represented along with their contribution to the development to expertise. Figure 6.3 illustrates the catalysts, enablers and outcomes of expertise within the CTAQ theme that were identified in this study.

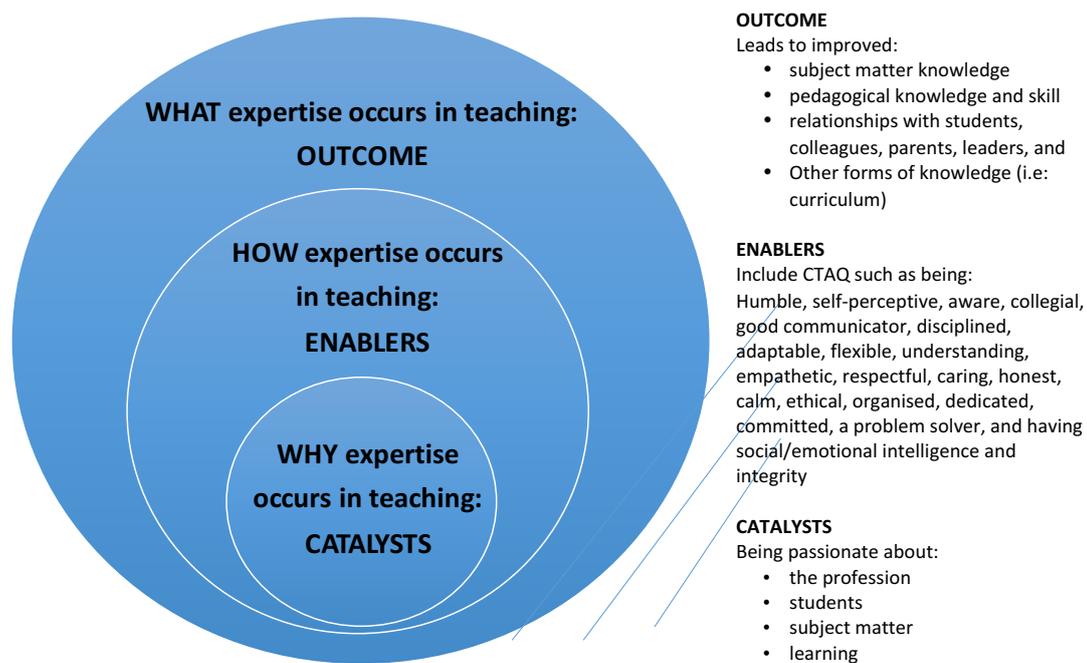


Figure 6.3: Particular Character Traits and Qualities (CTAQ) Suited to Teaching – catalysts and enablers of expertise development (adapted from Simon Sinek’s (2011) ‘Golden Circle’ Model)

Table 6.6: Cross-Case Comparison Summary of Categories and Codes: Particular Character Traits and Qualities Suited to Teaching Theme. Display of teacher and leader case codes and category comparison.

Category	Code	Teacher Case	Leader Case
Displays Self-Oriented CTAQ	Has a healthy self-perception (balanced ego)	●	●
	Demonstrates self-confidence	●	●
	Demonstrates humility	●	●
	Demonstrates passion	●	●
	Demonstrates integrity		●
	Demonstrates commitment		●
	Demonstrates enthusiasm	●	●
	Demonstrates sincerity		●
	Demonstrates self-discipline		●
	Demonstrates ethical behaviour		●
	Demonstrates accountability		●
	Demonstrates open-mindedness	●	●
	Demonstrates adaptability		

Table 6.6 Continued.

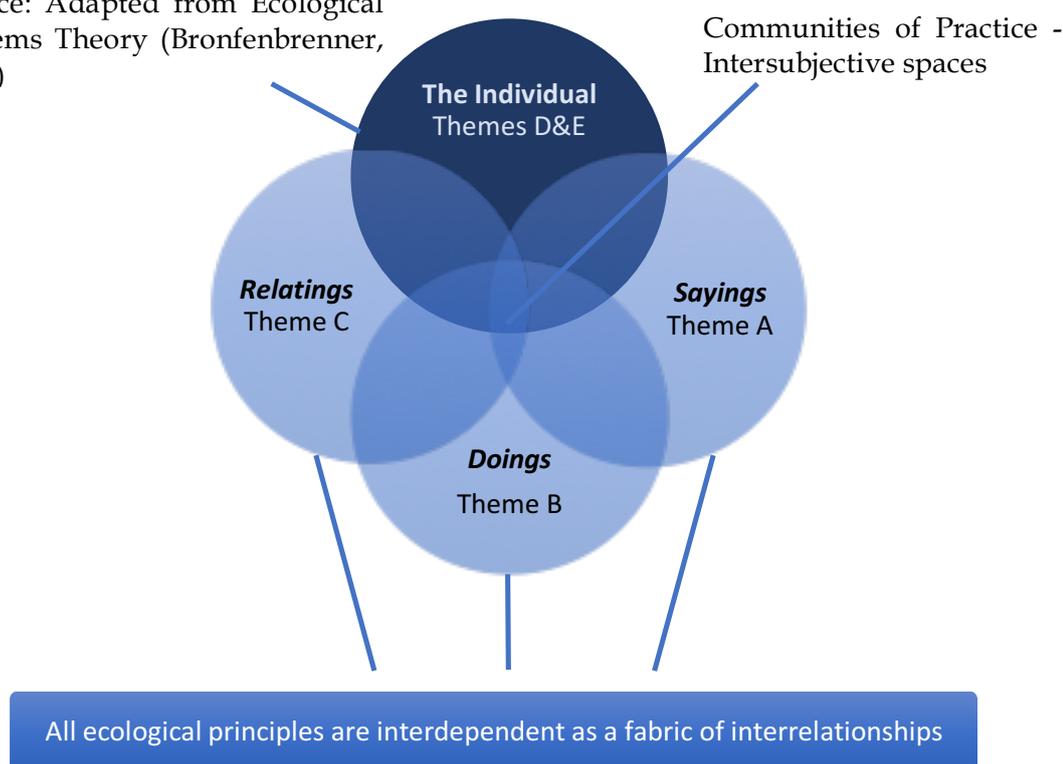
Displays CTAQ Oriented to Others	Demonstrates social intelligence	•	
	Demonstrates collegiality	•	•
	Exhibits an understanding of others	•	
	Demonstrates empathy	•	•
	Demonstrates respect	•	•
	Demonstrates honesty	•	
	Generates trust	•	•
	Shows care for others	•	
	Shows patience with others	•	
	Demonstrates awareness	•	
	Approachable to others		•
	Demonstrates calmness to others		•
Displays Skill Oriented CTAQ	Demonstrates Organisation	•	•
Displays a Particular Personality	Is viewed as a 'born' teacher	•	
	Has an outgoing personality	•	•
	Demonstrates humour	•	•

6.8 MERGING THEORETICAL FRAMEWORKS FOR AN ADAPTIVE PROFESSIONAL CONTEXT

The following sections provide additional details about two theoretical frameworks used to explore and better understand the findings of this study. This includes the relevance of the frameworks to this study, particularly discussion of its findings, implications and recommendations.

Figure 6.4 combines the two theoretical frameworks. By encapsulating the findings in these theoretical frameworks, other professionals may be able to draw upon their inherent principles in order to relate this study to other work environments and contexts.

Source: Adapted from Ecological Systems Theory (Bronfenbrenner, 1995)



Source: Adapted from Ecologies of Practices Theory et al., (2012; 2014a)

Theme A: Possesses a Deep Mastery of Subject Content Knowledge

Theme B: Demonstrates High Quality and Effective Pedagogical Practice

Theme C: Builds Relationships with the School Community

Theme D: Open to, and Seeks Out, Opportunities for Professional Growth and Improvement

Theme E: Displays Particular Professional Character Traits & Qualities

Figure 6.4: Situating the emergent themes with theoretical frameworks – Ecologies of Practice Theory; Ecological Systems Theory; encapsulated within Principles of Ecology.

6.8.1 PRACTICE ARCHITECTURES & ECOLOGIES OF PRACTICE THEORY

The incorporated theoretical framework of Practice Architectures and Ecologies of Practices Theory (Kemmis et al., 2012; Kemmis et al., 2014a) were evaluated as being suited to this study because of the key principles and the explicit focus on education, particularly suited to the school setting. This framework builds on the notion of professional learning communities, or communities of practice in schools, providing further insight into how schools as organisations can transform practices. Kemmis et al. (2014a) claim that the participants in a community of practice

encounter one another in intersubjective spaces, not in isolation as sovereign individuals. Rather all individuals rely on each other interdependently in education to form productive communities, which have a fundamental educational purpose to help people to live well, in a world that is worth living in (Kemmis et al., 2012). Kemmis et al. (2014a) claim that: 'Around the world, urgent efforts are being made to transform education for the globalised cultures, economies and politics of the twenty-first century' (p. 1). While this study is small-scale and focused only on three school sites, all education environments are distinctive and each one is important as a contributor to help to improve the world in which we all live. Furthermore, collectively individual school sites become instrumental in shaping school clusters (districts, regions, states, nations), and eventually contribute to the global educational landscape, particularly when practices spread to be in common and value is placed on certain practices that others endeavour to emulate.

This study draws on the framework in the context of the interrelationships between the dimensions of teaching and the themes to emerge from the data, particularly focused on the conceptualisation-operationalisation of expertise. It may be that a re-conceptualisation of what expertise means in teaching is worth exploring in the interests of contributing to an improved educational experience for all stakeholders in schools. For a teacher to explore other models of teaching, for instance, or to reconceptualise what teaching expertly means, Kemmis et al. (2012) espouse that the practices that presently hold the current conceptualisation in place will need to fit into a new architecture that will also support a change to new practices. This framework explores the interdependence between practices as ecologies and how they are connected within communities. The framework of ecologies of practice goes beyond the interrelations and interactions that occur between individuals in an organisation when change occurs involving new ideas, resources and the ways of relating to one another. For new practice to result, this framework requires creating new arrangements in new kinds of intersubjective spaces for the people involved in the encounter (Kemmis et al., 2012). Kemmis et al. (2014a) suggest that education cannot be anything other than what it has been previously, or is currently, unless some significant transformations occur in terms of developing new practices. It is these new practice architectures that will either enable or constrain education for the 21st Century, and Kemmis et al. (2014a) describe it as a 'kind of dance between reproduction and transformation' (p. 3). Kemmis et al. (2012) suggests there is a need to change the practice architectures if we want to change educational practices.

The theory of Practice Architectures relates to the composition of practices, which occur in intersubjective spaces in different dimensions of sayings, doings and relatings. Kemmis et al. (2014a) define a 'practice' as:

A form of socially established cooperative human activity in which characteristic arrangements of actions and activities (*doings*) are comprehensible in terms of arrangements of relevant ideas in characteristic discourses (*sayings*), and when the people and objects involved are distributed in characteristic arrangements of relationships (*relatings*), and when this complex of sayings, doings and relatings 'hangs together' in a distinctive project. (p. 31)

There are three different kinds of new intersubjective spaces: semantic space, physical space-time, and social space (Kemmis et al., 2012). In addition to researching the conceptualisation of teaching expertise, schools also require exploration of other interconnected and interdependent practices which influence teaching practice. An example of this involves leaders. Schools need transformational leaders (suggested in this framework to be all leaders throughout a whole organisation) to work together to construct new semantic spaces and ways to interrelate, to share an understanding, find new ways to use new resources in physical space-time, and new ways in which individuals can create solidarity of the new purpose and practices (Kemmis et al., 2012).

Drawing upon this theoretical framework, Kemmis et al. (2012) state that practices in education, and more specifically in schooling, occur in clusters, meaning that new practices need to be 'composed and constituted in new forms of understandings (*sayings*), new modes of action (*doings*) and new ways in which people will relate to one another and the world (*relatings*), all bundled together in new projects as new purposes and tasks' (p. 3). The medium of *sayings* is the language in the dimension of the semantic space with cultural-discursive arrangements; the medium of *doings* is the activity that occurs in the dimension of physical space-time with material economic arrangements; and the medium of *relatings* is the solidarity in creating power in the dimension of the social space with socio-political arrangements, (Kemmis et al., 2012; Kemmis et al., 2014a). To elaborate further, *sayings* relate to the cognitive practices of practitioners, which could also be *thinking*, in the form of ideas as part of the language dimension, occurring in the intersubjective space in the medium of language as cultural-discursive arrangements. These practice architectures can be prefigured, though not predetermined, and already exist at sites

(Kemmis, Heikkinen, Fransson & Aspfors, 2014). Practitioner *doings* involve the psychomotor in the medium of activity and work practices as physical space-time, as architectures of material-economic arrangements which may be brought to a site, if not already in existence, (Kemmis et al., 2014b). The practitioner's *relatings* are the affective dimension that occurs in the intersubjective social space medium of power and solidarity. The practice architectures (arrangements) are enabled or constrained in social-political interactions, which can be found at (or brought to) a site., (Kemmis et al., 2014b). Edwards-Groves et al. (2010) further explain that *sayings, doings and relatings* overlap as well as being interdependent and intertwined in the practices that occur in distinctive settings and environments. The term *ecologies of practices* is described by Kemmis et al. (2014a) as encompassing 'the ideas that the form and content of one practice may change the form and content of another and that practices can travel from site to site' (p. 50), and further suggested that the form and content of one site can then form the architecture of another site.

This model is presented in Figure 6.5 below; the arrow represents the bundled project.

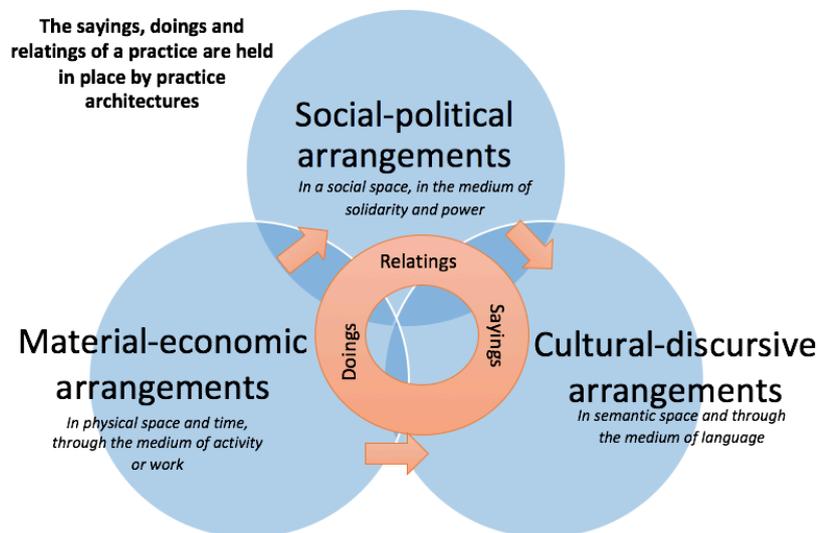


Figure 6.5: Practice Architectures with Ecologies of Practice (adapted) (Source: Kemmis et al., 2012; 2014a)

Deepening the conceptualisation of practice architectures and ecologies of practices further, The Education Complex describes a range of inter-connected practices, which Kemmis et al. (2014a) claim was stimulated by the concept of mass schooling. Kemmis et al. (2012; 2014a) describe five principles of highly effective learning communities as ecological relationships with one another: 1. educational

research and evaluation practices; 2. educational leadership and administration; 3. teachers' classroom educational practice (teaching); 4. professional development/learning and, 5. students' academic learning and social practices (p. 17). The Education Complex is presented below (adapted) in Figure 6.6, where the relationships between each ecology are depicted.

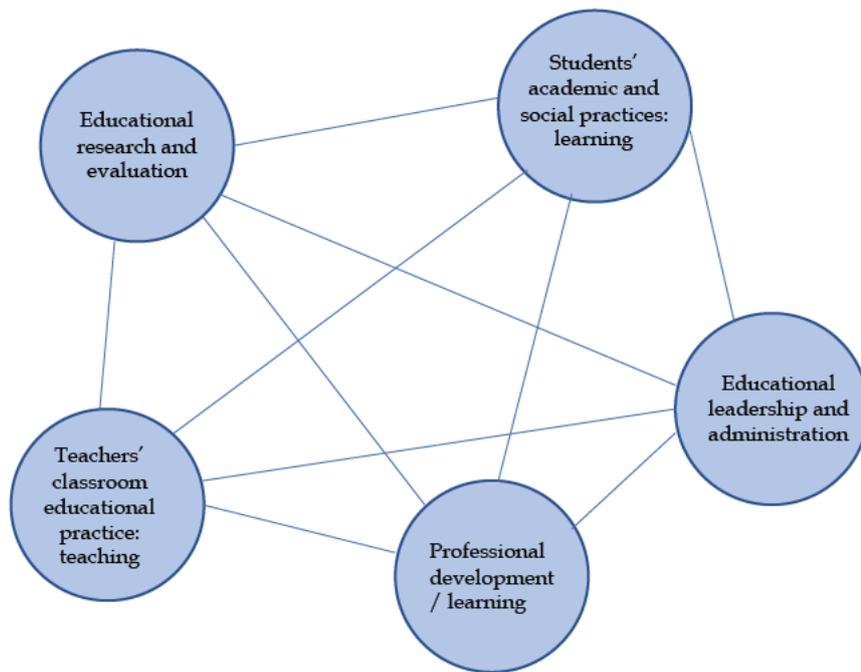


Figure 6.6: The Theories of Ecologies of Practices - The Education Complex (adapted) (Source: Kemmis et al., 2014a, p. 52).

Overall, the framework of Practice Architectures and Ecologies of Practices (Kemmis et al., 2012; Kemmis et al., 2014a) is highly suited as a conceptual theoretical framework to map the themes in this study into *sayings, doings* and *relatings*. In section 6.8, The Education Complex is used as a frame to hang together the interrelationships of the themes. The following section considers Bronfenbrenner's (1994) Ecological Systems Theory for its suitability to also frame this study.

6.8.2 ECOLOGICAL SYSTEMS THEORY

According to Bronfenbrenner (1994), one must consider the entire ecological system surrounding an individual to understand growth in human development. Ecological Systems Theory is an ecological paradigm developed by Urie Bronfenbrenner, which focuses on the psychology of human development. Rosa & Tudge (2013) stated that Bronfenbrenner's ecological theory evolved over three

phases, initially from the 1970s, and further consolidated in the 1990s. This included reports published on educational practice by Bronfenbrenner, commencing in his first phase of theory development. Paquette & Ryan (2001) note that this theory was subsequently renamed 'Bioecological Systems Theory' to emphasise the biological element of human development within the immediate and larger environment, as his theory evolved over time. While much of Bronfenbrenner's Ecological Systems Theory of human development is focused on the growth and development of a child, Härkönen (2007) notes that it includes the adult stage of development as a fully competent member of society. At an early stage, Bronfenbrenner (1975) defined his view on ecology of human development as:

The ecology of human development involves the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts within which the settings are embedded. (p. 21)

In this study, EST has been specifically applied to the education profession in the context of the development of an individual person, notably a classroom teacher, in context of the human interactions a classroom teacher would likely encounter as a professional. It explores a teacher's relationships at the various levels of interaction, and also focuses on the attributes, traits and qualities of an individual. Paquette & Ryan (2001) state that EST 'has implications for the practice of teaching' (p. 3). These implications are elucidated relative to the ecologies that exist between children (students), parents or carers, and teachers. Bronfenbrenner's theory on human development positioned the parent or significant other as the primary carer for a child, which should be long-term and last a lifetime. The relationship fostered with a teacher is not meant to replace this relationship and if it does, is symptomatic of deeper and more complex societal issues (Paquette & Ryan, 2001). The role of the teacher is to support primary carer (i.e., the parent), not replace them, and this is relevant because it enables the teacher to interrelate to students as a professional educator. Paquette & Ryan (2001) demonstrate a connection to education and teaching within the EST framework.

Hwang (2014) reports a further application to education and teaching of Bronfenbrenner's EST and states, 'understanding multiple contexts is critical to understanding teacher education' (p. 3) and cites examples involving teacher

education programs, accreditation of teachers and formal educational policy. Hwang (2014) creates a conceptual framework involving the different systems that Bronfenbrenner had developed in the EST. The key structure and principles of Ecological Systems Theory are expressed through layers of interaction, which are: the individual (for example, the individual's emotional and cognitive systems, own biology); the microsystem, where bi-directional contact occurs for the individual with that person's immediate environment (for example, home, peers, siblings, school, workplace, church); the mesosystem, which characterises the individual's microsystemic interactions that occur interdependently rather than independently, causing an indirect impact on the individual (for example, the interactions between home, school, workplace, religion, siblings); the exosystem, which refers to the setting involving the individual as an active participant though without direct interaction (for example, extended family, the community, parents' workplace, media); and the macrosystem, which encompasses the cultural environment in which the person exists, including all systems affecting the individual (for example, the global social conditions, economic system, culture, laws, history). This study involves Bronfenbrenner's framework inner-most three layers (Individual, Microsystem and Mesosystem) and does not draw upon the outer two layers (Exosystem and Macrosystem), as indicated by the shading in Figure 6.7.

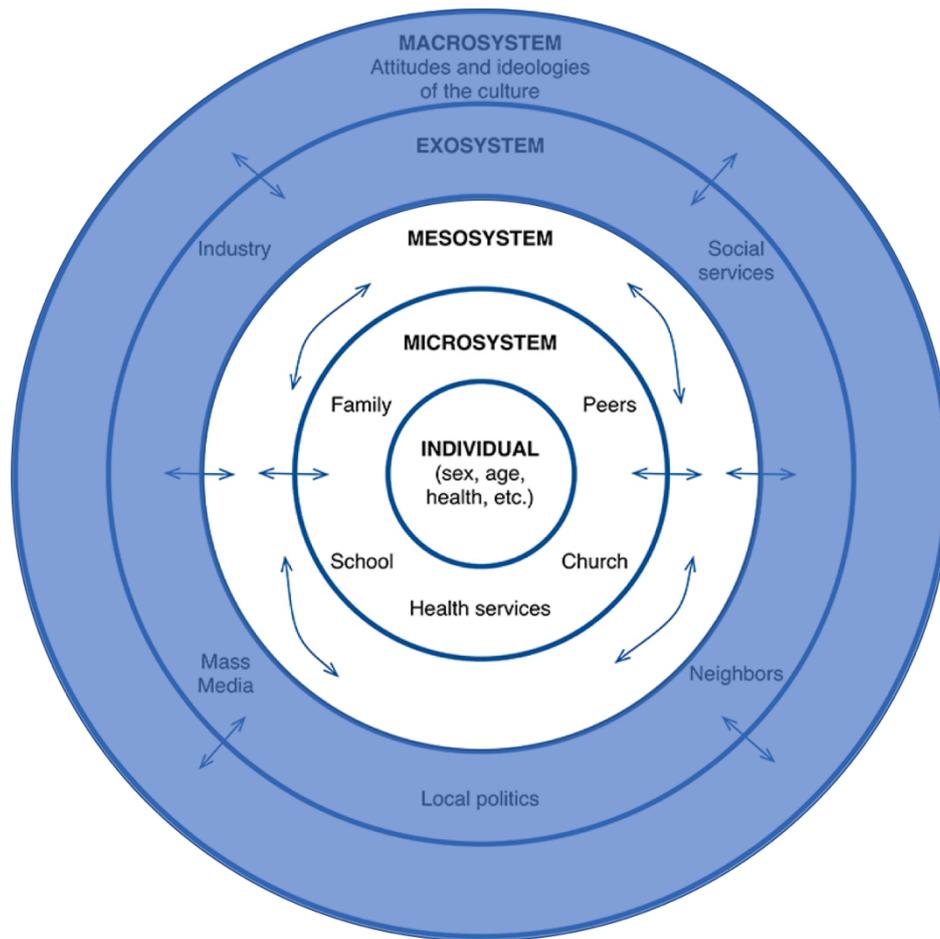


Figure 6.7: Adapted from Bronfenbrenner's (Bio)-Ecological Systems Theory (1979) (Bio)-Ecological Systems Theory. The three inner circles for this research study (Individual, Microsystem, Mesosystem) are presented in the unshaded core layers.

The relevance to this study is in relation to teachers own biological, emotional and cognitive systems that make up their qualities and character traits, along with their direct environmental interaction with their microsystemic and mesosystemic dimensions. The microsystem and mesosystem include interactions with colleagues, students, school leaders, parents of students, and own family members. Bronfenbrenner's theoretical framework is suited to theorise part of the findings of this study focus on expert teacher attributes, as the dynamic interactions occur in human relationships in school communities. These interactions connect the individual to the broader construct of the interrelationships. Kemmis et al. (2012; 2014a) particularly focus on the interrelationships of the ecological dynamics occurring in the school setting involving *sayings, doings, relatings* with Practice Architectures and Ecologies of Practice, though not specifically focused on the individual. Bronfenbrenner's Ecological Systems Theory should occur in conjunction

with the previous theoretical framework already presented (Kemmis et al., 2012; Kemmis et al., 2014a) as they work together to provide an architecture of this study's overall findings.

