



PEDAGOGY BEYOND COMPLIANCE: TEACHERS PROVIDING
OPPORTUNITIES FOR STUDENTS TO SELF-REGULATE THEIR
LEARNING IN THE PRIMARY–SECONDARY TRANSITION
YEARS OF SCHOOLING

A thesis submitted by

Karen L. Peel

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Abstract

This study explored how teachers provided opportunities for young adolescent students to be empowered as learners. Despite the crucial role that self-regulated learning plays in enhancing students' achievement at school and beyond, few studies have created a practice-based pedagogy aimed at enabling students to rationalise their goals, to accept responsibility for their learning and to develop their capabilities as resourceful learners in social learning environments.

The research was conducted as dual case studies within a primary school and a secondary school as transitionally connected settings in Queensland, Australia. The middle years of schooling, Years 5 to 9, have been identified as being a critical stage of development in young adolescents' lives for effective lifelong learning. How schools and teachers can contribute to fostering these learning qualities was highlighted as a topic relevant to current Australian and international educational policy and debate.

Rich qualitative data were collected through semi-structured interviews and classroom observations from eight teacher participants in the middle years of schooling. Thematic analysis methods were used in inductive intra-case and cross-case processes of generating codes, categories and themes.

The findings were reported as interpretations that were intertwined with snapshots of data that represented the voices of the teacher participants. The data foregrounded teachers' practices to identify that in striving to foster students' effective learning they implemented pedagogical approaches aimed beyond the management of students' behaviour for compliance and they sought to empower students as resourceful learners.

As an original contribution to knowledge, the findings were synthesised to construct a practice-based pedagogical model for self-regulated learning. The study found that the teachers endeavoured to provide opportunities for the students to regulate their own learning through pedagogical approaches that connect the learning, facilitate the learning, diversify the learning, socialise the learning and reflect on teaching. Extending this model, the transition pedagogy framework for

self-regulated learning presents key elements that attend to the distinctive needs of young adolescent students in the primary–secondary transition years of schooling. This study’s findings offer a proactive pedagogical approach to behaviour management within classroom environments that focuses on potentiating students’ self-regulation of their learning.

Keywords: classroom behaviour management; middle years of schooling; pedagogy; primary–secondary schooling transition years; self-regulated learning; young adolescents’ learning needs.

Certification of Thesis

This thesis is entirely the work of *Karen L. Peel* except where otherwise acknowledged. The work is original and has not previously been submitted for any other award.

The student's and the supervisors' signatures of endorsement are held at USQ.

Professor Patrick Danaher

Principal Supervisor

Associate Professor Robyn Henderson

Associate Supervisor

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*“Would you tell me, please which way I ought to go from here?” asked Alice.
“That depends a great deal on where you want to get to,” said the Cheshire Cat.
(Carroll, 1963, p. 59)*

This thesis is a culmination of a process of research and a learning journey that has spanned a substantial duration of time. In itself, it has required me to develop my own self-regulated learning capabilities, for at times the journey has been certainly a test of endurance and resilience. As such, I express my gratitude and respect for the people who have played their part in teaching, guiding and supporting me throughout this endeavour.

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Publications and Presentations Related to this Study

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The Glossary of Terms

Australian Professional Standards for Teachers (APST): Elements of effective and high quality teaching intended to have the maximum impact on student learning.

Case study: A way to study an issue in depth within a bounded system (or multiple bounded systems) through data collection, involving multiple sources of information, to inquire into a real-life situation in all its complexity.

Causal attributions: The reasons proposed for successes or failures that influence students' self-efficacy beliefs and their future expectations of success.

Classroom behaviour management: The means by which teachers create and sustain productive and supportive learning environments that function by sharing the control of the classroom and the responsibility for the learning and behaviour with their students.

Code category: A representation of similar correlated data sorted into the same place and described through the common characteristics.

Compliance: Students' behavioural responses that are favourable to the situation or the demands of the teacher.

Critical and creative thinking capability: Involves students developing reflective thinking, problem solving and reasoning skills that align with the strategies employed by self-regulated learners.

Data extract: A potentially meaningful segment of data, revealing information possibly relevant to the research questions.

Dispositions: Attitudes that are developed through experiences that incline students to act in certain ways.

Effective learning: Students enacting a suite of strategies to engage in tasks to achieve an outcome that advances their knowledge and skill development.

Effective students' behaviours: Actions that are personally fulfilling, productive and socially acceptable to the situation.

Empowerment: A process whereby students possess the inner agency to control their efforts, to understand themselves as learners and to apply and monitor strategies for given purposes.

Expectation of success: Students' anticipation of accomplishments and beliefs about how well they will perform during different learning experiences.

Extrinsic motivation: An internal process that is responsible for behaviours that are performed to attain a reward or to avoid sanction.

Feedback: Information related to aspects of skill performance and understanding that is received from a significant other.

Flow: A state of deep concentration or interest in and enjoyment of an activity.

Goal orientated learning: The planned outcomes of learning associated constructively with students' personal improvements and effort.

Interest to engage in learning: The students' positive reactions to topics or events that occur naturally in the classroom or that are planned, organised learning experiences.

Intrinsic motivation: An internal process that is responsible for behaviours that are volitional or performed because they are considered to be important.