6.9 THEMES MAPPED TO THE THEORETICAL FRAMEWORKS

Kemmis et al. (2014a) describe a practice as a form of socially established cooperative human activity in which characteristic arrangements occur. The themes that emerged in the two case studies, and the categories within each theme have been mapped to the three intersubjective practices of Practice Architectures: *sayings, doings and relatings*, which overlap as interdependent and intertwined practices. In addition, the individual is considered to be an individual person (teacher) who is operating within these nested systems, in context of a distinctive school setting (site), noting ecologies of practices travel from site to site. The individual is not presented as a sovereign individual, rather as a practitioner interconnected in social activity in intersubjective spaces. In the next section, the inter-relationship of these themes will be explored. Table 6.7 maps the categories and themes from the findings in this study to two theoretical frameworks: Ecologies of Practice Theory (Kemmis et al., 2012; Kemmis et al., 2014a) and Ecological Systems Theory (Bronfenbrenner, 1994).

Table 6.7: Mapping the Emergent Themes and Categories and the selected Theoretical Frameworks to the findings of this study in each category and theme.

Themes/Categories	Ecological Practice Theory			Ecological Systems Theory
	<i>Sayings</i>	<i>Doings</i>	<i>Relatings</i>	The Individual (core)
Intersubjective Space and the Medium	Language	Activity/Work	Power/Solidarity	(Traits & Qualities)
<i>Theme A</i> Possesses a Deep Mastery of Subject Knowledge	H gh	Med um	Low	H gh
A Possesses mastery of subject know edge	H gh	Med um	Low	H gh
B Possesses depth of subject know edge	H gh	Med um	Low	H gh
C Retr eves subject know edge effect ve y	H gh	Med um	Med um	H gh
D Uses know edge to make further connect ons	H gh	Med um	Low	Med um
E Possesses genera profess ona know edge	H gh	Med um	Low	H gh
<i>Theme B</i> Demonstrates High Quality and Effective Pedagogical Practice	Med um	H gh	H gh	Low
A Demonstrates effect ve p ann ng/structure /de very	H gh	H gh	Med um	Low
B D fferent ates & persona ses earn ng	Med um	H gh	H gh	Low
C Engages students n the r earn ng	Med um	H gh	H gh	Low
D Quest ons students effect ve y	H gh	H gh	H gh	Low
E Prov des qua ty feedback	Med um	H gh	H gh	Low
F Imp ements behav our management strateg es	Med um	H gh	H gh	Low
G Deepens earn ng for students	Med um	H gh	Med um	Low
H Understands neuro og ca princ p es for earn ng	H gh	Med um	Low	Low
<i>Theme C</i> Builds Relationships with the School Community	Med um	Med um	H gh	Low
A Pr or t ses student fr st	Med um	Med um	H gh	Low
B Demonstrates a ho st c approach to students	Med um	H gh	H gh	Low
C Connects & bonds w th students	Med um	Med um	H gh	Low
D Demonstrates co eg a ty	Med um	Med um	H gh	Low
E Inc udes parents	Med um	Med um	H gh	Low
<i>Theme D</i> Open to, and Seeks Out, Opportunities for Professional Growth & Improvement	H gh	Med um-H gh	Low-Med um	H gh
A Exh b ts openness to change	H gh	Med um	Low	H gh
B Demonstrates f ex b ty & adaptab ty	H gh	H gh	Med um	H gh
C Engages n ref ect ve pract ce	H gh	Med um	Low	H gh
D Demonstrates co eg a ty to enhance pract ce	Med um	Med um	H gh	Med um
E Invests n se f- earn ng	H gh	H gh	Low	H gh
F Demonstrates awareness	H gh	H gh	Low	H gh
<i>Theme E</i> Displays Particular Character Traits and Qualities (CTAQ)	Low-Med um	Med um	Med um	H gh
A D sp ays se f- or ented CTAQ	Low	Low	Med um	H gh
B D sp ays CTAQ or ented to others	Med um	H gh	H gh	H gh
C D sp ays sk or ented CTAQ	Med um	Med um	Med um	H gh
D D sp ays a part cu ar persona ty	Low	Low	Med um	H gh

6.10 SPOTLIGHT ON PRACTICES

This chapter has, thus far, presented the most prominent findings related to the themes in the two cases, and related the core principles of two theoretical frameworks. The categories from which the themes emerged map to the theoretical frameworks of Ecological Practice Theory (Kemmis et al., 2012; Kemmis et al., 2014a) and Ecological Systems Theory (Bronfenbrenner, 1994). As this chapter continues, it will provide a spotlight on professional practices by utilising The Education Complex as part of the overall Ecological Practice Theory framework (Kemmis et al., 2012; Kemmis et al., 2014a). This section will explore the relationship between the emergent themes and the theoretical frameworks. The practices and attributes of expert teachers were identified through episodic and continued discussions held with colleagues in several schools while revisiting the literature on expertise and teaching. Given the clear relevance to teacher practice in Australian schools, the *Australian Professional Standards for Teachers* (AITSL, 2011a) framework is also referred to in Chapter 7.

Edwards-Groves & Kemmis (2016) refer to the ecologies of educational practices, where interdependencies exist in a school setting, involving student learning, teaching, professional learning, leading, researching and the connectedness of all the systems that support each of these practices. In this study, the data revealed by the participants' perceptions (from both cases) and their conceptualisations of expertise in teaching demonstrated interdependences between the themes that emerged. Using The Education Complex principles as part of the Ecologies of Practices framework (Kemmis et al., 2012; Kemmis et al., 2014a), each of the themes and their interdependent relationships are explored in the sections below. The practices are: 1. Educational Leadership & Administration Practices; 2. Teachers' Classroom-based Educational Practice; 3. Students' Academic and Social Practices; 4. Professional Development and Learning, and discusses 5. Cultural, Material and Societal Practices.

6.10.1 EDUCATIONAL LEADERSHIP PRACTICES

The findings of the two respective case studies in this research inquiry revealed that both teachers and leaders in schools have many in-common perceptions of expertise. All leaders in the case were also classroom teachers on reduced teaching loads, with formal leadership responsibilities ranging on a continuum from department/faculty head to principal. Maintaining classroom teaching duties in addition to formal leadership may have provided the common ground for the similar

perspectives to emerge in the data. This sentiment was raised by several teachers, including T12 who stated leaders as teachers provided leaders with teacher perspective, and T11 noted the 'coalface' [classroom teaching] was a different experience. Another teacher (T10) explained that leaders as teachers enables one connected system, rather than two separate systems. The literature recognises the positive influence that leaders play in schools (Leithwood, Seashore Louis, Anderson & Wahlstrom, 2004), although just how important the role of the leader is still lacks evidence (DeVita in Leithwood et al., 2004). In this study, it was clear that leaders as teachers offered a value that was infused into the leaders' respective roles. This connectivity, in turn, was said to have enabled leaders to gain currency to better appreciate the demands of the classroom practitioner. These perspectives provide some additional insight into why all the five emergent themes were in common in both cases.

Klusmann, Richter & Lüdtke (2016) suggest that motivation of teachers is lowered when work environments are depersonalised. Leaders in their case study indicated a sense of responsibility to empower teachers, and to also create personalised and facilitative environments. One leader commented that 'managing underperformance [of teachers] is a really difficult issue because you risk affecting the morale of teachers' (L3). The view of leadership in both cases was clearly attached to formal roles rather than viewing the teacher as a leader. The description for the Highly Accomplished and Lead career stages repeatedly use explicit language related to teacher leadership. For example, 'Lead colleagues to...'; 'Lead process to...'; 'Support colleagues to develop...' (p. 8); 'Provide advice and support colleagues...'; 'Initiate and lead...'; (p. 9). However, in this case study, neither teachers nor leaders talked about the expert teacher as a leader, despite considerable prominence of this in the APST. This apparent disconnect in this study to expert teacher leadership is consistent with research conducted by Sly (2008), who conducted other case studies of classroom teachers in several independent schools to find that teachers typically do not consider themselves as leaders, other than when they are awarded a formal leadership role. In both of Sly's case studies, there was considerable reference to leaders and leadership, though these references were to formal leaders and how they supported teachers to develop their expertise. In some of these instances, teachers viewed leaders as enablers to develop expertise, which places the locus of control beyond the teachers themselves. Referring back to this study, it was suggested that teachers would want to leave their employment at the school if effective and supportive leaders did not recognise the efforts of teachers. While expertise in

leadership was not the focus for these case studies, formal leaders connected to expertise development in schools.

When comparing cases, there were some differences between the leader and teacher cases. Returning to the data multiple times during the analysis process revealed greater levels of sophistication and insight in the responses of many of the leaders, who also observed a somewhat broader spectrum of issues and interconnectedness relevant to the attributes they discussed. Leaders tended to be more philosophical and convey the 'bigger picture' and provide more analogies. Conversely, teachers tended to be more practical in most of their responses, with a particular focus on classroom teaching practice (e.g. pedagogy and relationships). The differing elements of the two case study roles account for some of these differences in perspective. Overall, however, there were many more similarities than differences.

6.10.2 TEACHER CLASSROOM EDUCATIONAL PRACTICES

A broad range of examples said to exhibit expertise in pedagogical knowledge and practices of a classroom teacher were provided in both case studies. However, participants in both cases expressed these practices through their own personalised perspective in context with their own experiences, resulting in numerous permutations of these examples and practices. Individual preferences and priorities determining or influencing evaluation of the practices that led to expertise were varied. Though, collectively, these examples represent the commonalities of practices that reflect expertise.

Some of the pedagogical practices were more prominent than others (for instance, differentiation practices), while others were less frequently stated (for instance, providing high quality feedback to students). Given the complexity of professional practice and the individual nature of teaching, this finding is not particularly unexpected. It does, however, reinforce the work still to be done in characterising expertise, even in an emergent theme grounded in knowledge and skill based practice.

A notable finding pertaining to pedagogical practice as a key theme of expertise in teaching was a scarcity of reference to the specific aspect of pedagogical *content* knowledge (PCK). This more specialised form of knowledge that Schulman in Turner-Bisset (1999) describes as the amalgam between content and pedagogy, rarely arose in this study. Whilst pedagogical knowledge was a strength of the participants' responses, PCK was not. It may be that participants embedded PCK within the more generalised descriptions involving pedagogical practice, though this was not

explored in the interviews and subsequent data analysis does not reveal the reason for its scarcity.

The quality of student-teacher relationships was embedded in another theme (Builds Relationships with the School Community), and participants connected teaching practices (pedagogy) to relationships (student-teacher), suggesting that lower quality relationships impacted adversely on teaching practice. One teacher stated that without quality relationships and care for students, it is not possible to effectively teach the curriculum. A similar sentiment was expressed by several participants, and provides an example of the sorts of ecologies that are interrelated in the Ecologies of Practices framework (Kemmis et al., 2012; Kemmis et al., 2014a).

Participants in both cases suggested that experimentation was required to improve these practices, reflecting on what worked or did not work effectively and adjusting practice, observing colleagues, attending professional development, seeking out less formal professional learning such as professional reading, and maintaining an open-minded, flexible and adaptable approach to imposed change. Participants were effectively describing the principles of Practice Architectures (Kemmis et al., 2012; Kemmis et al., 2014a).

Only one teacher explicitly talked about a need to have and continue to develop knowledge and skills in technology to embed in practice. Apart from this one individual, other participants provided a perspective of teaching-related expertise without referring to technology in both cases.

6.10.3 STUDENTS' ACADEMIC (LEARNING) AND SOCIAL PRACTICES

There were several references to the importance of student learning outcomes linked to the expertise of the teacher. Overall, however, responses from participants typically did not expand upon the impact of the learning outcomes or detail these linkages. Rather, the respondents consistently placed greater focus on the attributes or processes of the teacher, without regard to their outcomes for students.

The social practices of students in this study were only referenced in connection to their teachers' interactions with them, not their peers', as the latter was not a focus of this study. However, the social interactions between the student and teacher, in the form of rapport and relationships, was a most prominent theme to emerge. The data revealed that the clear majority in both cases regarded the quality of the relationship as an essential attribute of the expert. Furthermore, expert teachers were said to go out of their way to strategically learn more about their students. Participants also pointed out that the expert teacher develops positive social relationships with all

students, not confined to those students that the teacher finds amenable. An expert teacher can relate to all students, not only those who are intrinsically motivated learn or perceived to be less challenging.

6.10.4 PROFESSIONAL DEVELOPMENT & LEARNING

Professional development and professional learning were both prominent in the development of expertise in both case studies. Examples included both formal and informal learning. Several participants also suggested that, to be an expert, it was important to be engaging in ongoing learning outside the classroom environment. T7 specified that for a music teacher, playing a musical instrument outside of school [in a structured environment] was 'a skill that's highly respected and valued' and further stated its necessity. This comment was provided in context of responding to expertise and how it occurs. Similarly, T5 also a teacher in the Arts, stated that it was crucial for an art teacher to practice as an artist outside of school. T5 stated this provided the teacher with access to the commercial setting, allowing the teacher to 'go beyond...conceptual or theoretical expertise [as an artist teaching students in a school setting]. L6 stated that presenting at conferences was a means to continue to learn and develop expertise beyond the classroom.

A clear enabler to develop expertise, expressed in both cases, was observing colleagues in their professional practice. Observations of colleagues teaching classes was considered particularly valuable, though this extended to observations outside the classroom. Despite this clearly identified and desired enabler, few teachers and leaders suggested they regularly do so, or have regular opportunities to do so. Leaders at two sites, noting the value of this, mentioned they were planning for classroom observations to formally occur in the near future with a program to be implemented. However, participants noted that, despite the value of this practice, teachers rarely created their own opportunities for this during time-release from teaching.

Some of the teachers in the case study also stated they prefer leaders or teacher colleagues to drop in unannounced and stay for a full lesson to gain the full context and to provide feedback, rather than attend scheduled observations, or brief leader classroom 'walk-throughs' as noted in Hattie (2009) as a method of evaluation. When discussing these observations as a means to develop expertise, participants expressed high value in observing other teachers, or being observed themselves. At no stage did participants express concern about power imbalances and potential implications for the teacher, arising from leaders observing teachers teach lessons, as one of the

reasons why observation method rarely occurred. Some teachers did indicate they had seen others teach, though these opportunities were more incidental than strategically planned.

Of the participants in both cases who were asked to evaluate the percentage of expert teachers in their school (or sub-section of it), the responses ranged from five to one-hundred percent. Leaders expressed a lower overall percentage as an impression compared to teachers. In both cases, when subsequently asked to self-evaluate on expertise status, all but one participant (leader case) of those who were asked, suggested that they themselves were one of the experts. It was noteworthy that the percentage of self-evaluated expertise status was considerably higher compared to the evaluation of others.

The expert teacher was presented as one who is open to continual learning, and takes steps to engage in professional learning in diverse ways, and self-driven. Overall, the expert was considered to be a lifelong learner who refreshes knowledge and expertise, not allowing it to ossify.

6.10.5 CULTURAL, MATERIAL AND SOCIAL PRACTICES IN THE SOCIETY

When considering material resources, participants rarely made reference to teachers needing physical resources to practice with expertise. Expertise was communicated as practices and attributes that typically did not rely on any particular material resources. Cultural and social practices were mentioned in the form of collegiality among teachers. Teachers and leaders both talked about collegial relationships and how these characteristics were indicative of expertise. Barth (2006) identifies the differences in collegial interactions in schools, which supports observations made by participants. While some participants clearly identified experts as being collegial, some others contested this view. The rationale of the former view was that expertise, practised through sharing subject knowledge and resources, as well as other commodities, would be inhibited without this collegial interaction. The latter view suggested an expert can exist without being dependent on collegial interaction.

The morale of staff was also mentioned several times, with some teachers suggesting they avoid negative colleagues and are more drawn to positive colleagues. However, teachers stated that they do not express their views of colleagues' negativity; rather, they simply avoid those colleagues. Scott (2017) recommends the opposite, advocating colleagues discuss such matters. Participants also stated that

teachers tend to hide their views on their perceptions of colleagues' teaching performance. Leaders expressed the difficulty of balancing staff morale with addressing poor teaching performance, suggesting that maintaining the goodwill of teachers is crucial. Leaders expressed concern about the impact their role had on teachers, both professionally and personally. Apart from morale, other impacts involved elements of change management and the challenges involved for all concerned, also reported in the literature (Fullan, 2001, 2009). Leaders were also cognisant of their potential impact on family lives. For instance, scheduling early morning meetings impacting on those teacher-parents with children was mentioned, which in turn influenced professional practice. Inextricable links were made by leaders about the effect their decisions made on teachers' professional lives.

With respect to the evaluation of teacher performance by leaders, there is some evidence that the process is perceived by teachers as more of a mantra that: 'it's not about the person, it's about the process', enunciated by leaders to minimise the sense of associated power or other professional fallout. The OECD (2013) report in the *Key Findings from the Teaching and Learning International Survey (TALIS)* (Australia), that although 97% of all teachers in Australia report being formally appraised, nearly half stated that the appraisal had 'little to no impact on the way teachers teach in the classroom' (p. 1). Furthermore, 62% said they believed that the appraisal process and providing feedback is primarily an administrative exercise, which ultimately had a detrimental impact on their job satisfaction. Part of this perception from the clear majority of teachers (71%) in the TALIS (2013) report, added that the appraisal process does not take into consideration a thorough assessment of their teaching role, and 69% also stated that they believed the best-performing teachers at their school did not receive the greatest recognition (OECD, 2013). Many teacher performance appraisal systems are perceived to weigh heavily towards accountability systems, rather than supporting the growth and development of teachers to improve their professional practice, and do not adequately inform teachers on what needs to be improved or how they will be supported (Elliot, 2015).

A key element of professional practice relates to personal characteristics, which have to date remained sensitive, uncertain and political to include in any sort of appraisal, or even in professional conversation. However, this particular aspect of teacher attributes found in this study as a theme, (CTAQ) may cause difficulty because they are challenging to quantify, which would likely add further complexity to appraise these more personalised traits and qualities. The willingness of teachers to openly discuss with leaders in an appraisal situation, is another potential complexity.

To elaborate, a theme emerged on the personal attributes of a teacher and how they contribute to characterising expertise. These included character traits and qualities such as humility, confidence, integrity, honesty, empathy, and approachability. Another theme emerged regarding the mindset of the expert teacher being open-minded, adaptable and flexible. These two themes raise the problematic nature of evaluating expertise in teaching, given that all participants identified attributes similar to these examples. These attributes were clearly so important to participants that it seems one cannot be considered to be an expert without these traits. Yet, teachers to date have been evaluated on pedagogical practice and, to a lesser degree, on relationships and subject knowledge. These collective insights which are embedded in the two respective emergent themes, may be worth considering exploring further and are carried over to be elaborated on in the final chapter. Participants provided a clear perspective of the comprehensive importance of these attributes. To date, these attributes are not found in the *Australian Professional Standards for Teachers* (AITSL, 2011a).

6.11 REVISITING THE RESEARCH QUESTION

In this section, the research question and sub-questions are revisited and the findings are discussed inclusive of the theoretical frameworks. The participants in the two cases shared many perceptions about expertise in teaching. After revisiting and examining the data closely numerous times, some differences in some codes and categories emerged. Overall, however, the same five themes emerged from each case to provide answers to the primary research question and its sub-questions. The emergent themes are: Builds Relationships with the School Community; Possesses a Deep Mastery of Knowledge; Demonstrates High Quality and Effective Pedagogical Practice; Open to, and Seeks Out, Opportunities for Professional Growth and Improvement; and, Displays Particular Character Traits and Qualities. Unless stated otherwise, responses to the research questions are the collective views of the two cases because of the similarities of perceptions.

6.11.1 PRIMARY RESEARCH QUESTION - HOW DO PROFESSIONALS IN SCHOOLS CONCEPTUALISE-OPERATIONALISE EXPERTISE IN TEACHING?

Participants in both cases conceptualised-operationalised expertise in ways that were meaningful to their own unique experiences and practices, typically in context of their current respective schools, although on occasions participants specifically

referred to a previous school experience. That is, no two individuals within either case study conceptualised-operationalised expertise in precisely the same way as another participant. The combination and emphasis of attributes and practices varied, however, overall many perceptions emerged that were also in common. For instance, some particular character traits and qualities (CTAQ's) presented in the data were stated by one or more participants, though not necessarily stated by all; although the number and combinations of CTAQs stated in common by participants were comprehensive and formed a fabric overall resulting in clear themes emerging. The comprehensive number and detail of the perspectives provided by participants in both cases also supported the longstanding view in the literature that the complexity of the profession was substantial (Berry & Mulhal, 2006; Loughran, 2010; Shagrir & Altan, 2014) and not a formulaic one (Marzano, 2007), which was reflected in relation to the narrowed focus on expertise. Some participants also described expertise through a narrative of their own practice, as a model for expertise in teaching. Some other participants rarely referred to their own practice, or did so purposefully at particular moments to illustrate a point, and then reverted to giving responses without personalised reference. In the leader case, fewer participants tended to use the latter of these two contrasted approaches compared to the teacher case.

Considering the emergence of the thematic data more deeply in relation to the theoretical frameworks previously stated, Kemmis et al. (2014a) acknowledge different people in professional learning communities compose the practices of *sayings, doings, relatings*, in different ways, and possess different perspectives shaped by the practice architectures that hold them in place. That is, the particular 'cultural-discursive, material-economic and social-political arrangements' (p. 16), which specifically pertain to different sites where those practices are carried out, enable or constrain the perspectives that are formed. In this study, participants provided their own different perspectives to characterise expertise in teaching, shaped by their own contextualised experiences in schools as their respective communities of practice, encountering one another in intersubjective spaces (Kemmis et al., 2014a) and through the respective cultural-discursive, material-economic and social-political arrangements. It is these dynamic arrangements that enable, or constrain, the changing of practice architectures in the participants' respective organisational environments, where teacher and teaching expertise is conceptualised-operationalised.

As these interactions occur for the individual teacher, bi-directional interdependent relationships are formed within the communities of practice in the

micro-meso-exo- systems, identified by Bronfenbrenner (1994). How the individual teacher relates to others within these systems in their school, shapes their perceptions through their own interrelations and experiences with others. How teachers interact at the more intimate micro-system level, involving students, colleagues and leaders for instance, shapes how the teacher is viewed in turn by those same people, thus the bi-directional nature of the interactions. Perceptions of expertise involving the teacher are then formed by those interconnected individuals in their community, each of whom has their developed their own construct of what they perceive that an expert teacher should present in practice. Bronfenbrenner (1994) found in this theory that it is possible for two individuals to exist in the same micro-system and still have very different experiences, even for siblings within a nuclear family, for instance. This is applicable to teachers in a single school, sub-school or faculty department for example. What one person experiences, as well as how expertise is identified, may be quite different to another person who engages with the same teacher at this level based on their interactions. All these interactions are held together by the practice architectures described earlier by Kemmis et al. (2012; 2014a). The meso-system involves linkages to other relationships such as parents of students, colleagues external to the current school environment and other community members. Parents, for instance, form views on the teacher's expertise based on their interactions and experiences with the teacher, as well as from second-hand information provided by others, such as their children or other parents, and other pre-existing constructs of expertise. These intersubjective spaces, described by Kemmis et al. (2014a), position the interactions of the expert teacher in a community of practice as they, and others, encounter one another.

Exploring these interactions further, the cultural-discursive arrangements in the dimension of the semantic space (Kemmis et al., 2014a) either constrain or enable shared specialist discourses on what an expert teacher means to those individuals in a specific community. This study has presented what its participants have expressed as those attributes and practices that characterise an expert teacher, which have been presented previously in the results chapters. Participants in both cases identified particular aspects leading to the emergent themes. For instance, in the theme Displays Particular Character Traits and Qualities, participants in both cases describe many of the traits and qualities of expert teachers as they interact with others at the micro- and meso-system, in those intersubjective spaces in their respective communities. Examples include the level of respect displayed to others, the level of engagement of students achieved in learning environments, using humour as a way to connect with

others, including parents in the educative process involving their own children, personalising learning for students through the use of stories that captures the interest of an individual, and knowing student's personal situations and interests to better cater to their needs. Examples such as these were given by teachers and leaders. Darling (2007) states that Bronfenbrenner's later phase work focused 'its attention to the patterning and interrelationship of multiple determinants of development and on the active role of the developing person' (p. 203). This focus emphasised the interrelationship of different processes and their contextual variation, which is relevant to teachers in organisations, including those in this study, and how the conditions for practice allow for transformation in the workplace. Darling (2007) states that:

Because different environments will have different affordances and will be responded to in different ways by different individuals, experienced and objectively defined environments will not be randomly distributed with regard to the developmental processes and the individuals one observes within them. Rather, one will find ecological niches in which distinct processes and outcomes will be observed. (p. 204)

The theoretical frameworks paired together, Practice Architectures / Ecologies of Practice (Kemmis et al., 2012; 2014a), along with Ecological Systems Theory (Bronfenbrenner), notionally enables the conceptualisation of expertise in the teaching profession to be relatable to other sites beyond those in this particular study. For professionals in other schools, some of the themes (identified previously) are familiar in the literature. However, two particular themes are not as represented in the literature, such as the APST framework. These are: Open to, and Seeks Out, Opportunities for Professional Growth and Improvement; and, Displays Particular Character Traits and Qualities. Both of these themes illuminated some important conceptualisations-operationalisations of expertise by participants that are expanded upon in the following sub-sections and addressed in Chapter 7. These themes emerged in all three sites in both cases, despite the way in which participants conceptualised-operationalised an expert within their distinctive professional learning communities, as they interact in the multi-level systems presented in Bronfenbrenner's model and the intersubjective spaces in Kemmis et al. (2012; 2014a) theoretical framework of Practice Architectures and Ecologies of Practice Theory.