Learning engagement: A variable state of involvement that is influenced by the presence of a range of internal desires and external enablers.

Lifelong learning: Engagement in learning to develop the characteristics that will make learning an integral and valued part of students' lives.

Lifelong learning qualities: The strategic actions of active learners, who pursue strategies to acquire the knowledge and skills aligned with self-regulated learning.

Metacognitive awareness: Represented as metacognitive knowledge and metacognitive regulation, where students think about what strategies are required and monitor their thinking within a specific situation.

Middle schooling philosophy: An approach to teaching and learning intended to respond to a range of needs, interests and achievements of students in the formal and informal middle years of their schooling.

Paradigm: Logically related assumptions, concepts or propositions that orient thinking and research.

Pedagogical practices: Teachers' application of their professional knowledge associated with teaching intended to support students' learning.

Pedagogical reasoning: A knowledge of practice that is created by defining, describing and reproducing effective teaching as standards of practice.

Pedagogy: A repertoire of theoretically aligned skills associated with learning and teaching that are supported by professional knowledge and that are contextually influenced to design curriculum, to select instructional strategies and to exercise management techniques within supportive learning communities.

Pedagogy beyond compliance: Involves teachers sharing the responsibility for and control of learning with their students.

Personal and social capability: Involves students developing an understanding about themselves and others to manage their relationships, lives, work and learning more effectively.

Potentiating students' self-regulated learning: Supporting students' learning needs in social environments that enable behaviours, motivations and cognitions to empower them as resourceful learners.

Practice-based pedagogy: Teaching and learning that are interpreted from the socially constructed experiences with teachers and within their practice-based settings to generate a knowledge of practices.

Primary–secondary schooling transition years: A phase of schooling in Australia where students in Years 5 to 9 are in the process of preparing, moving and progressing between year levels and schools.

Reflexivity: Foregrounding statements about values, experiences, knowledge, interests, beliefs and ambitions that potentially shape research.

Reliance: A need for others to exert a measure of control over learning experiences.

Self-control: Delaying or resisting gratification by overriding or delaying a desire.

Self-efficacy beliefs: Students' personal perceptions of their capability to execute the skills successfully and to produce an outcome particular to the task.

Self-regulated learning (SRL): Metacognitive, motivational and behavioural participation in learning to rationalise goals, to take responsibility and to develop capabilities as resourceful learners within social learning environments.

Self-regulated learning pedagogy: Practices that provide all students with the external learning enablers of challenges, structures and options that are adjusted strategically for them to affect what and how they learn.

Self-regulated learning strategies: A sets of actions utilised by students to plan goals, select and activate strategies, monitor progress and reflect on their judgement.

Self-regulation: People managing stresses as the stimuli that use energy in order to enhance growth.

Semi-structured interview: A style of questioning guided by topics rather than as a sequence of pre-planned questions.

Sense of agency: The feelings experienced by students that are associated with being in control of their actions and of the events involved in the learning.

Students Sources of interest: Resources that trigger students' situational interest and in turn influence their readiness for learning, learning engagement and long-term development.

The capability for and from learning fundamental: Involves students experiencing an expectation of success by reflecting constructively on their judgements and attributing causes to outcomes that lead to constructive self-efficacy beliefs.

The co-regulation of learning: A transitional phase where learning is scaffolded and students interact with their teachers and their peers who demonstrate their expertise.

The external enablers of self-regulated learning: Sources that empower students to self-regulate their learning through opportunities that provide challenges, structures and options.

The internal enablers of self-regulated learning: Sources of internal desires that influence the extent to which students self-regulate their learning through an interest to engage in purposeful learning, a sense of agency and an expectation of success.

The internalisation process of learning: A natural process that occurs as students transform an externally regulated reliance into more self-regulated behaviours.

The learning regulation ladder: The differentiated possibilities of students' learning regulation illustrated as being enabled by external sources and internal sources to self-regulate their learning.

The middle years of schooling: Years 5 to 9 in the primary–secondary schooling transition years in Australia.

The pedagogical model for self-regulated learning: A representation of pedagogical approaches, as data generated core pedagogies supported by the literature, that provide opportunities for students to regulate their own learning and for teachers to reflect on their teaching.

The practice-based framework: A knowledge of practices interpreted from the socially constructed experiences with the teachers within the context of their classrooms.

The proactive pedagogical approach to classroom behaviour management: Teachers designing from the curriculum, selecting instructional strategies and exercising management techniques for shared control of and responsibility for learning to empower their students as learners.

The rationale for learning fundamental: Involves students experiencing an interest in their purposeful learning by responding to triggers as sources of interest that gain their attention, and by setting learning goals to maintain their engagement.

The responsibility for learning fundamental: Involves students experiencing a sense of agency by thinking about how they learn that empowers them to activate task strategies, monitor progress and adapt to different learning situations.

The self-regulated learning pedagogy for the primary–secondary schooling transition years: A framework that includes key elements framed within six principles that attend to the distinctive needs of young adolescents to inform and guide teachers in the context of the primary–secondary schooling transition years to potentiate students’ self-regulated learning.

The self-regulatory approach to classroom behaviour management: Teachers providing opportunities for students to assume responsibility for their behaviour through social interactions and engagement in academic pursuits.