6.11.2 SUB-QUESTION 1 - WHAT PROFESSIONAL ATTRIBUTES OR PRACTICES CHARACTERISE EXPERTISE IN TEACHING?

This study found a broad range of differing attributes and practices that participants perceived to characterise expertise in teaching, which emerged into the five distinct themes. According to participants, one of these themes Builds Relationships with the School Community was particularly focused on developing relationships with students. This aligned with relevant literature for student-teacher relationships (Cohen & Grossman, 2016; Rubie-Davies, 2015) and relationships with colleagues (Barth, 2006; Findall, 2015) were also noted in this same vein. For students, the perceived benefits involved improved experiences and learning outcomes. Being collegial, was said to enable access to resources and ultimately lead to improved practice. Some of the key attributes and practices involved placing students as the highest priority of a teacher's responsibility, viewing students as individuals with holistic dimensions (i.e.: intellectual, spiritual, social, emotional, physical), actively working to create a positive rapport with students in particular, and then developing genuine professional relationships, demonstrating collegiality through positive and productive engagement with colleagues. The case study involving teachers only also identified parents as part of the relationship for the benefit of the students.

A number of participants expressed a view that developing positive rapport and building relationships with students was the most important facet of a teacher's work. Although, this was not consistent across participants within either case, nor was it consistent in existing educational research (Depaepe et al., 2013). Bronfenbrenner's (1994) Ecological Systems Theory illustrates the importance of relationships in shaping any experience for any individual. Teachers are one of the core influences in the lives of students, alongside parents and siblings in the most immediate sphere of the microsystem. Conversely, students and colleagues are both a core influence in the most immediate sphere of teachers, impacting on the experience of the teacher in professional practice. This influence occurs through the *sayings*, *doings*, and *relatings* identified by Kemmis et al. (2012); Kemmis et al. (2014a) in Practice Architectures and interconnected in Ecological Practice Theory. Most particularly, the *relatings* dimension impacts on the teacher as interaction occurs with students, colleagues and even parents (which is, though less frequent, still impactful). Within the theme of Builds Relationships with the School Community, an emotive element was incorporated to express the attribute and practices of an expert teacher. For instance, the expert is able to convey a sense to their students that they care for

them, which creates a desire in some students to want to work harder for their teacher and not let down their teacher (or school).

A key practice within this theme that participants used to illustrate expertise was the teacher actively creating opportunities to learn about their students from multiple perspectives, as learners (learning strengths and needs, and catering to these), as supported by Torff in Moore et al. (2015). When describing expertise, participants suggested that an expert teacher had a high personal accountability and responsibility for the (broad) success of each of student, also identified by Dinham, (2008).

Two other themes that identified attributes or practices to characterise expertise were presented within Possesses a Deep Mastery of Subject Knowledge, and Demonstrates High Quality and Effective Pedagogical Practice. The former included subject content knowledge as an essential attribute for expertise, which is well supported by research (Agathangelou et al., 2016; Ball et al., 2008; Darling-Hammond 2000; Farrell, 2015; Guerriero & Deligiannidi, 2016; Sadler et al., 2015). Participants in this study expressed the view that without strong subject content knowledge, one could not be considered an expert teacher; although there was no suggestion from any participant that merely possessing this knowledge was enough to warrant the claim of expertise. Kemmis et al. (2012; 2014a) express the importance of *sayings* in a school setting where the particular language used explicates what people know, and interconnects with the activities in which people engage (*doings*). *Doings* are represented in the Practice Architectures and Ecologies of Practice Theory (Kemmis et al., 2012; 2014a) for the second of these themes, which involves pedagogical knowledge. This is also consistent in existing literature in characterising expertise (Berliner, 2004; Hill & Charalambous, 2012; Salkind, 2008). In this study, some participants referred to knowledge of pedagogy specifically as a term, though rarely was there reference to pedagogical content knowledge noted in the literature (Bertram, 2012; Depaepe, Verschaffel, Kelchtermans, 2013). Overall, participants characterised expertise in this theme by describing explicit examples of their own pedagogy to describe expertise.

In comparison to the first three themes to emerge in this study, there is a paucity of literature on the remaining two themes that participants said characterise the attributes or practices of expertise in teaching. For instance, these themes Open to, and Seeks Out, Opportunities for Professional Growth and Improvement; and, Displays Particular Character Traits and Qualities do not feature at all in some important key educational policy, such as the current *Australian Professional Standards*

for Teachers (AITSL, 2011a). These comparisons are observed and discussed in Chapter 7 in the implications and recommendations as important considerations for the profession.

The theme related to seeking out opportunities to improve professionally involves the mindset of the teacher and related practices. For example, an expert was construed to: have an open mindset; be perceptive and aware of their teaching environment (Schempp & Woorons Johnson, 2006); adapt to the needs of students in lessons day-to-day by demonstrating flexibility (Webster & Schempp, 2009); and reflect on practice (prior to, during and afterwards) (Schön, 1983) in order to identify and seize opportunities to improve professional practice (Farrell, 2015; Webster & Schempp, 2009). Expert teachers were not only open to getting better, they sought out opportunities to grow their knowledge and skills. Some aspects of this theme can be situated in the Ecologies of Practice Theory (Kemmis et al., 2012; 2014a) as forms of thinking in the *sayings* dimension.

The final theme to elucidate attributes or practices of the expert involved the character traits and qualities (CTAQ) of the teacher. Some of the key CTAQ identified by participants in this study were: passion (Berliner, 2001; Dinham, 2008; Elliot & Crosswell, 2004; Fried, 2004; Mart, 2013; Yates & Hattie, 2013), enthusiasm, humility, confidence, integrity, empathy (Day in Krátká, 2015) openness, optimism, care, humour (Tsui, 2009), reflection (Farrell, 2015; Tsui, 2009), self-awareness (Webster & Schempp, 2009), perceptiveness (Schempp & Johnson, 2006), honesty (Day in Krátká, 2015), sincerity, authenticity, dedication, adaptability, flexibility, trustworthiness, approachability, self-organisation, articulateness, good communication and a love of learning.

Of these, passion was the most frequently stated by participants overall, along with an ability to reflect accurately upon one's own practice. For some individuals, however, preferences differed. For instance, one leader stated that integrity was the most important attribute overall, while another leader stated empathy was the most important attribute overall. Both leaders placed these virtues ahead of any other, including knowledge, pedagogy or relationships (though they embedded and related these respective CTAQs in knowledge, pedagogy and relationships). A teacher's most fundamental traits and qualities as an individual person are the inner core of Ecological Systems Theory (Bronfenbrenner, 1994) before any interaction occurs with other people at the micro or mesosystem level. Much of the attributes of the expert are connected to the teacher as an individual, before considering the interactions

between the individual and other members of the school community that occur through the *sayings, doings, and relating*s (Kemmis et al., 2012; 2014a).

6.11.3 SUB-QUESTION 2 - HOW DO THESE ATTRIBUTES OR PRACTICES DIFFER BETWEEN THE EXPERIENCED AND NON-EXPERT TEACHER?

In response to seed questions as well as more probing questions, participants typically did not characterise expertise in reference to non-expertise. Rather, participants predominantly expressed their perceptions by describing attributes and practices that characterised an expert or expertise. There were occasions when participants were initially asked to differentiate expertise and non-expertise as part of the explicit question, though sometimes participants still did not express a response to discern the difference, rather provided views on the expert. In other situations, the description of a non-expert was brief and the participant promptly reverted to providing a narrative of an expert. This appeared to be more natural to do so for participants. Some responses suggested the experienced non-expert was the literally opposite of the expert, or alternatively less developed than the expert (in a developmental sense), though detailed descriptions were rare.

In the theme Possesses a Deep Mastery of Subject Knowledge, an experienced non-expert was said to have less developed knowledge. The same principle applied to the themes Demonstrates High Quality and Effective Pedagogical Practice and Builds Relationships with the School Community. For instance, the responses related to this research sub-question suggested experienced non-experts have lower quality relationships with their students, rather than no relationship at all. However, in the themes Open to, and Seeks Out, Opportunities for Professional Growth and Improvement, and Displays Particular Character Traits and Qualities, this same premise did not always apply. For example, one participant stated an experienced non-expert did not reflect, while another suggested they reflected less perceptively.

One other important response to this question from participants revealed that some experienced non-experts purportedly failed to realise that they are not-expert, differing from their colleagues in this perception. Non-experts often lack awareness of their own skills, according to participants, while experts are more perceptive (Webster & Schempp, 2009; Wolff et al., 2016). One leader (L2) suggested some teachers would 'rather not see' issues because it required a 'moral incumbency' to act if they were acknowledged, though it may be that they simply cannot 'see' (Schempp & Johnson, 2009; Tsui, 2009). Wolff et al. (2016) suggest it may not be whether a teacher sees an event or not, rather it is how they interpret what they are seeing, and

without adequate related knowledge, they cannot process it as meaningful. Other participants provided a similar sense that some teachers overestimate their abilities and level of performance compared to the perceptions of colleagues. For example, 'I think some people think they're experts but they're perhaps not in other people's eyes' (T7). A number of participants were asked if they perceived themselves as expert teachers. Of those who were asked, only one indicated they may not be, a senior leader who identified teaching was now a minor part of the proportion of overall responsibilities. This particular leader nominated a lack of regular classroom-based practise, and because teaching was not the predominant day-to-day responsibility, as the rationale for this self-evaluation. Every other participant who responded indicated in the affirmative. All participants identified a proportion of teacher colleagues as non-expert.

Within the theme Displays Particular Character Traits and Qualities, some specific traits did not receive consistent agreement as those characterising expertise. For example, while most participants who identified humility expressed it as an attribute of the expert, others suggested that an experienced non-expert could also be humble. The same principle applied to some other attributes, some suggesting that any teacher can, for example, be passionate, while others maintaining that passion was essential for expertise to develop and therefore an attribute of the expert.

Most of the responses from participants in both cases were situated to express the attributes or practices of the expert and typically, the experienced non-expert was excluded in most responses unless further probed by the facilitator.

6.11.4 SUB-QUESTION 3 - HOW IS EXPERTISE ENABLED OR INHIBITED AS A CLASSROOM TEACHER?

Participants in both cases suggested that expertise was enabled and developed through engagement in a number of different improvement strategies involving learning. In the theme Possesses a Deep Mastery of Subject Knowledge, formal study was given as one means of furthering subject content knowledge. Some participants suggested expertise was enabled by engaging in semi-formal and informal learning, including observing other teachers in practice, or engaging in related activities to develop knowledge outside of the school setting (such as when music teachers perform in musical groups external to the school, or visual arts teachers practise as artists).

The theme Open to, and Seeks Out, Opportunities for Professional Growth and Improvement also identified mindset as an enabler of expertise. Participants

explained that improvement is characterised by remaining open to change, open to learning and taking the initiative to improve. Furthermore, one participant suggested that it does not matter what is learned, provided the teacher-mindset remains open to learning. According to some participants, expertise was enabled in the theme Displays Particular Character Traits and Qualities. For instance, passion was identified to give purpose to improvement, explaining why teachers wanted to improve content knowledge, or pedagogical knowledge and skills, or to invest in high quality student-teacher relationships. Passion was cited as a CTAQ that explains *why* expertise develops, whereas some other themes explain *how* expertise developed. Inhibitors within this theme were also suggested to be self-delusion and having an excessive ego that interfered with practising expertise. Participants also discussed some converse notions of these enablers, such as having a *closed* mindset to change and possible improvement.

One additional inhibitor identified was an unhealthy work-life balance, or having challenging circumstances at home impacting on work (such as a lack of sleep or issues with family relationships). This maps into the Ecological Systems Theory of Bronfenbrenner (1994), which notes that the relationships between the individual and others in the microsystem and mesosystem impact directly on an individual.

6.11.5 SUB-QUESTION 4 - WHAT CONTRIBUTES TO, OR INFLUENCES YOUR SPECIFIC UNDERSTANDING OF EXPERTISE IN TEACHING?

Responses to this sub-question involved *sayings*, *doings* and *relatings* (Kemmis, et al., 2012; 2014a) within the themes that emerged. *Doings* included experience in the profession, trial and error, and experimenting in practice. *Sayings* included examples such as learning new knowledge and accessing the thinking of others. *Relatings* included interactions with colleagues who offered expertise from which to learn in practice, which were accessible due to collegial relationships creating and nurturing the opportunities. Participants expressed a combination of these interrelationships. For instance, engaging in stimulating professional conversation about a specific knowledge or teaching concept to incorporate into practice blended *relatings* with *doings* and *sayings* in one transaction. Observing others was another activity (*doings*) that participants proposed could spark ideas and cause self-reflection. Other means to inform professional practice include formal study, explicit support from leaders and colleagues, remaining aware, reflecting, engaging in professional discussion, experience in and out of teaching, learning from mistakes, policy including curriculum frameworks, feedback, professional reading and mentors. One teacher

indicated the *Australian Professional Standards for Teachers* (AITSL, 2011a) also informed practice, though this resource was rarely mentioned. Even upon prompting, most did not cite the APST as a means to inform practice or enable it to any significant degree. Some were not aware of the contents of the APST, while others were vaguely familiar but saw it as a compliance document asking them to 'tick the box'. What informs professional practice was similar in the views expressed in both cases between teachers and leaders.

6.12 CHAPTER CONCLUSION

This chapter explored the emergent themes arising from the teacher and leader cases, placing a particular focus on the respective similarities and differences arising from the data analysis process. Participants provided a substantive number of wide-ranging attributes and practices that would characterise expert teachers. These were presented in some detail in the Results chapters. They articulated the attributes and practices that characterise expertise in teaching that resulted in the emergence of the five themes in these two case studies. Each of the five themes was compared and contrasted between the two cases, with the categories defined and codes presented. The same five themes emerged in both cases, although some of the categories and codes differed. This finding suggests that teachers and leaders hold similar perceptions on the attributes and practices that characterise expertise.

This chapter also incorporated two theoretical frameworks that were considered suitable to further provide depth and insight into how the perceptions of expertise in teaching in schools may be shaped, arising from the interactions from interdependent relationships that exist in communities of practice. These frameworks are: Practice Architectures and Ecologies of Practices Theory (Kemmis et al., 2012, Kemmis et al., 2014a) and Bronfenbrenner's (2006) Ecological Systems Theory. The chapter also incorporated the emergent themes with the theoretical frameworks together to present further insight into the findings of the study, and revisited and answered the research questions. The next, and final, chapter presents a number of implications and recommendations for the wider profession, followed by recommendations for future studies.

CHAPTER 7

RECOMMENDATIONS AND CONCLUSION

7.1 INTRODUCTION

This study has researched how teachers and leaders conceptualise-operationalise expertise in teaching, as two distinct cases. Three independent schools, located in New South Wales, Queensland and the Australian Capital Territory, provided the settings for the two explorative case studies. The perceptions of teachers and leaders were gained through individual and focus group interviews, and the study employed a qualitative methodology within an interpretivist paradigm. Participants at each site responded to seed and probe type questions to provide their perceptions on the distinctive practices and attributes that characterise expertise. Participants also provided views on how experienced non-expert teachers differed to expert teachers. This study did not consider the characteristics of novice teachers because the attributes and practices are explainable due to inexperience (Berliner, 2004; Dinham, 2008). This study also researched how participants perceived expertise to develop over time, and further inquired about the conditions that enabled or inhibited expertise progression.

Arising from the data analysis process (Creswell, 2014), five themes emerged from the two cases respectively. Overall, each of the five emergent themes were uncommon in both cases. The emergent themes were: a. Possesses a Deep Mastery of Subject Knowledge; b. Demonstrates High Quality and Effective Pedagogical Practice; c. Builds Relationships with the School Community; d. Open to, and Seeks Out, Opportunities for Professional Growth and Improvement; e. Displays Particular Character Traits and Qualities. In this chapter, the themes are mapped against the *Australian Professional Standards for Teachers (APST)* (AITSL, 2011a) Focus Areas, and also further consider the Highly Accomplished and Lead teacher descriptors, across the seven Standards. By mapping the emergent themes and the APST, alignment between the APST Focus Areas and the findings of this study can provide a relevant and current context for professionals in practice in Australian schools.

This study aims to provide further insight into the complex cognitive phenomenon of expertise (Smith & Strahan, 2004) in the teaching profession, particularly focused for professionals in schools to stimulate further discussion and

debate on expertise. Although defining teaching quality is both contentious and contested among the different writers, researchers and policymakers (Naylor & Sayed, 2014), this study aims to contribute to this important professional issue, and in doing so, provide the perspective of teachers and leaders in an Australian school context. The importance of high quality teaching in society is now well-accepted (OECD, 2016), along with the importance of teachers continuing to learn and adapt to change throughout the career stages. Schleicher in OECD (2016) states:

Teachers are the key in today's knowledge economy, where a good education is an essential foundation for every child's future success... [with] strong evidence that teachers are open to change and keen to learn and develop throughout their careers. At the same time, they need to take more initiative to work with colleagues and school leaders, and take advantage of every opportunity for professional development. (p. 2)

Evans (2015) contends that the term professional development has been reconceptualised by teachers in schools, and is now encompassed as part of the broader concept of professional learning. Professional learning was an important concept to emerge in this study on progressing expertise of teachers. This statement above by Schleicher (in OECD, 2016) reflects an important aspect of the professional debate on teacher expertise, and where the locus of responsibility occurs to progress expertise, within the interdependent relationships (Bronfenbrenner, 1994) in the intersubjective spaces occurring in schools, as Kemmis et al. (2012; 2014a). This study investigated the attributes and practices that characterise expertise from a professional's perspective, for professionals in school environments.

Case studies are typically not suited to be generalised to other situations (Yin, 2009). This study is not replicable elsewhere because it is unique to the participants who informed this research on the topic based on their perceptions at the time of data collection. The theoretical frameworks of Ecological Systems Theory (Bronfenbrenner, 1994) and Ecologies of Practice Theory (Kemmis et al., 2012; 2014a) have been used to frame recommendations to enable readers to consider the findings in this study and more effectively relate to a different professional context. The frameworks provide a conduit for other professionals to apply contextual relevance in their own intersubjective spaces in schools. It is suggested that teachers and leaders consider the recommendations to inform their specific context to improve aspects of practice. To

conclude this chapter, ideas for future research are presented, along with a concluding statement.

7.2 FRAMING FINDINGS TO THE AUSTRALIAN PROFESSIONAL STANDARDS FOR TEACHERS (APST)

To align with current practice and provide relevance across the education sector, the findings of this study are mapped to the *Australian Professional Standards for Teachers* (AITSL, 2011a). Mapping the emergent themes to the APST makes visible the constructed professional perceptions in context of nationally aligned professional standards relevant in all Australian Schools. The organisation of the APST comprise seven 'interconnected, interdependent and overlapping Standards' (AITSL, 2011a, p. 3) and 'articulate what teachers are expected to know and be able to do at four career stages: Graduate, Proficient, Highly Accomplished and Lead' (p. 1). AITSL (2011a) state 'the focus areas and descriptors identify the components of quality teaching at each career stage' (p. 5). Aligning this study with the APST particularly considers the Highly Accomplished and Lead teacher descriptors, as they are the two most advanced career stages of the Standards and interpreted to reflect expertise. The Graduate and Proficient teacher career stages do not describe or reflect expertise and are not used to align the findings of this study.

It is important to note that this study explicitly did not, as part of its methodology, position it as an evaluation of the APST. Participants were not referred to the APST as a comparison to their own perceptions, or as an impetus to conceive perceptions. Participants were not asked to review any of the APST or any other framework or support documents. However, in context of this chapter and conceptualising future recommendations for professionals in schools, the APST come into focus because of their importance and current relevance to all teachers in Australian schools.

The following sections include a series of tables which present the specific Focus Areas of the seven Standards, and include the career stage descriptors for Highly Accomplished and Lead teachers. After each Focus Area descriptor, a brief section titled, 'Research Alignment', aims to provide additional insight comparing and contrasting key features of the emergent themes and the APST Focus Areas highlighting the key aspects that do and do not align.

The emergent themes are referred to as Themes A to E in Tables 7.1 to 7.8, as outlined below:

Theme A	Possesses a Deep Mastery of Subject Knowledge
Theme B	Demonstrates High Quality and Effective Pedagogical Practice
Theme C	Builds Relationships with the School Community
Theme D	Open to, and Seeks Out, Opportunities for Professional Growth and Improvement
Theme E	Displays Particular Character Traits and Qualities

7.3 APST STANDARD 1: KNOW STUDENTS AND HOW THEY LEARN

Standard 1 (Table 7.1) is included in the Domain of Professional Knowledge in the APST. It includes: the holistic developmental elements of students learning (intellectual, physical, social), how students learn, diversity of student’s backgrounds, strategies for teaching Aboriginal and Torres Strait Islander students, differentiation of student learning needs and strategies to support students with a disability.

Table 7.1: The APST descriptors for Standard 1 Focus Area, Highly Accomplished and Lead teacher (AITSL, 2011a) and comments on alignment to this study.

Standard 1: Know students and how they learn		
Focus Area	Highly Accomplished	Lead
1.1 Physical, social and intellectual development and characteristics of students	<i>Select from a flexible and effective repertoire of teaching strategies to suit the physical, social and intellectual development and characteristics of students.</i>	<i>Lead colleagues to select and develop teaching strategies to improve student learning using knowledge of the physical, social and intellectual development and characteristics of students.</i>
<p>Research Alignment: This Focus Area aligned with the findings in this study in both cases. Theme C, Builds Relationships with the School Community, provided the key features of the alignment.</p> <p>Categories that aligned to this Focus Area included, <i>prioritises students first, demonstrates a holistic approach to students, and connects and bonds with students</i> and the codes within these categories provide further insight (refer to Table 6.1). For example, codes such as ‘knows personal interests of students’, ‘creates opportunities to know students’, ‘fits content to the student’, ‘places students’ needs before content delivery’, ‘engages students’ demonstrate knowing students and how they learn.</p> <p>Teachers and leaders expressed statements that indicated an expert knows their students particularly well and they used this knowledge to enhance the teaching and learning processes, and outcomes, for their students. The research literature supports participant views on the importance of knowing students (Riley, 2010; Smith & Strahan, 2004). The Queensland Government Department of Education and Training (2016) state the ‘core business of schools is to provide students with a rich learning environment that is open, respectful, caring and safe’ (para. 1). There was a frequent reference in this</p>		

<p>study to building student-teacher relationships, as one dimension of social development.</p> <p>Whilst there was alignment with the Focus Area, and the Highly Accomplished teacher descriptor and this study, participants did not frame expertise that aligned with the Lead teacher descriptor. The misalignment involved ‘lead colleagues’. To elaborate, participants did not position expertise as a teacher leading colleagues, as stated in the Lead descriptor. Instead, the expertise was expressed in the performance of an expert teacher not connected to colleagues.</p>		
1.2 Understand how students learn	<i>Expand understanding of how students learn using research and workplace knowledge.</i>	<i>Lead processes to evaluate the effectiveness of teaching programs using research and workplace knowledge about how students learn.</i>
<p>Research Alignment: Alignment with this study, the Focus Area, and the Highly Accomplished descriptor occurred in relation to expert teachers/teaching. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, combined with Theme C, Builds Relationships with the School Community, and Theme D, Open to, and Seeks Out, Opportunities for Professional Growth and Improvement, all provided categories and codes for this alignment. Theme B was most relevant to understanding the methods employed to teacher students, while Theme C was most relevant to understanding how individual students are taught, and Theme D was relevant to expert teachers seeking out learning and connecting with colleagues to better understand how students learn. That is, it was an amalgam of categories and codes from these themes.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>demonstrates effective planning / structure/ delivery, differentiates and personalises learning, engages student in their learning, deepens learning for students, understands neurological principles for learning</i> (Theme B). Examples of codes in the category <i>differentiates and personalises learning</i> was ‘identifies styles of learning’ and ‘knows individual learning styles’. Examples of <i>neurological principles for learning</i> were ‘is aware of brain plasticity principles’ and ‘has cognitive and neurological learning awareness’.</p> <p><i>engages in reflective practice, demonstrates collegiality to enhance practice, invests in self-learning</i> (Theme D). An example of a code in the category, <i>invests in self-learning</i> was to ‘converse with students’ to better understand how they learn.</p> <p><i>demonstrates a holistic approach to students</i> (Theme C). An example of a code from this category was ‘understands students’.</p> <p>Participants did not specifically refer to the Lead teacher descriptor aspects involving leading processes with colleague teachers in relation to work program evaluation. However, participants discussed being collegial to develop their level of expertise, for a range of purposes and benefits. Understanding neurological principles for student learning was stated in the leader case. Alignment occurred for this Focus Area and Highly Accomplished teacher descriptor, though not the Lead teacher descriptor.</p>		
1.3 Students with diverse linguistic, cultural, religious and socioeconomic	<i>Support colleagues to develop effective teaching strategies that address the learning strengths and needs of students from diverse linguistic, cultural, religious and</i>	<i>Evaluate and revise school learning and teaching programs, using expert and community knowledge and experience, to meet the needs of students with diverse linguistic, cultural, religious and</i>

backgrounds	<i>socioeconomic backgrounds.</i>	<i>socioeconomic backgrounds.</i>
<p>Research Alignment: Alignment did not occur in this Focus Area. Participants in this study did not focus on or specifically refer to expert teachers supporting colleagues or evaluating programs to address religious, cultural, linguistic and socioeconomic backgrounds of students. However, participants did discuss the importance of differentiating to the needs of students and to know their students well. The specific socio-cultural aspects were not discussed as attending to different religious beliefs, for example, rather they were discussed as attending to the needs more generally.</p>		
1.4 Strategies for teaching Aboriginal and Torres Strait Islander students	<i>Provide advice and support colleagues in the implementation of effective teaching strategies for Aboriginal and Torres Strait Islander students using knowledge of and support from community representatives.</i>	<i>Develop teaching programs that support equitable and ongoing participation of Aboriginal and Torres Strait Islander students by engaging in collaborative relationships with community representatives and parents/carers.</i>
<p>Research Alignment: Alignment did not occur in this Focus Area. Participants in this study did not discuss expert teachers in terms of specifically teaching Aboriginal and Torres Strait Islander students or developing teaching programs in this context.</p>		
1.5 Differentiate teaching to meet the specific learning needs of students across the full range of abilities	<i>Evaluate learning and teaching programs, using student assessment data, that are differentiated for the specific learning needs of students across the full range of abilities.</i>	<i>Lead colleagues to evaluate the effectiveness of learning and teaching programs differentiated for the specific learning needs of students across the full range of abilities.</i>
<p>Research Alignment: Alignment occurred in this Focus Area. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, provided the key features of the alignment.</p> <p>Categories that aligned to this Focus Area included: <i>differentiates and personalises learning</i>. Codes within this category included, 'differentiates learning', 'amends lesson for learner needs', 'personalises learning', 'knows individual learning styles', 'identifies gaps in individual learners', as some examples.</p> <p>Expert teacher practice was described by participants in both cases as differentiating the needs of students, and teaching to those needs, for each individual. Participants did not refer to expertise as 'leading colleagues', rather it was described as teacher specific classroom practices and strategies. Alignment occurred with the Focus Area and the Highly Accomplished descriptors, though not with the Lead teacher descriptor. Participants identified expertise with a teacher who was aware of the needs of students and implemented strategies to cater to those needs. Differentiation was specifically expressed as a practice of an expert teacher, and was stated with repetition during interviews in both cases.</p>		
1.6 Strategies to support full	<i>Work with colleagues to access specialist knowledge, and relevant policy and legislation, to develop</i>	<i>Initiate and lead the review of school policies to support the engagement and full participation of students with</i>

participation of students with disability	<i>teaching programs that support the participation and learning of students with disability.</i>	<i>disability and ensure compliance with legislative and/or system policies.</i>
<p>Research Alignment: Alignment did not occur in this Focus Area. However, participants discussed the differentiated needs of students but did not focus on or specifically discuss students with disabilities. Standard 1, Focus Area 1.5 refers to ‘across a full range of abilities’ and as participants in this study referred to differentiating to the needs of students generally.</p>		
<p>Additional findings in this study, not covered in the APST:</p>		
<p>Inherent in Standard 1 is to ‘know students’ and this is stated in some Focus Areas, within the overarching Domain of Professional Knowledge. However, the APST Focus Areas 1.1 to 1.6 do not reflect the emphasis participants placed on the importance of knowing students beyond their learning needs. Participants in both cases frequently expressed the importance of a teacher knowing students’ interests, needs, and builds rapport and relationships with students, which characterises an expert. The data aligned for some of the Focus Areas in Standard 1, although when contextualising with participant emphasis, knowing students, building student-teacher relationships and have rapport, was considered a clear attribute and practice of an expert.</p>		

Table 7.1 provides a comparison between *Standard 1- Know students and how they learn - Focus Areas (FA) 1.1 to 1.6* and the Highly Accomplished and Lead teacher career stage descriptors, and the findings of this study. Alignment occurred in some, though not all of these. Notably, in some instances, in this study participants identified and articulated some elements of expertise in relation to the Focus Area presented, though expressed it differently to the Highly Accomplished teacher descriptor. For example, Focus Area 1.1 Highly Accomplished descriptor states ‘select from a flexible and effective repertoire of teaching strategies’. In this study, participants were very specific in the strategies described. In this instance, the difference was broad versus specific description, although the principle aligned.

There were also differences between the descriptions and perceptions of an expert teacher in this study, and the Lead teacher descriptors, even when the Focus Area itself was aligned. For example, the Lead teacher descriptor for Focus Area 1.1 stated ‘lead colleagues ...’, whereas participants in this study focused their descriptions of expertise as excellence /expertise without leading other colleagues in that specific area. There were also several Focus Areas in Standard 1 that this study did not cover, which have been noted in Table 7.1. They were concepts not actively rejected in this study, rather, they did not arise in the interviews.

7.4 APST STANDARD 2: KNOW THE CONTENT AND HOW TO TEACH IT

Standard 2 (Table 7.2) is included in the Domain of Professional Knowledge in the APST. It covers the selection and organisation of subject content matter, and the design and implementation of teaching strategies. This Standard further covers curriculum, assessment and reporting, as well as ICT strategies incorporated into teaching. Literacy and numeracy is another area of focus in relation to content and how to teach it. Finally, Aboriginal and Torres Strait Islander students are another focus area in terms of understanding and respecting cultures, histories and languages.

Table 7.2: The APST descriptors for Standard 2 Focus Area, Highly Accomplished and Lead teacher (AITSL, 2011a) and comments on alignment to this study.

Standard 2: Know the content and how to teach it		
Focus Area	Highly Accomplished	Lead
2.1 Content and teaching strategies of the teaching area	<i>Support colleagues using current and comprehensive knowledge of content and teaching strategies to develop and implement engaging learning and teaching programs.</i>	<i>Lead initiatives within the school to evaluate and improve knowledge of content and teaching strategies and demonstrate exemplary teaching of subjects using effective, research-based learning and teaching programs.</i>
<p>Research Alignment: Alignment occurred in this Focus Area. Theme A, Possesses a Deep Mastery of Subject Knowledge and Theme B, Demonstrates High Quality and Effective Pedagogical Practice, provided the key features of the alignment.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Possesses domain knowledge, with codes 'possesses a mastery of subject content knowledge', 'possesses depth of subject content knowledge', retrieves knowledge effectively', 'uses knowledge to make further connections', 'possesses general professional knowledge'. (Theme A).</i></p> <p><i>Demonstrates Effective Planning/Structure/Delivery; Differentiates and Personalises Learning; Engages Students in their Learning; Questions Students Effectively; Provides Quality Feedback; Implements Behaviour Management Strategies; Deepens Learning for Students; Understands Neurological Principles for Learning. (Theme B).</i></p> <p>Participants provided a clear view that knowing subject content matter at a deep level, was essential to be considered an expert teacher, which is well-supported in the literature (Agathangelou et al., 2016; Ball et al., 2008; Darling-Hammond, 2000; Farrell, 2015; Guerriero & Deligiannidi, 2016; Sadler et al., 2015). Participants also expressed a wide range of teaching strategies that an expert employs to teach the subject matter, also documented in the literature (Bertram, 2012; Depaepe, Verschaffel, Kelchtermans, 2013; Hill & Charalambos, 2012; Kleickmann et al., 2013; Sadler et al., 2015). However, participants in this study did not frame expertise as 'support colleagues...' or 'lead initiatives within the school to evaluate...'; rather, participants focused on framing expertise in relation to teacher practice in a classroom setting in this context. In a more general context, participants did discuss being a collegial practitioner. When comparing and contrasting Focus Area 1.1 to this study, a large amount of</p>		

data was generated by participants.		
2.2 Content selection and organisation	<i>Exhibit innovative practice in the selection and organisation of content and delivery of learning and teaching programs.</i>	<i>Lead initiatives that utilise comprehensive content knowledge to improve the selection and sequencing of content into coherently organised learning and teaching programs.</i>
<p>Research Alignment: Alignment occurred in this Focus Area. Theme A, Possesses a Deep Mastery of Subject Knowledge and Theme B, Demonstrates High Quality and Effective Pedagogical Practice, provided the key features of the alignment.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Possesses domain knowledge</i>, with codes ‘possesses a mastery of subject content knowledge’, ‘possesses depth of subject content knowledge’, ‘retrieves knowledge effectively’, ‘uses knowledge to make further connections’, ‘possesses general professional knowledge’. (Theme A).</p> <p><i>Demonstrates Effective Planning/Structure/Delivery; Differentiates and Personalises Learning; Engages Students in their Learning.</i> (Theme B).</p> <p>Participants discussed principles of organisation, which included selecting and preparing the content to be taught, and teaching it in an organised way. Participants also discussed the importance of being flexible in the selection of content and gave examples of this practice.</p> <p>Whilst participants did associate innovative practice with being an expert, they did not connect this concept specifically to the content selection and organisation, as the Highly Accomplished descriptor articulates. In the Lead teacher descriptor, ‘lead initiatives...’ was not part of the participants expression in relation to this Focus Area.</p>		
2.3 Curriculum, assessment and reporting	<i>Support colleagues to plan and implement learning and teaching programs using contemporary knowledge and understanding of curriculum, assessment and reporting requirements.</i>	<i>Lead colleagues to develop learning and teaching programs using comprehensive knowledge of curriculum, assessment and reporting requirements.</i>
<p>Research Alignment: Alignment occurred in this Focus Area. Theme A, Possesses a Deep Mastery of Subject Knowledge and Theme B, Demonstrates High Quality and Effective Pedagogical Practice, provided the key features of the alignment.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Possesses Domain Knowledge.</i> (Theme A).</p> <p><i>Questions Students Effectively Demonstrates Effective Planning/Structure/Delivery.</i> (Theme B).</p> <p>To elaborate, in both cases in this study, participants suggested an expert teacher engaged with colleagues to develop rigorous assessment pieces. Individually, expert teachers were also noted as developing carefully crafted assessment to meet student needs. Although reporting was not stated as being indicative of expertise. References to curriculum included the Australian Curriculum and some participants suggested an expert is familiar with these sort of policy documents, and engaged with them to reflect professionalism and expert interaction. However, apart from developing assessment,</p>		

<p>this Focus Area was not one emphasised by participants. A recurring disconnect is observed with this study and the framing of the Highly Accomplished and Lead teacher descriptors, which refer to supporting colleagues, and leading colleagues in specific approaches to teaching.</p>		
<p>2.4 Understand and respect Aboriginal and Torres Strait Islander people to promote reconciliation between Indigenous and non-Indigenous Australians</p>	<p><i>Support colleagues with providing opportunities for students to develop understanding of and respect for Aboriginal and Torres Strait Islander histories, cultures and languages.</i></p>	<p><i>Lead initiatives to assist colleagues with opportunities for students to develop understanding of and respect for Aboriginal and Torres Strait Islander histories, cultures and languages.</i></p>
<p>Research Alignment: Alignment did not occur in this Focus Area. As with Focus Area 1.4, there was no alignment in relation to this Focus Area and being an expert teacher. It was not raised as a specific focus area in the study, nor were any particular cultures or backgrounds. Students were simply referred to without specific differentiation. According to www.MySchools.edu.au [webpage] the Aboriginal and Torres Strait Islander percentage of school population for each of the schools ranged between 0 and 1%. However, it is important to note that the principle of differentiation occurred on several occasions in this study, though without going into detail. It is possible that this Focus Area could be embedded in views on differentiating to these specific needs of students, because knowing students was a most prominent point of discussion.</p>		
<p>2.5 Literacy and numeracy strategies</p>	<p><i>Support colleagues to implement effective teaching strategies to improve students' literacy and numeracy achievement.</i></p>	<p><i>Monitor and evaluate the implementation of teaching strategies within the school to improve students' achievement in literacy and numeracy using research-based knowledge and student data.</i></p>
<p>Research Alignment: Alignment did not occur in this Focus Area. This Focus Area was not narrowed to be this specific in discussions in this study. Rather, academic content and related strategies were covered in pedagogical expertise, as a focus of this study. Notably, the language to describe the Highly Accomplished and Lead teacher career stage was not used, such as 'monitor and evaluate...' other teachers.</p>		
<p>2.6 Information and Communication Technology (ICT)</p>	<p><i>Model high-level teaching knowledge and skills and work with colleagues to use current ICT to improve their teaching practice and make content relevant and meaningful.</i></p>	<p><i>Lead and support colleagues within the school to select and use ICT with effective teaching strategies to expand learning opportunities and content knowledge for all students.</i></p>
<p>Research Alignment: Alignment did not occur in this Focus Area. ICT was not identified within the themes of this study. The content of this Focus Area was only specifically referred to by one participant in the teacher case, who stated this knowledge area was important to be practising as an expert teacher. Other participants did not raise this Focus Area as an attribute or practice of an expert teacher.</p>		

Additional findings in this study, not covered in the APST:

One of the five themes in this study was focused on Possesses a Deep Mastery of Subject Knowledge (Theme A). Participants comprehensively expressed the importance of expert teachers having a deep mastery of their subject content knowledge and a substantive amount of data was generated on this element of expertise. Knowing content in terms of subject matter was well-covered in this study to characterise an expert.

Another key theme to emerge was expressed by participants who suggested that pedagogical practices were a clear indicator of an expert practitioner. Many examples were provided and the level of sophistication in the examples discussed are not able to be conveyed in the APST, which scantily refer to any specific teaching strategies in this Standard of 'Know the content and how to teach it'. However, it should be noted that Standard 3 is focused on planning and implementing effective teaching and learning, which also covers how to teach the content in the form of pedagogical practice. Participants did also include other aspects of curriculum knowledge (i.e., Australian Curriculum), without it being a particular area of focus.

In reference to Table 7.2 and Standard 2 of the APST, the main alignment of focus by participants in this study was in relation to Focus Area 2.1 – 'Content and teaching strategies of the teaching area'. In both teacher and leader cases, a highly detailed and sophisticated series of descriptions of teaching strategies were provided to conceptualise-operationalise an expert teacher in practice. However, participants positioned expertise as the teacher in practice in a classroom setting, focused on student interactions and excellence in practice, and not on leading, monitoring or innovating with other colleague teachers. For example, Focus Area 2.2 'content selection and organisation' states in the Lead teacher descriptor 'lead initiatives', whereas in this study, participants described how an expert teacher specifically executes that practice without reference to leading colleagues.

It is important to note, however, that there was also a clear perception by participants that an expert teacher was a collegial teacher who shared resources, ideas and strategies. Therefore, whilst expressed differently, there is alignment in this sense with the APST in Standard 2 in this context. Aboriginal and Torres Strait Islander specific teaching strategies were not raised in this study. Expertise in ICT was not part of a theme in this study, though reported by a single participant, and clearly identified in Focus Area 2.6.

7.5 APST STANDARD 3: PLAN FOR AND IMPLEMENT EFFECTIVE TEACHING AND LEARNING

Standard 3 (Table 7.3) is under the Domain of Professional Practice as part of the APST. It covers effective teaching and learning strategies incorporating learning

goals, teaching programs, resources, classroom communication, and the inclusion of parents in the learning process.

Table 7.3: The APST descriptors for Standard 3 Focus Area, Highly Accomplished and Lead teacher (AITSL, 2011a) and comments on alignment to this study.

Standard 3: Plan for and implement effective teaching and learning		
Focus Area	Highly Accomplished	Lead
3.1 Establish challenging learning goals	<i>Develop a culture of high expectations for all students by modelling and setting challenging learning goals.</i>	<i>Demonstrate exemplary practice and high expectations and lead colleagues to encourage students to pursue challenging goals in all aspects of their education.</i>
<p>Research Alignment: Alignment occurred in this Focus Area. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, provided the key features of the alignment.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Demonstrates Effective Planning/Structure/Delivery; Differentiates & Personalises Learning; Engages Students in their Learning. An example of a code is 'sets learning goals every lesson' (Engages Students in their Learning).</i></p> <p>Setting challenging learning goals was stated in this study, as one example describing an expert teacher's practice. It aligns with Focus Area 3.1 as well as the Highly Accomplished teacher descriptor. Leading other colleagues was not stated in this context in this study, though leading colleagues was stated in the Lead teacher descriptor, creating a misalignment.</p>		
3.2 Plan, structure and sequence learning programs	<i>Work with colleagues to plan, evaluate and modify learning and teaching programs to create productive learning environments that engage all students.</i>	<i>Exhibit exemplary practice and lead colleagues to plan, implement and review the effectiveness of their learning and teaching programs to develop students' knowledge, understanding and skills.</i>
<p>Research Alignment: Alignment did not occur between this Focus Area and this study.</p> <p>Learning programs were not a specific focus for participants in this study when conceptualising expertise. However, closely related to this, there was acknowledgement that an expert teacher did plan, structure and sequence teaching and learning very effectively. As with numerous other Highly Accomplished and Lead teacher descriptors, this study differed in that participants did not focus on leading colleagues in practice, rather the focus was on excellence in practice. For instance, Lead teacher states '...lead colleagues to plan...'</p>		
3.3 Use teaching strategies	<i>Support colleagues to select and apply effective teaching strategies to develop knowledge, skills, problem solving and critical and creative thinking.</i>	<i>Work with colleagues to review, modify and expand their repertoire of teaching strategies to enable students to use knowledge, skills, problem solving and critical and creative thinking.</i>

Research Alignment: Alignment occurred in this Focus Area. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, provided the key features of the alignment.

Categories that aligned to this Focus Area included:

Demonstrates Effective Planning/Structure/Delivery; Differentiates and Personalises Learning; Engages Students in their Learning; Questions Students Effectively; Provides Quality Feedback; Implements Behaviour Management Strategies; Deepens Learning for Students; Understands Neurological Principles for Learning. (Theme B).

This study frequently referred to using teaching strategies to conceptualise-operationalise how an expert differs from a non-expert; a concept that was well-noted in the literature (Depaepe, Verschaffel & Kelchtermans, 2013; Hill & Charalambos, 2012; Kleickmann et al., 2013; Sadler et al., 2015).

Whilst the alignment of the Focus Area and this study's findings was clear, alignment was not achieved in relation to the two career stage descriptors because each refers to supporting and working with colleagues as part of the expertise. Teachers and leaders provided many frequent examples to describe expertise in teaching using a diverse range of teaching strategies focused on student-teacher interactions, which did not involve working with colleagues.

3.4 Select and use resources	<i>Assist colleagues to create, select and use a wide range of resources, including ICT, to engage students in their learning.</i>	<i>Model exemplary skills and lead colleagues in selecting, creating and evaluating resources, including ICT, for application by teachers within or beyond the school.</i>
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Research Alignment: This study had a low level alignment with this Focus Area. The Theme that aligned was Theme B, Demonstrates High Quality and Effective Pedagogical Practice.

The categories that aligned to this Focus Area included:

Engages Students in their Learning. An example of a code was, 'environment is engaging'.

Teachers and leaders referred to creating engaging environments in the classroom. Resources, were infrequently stated, and by few participants, to be required to create engaging learning environments. One teacher referred to the need to have resources to be an expert teacher in practice. Similarly, one teacher mentioned ICT resources was part of the expert teacher's repertoire, however, these two specific references did not form part of a theme. Other teachers and leaders did not conceptualise-operationalise an expert as one who selected and used resources in a particular way.

3.5 Use effective classroom communication	<i>Assist colleagues to select a wide range of verbal and non-verbal communication strategies to support students' understanding, engagement and achievement.</i>	<i>Demonstrate and lead by example inclusive verbal and non-verbal communication using collaborative strategies and contextual knowledge to support students' understanding, engagement and achievement.</i>
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Research Alignment: Alignment occurred in this Focus Area. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, provided the key features of the alignment.

Categories that aligned to this Focus Area included:

<p><i>Engages Students in their Learning</i>. The code reflecting this was ‘communicates effectively’.</p> <p>Participants described an expert teacher as one who was an effective classroom communicator. The descriptors of Highly Accomplished and Lead teacher have a disconnect with the framing of these advanced career stage practices, in contrast to those provided by participants in this study to describe expertise.</p>		
<p>3.6 Evaluate and improve teaching programs</p>	<p><i>Work with colleagues to review current teaching and learning programs using student feedback, student assessment data, knowledge of curriculum and workplace practices.</i></p>	<p><i>Conduct regular reviews of teaching and learning programs using multiple sources of evidence including: student assessment data, curriculum documents, teaching practices and feedback from parents/carers, students and colleagues.</i></p>
<p>Research Alignment: Alignment did not occur in this Focus Area when compared and contrasted to this study. To elaborate, evaluation was frequently referred to in this study in the form of reflection. However, this was not in relation to evaluating or reflecting on teaching programs specifically, rather more generically linked to practice. The Highly Accomplished and Lead descriptors refer to teaching programs, student assessment data, curriculum documents and workplace practices and feedback. Whilst there is some potential alignment conceptually, the basis of these descriptors and those identified in this study have a disconnect and thus there is insufficient evidence in the data to claim alignment.</p>		
<p>3.7 Engage parents/carers in the educative process</p>	<p><i>Work with colleagues to provide appropriate and contextually relevant opportunities for parents/carers to be involved in their children’s learning.</i></p>	<p><i>Initiate contextually relevant processes to establish programs that involve parents/carers in the education of their children and broader school priorities and activities.</i></p>
<p>Research Alignment: Alignment occurred in this Focus Area in the teacher case only. Theme C, Builds Relationships with the School Community, provides features of the alignment.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Includes parents.</i></p> <p>Teachers talked about ‘builds relationships with parents’ and ‘communicating with parents’, as codes in the <i>Includes Parents</i> category. Leaders did not make notable references to including or consulting with parents when describing an expert teacher.</p>		
<p>Additional findings in this study, not covered in the APST:</p>		
<p>Teachers and leaders in this study provided detailed and comprehensive examples of pedagogical practice that characterise an expert teacher. Alignment occurred with Focus Area 3.3. However, overall when considering the Focus Area and findings of this study more closely, and contextualising the process of comparing and contrasting, the examples and differing strategies provided by participants in this study were more comprehensive than the content provided in APST Focus Area 3.3,</p>		

'Use teaching strategies'. This study provided many teaching strategies, among them setting challenging learning goals, using effective classroom communication and more.

In Standard 3, the Domain shifted from Professional Knowledge (Standards 1 and 2) to Professional Practice, and remains in this Domain for Standards 3, 4 and 5. Across most Focus Areas, there was a high degree of alignment with this study in the Domain of Professional Practice. Participants provided detailed strategies related to planning and implementing effective teaching and learning. Whilst alignment occurred with the Focus Areas, a disconnect occurred with the descriptors of some Highly Accomplished and most Lead teacher career stages in relation to this Standard. Ostensibly, the disconnect occurred in relation to these two career stages stipulating the role to be to 'support', 'lead', 'work with', and so forth of other teachers. Participants in this study described expertise framed more as excellence and exemplary teaching without specifically supporting colleagues as part of that expertise. The APST Highly Accomplished, and particularly the Lead teacher descriptors frame expertise as supporting, leading, initiating, leading (and similar terms) other colleagues.

7.6 APST STANDARD 4: CREATE AND MAINTAIN SUPPORTIVE AND SAFE LEARNING ENVIRONMENTS

Standard 4 (Table 7.4) is under the Domain of Professional Practice as part of the APST. It covers support of students in their learning environments, challenging students, managing safety and challenging behaviour. ICT is included in the focus on creating safe environments.

Table 7.4: The APST descriptors for Standard 4 Focus Area, Highly Accomplished and Lead teacher (AITSL, 2011a) and comments on alignment to this study.

Standard 4: Create and maintain supportive and safe learning environments		
Focus Area	Highly Accomplished	Lead
4.1 Support student participation	<i>Model effective practice and support colleagues to implement inclusive strategies that engage and support all students.</i>	<i>Demonstrate and lead by example the development of productive and inclusive learning environments across the school by reviewing inclusive strategies and exploring new approaches to engage and support all students.</i>
Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, and Theme C, Builds Relationships with		

the School Community, provides features of the alignment.

Categories that aligned to this Focus Area included:

Differentiates & Personalises Learning; Engages Students in their Learning; Questions Students Effectively; Provides Quality Feedback; Implements Behaviour Management Strategies. (Theme B). Examples of codes included: 'personalises learning', 'differentiates learning', 'amends lessons for learner needs', 'teaches the same concept multiple ways', 'engages and captivates all students', 'analyses to capture interest', 'knows students as individuals in their learning', 'directs individualised questions', 'empowers students but remains in control'.

Prioritises Student First; Demonstrates a Holistic Approach to Students; Connects & Bonds with Students. (Theme C). Examples of codes included: 'engages students', 'inspires students to learn', 'caters to individual commitments'.