The self-regulatory development framework: A four-levelled pathway that emphasises the systematic scaffolding of self-regulatory strategies.

The social environment for learning: Interactions that occur among members of a classroom community at group and individual levels.

The socially shared regulation of learning: Students working on co-operative and collaborative tasks in a form of interdependent learning with a co-constructed or a shared outcome.

The triadic reciprocal model: Interplay among the thought processes and feelings, the observable behaviours and the environmental events in explaining the reasons why students’ self-regulated learning is highly situationally specific and context dependent.

Visible thinking: Articulating the structure of the learning to make the processes explicit.

Young adolescents: Young people in the age group of 10 to 15 years.

Young adolescents’ learning needs: Challenge, curiosity, responsibly, capability and belonging.

Chapter 1 The Introduction to the Study

A genuine purpose always starts with an impulse. Obstruction of the immediate execution of an impulse converts it into a desire. Nevertheless, neither impulse nor desire is a purpose. A purpose is an end-view. That is, it involves foresight of the consequences which will result from acting upon impulse. (Dewey, 1938, p. 67)

Creating a rationale for a research project can be an exercise in historical data mining—in finding shoulders to build on. (Carey, 2015, p. 86)

1.1 Overview of the Chapter

This thesis represents a commitment to constructing a practice-based pedagogy for self-regulated learning (SRL) and it contributes to the existing body of knowledge. The challenge was to distil and define a pedagogy that went beyond achieving young adolescent students' behavioural compliance towards empowering them as resourceful learners. Bandura (1993) argued that ideally “A major goal of formal education should be to equip students with the intellectual tools, self-beliefs, and self-regulatory capabilities to educate themselves throughout their lifetime” (p. 136). The primary–secondary schooling transition years represent a time of potential transformation from childhood towards adulthood and they exemplify an important stage of development for students to act, think and feel as self-regulated learners. It is argued in this thesis that self-regulated learning has important implications for students and teachers in this phase of education and that how teachers apply their collective understandings to this field of research is an underexplored area in the theory of self-regulated learning (McCaslin et al., 2006).

This first chapter provides the background to this research within the literature. As a reflexive researcher, I situate myself biographically in the study and the relationships involved in the investigation and the methodology are discussed by identifying my place as the researcher. Furthermore, the issue of investigation and the aim of the study were located within the existing research. It is then explained how the research questions guided the methodological decisions that were supported by the underlying philosophical foundations and the qualitative design. The gap in the literature was identified to signify the contributions to theoretical, methodological, practical and policy knowledge yielded by this research. To outline the thesis structure, an overview of the eight chapters is provided. In addition, The

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Glossary of Terms positioned in the initial pages presents terms, many of which are represented in italics in the thesis, to clarify their significance to this study.

1.2 The Background of the Study

In this section, the background of the study is outlined and reference is made to the literature aligned with self-regulated learning to identify the issue of investigation. As learning has been recognised as being active and constructive processes driven by cognitive, motivational and social dimensions, the multidimensional framework of self-regulated learning has become a focus of educational research (Bembenutty, Kitsantas, & Cleary, 2013; Pintrich, 2000a; Zimmerman & Schunk, 2011a).

Educational psychology studies were reported to have dominated the first four decades of self-regulated learning research (Pintrich, 2000a; Vohs & Baumeister, 2011). The literature generated from these studies highlighted the influence of self-regulated learning as a significant source of achievement differences among students (Boekaerts, Maes, & Karoly, 2005; Butler & Winne, 1995; Cleary & Chen, 2009; Zimmerman & Martinez-Pons, 1986, 1988; Zimmerman & Schunk, 2011a). Moreover, research has identified that students' interest in their purposeful learning, their sense of control to take responsibility for their learning and their feeling of competency for success are fundamental to their academic achievement (Deci & Ryan, 2002; Dembo & Eaton, 2000; Hidi & Renninger, 2006; Jang, Reeve, & Deci, 2010; Zimmerman, 2002a, 2008). Furthermore, Bjork, Dunlosky and Kornell (2013) described managing one's own learning as being "an important survival tool" (p. 418) for our complex and rapidly changing world of technological advances "not only during the years typically associated with formal education, but also across the lifespan" (p. 418).

At an American Educational Research Association (AERA) symposium in 1986, attendees generated an inclusive definition of self-regulated learning that was published in the *Contemporary Educational Psychology* journal (Zimmerman, 1986). *Self-regulated learning* was defined as being "the degree to which students are metacognitively, motivationally, and behaviorally active participants in their own learning process" (as cited in Zimmerman, 2008, p. 167). This definition emerged from an integration of research (e.g., Bandura, 1969, 1977, 1986; Bandura, Grusec,

& Menlove, 1967; Mischel, 1974; Mischel & Liebert, 1966; Schunk, 1984; Schunk & Rice, 1986; Thoresen & Mahoney, 1974; Zimmerman, 1986; Zimmerman & Martinez-Pons, 1986) about learning strategies, metacognitive monitoring, self-concept perceptions, volitional strategies and self-control.

The phrase “own learning process” (as cited in Zimmerman, 2008, p. 167) from the definition could imply self-regulated learning as being a solo or unsociable practice. However, research has established that self-regulated learning capabilities are developed and experienced within social learning systems (Hadwin, Järvelä, & Miller, 2011; Järvenoja, Järvelä, & Malmberg, 2015; Patrick, 1997). Therefore an inclusive definition has evolved to embrace the significance of the social learning environment in initiating and sustaining goal directed learning (Pintrich, 2002; Zimmerman & Schunk, 2011a). As a social practice, self-regulated learning is situation specific and highly context dependent so that students act, think and feel to varying degrees in different situations (Schunk, 2001b).

Since 1989, Zimmerman and Schunk, as educational psychologists and leaders in their field, have produced a series of scholarly publications in relation to self-regulated learning (Schunk & Zimmerman, 1998, 1994, 2007b; Zimmerman & Schunk, 1989, 2011b). The first book in the series was entitled *Self-regulated learning and academic achievement: Theory, research and practice* (Zimmerman & Schunk, 1989). In the latest sixth edition—edited by Zimmerman and Schunk (2011b) and entitled the *Handbook of self-regulation of learning and performance*—global contributions were drawn from diverse areas of psychology, including educational, clinical, social and organisational psychology. Leading researchers, regarded as being experts in their topics, contributed to integrating aspects that refer to the following: basic domains; applications to content areas; instructional issues; differentiated self-regulated learning; and methodological instruments. A summary of the various topics is presented in Figure 1.1.

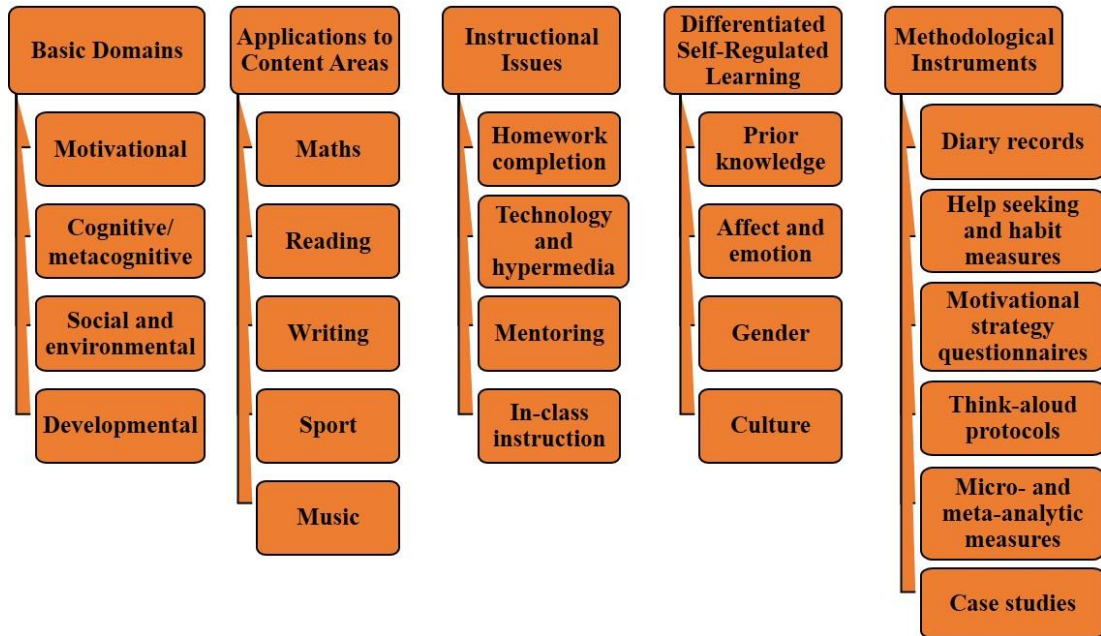


Figure 1.1. A summary of topics addressed in the *Handbook of self-regulation of learning and performance* (Zimmerman & Schunk, 2011b)

The researchers in another prominent publication, *Applications of self-regulated learning across diverse disciplines* (Bembenutty et al., 2013), demonstrated a commitment to understanding the application of self-regulatory principles. These applications were based on intervention programs, research learning contexts and specific subject learning areas. The publication aimed to pay tribute to the work of Professor Barry Zimmerman. It offers an international platform for scholars who have been influenced by Zimmerman’s work and who have applied self-regulated learning principles in various contexts. Figure 1.2 presents a “literature map” (Creswell, 2014, p. 36) as a tool for mapping the literature drawn from this publication. The map highlights how the self-regulatory principles have been applied in an array of situations and contexts. Further, the map locates the gap in the literature, denoted by a broken outline, to identify how this study can contribute to this agenda.