In this Focus Area comparison, participants in this study expressed support for student participation through the application of expert pedagogical practice as part of the strategies incorporated into student engagement. This was not expressed as 'supporting colleagues to implement inclusive strategies...' or 'reviewing inclusive strategies...' across the school. Rather, participants discussed supporting safe environments, and performing (not reviewing) inclusive teaching strategies, to allow students to participate.

4.2 Manage classroom activities	<i>Model and share with colleagues a flexible repertoire of strategies for classroom management to ensure all students are engaged in purposeful activities.</i>	<i>Initiate strategies and lead colleagues to implement effective classroom management and promote student responsibility for learning.</i>
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Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, and Theme C, Builds Relationships with the School Community, provides features of the alignment.

Categories that aligned to this Focus Area included:

Differentiates & Personalises Learning; Engages Students in their Learning; Questions Students Effectively; Provides Quality Feedback; Implements Behaviour Management Strategies. (Theme B). Examples of codes included: 'in control but not dominating the space', 'empowers students but remains in control'.

Prioritises Student First; Demonstrates a Holistic Approach to Students; Connects & Bonds with Students. (Theme C). Examples of codes included: 'connects with students', 'engages students', 'cares for students'.

Participants in this study, in both cases, were clear that expert teachers manage their classroom through a series of preventative strategies that were aimed to avoid adverse issues and to encourage positive participation. This was achieved through building relationships with students and other strategies indicated by the codes and categories presented. An example was, 'in control but not dominating the space', which describes an expert teacher being aware of: the dynamics, remaining in control, timing interaction purposefully.

The Highly Accomplished descriptor aligned with discussion by participants, although the Lead teacher descriptor of leading colleagues does not align in its language of what exemplary practice is.

4.3 Manage challenging behaviour	<i>Develop and share with colleagues a flexible repertoire of behaviour management strategies using expert knowledge and workplace experience</i>	<i>Lead and implement behaviour management initiatives to assist colleagues to broaden their range of strategies.</i>
<p>Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, and Theme C, Builds Relationships with the School Community, provides features of the alignment.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Differentiates & Personalises Learning; Engages Students in their Learning; Questions Students Effectively; Provides Quality Feedback; Implements Behaviour Management Strategies.</i> (Theme B). Examples of codes included: ‘employs effective behaviour management’, ‘manages behaviour through rapport’, ‘in control but not dominating the space’, ‘empowers students but remains in control’.</p> <p><i>Prioritises Student First; Demonstrates a Holistic Approach to Students; Connects & Bonds with Students.</i> (Theme C). Examples of codes included: ‘connects with students’, ‘engages students’, ‘cares for students’.</p> <p>Similar to 4.2, participants in this study, in both cases, were clear that expert teachers manage classroom behaviour through a series of preventative strategies that are aimed to avoid adverse issues and encourage positive behaviour. This was achieved through building relationships with students and other strategies indicated by the codes and categories presented.</p> <p>Part of the Highly Accomplished descriptor aligned with discussion by participants, although the ‘share with colleagues’ did not align; the Lead teacher descriptor of leading colleagues did not align.</p>		
4.4 Maintain student safety	<i>Initiate and take responsibility for implementing current school and/ or system, curriculum and legislative requirements to ensure student well- being and safety.</i>	<i>Evaluate the effectiveness of student well-being policies and safe working practices using current school and/ or system, curriculum and legislative requirements and assist colleagues to update their practices.</i>
<p>Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme B, Demonstrates High Quality and Effective Pedagogical Practice, and Theme C, Builds Relationships with the School Community, provides features of the alignment.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Differentiates & Personalises Learning; Engages Students in their Learning; Questions Students Effectively; Provides Quality Feedback; Implements Behaviour Management Strategies.</i> (Theme B). Examples of codes included: ‘employs effective behaviour management’, ‘manages behaviour through rapport’, ‘in control but not dominating the space’, ‘empowers students but remains in control’.</p> <p><i>Prioritises Student First; Demonstrates a Holistic Approach to Students; Connects & Bonds with Students.</i> (Theme C). Examples of codes included: ‘connects with students’, ‘engages students’, ‘cares for students’.</p> <p>Similarities occurred with Focus Areas 4.2, 4.3, and 4.4 in relation to participants suggesting expert teachers create a series of connected strategies to prevent adverse behavioural issues, and these</p>		

<p>strategies foster student safety. A clear finding of this study was that expert teachers care deeply about their students, and maintaining safe environments was part of that commitment. The impact of the teacher's presence in the classroom was also stated, and the confidence displayed by the teacher in front of the class, was one example of this perception involving safe learning environments. Participants discussed the importance of how students perceived the teacher, in addition to specific skills and strategies employed.</p> <p>There was no alignment with the Lead teacher descriptor which includes evaluation of policies and legislative requirements. These sort of actions did not arise in this study as an indicator or practice of an expert.</p>		
<p>4.5 Use ICT safely, responsibly and ethically</p>	<p><i>Model, and support colleagues to develop, strategies to promote the safe, responsible and ethical use of ICT in learning and teaching.</i></p>	<p><i>Review or implement new policies and strategies to ensure the safe, responsible and ethical use of ICT in learning and teaching.</i></p>
<p>Research Alignment: This Focus Area did not align with this study.</p>		
<p>Additional findings in this study, not covered in the APST:</p>		
<p>In the theme, Building Relationships within the School Community, substantial focus was placed on the relationships between expert teachers and students, as well as with colleagues. Expert teachers in this study were said to have well-developed teaching strategies and among those cater to the needs of students, including their safety in learning environments. Overall, the APST and this study aligns in Standard 4. A difference was that in this study, participants articulated a strong preference and emphasis on preventative measures to provide safe and productive classroom environments, achieved predominantly by building relationships with students. The view of participants was that if relationships were of high quality, the need to behaviour manage classes was limited, or even eliminated. Yates & Hattie (2013) suggest expert teachers have virtually no behavioural issues in their classrooms.</p>		

Standard 4 had a clear alignment with this study's findings which suggested that expert teachers create, maintain and provide safe and supportive classroom environments for students. Teachers in this study had a strong sense of accountability to meeting the needs of their students beyond an intellectual academic learning focus. As with previous Standards, the disconnect was more on the language and framing of the Highly Accomplished and Lead teacher descriptors, not the Focus Area itself. However, it is important to clarify that participants in this study did not articulate expertise in a manner that reflected the Proficient teacher or Graduate teacher descriptors. For example, Focus Area 4.3 'manage challenging behaviour' Proficient teacher descriptor states 'manage challenging behaviour by negotiating clear expectations with students and address discipline issues promptly, fairly and respectfully'. The Graduate level descriptor states 'demonstrate knowledge of practical approaches to manage challenge behaviour'. In this study, participants

provided a more sophisticated articulation of primary and preventative strategies employed by expert teachers to avoid a need to later manage challenging behaviour, as one aspect of the discussions. It was not that participants had lower level perceptions of expertise compared to the standards for the specific practice of the teacher, rather the focus of expertise was different. Refer to Table 7.4 for further specific observations for each Focus Area.

7.7 APST STANDARD 5: ASSESS, PROVIDE FEEDBACK AND REPORT ON STUDENT LEARNING

Standard 5 (Table 7.5) is under the Domain of Professional Practice as part of the APST. This Standard in the APST is focused on assessment, feedback and reporting on student learning, and the practices to execute and implement these initiatives.

Table 7.5: The APST descriptors for Standard 5 Focus Area, Highly Accomplished and Lead teacher (AITSL, 2011a) and comments on alignment to this study.

Standard 5: Assess, provide feedback and report on student learning		
Focus Area	Highly Accomplished	Lead
5.1 Assess student learning	<i>Develop and apply a comprehensive range of assessment strategies to diagnose learning needs, comply with curriculum requirements and support colleagues to evaluate the effectiveness of their approaches to assessment.</i>	<i>Evaluate school assessment policies and strategies to support colleagues with: using assessment data to diagnose learning needs, complying with curriculum, system and/or school assessment requirements and using a range of assessment strategies.</i>
<p>Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme B, Demonstrates High Quality and Effective Pedagogical Practice.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Demonstrates Effective Planning/Structure/Delivery; Differentiates & Personalises Learning; Engages Students in their Learning; Questions Students Effectively; Provides Quality Feedback; Deepens Student Learning.</i> (Theme B). Examples of codes included: ‘poses questions to draw out knowledge’, ‘directs individualised questions’, ‘allows sufficient processing time’.</p> <p>Participants discussed expertise in context of effectively assessing student learning. Examples given by participants covered both formative and summative types of assessment. Participants communicated the importance of dedication and diligence that was required to be operating at an expert level, when developing assessment instruments. Engaging and supporting colleagues in this process was an overall practice of the expert, but not stated in relation to evaluating school policies and strategies.</p> <p>Participants did not describe this practice as ‘evaluate school assessment policies and strategies to support colleagues...’, rather the focus was on excellence on the application of the practice.</p>		

5.2 Provide feedback to students on their learning	<i>Select from an effective range of strategies to provide targeted feedback based on informed and timely judgements of each student's current needs in order to progress learning.</i>	<i>Model exemplary practice and initiate programs to support colleagues in applying a range of timely, effective and appropriate feedback strategies.</i>
<p>Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme B, Demonstrates High Quality and Effective Pedagogical Practice.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Provides Quality Feedback.</i></p> <p>Participants also identified that an expert teacher provides highly detailed and effective feedback to students, consistent with literature (Reeves, 2011). Overall, this Focus Area was aligned with this study. The descriptors in the Lead teacher 'initiate programs to support colleagues in applying a range of ...' was not used by participants in this study.</p>		
5.3 Make consistent and comparable judgements	<i>Organise assessment moderation activities that support consistent and comparable judgements of student learning.</i>	<i>Lead and evaluate moderation activities that ensure consistent and comparable judgements of student learning to meet curriculum and school or system requirements.</i>
<p>Research Alignment: This Focus Area did not align with this study.</p> <p>Participants in this study stated that an expert teacher developed and engaged in effective assessment, which involved interacting with colleagues in this process. Moderation of student work was infrequently referenced by some participants as part of this process, and this did not form part of an emergent theme.</p> <p>This practice was not described as 'organise assessment moderation activities' or as described in the Lead teacher descriptor. It was also not described as 'Understand and participate in assessment moderation' as the Proficient teacher descriptor states. The language used was different, although the Focus Area itself also did not align with this study.</p>		
5.4 Interpret student data	<i>Work with colleagues to use data from internal and external student assessments for evaluating learning and teaching, identifying interventions and modifying teaching practice.</i>	<i>Co-ordinate student performance and program evaluation using internal and external student assessment data to improve teaching practice.</i>
<p>Research Alignment: This Focus Area did not align with this study.</p>		
5.5 Report on student achievement	<i>Work with colleagues to construct accurate, informative and timely reports to students and parents/carers about student learning and achievement.</i>	<i>Evaluate and revise reporting and accountability mechanisms in the school to meet the needs of students, parents/carers and colleagues.</i>

Research Alignment: This Focus Area did not align with this study.

Of the Standards compared and contrasted thus far, the Focus Areas in Standard 5 have aligned the least in comparison to the findings of this study. It was not that participants in this study disagreed or provided contradictory perceptions to Standard 5, rather a number of the focus areas were not raised when conceptualising-operationalising expertise. For instance, participants did not suggest an expert was one who reported accurately, timely and informatively to students and parents. However, 5.2 did align in the sense that participants in this study perceived an expert teacher as one who gave high quality feedback to students. In this instance, the Highly Accomplished descriptor also aligned because it was focused on the teacher's practice, and did not refer to leading, supporting, assisting, (or similar) other teachers, unlike in most other Highly Accomplished descriptors presented across all Standards. However, the Lead teacher descriptor did include 'initiate programs to support colleagues' as part of its descriptor and thus did not align, as detailed in relation to other Standards. Refer to Table 7.5 for comments on other alignments.

7.8 APST STANDARD 6: ENGAGE IN PROFESSIONAL LEARNING

Standard 6 (Table 7.6) is under the Domain Professional Engagement of the APST. This Standard is focused on the engagement of professional learning. This incorporates engaging with colleagues in professional communities and applying the resultant learning to student learning practices.

Table 7.6: The APST descriptors for Standard 6 Focus Area, Highly Accomplished and Lead teacher (AITSL, 2011a) and comments on alignment to this study.

Standard 6: Engage in professional learning		
Focus Area	Highly Accomplished	Lead
6.1 Identify and plan professional learning needs	<i>Analyse the Australian Professional Standards for Teachers to plan personal professional development goals, support colleagues to identify and achieve personal development goals and pre-service teachers to improve classroom practice.</i>	<i>Use comprehensive knowledge of the Australian Professional Standards for Teachers to plan and lead the development of professional learning policies and programs that address the professional learning needs of colleagues and pre-service teachers.</i>
<p>Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme D, Open to, and Seeks Out, Opportunities for Professional Growth and Improvement.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Exhibits openness to change; Engages in Reflective Practice; Invests in self-learning; Demonstrates</i></p>		

Awareness. Examples of codes included: 'open to continual improvement', 'reflects on past practice to improve', 'values and engages in learning', 'seeks own opportunities to upskill-knowledge self improvement', 'demonstrates awareness of own level of professional knowledge level'.

Professional learning was identified frequently in this study as participants conceptualised expertise. However, as part of that conceptualisation, rarely were the APST raised by participants in either case at all. The Focus Area pertaining to professional learning aligned clearly. When considering the Highly Accomplished and Lead teacher descriptors, which focus on the APST as that professional learning, a misalignment occurred.

6.2 Engage in professional learning and improve practice	<i>Plan for professional learning by accessing and critiquing relevant research, engage in high quality targeted opportunities to improve practice and offer quality placements for pre-service teachers where applicable.</i>	<i>Initiate collaborative relationships to expand professional learning opportunities, engage in research, and provide quality opportunities and placements for pre-service teachers.</i>
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Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme D, Open to, and Seeks Out, Opportunities for Professional Growth and Improvement.

Categories that aligned to this Focus Area included:

Exhibits openness to change; Engages in Reflective Practice; Invests in self-learning; Demonstrates Awareness. Examples of codes included: 'open to continual improvement', 'reflects on past practice to improve', 'values and engages in learning', 'seeks own opportunities to upskill-knowledge self improvement', 'demonstrates awareness of own level of professional knowledge level'.

Engaging in professional learning was viewed by participants as a critical method to improve practice and to develop expertise. A range of activities were identified including research, reading, presenting at conferences, observing colleagues teach and being observed in return, other forms of informal and formal study, were all examples provided. This Focus Area was aligned, except that pre-service teachers were not mentioned as part of that arrangement.

6.3 Engage with colleagues and improve practice	<i>Initiate and engage in professional discussions with colleagues in a range of forums to evaluate practice directed at improving professional knowledge and practice, and the educational outcomes of students.</i>	<i>Implement professional dialogue within the school or professional learning network(s) that is informed by feedback, analysis of current research and practice to improve the educational outcomes of students.</i>
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Research Alignment: Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme D, Open to, and Seeks Out, Opportunities for Professional Growth and Improvement.

Categories that aligned to this Focus Area included:

Demonstrates Collegiality to Enhance Practice. Examples of codes included: 'views others' classes to learn', 'provides / receives feedback to colleagues', 'engages effectively benefiting teaching', 'engages in professional conversation', 'shares ideas and resources', 'accepts and adopts ideas', contributes to

<p>positive staff morale’.</p> <p>Engaging with colleagues was viewed by participants as a critical method to improve practice and to develop expertise. Barth (2006) also recognises the importance of collegiality, presenting views consistent with participants in this study. This Focus Area also had a clear alignment with this study. It has been rare that the Highly Accomplished and Lead teacher descriptors have aligned in other Standards and Focus Areas in their framing and language, though in this instance they do. This is attributed to the emphasis of the descriptors on engaging with colleagues as part of the demonstrated expertise (in this instance, collegiality was the focus of the content and process, of the descriptors).</p>		
<p>6.4 Apply professional learning and improve student learning</p>	<p><i>Engage with colleagues to evaluate the effectiveness of teacher professional learning activities to address student learning needs.</i></p>	<p><i>Advocate, participate in and lead strategies to support high-quality professional learning opportunities for colleagues that focus on improved student learning.</i></p>
<p>Research Alignment: Alignment occurred in this Focus Area when compared to this study. Theme D, Open to, and Seeks Out, Opportunities for Professional Growth and Improvement.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Demonstrates Collegiality to Enhance Practice. Examples of codes: ‘views others’ classes to learn’, ‘provides / receives feedback to colleagues’, ‘engages effectively benefiting teaching’, ‘engages in professional conversation’, ‘shares ideas and resources’, ‘accepts and adopts ideas’.</i></p> <p>This Focus Area is aligned with this study in relation to participants frequently identifying the need to continue to learn professionally, as a feature of expertise. Whilst participants did not explicitly focus on the application of professional learning to student learning, it was clearly implied that students would benefit from professional learning of the teacher, because the teacher improves their practices.</p>		
<p>Additional findings in this study, not covered in the APST:</p>		
<p>Whilst this Standard and Focus Area aligned with this study, some additional attributes and practices were identified by participants. These were: 1. <i>Exhibits an openness to change with an open mindset and open to continual improvement.</i> 2. <i>Demonstrates flexibility and adaptability in practice.</i> 3. <i>Engages in reflective practice to further improve and identifies areas for professional growth.</i> 4. <i>Demonstrates awareness, by being self-aware of professional practice, being aware generally of what is occurring in the school setting.</i> These attributes and practices were all related to improvement and are relevant to consider for Standard 6, Engage in Professional Learning.</p>		

Standard 6 of the APST and this study aligned particularly closely with most Focus Areas in this Standard. This occurred most notably in relation to professional learning and collegiality, where participants in this study, in both cases, perceived an expert teacher to be actively involved and seeking out both of these practices. This included having an awareness of the areas of professional practice that need improvement, general willingness to change and adapt to the needs of the profession and engaging in reflective practice to evaluate areas of develop and seek out. In

Standard 6, there was alignment with all four Focus Areas. Refer to Table 7.6 for further observations on alignment comparisons.

7.9 APST STANDARD 7: ENGAGE PROFESSIONALLY WITH COLLEAGUES, PARENTS/CARERS AND THE COMMUNITY

Standard 7 (Table 7.7) is under the Domain Professional Engagement of the APST. This Standard covers the engagement teachers have with their colleagues, parents/carers of students and the wider community. It also covers ethics, legislative and organisational compliance obligations and requirements.

Table 7.7: The APST descriptors for Standard 7 Focus Area, Highly Accomplished and Lead teacher (AITSL, 2011a) and comments on alignment to this study.

Standard 7: Engage professionally with colleagues, parents/carers and the community.		
Focus Area	Highly Accomplished	Lead
7.1 Meet professional ethics and responsibilities	<i>Maintain high ethical standards and support colleagues to interpret codes of ethics and exercise sound judgement in all school and community contexts.</i>	<i>Model exemplary ethical behaviour and exercise informed judgements in all professional dealings with students, colleagues and the community.</i>
Research Alignment: This Focus Area did not align to the emergent themes, categories or codes in this study.		
7.2 Comply with legislative, administrative and organisational requirements	<i>Support colleagues to review and interpret legislative, administrative, and organisational requirements, policies and processes.</i>	<i>Initiate, develop and implement relevant policies and processes to support colleagues' compliance with and understanding of existing and new legislative, administrative, organisational and professional responsibilities.</i>
Research Alignment: This Focus Area did not align to the emergent themes, categories or codes in this study.		
7.3 Engage with the parents/ carers	<i>Demonstrate responsiveness in all communications with parents/carers about their children's learning and well-being.</i>	<i>Identify, initiate and build on opportunities that engage parents/carers in both the progress of their children's learning and in the educational priorities of the school.</i>
<p>Research Alignment: Alignment occurred in this Focus Area when compared to the teacher case in this study. Theme C, Open to, and Seeks Out, Opportunities for Professional Growth and Improvement.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Includes Parents.</i> Examples of codes included: 'builds relationships with parents', 'communicates with parents'.</p>		

<p>The teacher case aligned with this Standard Focus Area. Teachers stated that an expert teacher engaged with parents in the learning of students/children, although it was not raised in the leader case. This study's data specifically mentioned building relationships with parents.</p>		
<p>7.4 Engage with professional teaching networks and broader communities</p>	<p><i>Contribute to professional networks and associations and build productive links with the wider community to improve teaching and learning.</i></p>	<p><i>Take a leadership role in professional and community networks and support the involvement of colleagues in external learning opportunities.</i></p>
<p>Research Alignment: Alignment occurred in this Focus Area when compared to the teacher case in this study. Theme C, Open to, and Seeks Out, Opportunities for Professional Growth and Improvement.</p> <p>Categories that aligned to this Focus Area included:</p> <p><i>Demonstrates Collegiality.</i> Examples of codes included: 'engages with colleagues', 'shares colleagues' ideas', 'adopts colleagues' ideas', 'communicates expertise to colleagues'.</p> <p>The data in this study aligned with Standard 7.4 by stating that expert teachers engaged in their specialisations beyond their classroom and beyond their environment within the school setting. Expert teachers were said to engage in networks of various kinds in the wider community. Examples were provided, which included music groups, practising as artists, presenting at conferences and joining online learning communities. Participants also stated that experts engaged with colleagues for a particular purpose that resulted in improved practice.</p>		
<p>Additional findings in this study, not covered in the APST:</p>		
<p>There were not additional findings relevant to this Standard to report.</p>		

Participants in this study stated that collegiality was a feature of expertise in the teaching profession. Some participants suggested collegiality was a feature of expertise to improve practice specifically as a clear purpose of the interactions, while other participants did not suggest this was the aim of being collegial. Importantly, participants in this study, overall, clearly suggested an expert teacher was a collegial teacher. However, participants did not frame their descriptions of expertise as being collegial when specifying examples of expertise across a range of attributes and practices. In the Lead teacher descriptors in particular, and to a large extent the Highly Accomplished teacher descriptors, consistently frame expertise as engaging with colleagues in practice in relation to the Focus Area presented. This difference is an important one to note when comparing and contrasting Standard 7, and all other Standards 1 to 6 inclusive.

In terms of general alignment of the Focus Area, there was a particular focus on this aspect in this study, and therefore this element aligns closely with the APST in

that context. Participants did not focus on engagement with legislative requirements, as an indicator or practice of expertise.

7.10 FURTHER COMPARISON BETWEEN THE TEACHER AND LEADER CASES AND THE APST

In the seven Standards and corresponding Focus Areas, the findings of this study identified other attributes and practices that were perceived to conceptualise-operationalise expertise in teaching, arising from the data analysis in both cases. Themes A, B, C, and D all had categories and codes align, however, Theme E did not, which was Displays Particular Character Traits and Qualities. The APST does not cover the attributes identified by participants which were said to characterise expert teachers. These included examples of codes such as: humility, passion, integrity, enthusiasm, open-mindedness, adaptable, respectful, honest, trustworthy, empathetic, intelligent, committed, patient, socially intelligent and calm. Personal character traits and qualities were frequently stated in this study and participants clearly communicated the importance of these attributes to be considered an expert teacher.

When comparing this study's findings to the APST seven Standards, Focus Areas and respective descriptors of Highly Accomplished and Lead teacher, a notable observation frequently recurred. This was a misalignment of the descriptors of the Highly Accomplished and Lead teacher in each of the seven Standards and various Focus Area when compared to the findings of this study. The APST descriptors for both these two career stages repeatedly frame expertise in relation to actions involving colleague teachers. Participants in this study did not frame expertise this way, although they stated that collegiality was crucial, it was not used to conceptualise-operationalise expertise in practice in all other elements, as the APST does. The APST Proficient teacher stage, which exists after Graduate teacher, though prior to the Highly Accomplished stage, rarely frames teacher practice in relation to other colleagues. Participants in this study did not describe expertise at a career stage level consistent with Proficient teacher status. Participants in this study typically described expertise in teaching practice and attributes in a manner involving excellence, rather than proficiency or at a competent level. Participants also focused expertise on teacher practice and attributes, and not in relation to supporting, leading, guiding, initiating actions for other teachers.

There were many areas where the Standards and Focus Areas aligned closely to the findings of this study. This study also had some additional attributes and

practices not identified in the APST, which have been acknowledged in this chapter. Some of these include areas involving the character traits and qualities of individual teachers, as well as the mindset that an expert teacher has, which distinguishes them from an experienced non-expert teacher. Table 7.8 maps the APST Focus Areas and specific Standards to the five emergent themes and related categories of this study. Table 7.8 illustrates those Focus Areas and Categories which either clearly aligned, partially aligned or did not align.

In Tables 7.1 to 7.7, a series of brief alignment summaries were presented within the respective tables after each Focus Area, Highly Accomplished and Lead teacher descriptor as a short comparison to the findings on expertise in this study. There were clear differences between each of these respective descriptors when comparing to this study's findings. The mapping in Table 7.8 (overview) specifically occurred only with the APST Focus Area descriptors for each Standard, and not the Highly Accomplished and Lead teacher career stage descriptors. This decision was made to ensure the mapping occurred against the Standard Focus Area, which was different to all four of the career stage descriptors, including Highly Accomplished and Lead teacher. The participants in this study described the attributes and practices of expertise quite differently to the way expertise is framed and communicated in the career stage descriptors, however, the particular practices of the Standards remained as the focal point for comparison.

To elaborate, in reference Tables 7.1 to 7.7, the APST Focus Area specified a descriptor of the Standard, and the Highly Accomplished teacher and Lead teacher descriptor then described actions for a teacher to perform. Both the Highly Accomplished and Lead teacher descriptors frequently and consistently framed the teacher as leading other colleagues, not necessarily on self-focused excellence of performance as a classroom teacher. For example, descriptors for these career stages often stated, 'lead colleagues', 'lead processes', 'revise school learning and teaching programs', 'initiate and lead the review of school policies', 'lead initiatives', 'support colleagues', 'work with colleagues', 'monitor and evaluate', 'assist colleagues', 'conduct regular reviews', 'co-ordinate', and 'advocate'. There were examples where the Highly Accomplished descriptors presented differently and did describe actions more akin to personal excellence and personal expertise. For example, 'select from a flexible and effective repertoire of teaching strategies', 'expand understanding', 'exhibit innovative practice', 'select from an effective range of strategies'. Framing expertise this way was considerably more aligned with the participants in this study, however, the majority of the Highly Accomplished descriptors were expressed as 'support colleagues', 'work with colleagues', 'assist colleagues' and similar to the Lead teacher descriptors in that regard. Thus, the mapping in Table 7.8 only occurred against the Focus Area of the Standard, as it was apparent the language of the participants in this study and the career stages were too varied in their framing of expertise. In this study, participants more often described expertise as specific

practices or attributes that the teacher did or had, which indicated expert level status. Participants did not typically describe expertise in all areas connected with how they interacted with their colleagues. However, collegiality was clearly identified as an attribute and practice of an expert, though not interwoven throughout the descriptions of expertise.

For these reasons, comparing the APST and this study involved some complexities with nuances throughout the process. It became evident that apart from framing expertise differently, this study identified several practices and attributes said to conceptualise-operationalise expertise not presented in the APST. These include a focus on character traits and qualities (Displays Particular Character Traits and Qualities) identified in Theme E. Another area that additional practices and attributes were identified occurred in Theme D, (Open to and Seeks Out, Opportunities for Professional Growth and Development). In this theme, the mindset of the teacher was a particular area of focus, not directly covered in the APST. Theme C, (Builds Relationships with the School Community), was also another emergent theme where expertise was conceptualised-operationalised differently to the APST in reference to knowing students. It is differences such as these, that serve as the foundation to inform the recommendations made in the next section of this chapter.

7.11 RECOMMENDATIONS

The recommendations of the study presented in this section of the chapter are informed by the study's findings, in conjunction with the emergent themes mapped to the *Australian Professional Standards for Teachers* (AITSL, 2011a) Focus Areas. The mapping of the emergent themes with the APST, elucidate where alignment of the Standards has occurred with the relevant perceptions of expertise provided by participants in this study. The result of this process offers the potential for reconceptualising expertise in teaching.

The recommendations also use Bronfenbrenner's (1994) Ecological Systems Theory (EST) and Practice Architectures /Ecologies of Practice (Kemmis, et al., 2012; 2014a). These theoretical frameworks have been presented in further detail, along with relevance to education and this study, in Chapter 6. In relation to EST, the inner layers are the focus for these recommendations, which includes the individual and micro-meso-systems. The exosystem and microsystems are not the focus of these recommendations because they are beyond the scope of this study, even though there

are minor references to these systems. An illustration of Bronfenbrenner's (1994) systems model is represented in Figure 7.1.

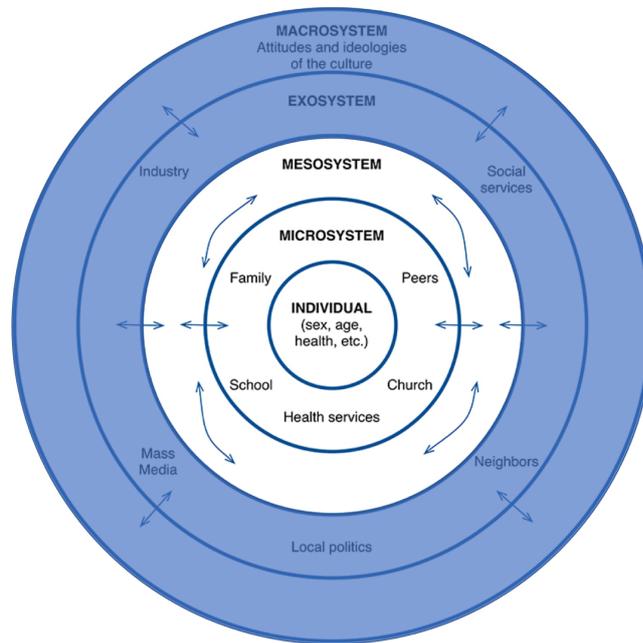


Figure 7.1: Adapted from Bronfenbrenner's (1979) (Bio)-Ecological Systems Theory. The three inner circles for this research study (Individual, Microsystem, Mesosystem) are presented in the unshaded core layers.

7.11.1 RECOMMENDATION 1: Consider the role of mindset in teacher expertise development.

An important observation expressed in the research literature on expertise, suggests that not all experienced participants in any particular field continue to develop into experts (Bereiter & Scardamalia, 1993; Berliner, 2004; Ericsson & Poole, 2016), rather some participants remain as experienced non-experts. A critical attribute that leads to improvement, is a growth mindset, not a fixed mindset (Dweck, 2016; Boaler, 2016).

The literature on expertise development was consistent with the perceptions provided by participants in this study. Teachers and leaders suggested that not all teachers become expert, and when asked in the interviews if they could identify experienced non-experts, the majority of participants said they could do so in their school, sub-school or faculty. Fewer stated they were not informed enough to provide a view. Being open (minded) and seeking opportunities to further improve, was said to enable expertise to develop.

The findings suggest that teacher expertise development has an important relationship with mindset. For example, teachers and leaders stated that an expert teacher: is open to learn, demonstrates adaptable and flexible behaviours when confronted with change, and seeks out their own opportunities to learn through a variety of methods, and that these attributes and practices enable further progression of expertise. It was this approach that led to new knowledge generation and improved skills for teachers. Participants also identified teachers as experts who sought out opportunities to continually learn through a variety of methods and engaged with others for their own professional improvement. Conversely, participants suggested that a teacher who was closed off to change would never develop to become an expert teacher, and would be unlikely to have ever been one. It was also stated in this study by some participants, that they actively avoided colleagues who adopted a negative and closed off approach to their work, thereby diminishing opportunities for collegial interactions, as one example of an adverse impact. The following recommendations are made within the nested systems of a school community.

The specific concept of mindset is not articulated in the APST. In this study, mindset was viewed to be critical to expertise development as well as being one indicator of expert level performance.

It is recommended that teachers carefully consider, and adopt, the attributes and practices identified in this study involving mindset, which are presented in Theme D, 'Open to, and Seeks Out, Opportunities for Professional Growth and Improvement'. This includes responses to: imposed change from internal and external sources, embracing new learning opportunities presented to teachers, and to actively seek out additional opportunities to engage in new learning experiences that progress expertise development. As Bronfenbrenner (1994) identifies in the Ecological Systems Theory framework, the person, in this instance interpreted to be a teacher, is first recognised as an individual, which includes physical and other types of traits and needs, which they then bring to the interactions that occur with others. The mindset of the teacher is identifiable at this individual level, and interaction with others at the microsystem level.

It is recommended that leaders in schools facilitate professional learning opportunities for teachers and school leaders to engage in, specifically related to mindset. It would also be beneficial for leaders to develop structures and processes to

enable those who displayed consistent negativity, or who were resistant to change, or who repeatedly declined opportunities to learn, to have a safe way to voice concerns to directly inform leaders to progress what may be acting as an inhibitor for expertise development. Thus, the deeper lying issues can surface so they are more likely to be addressed with bolstered support for teachers or leaders.

The interrelated and interdependent relationships that occur in schools, identified by Kemmis et al. (2012; 2014) in the intersubjective spaces that occur in the *sayings, doings and relatings* are crucial for schools to develop, and by fostering this process of learning, teachers can have new opportunities to engage in their own developmental learning in this important area. As the teacher forms a particular mindset, they interact with others in the community at a microsystem and macrosystem level (Bronfenbrenner, 1994) initially. Leaders should ask by what means are the interactions, shaped by the mindset of teacher, currently impacting on the ecologies of the school. In school settings, the formation of *The Education Complex* principles (Kemmis et al., 2012, 2014a) are key to tie together highly effective and professional learning communities interconnecting with other practices.

7.11.2 RECOMMENDATION 2: Develop a group-focused reflective practice framework in schools

The importance of reflective practice to enable expertise to develop is acknowledged in the literature (Farrell, 2015; Tsui, 2009) and the need to so with accuracy is also observed (Webster & Schempp, 2009). Although, not everyone reflects with accuracy and some individuals employ self-deception in the process (Von Hippel & Trivers, 2011). Research studies show that people who reflect least accurately, and are less self-perceptive, are people with fixed mindsets, whilst those with growth mindsets are particularly accurate in their self-perception abilities (Dweck, 2016).

Consistent with the literature, the results of this study showed that participants indicated that some colleagues in their respective schools did not appear to reflect, or did not reflect with accuracy, or in a small number of instances engaged in self-deception. It was suggested that this perceived deficit inhibited growth and development of practice and expertise progression of some practitioners in schools. This observation was said to be a key contributor of why some professionals do not develop into expert teachers and remain as experienced non-experts. The literature consistently identifies the important role deliberate practice plays in expertise development (Ericsson, 2008; Ericsson & Pool, 2016), which is critically reliant on the

ability to accurately reflect on performance, to then engage in useful improvement strategies.

Reflection, in, or on, practice, is not in the APST as a statement of what teachers in Australia should know and be able to do in any of the Focus Areas. However, participants in this study provided clear perceptions that reflecting effectively and with accuracy was important for expertise development.

It is recommended that all teaching professionals in a school setting employ and utilise a reflective practice tool. Further developing a *group*-focused reflective practice framework is recommended, so that professionals can engage in reflection with greater levels of support, accuracy and facilitation.

The development of a group-focused reflective framework tool could occur through action research involving teachers and leaders, taking into consideration contextual needs of teachers and a school community. The framework should include teachers working with other colleagues when engaged in reflection, as part of their professional practice, in addition to some individual and personal reflection to occur on other occasions. The benefits of reflecting in/on practice were an important finding in this study, as was the importance of reflecting with accuracy. This recommendation supports teachers to reflect with greater accuracy, through the presence of other colleagues and accessing collegial perspectives during reflective activity. Engaging in an action research plan to introduce a collegial reflective practice framework is an example of how The Education Complex (Kemmis et al., 2014a) exists in schools (see Figure 6.6). That is, 'educational research and evaluation' interconnects with 'teachers' classroom educational practice', which further interacts with 'educational leadership and administration' and 'professional development/learning' - all interrelating in a school setting (Kemmis et al., 2014a, p. 52).

It is further recommended that the group-focused reflective framework tool include relational attributes which interconnects key aspects of two themes presented in the findings of this study (reflection and relationship building). The extension of Recommendation 2 involves concomitantly incorporating relationship building as an inherent component of the reflective framework. For groups to reflect together effectively, individuals within the group need to develop trust and other relational qualities to optimise the overall effectiveness, as they work towards, and further develop, expertise, particularly when working together in their respective workplace.

The literature recognises the benefits of relational attributes in expert teachers (Smith & Tiberius, 1998; Tsui, 2009; Webster & Schempp, 2008) and combining relationship building with group reflective practice is recommended to the professional education community. This proposition also aligns with the Education Complex (Kemmis et al., 2014a) model considerate of the interaction among the different dimensions as further justification for this recommendation.

7.11.3 RECOMMENDATION 3: Develop a teacher performance evaluation tool that incorporates character traits and personal qualities.

The literature provides various examples of character traits and qualities that influence relationships in schools and the work of classroom teachers (Bucci, 2004; Carr, 2006; Di Stasio et al., 2016; Jones, 2011; Messineo, 2010; NSW Department of Education and Communities, 2015; Riley, 2010; Wolff et al., 2015). Examples of attributes of teachers that present as character traits and qualities include: passion (Berliner, 2001; Crosswell, 2006; Dinham, 2008; Elliot & Crosswell, 2004; Fried, 2004; Mart, 2013; Yates & Hattie, 2013), empathy (Day in Krátká, 2015) openness, optimism, care, humour (Tsui, 2009), reflection (Farrell, 2015; Tsui, 2009), self-awareness (Webster & Schempp, 2009), perceptiveness (Schempp & Johnson, 2006) and honesty (Day in Krátká, 2015), among others identified in this study.

The findings of this study provided a clear view that an expert teacher demonstrates a range of desired character traits and qualities. Those traits and qualities that were identified by teachers and leaders in two cases, led to an emergent theme as a result of the data analysis, and has been presented in the respective results chapters. Participants in both cases expressed the view that experts demonstrate particular character traits and qualities, which indicated the presence of expertise, as well as being a contributor to expertise development.

The APST does not include these type of attributes as part of the Focus Areas of the seven Standards. The APST does refer to professional ethics, however, participants were considerably more explicit and detailed in their descriptions of an expert practitioner, which went beyond professional ethics. Espousing specific character traits and qualities that all teachers should demonstrate is problematic. There is no suggestion that character traits and qualities should be governed in any way. However, in schools there is insufficient guidance for teachers to develop greater awareness of the need to demonstrate particular character traits and qualities

to progress to be an expert teacher. It would be useful for schools to improve the way they communicate and promote these attributes.

It is recommended that schools strengthen support for this professional dimension of a teacher's role and incorporate character traits and qualities into a performance evaluation framework, along with the appropriate educative processes. It is suggested that key stakeholders in schools develop agreed meaningful character traits and qualities within context of individual schools, so that existing ethos, school values, mission and vision statements can be considered when shaping an evaluation tool to further incorporate particular character traits and qualities.

The impact of this initiative would raise awareness and improve guidance for teachers in localised individual schools. This allows for contextualisation for stakeholders to consider the unique features, history, traditions and culture of each school. The benefits are evidenced in the *relatings* (Kemmis et al., 2012; 2014a) that occur in schools which shape cultures in the interdependent nature of communities. Because these do not form part of the APST, this presents an opportunity for leaders in schools to cultivate the character traits and qualities with their school community, as part of the interaction between the individual, microsystem and macrosystem (Bronfenbrenner, 1994). Inviting students, teachers, leaders, parents, governance, parents & friends, external local community and Traditional Owners of the land on which the school sits, could allow for comprehensive co-collaboration on the traits and qualities that are most highly valued in the respective school community. By strengthening this connection to expertise, individual teacher development in school environments could also be further enabled. Ecological Systems Theory (EST) (Bronfenbrenner, 1994) places the individual at the core of the circular graphic (refer to Figure 7.1) that represents the ecologies in which an individual interacts within a community at increasing levels of diverse exposure. The character traits and qualities of the sovereign individual are a deep part of the identity of a person. Those traits and qualities are expressed as the interactions of the individual connect to the *relatings* (Kemmis et al., 2012; 2014a) of the inner most social groups of the enmeshed system nested in different school ecologies (Bronfenbrenner, 1994).

7.11.4 RECOMMENDATION 4: Celebrate and further strengthen the importance student-teacher relationships serve in expert teacher practice.

The NSW Department of Education & Communities (2015) state that schooling should not only be about academic outcomes, it should also focus on the wellbeing of

the whole child. Teachers who carefully craft and maintain positive and productive relationships with students also enhance their academic outcomes (Cochrane-Smith, 2005; Onwuegbuzie et al., 2007; Riley, 2010). Developing positive student-teacher relationships is a feature of an expert teacher (Webster & Schempp, 2008) and this includes allowing students to get to know the teacher in return (Dinham, 2010). A benefit of knowing students particularly well is that virtually no misbehaviour occurs in those classrooms (Yates & Hattie, 2013).

The results of both case studies agreed with the literature in respect of the importance of the role relationships play in schools. Teachers and leaders in both cases identified that an expert teacher has healthy relationships with students and strategically aims to develop knowledge of individual student interests, well-beyond formal curriculum based learning. Participants repeatedly and frequently made specific connections to the quality of relationships teachers had with their students as an essential attribute and practice for expertise to occur. The findings suggest that expert teachers cared about students, knew them as individual learners, and knew about their interests outside the classroom, all of which enabled curriculum content to be personalised and taught more effectively; apart from positive outcomes for students in the social-emotional developmental dimension.

The APST and this study did fundamentally align in relation to student-teacher relationships. The APST referred to 'know students and how they learn' and it is acknowledged that this is an important feature of the Standards. However, the descriptions of these teacher-student relationships by participants, and the character traits and personal qualities that were infused in these relationships, went beyond the depth and detail of the APST descriptors. Participants suggested a teacher who did not have strong professional relationships with students could not be considered an expert. There is a need to firstly celebrate the existing recognition for this critical feature of the work of teachers, however, there is still a need to further strengthen the importance this plays in the holistic development of children.

It is recommended that leaders in schools make more explicit the critical importance of the relationships that occur for teachers in a school environment. In making this explicitly important and connecting this practice to teacher expertise development, leaders in schools should provide increased opportunities for teachers to build their relationships with other members of the school community beyond the formality of the classroom.

Among the implications of this recommendation, is the capacity to deepen and strengthen these relationships, which in turn would be reflected in the level of expertise development of teachers. To nurture this process, it would be beneficial for teachers if leaders and parents also gain more quality opportunities to build relationships with teachers. This would also enable other stakeholders to view expertise from differing perspectives. The relationships exhibited by the expert teacher impacts particularly on the social-political arrangements in the social intersubjective space identified by Kemmis et al., (2012; 2014a) as *relatings*. Bronfenbrenner (1994) identifies that the individual is mostly influenced by those who are closest to them. Bronfenbrenner (1994) also acknowledges that although parents are the primary carers of children (students), the close relationships that teachers have with students is also crucial in the overall development of a child.

7.11.5 RECOMMENDATION 5: Raise awareness of the critical role problem solving plays in expertise development for teachers in schools.

The literature on generic expertise repeatedly and frequently identified problem solving as a crucial practice that experts engage in, and in a superior way compared to non-experts (Bédard & Chi, 1992; Bereiter & Scardamalia, 1993; Berliner, 2001, 2004; Chi, 2006; Herbig & Glöckner 2009; Hoffman, 1996; Smith et al., 1998; Sternberg, 1998; Webster & Schempp, 2009). Problem solving is a key characteristic of expertise, and experts spend more time considering a problem compared to non-experts; however, experts solve the overall problem more efficiently compared to non-experts (Chi, 2006). This critical and prominent feature in the literature on expertise, also relates to teaching expertise (Hattie, 2003, 2009).

The results of this study did not reflect the importance of an expert teacher demonstrating superior problem solving capabilities, which was frequently stated in the literature. Overall, there was little reference to this attribute and practice in relation to expertise in teaching, and a disconnect with the literature occurred in both cases.

The issue with this disconnect is that teachers are required to make a large number of decisions on a daily basis and the nature of teaching is complex. Teachers require advanced problem solving capabilities to perform at an expert level. The APST does not include problem solving as a Standard Focus Area, although, there is one reference to problem solving within the descriptor for 'use teaching strategies'. This may not accurately reflect the explicit importance placed on problem solving presented in the literature when evaluating expertise.

It is recommended that the awareness of the importance of problem solving in expertise development be raised in schools to benefit teacher practice. As part of this recommendation, more opportunities for teachers should be created to engage in action research projects involving problem solving.

To raise awareness in schools of this critical attribute when considering teacher expertise development, leaders and teachers could co-create opportunities for this to occur for teachers to further develop problem solving skills. One suggestion is for teachers to work collaboratively to enhance professional practice and progress expertise and career stage status as the result of this engagement. It was observed in this study's findings that teachers and leaders did not conceptualise-operationalise expertise to be 'working with' (or leading, assisting, initiating, supporting) colleagues in the range of Focus Areas of the APST a regular dimension of expertise. Rather, expertise was communicated more akin to personal excellence in practice. To facilitate broadening the conceptualisation-operationalisation of expertise in schools, teachers could collaborate on action research projects that enable expertise to develop further by engaging in problem solving. More advanced career stage teachers could 'lead', 'support' 'assist' less advanced teachers. Problem solving is a feature of action research projects (O'Brien, 1998) and a benefit of action research in a school setting is that it can involve teachers working together to solve problems which improve the conditions of the workplace for teachers. Zuber-Skerritt & Fletcher (2007) note that action research can be innovative in nature, and this has an inherent problem solving dimension. Engaging in an action research project reinforces and supports the interrelated ecologies espoused in EST (Bronfenbrenner, 1994) and has the potential to reshape the practice architectures that hold the *sayings, doings and relatings* in place in school (Kemmis et al., 2012; 2014a).

7.12 SUGGESTIONS FOR FUTURE RESEARCH:

This study has sought to provide original insights into the conceptualisations-operationalisations of expertise from the perspective of professionals in schools. Although this study aimed to investigate the gap in the literature on teacher and school leader perspectives on teacher expertise, there is a need for further research. Additional research can further develop the insights on how expertise is conceptualised-operationalised from different perspectives and complement the complex phenomenon involving teacher expertise (Smith & Strahan, 2004). The following suggested ideas for future research studies in teacher expertise include:

- Investigate how professionals in other schools conceptualise-operationalise expertise.

This study comprised two cases, across three sites, to investigate perceptions of teacher expertise from a professional perspective. While this study provided insight into this important issue, it remains a narrow perspective.

As the cases are bounded, they are limited in their scope. It would be useful to replicate the study at different sites to gain insight from the perspective of other professionals and how they also conceptualise-operationalise expertise in their own school context in their own intersubjective spaces (Kemmis et al., 2012; 2014a).

This would broaden the perspective further for professionals in other schools and add to the body of knowledge on teacher expertise.

- Investigate how students and parents, as key stakeholders in schools conceptualise-operationalise expertise.

This study investigated perceptions of teacher expertise from a professional perspective. As the cases are bounded, they are limited in their scope and the perceptions are most relevant for professionals in schools, and less relatable for other stakeholders in schools.

It would be useful to replicate aspects of the study to gain insight from the perspective of other stakeholders. Investigating the perspectives of students and parents to explore how they also conceptualise-operationalise expertise in their own school context as a recommended future inquiry.

This would broaden the perspective further beyond professionals and add to the body of knowledge on teacher expertise from a difference perspective.

- Explore known areas of professional practice that were not identified in this study when conceptualising-operationalising teacher expertise.

This study's findings were compared and contrasted to the *Australian Professional Standards for Teachers* (AITSL, 2011a) as the current statement for teachers describing what professional practitioners should know and be able to do.

Whilst this study elicited data on how professionals conceptualised-operationalised expertise, there were a number of Focus Areas in the Standards that were not stated or identified. In addition, this study's findings identified a number of other attributes and practices of expertise that are not presented in the APST. It would be useful to further research why those areas were not identified, or did not align, in context of expertise.

As an extension of this research study, it would be useful to investigate and reconcile why participant perspectives of expertise in this study did not align with the Lead Teacher career stage descriptors of expertise from the *Australian Professional Standards for Teachers* (AITSL, 2011a). There was a disconnect in the way this career stage was viewed and this is worthy of future consideration to research to understand why this occurred.

Understanding the discourse on both these differences would provide further insight into the phenomenon of teacher and teaching expertise in schools.

- Investigate teacher expertise in context of enhanced student outcomes.

Participants in this study provided rich data to conceptualise-operationalise expertise across a broad range of teacher responsibilities and professional duties.

While it was evident participants considered students when providing their perceptions of expertise, it would be useful to strengthen those connections to make them more explicit, as the focus of a future study to inquire further about this aspect of the teacher-expertise phenomenon.

Investigation should focus on the range of identified student needs presented in the *Australian Professional Standards for Teachers*, (AITSL, 2011a) Standard 1, Focus Area 1.1 - 'physical, social and intellectual development and characteristics of students', and add emotional needs so that more can be learned about how expert teachers impact on student outcomes in a range of dimensions.

7.13 CONCLUDING REMARKS

There is value in learning more about the characteristics of expertise and the trajectory practitioners have when developing expertise (Fiore, Hoffman & Salas, 2008). This study has contributed to the body of knowledge on expertise in the

teaching profession by investigating the perceptions of professionals in schools when conceptualising-operationalising an expert teacher. This study has contributed in a number of ways, and researched two cases across three Australian independent schools. The research questions and emergent themes provided important results to analyse and explore.

This study utilised two theoretical frameworks: Ecological Systems Theory (Bronfenbrenner, 1994) and Practice Architectures and Ecologies of Practices Theory (Kemmis et al., 2012; 2014a), incorporating The Education Complex (Kemmis et al., 2012) model. The results of this study were bounded in two cases. By utilising the two theoretical frameworks to house the findings, together they provided greater potential relevance for professionals in other schools to gain insight for their own context.