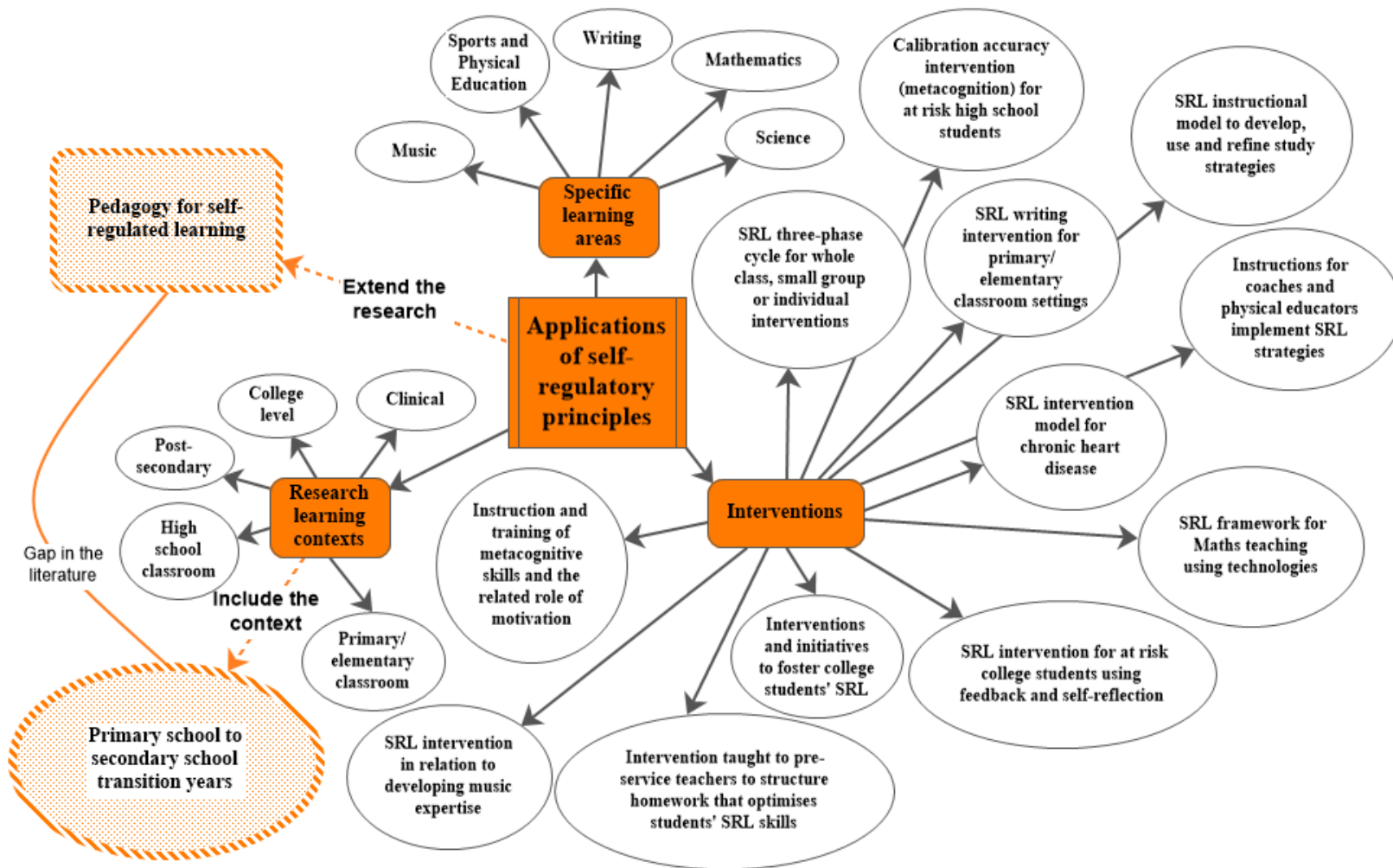


Figure 1.2. A literature map representing the research applications of self-regulated learning (SRL) theory and the gap in the literature addressed in this study

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The literature reviewed in Figures 1.1 and 1.2 highlights self-regulated learning research as being prominent in the field of education, although research foregrounding teachers' pedagogy has been reported conceivably to be undervalued, underestimated or underexplored (Boekaerts, De Koning, & Vedder, 2006; Dignath & Büttner, 2008; Lombaerts, De Backer, Engels, van Braak, & Athanasou, 2009; Lombaerts, Engels, & Athanasou, 2007; Lombaerts, Engels, & van Braak, 2009; Marchis, 2011; McCaslin et al., 2006; Paris & Winograd, 2001; Perry & Rahim, 2011). For example, Dignath and Büttner (2008) emphasised that:

When studying the literature on how to promote self-regulated learning, it becomes obvious that there is still a gap in the research about how teachers can bring self-regulated learning into the classroom. Most studies report attempts to improve students' academic self-regulation, but only little information is available about supporting teachers in how to do so. (p. 232)

Extending the review into the broader literature field, I had no success in locating any practice-based pedagogical frameworks for self-regulated learning developed from exploratory studies in the primary–secondary schooling transition years. This phase of schooling, also termed the *middle years*, represents Years 5 to 9 and equates to students in the young adolescents' age group of 10 to 15 years (Pendergast & Main, 2013), although the exact year level and age range varies in different states and territories around Australia and internationally (Pendergast, 2017a). In addition, there was limited evidence of research about self-regulated learning as an approach to classroom behaviour management in these middle years of schooling (McCaslin et al., 2006).

In the next section, my position as the researcher in the research is considered. I identify what was important to me and how my actions, thoughts and feelings were influenced by my life experiences and by my professional experiences in my roles as a school teacher and an initial teacher educator. Likewise, self-exploration during this study and the acknowledgement of the subjectivity of this research required me to redirect the mirror with *The Biographically Situated Researcher Revisited* in Chapter 8.

1.3 The Biographically Situated Researcher

I have been an educator all my professional life, practising for over 25 years in the primary school setting, and currently I am committed to teaching in initial teacher education. My life experiences have led me to realise that there are never two social settings exactly the same, and my teacher knowledge informs me that no two classroom environments can be replicated (McLennan & Peel, 2011). A learning environment consists of interconnections between the teachers and the students and amongst the students themselves, thereby creating distinctive learning contexts. Personalities, past experiences, current life events and the combination of all of these create the customs and social discourses of the learning environment.

Through my professional experience as an educator and now as a researcher, I have developed an interest in exploring the pedagogy of other teachers intended for students to learn effectively. My commitment to the research issue of this study was ignited by my professional and personal experiences in education and I was fuelled by curiosity about and scholarly enthusiasm for self-regulated learning. In my endeavour to enrich my personal and professional knowledge, I selected an educational issue that was of interest to me. I suggest that Strauss and Corbin (1990) would have endorsed my decision given that they stated: “The touchstone of your own experience may be more valuable an indicator for you of a potentially successful research endeavour” (p. 36).

The inspiration for this research originated from my prolonged experiences as a primary school teacher at a school within a rural residential community. Through a feeling of pride, I observed past students transition from primary school to secondary school and then into the broader community. At the time of this study, past students were repairing my car, cutting my hair, implementing trade work on my home, managing my groceries, delivering my mail, serving me coffee and even working within the teaching profession themselves. These interpersonal transactions stimulated my awareness of the ongoing obligation of teachers in preparing students to journey towards worthwhile participation in adult-life and lifetime learning. It was my assumption that, with a capacity to activate, control and reflect constructively on learning, students could progress confidently as resourceful learners at school, within the local community and beyond.

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While teaching in the primary school setting, my sense of responsibility initiated a personal pedagogical reflection upon my classroom learning environment. Together with my teaching partner, we explored our pedagogy in an attempt to identify what we did to promote opportunities for our students to learn effectively. As experienced teachers, we recognised the value of reflective practice and the potential of exploring our practical knowledge. A research outcome of our reflections was a pedagogical framework that we termed the “potentiating learning milieu model” (McLennan & Peel, 2012, p. 97). This design comprised overarching fundamentals, each inclusive of related pedagogical elements that characterised our classroom learning environment. The planned implications of our study were to share our practice and to provide a model that could be implemented, examined and extended upon by other educators in their respective learning contexts.

To share the research, the findings were published in the chapter “The fundamentals of a potentiating learning milieu: Expanding capacity for student internalisation and self-regulated learning” (McLennan & Peel, 2012). In reality, the research process and the publication provided me with a snapshot that captured a vision of my pedagogy at a time in my teaching career when I was well informed as an effective practitioner. What was written could have been otherwise forgotten, or at the very least could have been difficult to recall, when I moved on to new experiences.

As an educator striving for continual growth, inevitably the ways in which I was to act, to think and to feel about education have grown. In essence, my experiences as a school teacher and as an action researcher provided me with an important foundation for this doctoral research.

When it came to exploring the issues for my research, I found myself “spoilt for choice” (P. Danaher, personal conversation, 2011) and I engaged in a search of the literature to develop a theoretical understanding of issues about which I had considerable experiential knowledge.

The research design of this study afforded me the fortunate opportunity to explore in depth the pedagogy of eight teachers in different social contexts to add to my experiences. Operating from an interpretivist framework, I was interested in understanding other teachers’ experiences and for this reason I did not endeavour to compare, contrast or advance directly the findings represented in my previous potentiating learning milieu research (McLennan & Peel, 2012). Rather, I facilitated

the emergence of this study's findings through my analysis and interpretations of the data collected from the interviews with and observations of the teacher participants.

In my role as a qualitative researcher, I strived to acknowledge my place in the research in a reflexive manner. I drew on my own experiences and understandings to design the study, collect the data and interpret those data to distill analytical findings. Doucet and Mauthner (2002) suggested that the term *reflexivity* means “being cognisant and open about epistemological, ontological and theoretical assumptions which inform our work, and particularly as they shape our data analysis processes” (p. 134). In the “spirit of researchers’ reflexivity” (Cousin, 2009, p. 18), where possible and necessary for this study, I have foregrounded statements about my values, experiences, knowledge, interests, beliefs and ambitions that potentially shaped my research.

1.4 The Issue of the Investigation

The issue was that teachers play prevalent roles in managing classroom environments that potentiate self-regulated learning. From this potentiating perspective, the social environments that conceivably provide students with opportunities to regulate their learning to varying degrees support their learning needs and competencies. This issue was provoked by my experiential curiosity to explore teachers’ pedagogical practices, as sources of influence, to enable students’ internal desires for self-regulated learning. In this section, the issue of investigation is clarified through examining: the promotion of self-regulated learning; the conflicting views of self-regulated learning; the roles of teachers in student learning; and the management of classrooms and behaviours for learning.