The findings were also compared and contrasted with the APST to consider alignment between the emergent themes and the Focus Areas of the seven Standards. The process to explore alignment of the APST and this study's findings, provides further opportunity for leaders and teachers to consider the findings and recommendations in a more relatable context, as the APST are relevant to teachers in all Australian schools. This enables professionals in schools to further conceptualise-operationalise expertise with this insight.

I am hopeful that this research study sparks debate, and supports professionals in schools to reflect on how expertise in teaching is conceptualised-operationalised, so that teachers are enriched in their professional practice, which in turn has benefits flowing on to students. Professor Geoff Masters, Chief Executive of the Australian Council for Educational Research (2013) states that micro change, such as more effective day-to-day classroom teaching practices, will improve student learning performance, notably more than macro change policy and practices, such as smaller class size, standardised testing, school incentives or performance pay, principal autonomy, greater transparency and accountability, common curricula or even teaching standards if not inter-connected solutions. This study has contributed by expressing the attributes and practices that professionals in schools perceived to characterise the most effective and highest quality teaching, performed by expert teachers. The implications of this new knowledge inform the recommendations that have been stated in this concluding chapter. These recommendations are aimed to support professionals in schools to continue to reflect and to explore opportunities to grow as educators. Teachers in Australian schools have the crucial responsibility of shaping the future of our nation; our children, who, in time, will assume

responsibility for guiding the next generation within our globalised, ever evolving knowledge-based communities.

The final words are left for Urie Bronfenbrenner (2005), who, when reflecting on decades of service in the teaching profession, remarked, 'the greatest reward a teacher can experience - [is] the awakening and empowerment of another's mind and spirit' (p. 26).

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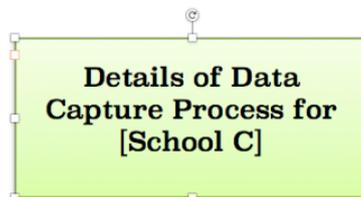
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APPENDICES

APPENDIX 1: INFORMATION LETTER TO SCHOOL C PRINCIPAL



*School of Education
Faculty of the Professions
University of New England*
Armidale NSW 2351
Australia
*Phone 02 6773 4444
www.une.edu.au/*



(School Principal)
(School Address)

Dear (Principal),

Thank you for agreeing to allow me to conduct my Doctoral research at [School C]. I am writing to endeavour to determine an appropriate time to visit on site and collect the research data. The disruption should be minimal to you and your staff, and I have outlined some additional details below, including some proposed dates (which at this stage are in common to the two other schools I have permission to collect data from – one is NSW and the other in QLD).

I would be grateful if you could choose one of the dates listed (or two if necessary) and reply with that information. If none of these suit, perhaps you could suggest some dates in your reply. I am aiming to have all the data collected from all schools by early May at the latest, but preferably earlier. For [School C] it only involves a one-off visit, but given proximity it could be two if that suits you better.

Details:

Topic Area: This will involve discussion around **expertise in teaching practice** from an educator's **perspective**. It is best if responses are raw and no preparation is done by staff on the topic area. I am searching for the current held beliefs on this topic.

Staff Involved:

I would require **2 separate groups** as follows:

Group 1 – Members of the academic staff who lead curriculum, teaching approach, or mentor teachers in any way. Typically, this would be any of the following – Headmaster, Director of Teaching and Learning, Director of Studies, Head of Junior/Middle/Senior School, Dean of Students or similar executive or senior roles. It could also be Heads of Department / Faculty if the above staff were not available.

I would need a total of **4 - 6 members of staff to form Group 1**.

(I ask no more or no less only to ensure quality of responses is enabled but with enough breadth of view too).

Total time required: 45min-50min total for each group, which can be back to back group meetings. That is, 1.5hrs is achievable total for both groups.

Group 2 – Members of staff who teach in the classroom with no additional responsibilities, other than teaching itself. Ideally, it would be a mixture of year groups taught from K-12, different genders, and years of experience ranging from 3 years or greater. It is important that no one in this group has formal leadership responsibilities in the School at that time.

I would need a total of **4 - 6 members of staff to form Group 2**.

(I ask no more or no less only to ensure quality of responses is enabled but with enough breadth too).

Total time required: 45min-50min total for each group, which can be back to back meetings of both groups one the same day. That is, 1.5hrs is achievable as a total of both groups.

There is no follow up required of staff at all. **Neither the individual staff involved, nor the School will be identifiable** in the Doctoral thesis or any other publication arising.

Selection of Group Members:

One aspect that it essential is ensuring that staff have the opportunity to nominate/volunteer for the session and are not given a directive by the employer or leader/manager that they have to participate. It needs to be of their own desire. There is no restriction on encouraging staff or reminding them of the opportunity. Staff can withdraw at any time too.

Additional Information:

I will visit on campus and with your approval meet in a room designated by you as being suitable. Ideally, I would be helpful if it contained a projector but this is not essential.

Proposed Dates: School C to choose one of the following date options (or two consecutive dates if desired to hold over two meetings).

	School C
February	24 th to 28 th
March	17 th to 21 st
April	1 st to 4 th , 29 th , 30 th ,
May	1 st , 2 nd

If you prefer I liaise with a member of staff other than yourself, I would be only too pleased to contact them to make the above arrangements. I would be most grateful if you can reply at your earliest convenience or prior to Friday 28 February.

I would be very willing to answer any queries you may have to assist you at abell26@myune.edu.au on 0264 512428 / 0264 571022.

Thank you.

Yours sincerely,

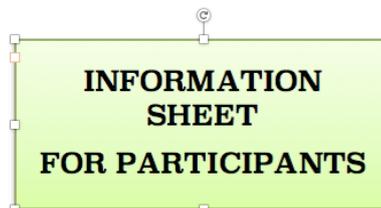


Andrew Bell
EdD student researcher
University of New England

APPENDIX 2: LETTER OF INTRODUCTION



School of Education
Faculty of the Professions
University of New England
Armidale NSW 2351
Australia
Phone 02 6773 4444
www.une.edu.au/



I wish to invite you to participate in my research project, described below.

My name is **Andrew Bell** and I am conducting this research as part of my EdD in the School of **Education** at the University of New England. My supervisors are **Mary Macken-Horarik** and **Joy Hardy**.

Research Project	Attributes and practices that characterise an expert teacher: Professional perceptions within schools.
Aim of the research	The research aims to explore the perceptions held by educators within schools about what attributes characterise <i>expertise</i> in the professional practice of teaching, as well as differentiate those attributes with that of <i>experienced non-expert</i> teacher qualities. It will also explore what might inform educators about their perceptions on this topic.
Interview	I would like to conduct a focus group discussion with you and another 3-5 of your colleagues at [school name] . The group interview will take approximately 60 minutes. With your permission, I will make an electronic audio recording of the focus group discussion to ensure that I accurately recall the information you provide. Following the discussion, a transcript can be provided to you if you wish to see one upon request.
Confidentiality	Any information or personal details gathered in the course of the study will remain confidential. No individual will be identified by name in any publication of the results. All names will be replaced by pseudonyms if required at all; this will ensure that you are not identifiable.
Participation is Voluntary	Please understand that your involvement in this study is voluntary and I respect your right to withdraw from the study at any time. You may discontinue the interview at any time without consequence and you do not need to provide any explanation if you decide not to participate or withdraw at any time. There is only one session of around 60 minutes and there is no follow up interviews.
Questions	The discussion questions will not be of a sensitive or personal nature: rather they are general, aiming to enable you to enhance my knowledge of the attributes that characterise expertise in teaching practice, as perceived from your

	topic.
Use of information	I will use information from the focus group as part of my doctoral thesis, which I expect to complete in 2016. Information from the interview may also be used in journal articles and conference presentations before and after this date. At all times, I will safeguard your identity by presenting the information in way that will not allow you to be identified.
Upsetting issues	It is unlikely that this research will raise any personal or upsetting issues but if it does you may wish to contact a community support service on 131114 (lifeline counselling) or your own on-site school-based counsellor.
Storage of information	I will keep hardcopy recordings and notes of the interview in a locked cabinet at the researcher's workplace in NSW and at the University of New England's School of Education. Any electronic data will be kept on a password protected computer in the researcher's workplace and only the researcher and supervisors will have access to it.
Disposal of information	All the data collected in this research will be kept for a minimum of five years after successful submission of my thesis, after which it will be disposed of by deleting relevant computer files, and destroying or shredding hardcopy materials.
Approval	This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No...HE13-236, Valid to 22/10/2014).
Contact details	<p>Feel free to contact me with any questions about this research by email at abell26@une.edu.au or by phone on 0434744709.</p> <p>You may also contact my supervisors. My Principal supervisor's name is Mary Macken-Horarik and she can be contacted at mmackenh@une.edu.au or 02 6773 3562 and my Co-supervisor's name is Joy Hardy and she can be at joy.hardy@une.edu.au or on 02 6773 2520</p>
Complaints	<p>Should you have any complaints concerning the manner in which this research is conducted, please contact the Research Ethics Officer at:</p> <p>Research Services University of New England Armidale, NSW 2351 Tel: (02) 6773 3449 Fax: (02) 6773 3543 Email: ethics@une.edu.au</p> <p>Thank you for considering this request and I look forward to further contact with you.</p> <p>regards, Andrew Bell EdD student</p>

APPENDIX 3: PARTICIPANT CONSENT FORM



*School of Education
Faculty of the Professions
University of New England
Armidale NSW 2351
Australia
Phone 02 67733716
www.une.edu.au/education*

PERMISSION FORM for PARTICIPANTS

Research Project: Attributes that characterise an expert teacher: Professional perceptions within Independent schools.

Consent Form for Participating School Educators / Teachers

Please insert your name, and circle the yes/no responses as appropriate.

I, _____ have read the information contained in the Information Sheet for Participating Teachers and any questions I have asked have been answered to my satisfaction.

Yes / No

I agree to participating in this activity, realising that I may withdraw at any time.

Yes / No

I agree that research data gathered for the study may be published using a pseudonym.

Yes / No

I agree to the interview being audiotape recorded and transcribed.

Yes / No

I agree to information I provide to the researchers being quoted in scholarly reports of the project provided that any quotation is approved by me and that it is not possible that I could be identified from the quoted material.

Yes/No

NAME

SIGNATURE

Date

APPENDIX 4: ETHICS APPROVAL CONFIRMATION LETTER



Ethics Office
Research Development & Integrity
Research Division
Armidale NSW 2351
Australia
Phone 02 6773 3449
Fax 02 6773 3543
jo-ann.sozou@une.edu.au
www.une.edu.au/research-services

HUMAN RESEARCH ETHICS COMMITTEE

MEMORANDUM TO: A/Prof Mary Macken-Horarik, A/Prof Joy Hardy & Mr Andrew Bell

School of Education

This is to advise you that the Human Research Ethics Committee has approved the following:

PROJECT TITLE: Attributes that characterise expertise in teaching:
Professional perceptions within Independent schools

APPROVAL No.: HE13-236

COMMENCEMENT DATE: 22 October, 2013

APPROVAL VALID TO: 22 October, 2014

COMMENTS: Nil. Conditions met in full

The Human Research Ethics Committee may grant approval for up to a maximum of three years. For approval periods greater than 12 months, researchers are required to submit an application for renewal at each twelve-month period. All researchers are required to submit a Final Report at the completion of their project. The Progress/Final Report Form is available at the following web address:
<http://www.une.edu.au/research-services/researchdevelopment/integrity/ethics/human-ethics/hrecforms.php>

The NHMRC National Statement on Ethical Conduct in Research Involving Humans requires that researchers must report immediately to the Human Research Ethics Committee anything that might affect ethical acceptance of the protocol. This includes adverse reactions of participants, proposed changes in the protocol, and any other unforeseen events that might affect the continued ethical acceptability of the project.

In issuing this approval number, it is required that all data and consent forms are stored in a secure location for a minimum period of five years. These documents may be required for compliance audit processes during that time. If the location at which data and documentation are retained is changed within that five year period, the Research Ethics Officer should be advised of the new location.



Jo-Ann Sozou
Secretary/Research Ethics Officer

22/10/2013

A13/2288

APPENDIX 5: SAMPLE OF TRANSCRIPT TEACHER CASE

- S1 34:41 Yes. Humility, it just came up implicitly in that moment? Where does humility fit into expertise, if at all? Do you find that more expert teachers have a sense of humility, or not, or that's no different?
- S5=T13 34:59 No, not necessarily. Depending on the way that someone views the person giving feedback or advice or criticism, they can take it in very different ways. So, if you're a new teacher offering a suggestion, it can be taken very badly by the teacher who's meant to be mentoring you.
- S4=T10 35:32 Or the expert.
- S2=T12 35:33 Yes.
- S5=T13 35:35 But it depends from person to person. If a teacher sees you as having a point of view that's valuable, then they I guess in all likelihood, just take it on board, in the experience that I've had.
- S1 35:53 [T12], you just picked up on the humility side. You made a comment in reference to it. Do you think that humility is an attribute for expertise, or not at all?
- S2=T12 36:01 No I don't think so. I think some people just have that air about them, that quiet humility that you respect a lot.
- S4=T10 36:10 It's inherent then, isn't it?
- S2=T12 36:11 Yes.
- S1 36:12 But do you think a non-expert experienced teacher can be just as humble?
- S2=T12 36:16 Yes, absolutely.
- S4=T10 36:19 For some reason I disagree.
- S1 36:22 So what are your thoughts [T10]?
- S4=T10 36:23 I don't know. I just feel it's an inherent thing and teachers discern that bit of humility? I don't know why.
- S2=T12 36:33 Do you think most teachers do?
- S4=T10 36:35 No, just the good teachers.
- S2=T12 36:38 Yes.
- S1 36:38 The very best.
- S4=T10 36:40 I think you have to be able to...it's almost a natural thing where you can take on feedback without getting upset and you can engage with your kids in a professional sense.
- S2=T12 36:59 It is going to be really interesting for us here because we're just about to introduce this feedback thing where you have a mentor and you have to give feedback and so on. We were demonstrated on how you can constructively give feedback, and couch it in certain terms, or, should you just be blunt and say, Look, really that was pathetic, you know, do it again next week.
- S1 37:18 So you've had some in-servicing about that?
- S2=T12 37:20 Just started to have it, and we're going to have mentors. How are we going to choose them? Do we choose them? I think we get to choose them ourselves. You can't really allocate a mentor to someone if you don't have a rapport with them.
- S1 37:30 So you're not buddies, it's not buddy sharing. Someone is in a superior role within a relationship.
- S3=T11 37:35 So they're doing it in a couple of different groups. I'm in the second group because I, by default, it was mentoring [name of a person stated]. Frankly it should be [name of person] mentoring me. Again, at some stage, at least we're sharing [professionally - inaudible].

...

S4=T10 37:59 This other thing is PD and what have you.

S4=T10 38:06 Aside from the conferences and the in-class observations and what have you, just that ability to share, the time like for example, this Thursday, it's like a teach-me where people from outside the school, they've been invited along as well, get to share in my views on the use of IT in the classroom, and, little things like that where - that's generally organized by another teacher as well. I think they're quite useful because you get to see what does and doesn't work for you, and how that fits into your own personal style as well, but then, that requires a certain amount of time being given to those staff, whereas the person who's organizing it or, the passionate person who might just keep on everything else, who are able to initiate some things like that. I think it's very good to have that as well.

S1 39:00 Can I just ask you to think of the very best teacher in your mind, that you've seen in your career. What is the standout for them that would lead you to say, they're the best teacher I've ever seen, I've ever worked with?

S5=T13 39:14 Exceptional patience.

S3=T11 39:16 Yes.

S1 39:17 Patience?

S5=T13 39:18 Just amazing, and also the way that they comported themselves. It was something that - and this is a teacher that I had a once-a-fortnight team-teaching thing with, and they had an exceptional way of managing their class, which was based on patience and not yelling at students or doing anything like that, and just an exceptional way of delivering things that was obviously really well thought out, kind of step-by-step instructions. Everything was visible, everything was clear, everything was repeated, and there was never a slip from the way that they were managing the classroom and delivering their content. It was just always working perfectly.

S1 40:19 [T12], how would you answer that?

S2=T12 40:22 Maybe go onto one of the others.

S1 40:23 Okay sure. We'll go down the other end, [T10], and we'll come back.

S4=T10 40:30 Yes, I agree with that. I found the engagement with the students, [being able to provide a variety of activities for the class], and having, whether it's patience, and part of that patience is having a professional sense of humour in front of the kids, knowing that there's certain humour around the kids, but then knowing where the line is as well and being able to manage that. I think that yes, it comes back to patience, it's related to patience in some way.

S1 41:07 But really engaging the kids and having a presence almost.

S4=T10 41:08 Yes, and being able to provide various activities in the class, and also being able to identify the students who had differentiations required, and that's something that we try and remind the staff that, not only have they been required in the class, but it's that they can actually see in the class how to provide things in a different way to other students, without making it a big thing for those students, without being embarrassing. That's what I really admired.

S1 41:47 All right, thanks. T11?

S3=T11 41:49 I have to agree actually. You can walk in and somebody's got the kids in the palm of their hand, and they're engaged, and everybody regardless of their ability, is in the zone. So, as you say, there's a couple

in differentiation happening, etcetera, there's a supported level of confidence, I think patience is important, go back to one, losing patience was one of the things that I have trouble with and yet I'm as human as anybody - you know, everyone loses their patience but I think there's just ways of allowing that to happen, so that you can be human, but you're always a professional. If I think of teachers that I've really admired, either because I had them myself at school or because I've taught with them, I guess the standouts are the ones who have a very specific rapport that allows them to engage with the kids and the kids to want to be engaged with whatever it is they're talking about - just a bit hard to describe but, yes, I think that's pretty much it.

S1 43:02 In terms of wanting to engage, do you mean that the kids want to work for their own results and achieve themselves, but they want to work for their teacher as well, they want to achieve for their teacher, which goes beyond?

S3=T11 43:09 Yes, so they want to do their own thing. Regardless of their own agenda, whether it's because they're academic squats, or whether they'd really rather be playing around with the computer, if there's something without it necessarily being a threat of detention that's got them all engaged, then that's pretty good.

S1 43:29 Yes okay. [T12]?

S2=T12 43:32 You were saying like, the best teachers are the ones who can empower the kids to almost do their own thing, but keep control of the whole thing at the same time, and they're the ones where the kids are looking like they're excited they're actually doing stuff, and they know what they're doing. I think the teachers know, like, discipline's not a problem for them, because they know exactly what they want to do and the kids recognize it when you know that you've got to get this done and you want to do this, and then you're going to introduce that, and they sort of come with you. It's when the lesson's not tight or there's no proper direction, that then things start to go awry.

S1 44:10 All right, great. We might move on. There were two things I think Andrew you might have said about explaining things, you said something around, they're able to explain things easily. Do you mean that they take a concept and it sounds simple to the students, rather than making it sound complex? Is that what you mean by that?

APPENDIX 6: SAMPLE SECTION OF A CODING PHASE: TEACHER CASE

What are the Attributes of Expertise in Teaching or of an Expert Teacher?							
	Individual Teacher 1	Individual Teacher 2	Individual Teacher 3	Individual Teacher 4	Individual Teacher 5	Focus G T7-9	Focus G T10-13
Confidence						•	•
Engaging with students, can engage a broad range of students, all students						•	•
Creating a bond with student / connecting /rapport/cares for students	•		•		•	•	•
Knowing students well beyond names, knowing personal interests, know and nurture individual talents	•			•	•		
Dedicated / Commitment to teaching as a profession /Cares for teaching / vocation		•		•		•	
Is reflective or mindful of consideration for improvement- in both personal attributes/virtues and or in profession			•	•			•
Calm, composed							•
Pastoral approach to allow students to feel confident and comfortable/supported					•		
Being collegial for a range of benefits (can be two ways), shares, takes on others' ideas			•			•	
Integrity, Honesty, -professional attitude and collegial					•		
Demonstrated passion, enthusiasm or emotional engagement to either the subject area, students or general profe	•	•		•	•	•	•
Is accountable							
Humility in their approach and with a view to continually improve						•	
Sympathetic, Empathetic			•				
Firm and know when to be firm at times							
Respectful to students and students respectful in return, respectful / safe learning environment	•	•			•		
Open to change			•			•	
Is trusted as a practitioner		•					
Use of humour in teaching contributing to effective learning	•						•
Open, aware to own level of knowledge and open to improvement and continual learning						•	
Ego is 'in-check' so it does not interfere with openness to learning and relationships						•	
Understanding own teacher self-weakness and areas to improve	•						
Positive in approach / optimistic				•			
Outgoing				•			
Caring towards students				•			
Flexible in terms of student needs				•			
Adaptable to change - professionally, other				•			
Relationship with parents		•					
Awareness of the environment in which you teach and what is suitable					•		
Be a performer in the classroom						•	
emotionally intelligent and mature to accept and utilise criticism						•	
Born with it'							•
empower students to do own thing but remain in control overall							•
Depth of knowledge of subject content, mastery	•	•		•	•	•	•
Pace and timing of lesson phases				•			
Questioning techniques to draw out knowledge, balancing providing & eliciting engagement and knowledge				•			
Knowing when students understand work and amending approach accordingly				•			
Detailed feedback that is personalised	•						
Capacity to attend to all aspects of teaching							
Curriculum and or syllabus understandings beyond content/stages of learning outcomes		•					
Understanding of & creating effective assessment		•					
Communicates effectively, focused and clear instructions,	•				•		•
Communicates expertise (knowledge) to others						•	
Flexible in approach, able to adapt to lesson demands and changes			•		•		
identifying what is required throughout a lesson and responding accordingly							
Reflecting on past practice and improving activities, content or assessment		•					
Analogue, story tell with purpose, relate to individual student interests	•						
Plans lessons intentionally for effective learning, well organised and structured					•		
Understands difference between engaged/happy students and effective learning							
Setting student learning goals each lesson				•			
Creating (high expectations for students in their learning				•			
Knowledge of the student and how they each learn individually (visual, oral, kin. Etc)	•						
Differentiate learning for student needs	•	•	•				•
Allowing for processing time							
Waiting for student attention before proceeding					•		
ICT use to engage or prepare for life beyond school		•					
Classroom (behaviour) management and lesson structure	•		•	•	•		•
Teach a concept multiple ways			•				•
Making decisions about timing in the best interests of those particular students			•				
Being professionally organised, time management		•		•			
General Professionalism (relationship with students, other)				•	•		
Identifies the gaps in student learning / (assessing formatively start of a unit)		•					
celebrates student learning or achievement		•		•			
Involved in upskilling of subject knowledge and mastery					•		
Exercising leadership as a teaching in the classroom					•		
Able to follow threads and diverge in lessons with a clear purpose					•		
Communicates with parents with appropriate timing and frequency and purpose					•		
has a sense of responsibility that all students succeed and not fail					•		
Procedural Knowledge and Declarative Knowledge mentioned (both required)						•	
Adaptable and flexible in retrieving and applying knowledge						•	
Constantly engaged beyond classroom to bring into the learning space						•	
Giving back to the body of professional knowledge						•	

APPENDIX 7: SAMPLE OF TRANSCRIPT LEADER CASE

- L9 10:35 Strong content knowledge - I expect a professional teacher to know their students as well as know their subject. I expect them to have skills in making connections in knowledge. They'd have expertise in using their environment as a learning tool and creating engaging learning environments.
- L10 11:01 You'd expect them to develop skills in students so that balance of knowledge and skills.
- S1 11:07 In the students? Yeah. [L9], what did you mean by no students? Which part of the students? What did you mean by that?
- L9 11:14 Okay. That's multi-faceted. They need to know their students in terms of what their interests are. They need to know their students in terms of what knowledge and skills they bring before you and engage in new or deep or connective learning. They need to know their students just as human beings.
- S1 11:32 You're referring to their learning as well as--?
- L9 11:35 Absolutely.
- S1 11:37 Yeah, all right. Great.
- L6 11:37 What about passion and art? I think teaching is an art and a science and I think there's words like style don't do it justice. I think there is an absolute essence that is a really expert teacher that wows people. We've all been in the classrooms and they're the people who have that passion and it can be passion for pedagogy, it can be passion for certain aspects of what you do or certain aspects of what you teach or your subject matter that you're absolutely desperate about, and that is infectious, and I think that's one of the greatest [L7 cut in before finishing sentence].
- L7 12:12 That's interesting. I wouldn't normally say I have expertise in teaching because - or one of the reasons being because I'm a passionate teacher. I wouldn't normally have that as a criteria for expertise. They make a good teacher, but I wouldn't use it as a criteria for expertise.
- S1 12:31 You're saying passion [L6 commences talking].
- L6 12:36 You can be an expert without being passionate about what you do.
- L10 12:40 No, I think they go together. I think when you've reached that level of expertise as opposed to just being a good teacher. Looking at that different level, there is a passion that becomes an attribute of that because it drives the search for knowledge and understanding.
- L6 13:00 It models that desire to embed yourself in something.
- S1 13:06 I just want to clarify something, you're saying you can be an expert teacher, but without the passion? Sorry, I just want to clarify.
- L7 13:14 It may be true. I just meant that if I were to think of criteria, attributes and practices that characterise expertise, I wouldn't usually have included passion in the same way that if I was trying to define an expert heart surgeon, I'm not sure if I would've included passion for the job. I know teaching and heart surgery are completely different things.
- S1 13:39 You've got me thinking though because if I go back - [L6] was mentioning about her time at university, you can put the stereotypical expert university professor up there, passion and enthusiasm doesn't quite come into the stereotype, so has [L7] got a point?