1.4.1 The promotion of self-regulated learning

Substantial evidence in the literature connected self-regulated learning with students’ academic outcomes (Adams, Forsyth, Dollarhide, Miskell, & Ware, 2015; Bembenuddy et al., 2013; Cleary & Zimmerman, 2004; Zimmerman, 2001; Zimmerman & Bandura, 1994; Zimmerman & Martinez-Pons, 1988) and subsequently with lifelong learning (Schunk, 2005). Accordingly, *lifelong learning* is defined for this study as engaging students in learning to develop the characteristics that will make learning an integral and valued part of their lives

(Bryce & Withers, 2003). How schools and teachers can contribute to students' lifelong learning is an issue relevant to current educational policy and debate (Dignath & Büttner, 2008; Goss, Sonnemann, & Griffiths, 2017; Istance, 2003; Lüftenegger et al., 2012; Reeve, 2006). Alderman and MacDonald (2015) proposed that for students to achieve at school and to manage the challenges for lifetime learning that are associated synonymously with lifelong learning they require competencies to activate, to control and to reflect on their learning.

The primary–secondary schooling transition years have been identified as a critical stage of development in young adolescents' lives, simultaneously for effective lifelong learning and for self-regulated learning (Main & Pendergast, 2017; Pendergast, 2010; Schloemer & Brennan, 2006). This substantiated the value of exploring how teachers provide opportunities for students to develop their competencies as self-regulated learners in the primary–secondary schooling transition years.

In addition, the middle years of learning are a time when young adolescents are expected to accept greater control and responsibility for themselves as individuals (Eccles & Midgley, 1989; Mackenzie, McMaugh, & O'Sullivan, 2012; Zimmerman, 2002a). Brophy (2006a) suggested a pedagogical shift from a unilateral, teacher controlled approach to behaviour management towards an approach that affords opportunities for students to develop responsibility for their learning and to take ownership of their behaviour. De Jong (2005) acknowledged a “democratic, empowering and positive management approach” (p. 362) to behaviour management in classrooms that places students at the centre of the learning. The enhancement of students' self-regulated learning, as a conception of classroom behaviour management, has been embraced by educators and researchers who identify with a proactive pedagogical approach to managing supportive learning environments (Alderman & MacDonald, 2015; Bear, 2015; Briesch & Briesch, 2015; Fields, 2004; Kohn, 1996; Martin et al., 2016; McCaslin et al., 2006; McCaslin & Good, 1998; McDonald, 2013).

1.4.2 Conflicting views about self-regulated learning

Referring to conflicting views in the literature about promoting students' self-regulation, Martin and McLellan (2008) questioned the degree of “teacher control exercised over students' *self*-regulation” (p. 444, *emphasis in original*). Developing

students' self-regulated learning has also received critical attention when it is assumed by educators as being an "often taken for granted" (Vassallo, 2011, p. 239) way to empower students. Vassallo (2013b) challenged the conception of promoting self-regulated learning as being neutral, natural, beneficial and value free.

Furthermore, in educational systems, there are external benchmark assessments, such as the National Assessment Program for Literacy and Numeracy (NAPLAN) introduced in Australia in 2008, that do not prioritise the development of self-regulation (Davis & Neitzel, 2011). The NAPLAN testing scheme is similar to international standardised testing programs (Rotberg, 2006) that are intended to provide policy makers, school communities and parents with information about student performance. In Australia, NAPLAN testing is undertaken each year by students in Years 3, 5, 7 and 9 at the same time across the country with the aim of ensuring greater accountability of schools to improve teaching and learning (Belcastro & Boon, 2012). Debatable issues are expressed as criticisms about the administration of this testing regime that include teachers teaching to tests and implementing a narrowed pedagogy (Caldwell, 2010). Accordingly, teachers' pedagogical approaches are required to satisfy various assessment audiences, and the interests of these audiences do not always represent the tenets of providing opportunities for students' self-regulated learning (Davis & Neitzel, 2011).

Irrespective of these competing demands, teachers do have an overall responsibility for providing "all students with access to high-quality schooling" (MCEETYA, 2008, p. 7). Consistent with Bridgestock's (2016) educational model for 21st century learning, if schools are to serve as contemporary educational settings, then teachers need to provide opportunities for students to develop their future capabilities of collaboration, complex problem solving and innovation. It is unlikely that students will flourish as learners in classrooms that are narrowed to obedience and sheer compliance (McCaslin & Good, 1998).

1.4.3 The roles of teachers in student learning

The conflicting views about the roles of teachers in creating classroom environments that optimise students' learning, and my personal advocacy for students developing self-regulated learning capabilities, substantiated the value of investigating this issue further. I was interested in finding out what could be learned from how teachers talk about fostering students' effective learning. To deal with the

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complex demands of situations, teachers carry with them practical knowledge that includes: learning area content knowledge; general pedagogical knowledge; curriculum knowledge; pedagogical content knowledge; knowledge of learners and of their characteristics; knowledge of educational contexts; and philosophical knowledge of educational objectives (Shulman, 1986). I value and appreciate the knowledgeable voices of teachers, who as reflective practitioners strive for continual improvement and pedagogical expertise.

The Australian Institute for Teaching and School Leadership (AITSL) has developed professional standards for teachers (AITSL, 2017) to provide a clear vision of what teachers are expected to know and to be able to do. The Australian Professional Standards for Teachers (APST) clarify the elements of effective and high quality teaching intended to have the maximum impact on student learning. The standards are organised around the three domains of professional knowledge, practice and engagement. Teachers are required to have professional knowledge in the ways that they know the students and how they learn, and know the content and how to teach it. Their professional practice includes: knowing how to plan for and implement effective teaching and learning; how to create and maintain supportive and safe learning environments; and how to assess, provide feedback and report on student learning. To support their practices, teachers are expected to engage professionally in learning and with colleagues, parents/caregivers and the community.