- L10 13:58 It's interesting though, that if you ask university professors that I've had contact with who might have that minute knowledge about grammar and we might think that is the most boring thing in the world, but they love where that comma goes. There's that passion for being the expert in that area.
- S1 14:21 Could that person be an expert teacher in a school sense without that passion for kids that [L9] was talking about, even though they've got content knowledge?
- L10 14:27 I think so. I'd hope not. I would hope that, within a school context, you would have to be an expert teacher, you would have to have that passion for students, because without it, you're doing the mechanics of teaching. You're not actually thinking about the outcome of teaching. We'd be like a machine, we've just been programmed, 'This is how you teach. This is what you do,' and students will learn, but they won't learn to the level that an expert teacher would be able to teach them.
- L6 15:03 It's the effect is lost, isn't it, that sense of the emotional engagement and the interpersonal relational stuff that underpins most of what we do as far as I see it anyway.
- S1 15:17 [L6], do you think that there's an element of students wanting to go beyond wanting to satisfy themselves or being motivated towards wanting to please their teacher? Do you think there's an element of extension - in terms of motivation, that's one - that is important to be an expert teacher where they are motivating students beyond what they just want to achieve themselves, they're wanting to please their teacher?
- L6 15:44 Teacher pleasing makes me a bit uncomfortable as a concept. If someone is intrinsically motivated versus motivated to please somebody, it's not intrinsic.
- L10 15:57 Don't you find, though, that you have circumstances with students that for you they hand in homework and for other people they don't? They're engaged and connect, there's an element of pleasing, because of the relationship that's been established, not because they expect anything out of it, but it more comes about as a mutual respect thing.
- L6 16:22 I would say then the terminology of pleasing the teacher, perhaps returning that relationship or participating in some kind of-- yeah, I would say teacher pleasing I find problematic as a terminology but there is - if a student is engaged and cares about what they do and understands that you care about how they're going and what they need to do to achieve the best they can be, it's more inspiration than pleasing, perhaps.
- S1 16:50 Okay. I guess I was using that to try and extrapolate some terminology from a coaching situation where the team wants to please the coach and do it for the coach not just for themselves as individuals and that may be in a student sense, as well.
- L10 17:03 I think it happens.
- L6 17:05 Yeah.
- L10 17:06 To a small number of kids.
- S1 17:10 Okay.
- L10 17:10 Why it happens is a different.
- S1 17:13 Yeah. Before we move on, are there any other attributes that you think are important that you need to be practicing at an expert level?
- L6 17:22 I think you've got to be open-minded and open to your own learning and aware of your own attributes and constantly on the lookout for

- new ways of expanding that knowledge. I think if you think that you're done at the end of your prac and you're ready to be a teacher and off you go into the world, then you're never going to hit that.
- L10 17:41 That reciprocal process and continuous learning and with that, once you are in that level of expertise that you are then building the expertise among us so it's not, 'I'm the owner of all knowledge and I'm brilliant now,' but 'How do I develop others? How do I share that expertise?' would be the ideal component.
- S1 18:01 Beyond collegiality, it's going beyond that, even still? Is that what you mean?
- L10 18:07 Yeah, even if it becomes a mentoring process, developing other people, new teachers to reach a level of expertise.
- S1 18:11 Can I ask others, would you agree that you need to be wanting to be beyond that and developing others to be practicing as an expert?
- L6 18:23 To maintain the metaphor, I would like my heart surgeon to keep reading journals and to know.
- L7 18:27 Yeah, that's different.
- L6 18:32 ...and to be presenting it at conferences.
- L10 18:35 To be open that we never finish learning so we never reach a level of, 'We know everything and can do everything.' An expert doesn't go, 'I'm here now and therefore I'll just stay here,' that if they don't continue learning and they're open to feedback and improvement then they don't maintain - I don't even think they were an expert in the first place.
- S1 18:56 [L9], you were going to say something?
- L9 18:57 Yes, I just wanted clarification because are we talking about continual learning? [L10], you also referred to what we expect as a profession that we share our knowledge and we share our skill sets. I think if you drill it down, you can still be an expert teacher and not share.
- L7 19:16 In the same way you can be an expert heart surgeon and incredibly selfish and not share your expertise with anyone else.
- L9 19:20 Exactly, but then I think we--
- L10 19:23 You can be but it wouldn't be the ideal.
- L7 19:25 It wouldn't be the ideal, no.
- L9 19:27 --expert but you wouldn't be seen as--
- L10 19:31 Will you stay an expert? If you don't share, then you're not open to learning, either.
- L8 19:37 Not necessarily. I think you can live in your own bubble and--
- L10 19:45 I think that bubble creates a wall where you don't - sooner or later, it'll come undone where you're not having those reciprocal relationships with people. Sometimes I learn things from someone who has no experience and I learn things from my kids, from the students in the classroom and I go, 'I haven't thought of that. What a brilliant idea.' An expert can't ever shut off their knowledge base from anyone, so I think you have to have that reciprocal process. You both teach and learn always continuously.

APPENDIX 8: SAMPLE SECTION OF A CODING PHASE: LEADER CASE

What are the Attributes of Expertise in Teaching or of an Expert Teacher?							
	Individual Leader 1	Individual Leader 2	Individual Leader 3	Individual Leader 4	Individual Leader 5	Focus G L6-10/14	Focus G L11-13
Confidence	•		•	•	•		•
Modelling values	•			•			
Engaging with students, can engage a broad range of students, all students	•						•
Creating a bond with student / connecting /rapport/cares for students	•						
Knowing students well beyond names, knowing personal interests, know and nurture individual	•			•	•	•	•
Dedicated / Commitment to teaching as a profession /Cares for teaching / vocation	•	•	•			•	
Creating opportunities to know students outside classroom	•						
Capacity to attend to all attributes of teaching		•					
Is reflective or mindful of consideration for improvement- in both personal attributes/virtues and or in	•	•	•	•	•	•	•
Calm, composed	•			•	•		
Pastoral approach to allow students to feel confident and comfortable/supported		•					
Adopting pastoral approaches to motivate students and learning		•					
Being collegial for a range of benefits (can be two ways), shares, takes on others' ideas	•	•	•			•	•
Being open and aware of own level of practices, not self delusional about own performances	•					•	
Detailed awareness of teaching and desire to converse on details of teaching	•					•	
Ethical in practice with a commitment to act on what needs improving	•						
Integrity, Honesty, -professional attitude and collegial				•		•	
Demonstrated passion, enthusiasm or emotional engagement to either the subject area, students or general profes			•			••	•
Is accountable			•				
Self disciplined			•				
Vision of their student's whole journey			•				
Articulate			•				
Humility in their approach and with a view to continually improve			•			•	
Insecurity diminishing willingness to engage in learning with students and colleagues			•				
Sincerity / authenticity in relationships			•			•	
Balanced and measured in feedback to colleagues as leaders between admonishing and praising			•				
Motivations underpinned by what matters as opposed to what will be noticed by others			•				
Approachable - students, parents, colleagues				•			
Sympathetic, Empathetic				•	•		•
Firm and know when to be firm at times				•			
Respectful to students and students respectful in return, respectful / safe learning environment				•			
Aware and adaptable to respond to students differently knowing the effect on them (ie: effect of raised voice)				•			
Highly organised -in mind and in practice, consistent routines for students,				•	•		
In control					•		
Open to change					•		
Is trusted as a practitioner					•		
Can personalise the learning from teacher perspective (put their own 'flavour' on it)					•		
Use of humour in teaching contributing to effective learning					•	•	
Valuing all students actively, not patronising or ostracising lower ability students					•		
Be knowledgeable and skillfull in working with, knowing and understanding students						•	
A desire to search for further knowledge and understanding						•	
Inspires students to want to learn or to learn more through positive relationships						•	•
Open, aware to own level of knowledge and open to improvement and continual learning						•	
Know how your individual students learn most effectively, styles of learning for each person, beyond knowing their interests						•	
Ego is 'in-check' so it does not interfere with openness to learning and relationships			•			•	
Loves to learn, continual learner				•		•	•
Expert at learning to be expert at teaching						•	•
Teaches the content around the student. Student is first and foremost over content							•
Understanding own teacher self-weakness and areas to improve							
Positive in approach / optimistic							

APPENDIX 9: CODE AND CATEGORY DEFINITIONS AND MAPPING TEACHER CASE

THEME: Builds Relationships with the School Community		
Category	Definition	Codes
Demonstrates a Holistic Approach to Students	Is defined as the classroom teacher displaying a holistic interest in each student beyond academic responsibilities that are limited to imparting specified curriculum knowledge.	Takes a pastoral approach Knows personal interests of students Caters to individual commitments Accepts responsibility for student success
Connects & Bonds with Students	Is defined as the teacher establishing a connection with the student, including building rapport and demonstrating a sense of care for each student	Develops rapport with students Engages students Connects with students and forms a relationship Cares for students
Demonstrates Collegiality	Is defined as the way a teacher interacts with colleagues relationally, which sometimes extends to actively seeking out opportunities to engage with others in addition to incidental interactions. Integral to these interactions is a view to fostering and nurturing professional collegial relationships	Engages with colleagues positively Communicates expertise to colleagues Adopts ideas of colleagues Shares resources with colleagues
Includes Parents	This category is defined as identifying parents as integral to the practice of expertise in teaching and involving them in the teacher-student-parent relationship	Builds relationships with parents Communicates with parents

THEME: Open to, and Seeks Out, Opportunities for Growth and Development		
Category	Definition	Codes
Exhibits Openness to Change	Is defined as keeping an open mind to possibilities of change occurring in some form related to teaching	Open to continual improvement Open to change / open mindset Goes beyond routine (pursues change) Avoids complacency
Demonstrates a Flexible/Adaptable Approach	Is defined as possessing the capacity and willingness to adapt practice to imposed influences and requirements in teaching. It is an extension beyond remaining open to change and requires some action to occur	Adapts to change Displays flexibility
Engages in Reflective Practice	Is defined as the process teachers give to conscious thought about their own professional practice, either before, during or after classroom teaching or related interactions beyond the classroom. Tethered to this thinking is consideration of changing or improving practice as a result of the thought processes	Reflects on past practice to improve further Reflects on observations of others Identifies areas to improve
Demonstrates Collegiality to Enhance Practice	Is defined as interacting with colleagues effectively where a potential or actual benefit is derived in the professional practice of the teacher or teachers involved. It is possible for teachers to seek out these opportunities	Views others' classes to learn Provides feedback to colleagues and accepts feedback Engages effectively to improve teaching

	purposefully and/or respond to incidental opportunities	Engages in professional conversation
Invests in Self-Learning	Is defined as teachers identifying and pursuing opportunities to continue to learn in areas to enhance professional practice. Such opportunities may be small and informal, through to significant formal learning	Values and engages students in learning Engages in their domain field outside the classroom setting Seeks self-improvement Undertakes professional reading Values formal studies/qualifications Learns about teacher related technology
Demonstrates Awareness	Is defined as teachers demonstrating awareness of their professional teaching environments in relation to the teachers within them, including self-awareness and awareness of knowledge	Demonstrates self-awareness Demonstrates general awareness in the school setting Demonstrates awareness of own level of professional knowledge

THEME: Displays Particular Character Traits and Qualities		
Category	Definition	Codes
Displays Self-Oriented Character Traits and Qualities	Is defined as an expert teacher's practice of displaying character traits and qualities that are less reliant to be interactive with others, yet still notably influence practice	Displays passion Demonstrates enthusiasm Demonstrates humility Has a sense of self-perception/ego Displays confidence Displays open-mindedness
Displays Character Traits and Qualities Oriented to Others	Is defined as the character traits and qualities of expert teachers that are more oriented towards the interaction with others, contrasted with those that are immediately self-oriented	Demonstrates respect Demonstrates honesty Generates trust Shows care for others Shows patience Demonstrates social intelligence Exhibits an understanding of others Demonstrates empathy Demonstrates awareness Demonstrates collegiality
Displays Skill Oriented Character Traits and Qualities	Is defined as a character trait that relates to particular demonstrated skills	Demonstrates organisation
Displays a Particular Personality	Is defined as the character traits and qualities related to personality that are demonstrated by expert teachers, as perceived by participants	Has an outgoing personality Is viewed as a 'born teacher' Demonstrates humour

THEME: Demonstrates High Quality and Effective Pedagogical Practice		
Category	Definition	Codes
Demonstrates Effective Planning/ Structure/Delivery	Is defined by purposeful teacher preparation to deliver classroom pedagogical practice and includes organisational aspects (structure) of the lesson such as phases and transitioning	Plans intentional lessons Plans well organised lessons Embeds structure in lessons Remains flexible in lessons
Differentiates & Personalises Learning	Is defined as the classroom teacher being aware of their students' learning needs and intentionally tailoring the learning experiences to cater for those needs to suit the learner, as opposed to taking a homogenous approach to the whole class	Differentiates for multiple learner needs Identifies gaps in individual learners Identifies styles of learning Teaches the same concept multiple ways
Engages Students in their Learning	Is defined as the teacher demonstrating the capacity to connect students in the learning process	Engages and captivates students Analyses to capture interest Sets learning goals every lesson Communicates effectively
Questions Students Effectively	Is defined as teachers constructing, directing and asking effective questions to students in class to check for understanding. Questions to draw out knowledge was the code for this category	Poses questions to draw out knowledge
Implements Behaviour Management Strategies	Is defined as the teacher ensuring students are appropriately behaved in the classroom to enable productive learning to occur for all students	Employs effective behaviour management Manages behaviour through rapport Empowers students but remains in control

THEME: Possesses a Deep Mastery of Subject Knowledge		
Category	Definition	Codes
Possesses Domain Knowledge	Is defined as content-based, domain centred knowledge that informs teachers on subject knowledge to be taught to students. It does not include any means of how to apply or pass on that knowledge or pedagogical knowledge	Possesses mastery of subject knowledge Possesses a depth of subject knowledge Retrieves knowledge effectively

APPENDIX 10: CODE AND CATEGORY DEFINITIONS AND MAPPING LEADER CASE

THEME: Builds Relationships with the School Community		
Category	Definition	Codes
Prioritises Students First	Is defined as the classroom teacher considering the student as the first and highest priority, where the curriculum 'fits' the student, not the other way around	Places students' needs before content delivery Fits content to the student
Demonstrates a Holistic Approach to Students	Is defined as the classroom teacher displaying a holistic interest in each student beyond academic responsibilities that are limited to imparting specified curriculum knowledge.	Knows personal interests of students Creates opportunities to know students Understands students
Connects & Bonds with Students	Is defined as the teacher establishing a connection with the student, including building rapport and demonstrating a sense of care for each student	Connects with students Inspires students to learn Engages students

THEME: Open to, and Seeks Out, Opportunities for Growth and Development		
Category	Definition	Codes
Exhibits Openness to Change	Is defined as keeping an open mind to possibilities of change occurring in some form related to teaching	Open to continual improvement Open to change / open mindset Open to receive feedback to improve
Demonstrates a Flexible/Adaptable Approach	Is defined as possessing the capacity and willingness to adapt practice to imposed influences and requirements in teaching. It is an extension beyond remaining open to change and requires some action to occur	Adapts to change Displays flexibility Avoids rhythmic complacency
Engages in Reflective Practice	Is defined as the process teachers give to conscious thought about their own professional practice, either before, during or after classroom teaching or related interactions beyond the classroom. Tethered to this thinking is consideration of changing or improving practice as a result of the thought processes	Reflects on past practice to improve further Identifies areas to improve
Demonstrates Collegiality to Enhance Practice	Is defined as interacting with colleagues effectively where a potential or actual benefit is derived in the professional practice of the teacher or teachers involved. It is possible for teachers to seek out these opportunities purposefully and/or respond to incidental opportunities	Engages with colleagues Shares ideas and resources Accepts and adopts ideas Provides/receives feedback to/from colleagues Contributes to positive staff morale
Invests in Self-Learning	Is defined as teachers identifying and pursuing opportunities to continue to learn in areas to enhance professional practice. Such opportunities may be small and informal, through to significant formal learning	Undertakes professional reading Values and engages in learning Seeks out opportunities to upskill Learns from mistakes Learns by observing others Converses with students Seeks feedback
Demonstrates Awareness	Is defined as teachers demonstrating awareness of their professional teaching environments in relation to the teachers within them, including self-awareness and awareness of knowledge	Demonstrates self-awareness Demonstrates awareness of own level of professional knowledge

THEME: Displays Particular Character Traits and Qualities		
Category	Definition	Codes
Displays Self-Oriented Character Traits and Qualities	Is defined as an expert teacher's practice of displaying character traits and qualities that are less reliant to be interactive with others, yet still notably influence practice	Demonstrates humility Demonstrates passion Demonstrates integrity Demonstrates commitment Has a sense of self-perception/ego Demonstrates confidence Demonstrates enthusiasm Demonstrates sincerity Demonstrates self-discipline Demonstrates ethical behaviour Demonstrates accountability Demonstrates open-mindedness Demonstrates adaptability
Displays Character Traits and Qualities Oriented to Others	Is defined as the character traits and qualities of expert teachers that are more oriented towards the interaction with others, contrasted with those that are immediately self-oriented	Demonstrates empathy Generates trust Approachable to others Demonstrates respect Demonstrates calmness Demonstrates collegiality
Displays Skill Oriented Character Traits and Qualities	Is defined as a character trait that relates to particular demonstrated skills	Demonstrates organisation
Displays a Particular Personality	Is defined as the character traits and qualities related to personality that are demonstrated by expert teachers, as perceived by participants	Has an outgoing personality Demonstrates humour

THEME: Demonstrates High Quality and Effective Pedagogical Practice		
Category	Definition	Codes
Demonstrates Effective Planning/ Structure/Delivery	Is defined by purposeful teacher preparation to deliver classroom pedagogical practice and includes organisational aspects (structure) of the lesson such as phases and transitioning	Plans intentional lessons Plans well-organised lessons Adapts flexibly to lesson needs Embeds suitable pace, timing and fluency in lessons Anticipates students' errors
Differentiates & Personalises Learning	Is defined as the classroom teacher being aware of their students' learning needs and intentionally tailoring the learning experiences to cater for those needs to suit the learner, as opposed to taking a homogenous approach to the whole class	Differentiates for multiple learner needs Amends lesson for learner needs Knows individual learning styles Personalises learning
Engages Students in their Learning	Is defined as the teacher demonstrating the capacity to connect students in the learning process	The environment is engaging Knows students as individuals Engages all students
Questions Students Effectively	Is defined as teachers constructing, directing and asking effective questions to students in class to check for understanding. Questions to draw out knowledge was the code for this category	Plans for a range of complexity for students Shows confidence in subject matter Directs individualised questions Allows sufficient processing time
Implements Behaviour Management Strategies	Is defined as the teacher ensuring students are appropriately behaved in the classroom to enable productive learning to occur for all students	Is in control but not dominating the space Behaviour management is effective
Deepens Learning for Students	Is defined as the teacher promoting the learning concepts at a deep level of sophisticated learning, as opposed to only applying surface learning concepts	Teaches students to apply principles Layers learning concepts to deepen understanding Understands difference between engaged happy students and effective learning
Understands Neurological Principles for Learning	Is defined as the classroom teacher having knowledge, awareness and application of some extended, relevant, specific learning principles or concepts in areas such as brain development, memory, learning psychology or more complex learning principles and using this understanding to help shape the teaching approach	Is aware of brain plasticity principles Has cognitive and neurological learning awareness

THEME: Possesses a Deep Mastery of Subject Knowledge		
Category	Definition	Codes
Possesses Domain Knowledge	Is defined as content-based, domain centred knowledge that informs teachers on subject knowledge to be taught to students. It does not include any means of how to apply or pass on that knowledge or pedagogical knowledge	Possesses a depth of subject knowledge Uses knowledge to make further connections Possesses mastery of specific subject knowledge Possesses general professional knowledge

APPENDIX 11: MAPPING OF THE EMERGENT THEMES AND CATEGORIES TO PARTICIPANT RESPONSES AT EACH SITE – TEACHER CASE

Mapping the Emergent Themes and Categories to participant responses at each site. The overall robustness of categories is illustrated to give a more detailed sense of emphasis of the data from each site in each case.

Themes/Categories –Teacher Case		Mapping participants’ responses at each site for the respective Themes and Categories listed. Illustration of relevant discussions of sites are represented collectively for the respective three sites.			Overall strength/robustness of participants responses of the Categories
		Site 1	Site 2	Site 3	
Theme A Possesses a Deep Mastery of Subject Knowledge					
A	Possesses mastery of subject knowledge	•	•	•	Major
B	Possesses depth of subject knowledge	•	•	•	Major
C	Retrieves subject knowledge effectively		•		Minor
Theme B Demonstrates High Quality and Effective Pedagogical Practice					
A	Demonstrates effective planning/structure/ delivery	•		•	Major
B	Differentiates & personalises learning	•		•	Major
C	Engages students in the learning	•	•	•	Major
D	Questions students effectively	•			Minor
E	Provides quality feedback	•			Minor
F	Implements behaviour management strategies	•		•	Major
Theme C Builds Relationships with the School Community					
A	Prioritises student first	•			Minor
B	Demonstrates a holistic approach to students	•	•	•	Major
C	Connects & bonds with students	•	•	•	Major
D	Demonstrates collegiality	•	•		Moderate
E	Includes parents	•			Minor
Theme D Open to, and Seeks Out, Opportunities for Professional Growth & Improvement					
A	Exhibits openness to change	•	•		Major
B	Demonstrates flexibility & adaptability	•			Minor
C	Engages in reflective practice	•		•	Major
D	Demonstrates collegiality to enhance practice	•	•	•	Major
E	Invests in self-learning	•	•	•	Major
F	Demonstrates awareness	•	•		Moderate
Theme E Displays Particular Character Traits and Qualities (CTAQ)					
A	Displays self-oriented CTAQ	•	•	•	Major
B	Displays CTAQ oriented to others	•	•	•	Major
C	Displays self-oriented CTAQ	•			Minor
D	Displays a particular personality	•		•	Moderate
Key :	Minor: low number of respondents at one or two sites and not a recurring or strong response, though stated sufficiently to form a category and gain representation	Moderate: two or three sites, or prominent and recurring at one site			Major: clear strong response across multiple individuals and sites; significant discussion

APPENDIX 12: MAPPING OF THE EMERGENT THEMES AND CATEGORIES TO PARTICIPANT RESPONSES AT EACH SITE – LEADER CASE

Mapping the Emergent Themes and Categories to participant responses at each site. The overall robustness of categories is illustrated to give a more detailed sense of emphasis of the data from each site in each case.

Themes/Categories –Leader Case		Mapping participants’ responses at each site for the respective Themes and Categories listed. Illustration of relevant discussions of sites are represented collectively for the respective three sites.			Overall strength/robustness of participants responses of the Categories
		Site 1	Site 2	Site 3	
Theme A Possesses a Deep Mastery of Subject Knowledge					
A Possesses mastery of subject know edge		•	•	•	Major
B Possesses depth of subject know edge		•	•	•	Major
C Uses knowledge to make further		•	•		Moderate
D Possesses general professional knowledge		•			Minor
Theme B Demonstrates High Quality and Effective Pedagogical Practice					
A Demonstrates effective planning/structure /delivery		•	•	•	Major
B Differentiates & personalises learning		•	•	•	Major
C Engages students in the learning		•	•		Major
D Questions students effectively		•		•	Moderate
E Provides quality feedback		•			Minor
F Implements behaviour management strategies		•		•	Moderate
G Deepens learning for students		•		•	Minor
H Understands neurological principles for		•			Minor
Theme C Builds Relationships with the School Community					
A Prioritises student first		•	•	•	Major
B Demonstrates a holistic approach to students		•	•	•	Major
C Connects & bonds with students		•	•	•	Major
Theme D Open to, and Seeks Out, Opportunities for Professional Growth & Improvement					
A Exhibits openness to change		•	•	•	Major
B Demonstrates flexibility & adaptability		•			Minor
C Engages in reflective practice		•	•	•	Major
D Demonstrates collegiality to enhance practice		•	•	•	Major
E Invests in self-learning		•	•	•	Major
F Demonstrates awareness		•	•		Moderate
Theme E Displays Particular Character Traits and Qualities (CTAQ)					
A Displays self-oriented CTAQ		•	•	•	Major
B Displays CTAQ oriented to others		•	•	•	Major
C Displays self-oriented CTAQ		•			Minor
D Displays a particular personality		•	•		Moderate
Key :	Minor: low number of respondents at one or two sites and not a recurring or strong response, though stated sufficiently to form a category and	Moderate: two or three sites, or prominent and recurring at one site			Major: clear strong response across multiple individuals and sites; significant discussion

	gain representation		
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