1.4.4 The management of classrooms and behaviours for learning

Collectively, the APST transform the perceived aim of classroom behaviour management beyond the teacher maintaining acceptable standards of behaviour and call for a more democratic approach to creating environments for learning (Egeberg, McConney, & Price, 2016; Evans & Lester, 2010). Research by Jacob Kounin in the 1970s (Kounin, 1970) has influenced gradually the focus of classroom management research, shifting it from being correction orientated to increasing understanding about how teachers can effectively manage the class as a group (Hardin, 2012). Kounin (1970) acknowledged that “effective classroom management skills should not be regarded as an end in itself” (p. 144). His research found that effective teachers maintained lesson momentum, kept students actively engaged in learning and used preventative techniques for potential behavioural problems.

This shift in thinking for teachers to consider the students' needs to feel responsible and respected (Almog & Shechtman, 2007) was affirmed more widely in contemporary research (Alderman & MacDonald, 2015; Beaty-O'Ferrall, Green, & Hanna, 2010; Evans & Lester, 2010; McDonald, 2013). For example, Evans and Lester (2010) reported: "When students experience these types of democratic classrooms, it not only serves to improve classroom management, it also creates a climate of safety and trust in which instruction thrives" (p. 61).

However, classroom behaviour management has been viewed with an emphasis on controlling students' behaviour (McCaslin & Good, 1998) and with students complying with behaviours that are favourable to the situation or that are demanded by the teacher (Fogelgarn & Lewis, 2015). The definitions of behaviour management and classroom management are varied, with some having a disputable focus on action being taken by teachers "to establish order, engage students, or elicit their cooperation" (Emmer & Stough, 2001, p. 103). Furthermore, Germeroth and Day-Hess (2013) referred to behaviour management as being external processes that are imposed. Similarly, Edward and Watts (2004) described classroom management as being the actions taken by the teacher to direct classroom operations.

Although acknowledged is the necessity for students' compliance with rules and procedures that afford conditions for learning, in this study a paradigm shift is proposed by suggesting that the aim of classroom behaviour management should be featured as creating and sustaining productive and supportive learning environments (Emmer & Sabornie, 2015; Postholm, 2013). This is an alternative to teachers viewing classroom behaviour management as the use of tools or tricks to control students' behaviour (Brophy, 2003; Eisenman, Edwards, & Cushman, 2015) or as interventions with a repair rather than a create emphasis (Doyle, 2006).

Such a proactive pedagogical approach focuses on potentiating students' self-regulated learning and was recommended by Alderman and McDonald (2015), who acknowledged: "Self-regulated learning integrated into classroom management can empower students to take control of their own learning and behavior; teachers thereby gain partners for creating a positive classroom climate" (p. 56). As opposed to a teacher reflecting on "How well did I manage the students' behaviour in the classroom?", the emphasis is on whether the teacher provided opportunities for the students to regulate their learning within a social environment. *Potentiating students' self-regulated learning* involves enabling their behaviours, motivations and

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cognitions to empower them as resourceful learners. After all, no one has control over the students' behaviour and learning success more than the students (Dembo & Eaton, 2000).

1.5 The Aim of the Study

The issue of investigation of this study has received limited research attention, although theory and research support the importance of self-regulated learning for students in the middle years of schooling (McCaslin et al., 2006). My commitment to extending understanding of and knowledge about how teachers promote opportunities for students' self-regulated learning in the primary–secondary schooling transition years provided the aim for this research. Self-regulated learning research in the classroom has been recommended by Kramarski, Desoete, Bannert, Narciss and Perry (2013), with the focus being on:

... improving teachers' understanding of SRL and on supporting them in developing and adopting self-regulated teaching practices. Our goal should be to empower experienced teachers and student teachers to be self-regulated learners themselves and to in turn cultivate successful self-regulated learners of all achievement levels within their classrooms. (p. 3)

I acknowledge that the presentation of self-regulated learning and a proactive pedagogical approach to classroom behaviour management, as referred to throughout this thesis, could be viewed as being idealised and aspirational. Yet, from my own experiential knowledge as an educator, I deem that many and perhaps most students experience self-regulated learning at different times in their educational careers. Moreover, I argue that teachers can be empowered, and that they can and should empower their students, by adopting a *pedagogy beyond compliance* that involves sharing the responsibility for and control of learning with their students.

1.6 The Research Questions

To explore and understand further the issue of investigation and to meet the aim of this study, three research questions were proposed:

1. How do teachers working across the primary–secondary schooling transition years talk about fostering their students’ effective learning?
2. How do teachers’ pedagogical practices for effective learning provide opportunities for students to regulate their own learning in the primary–secondary schooling transition years’ classroom environments?
3. How does the exploration of teachers’ pedagogical approaches inform a primary–secondary schooling transition pedagogy for self-regulated learning?

An exploratory case study design was chosen as the most appropriate approach for answering these *how* questions as it provided a holistic, in-depth, investigative approach that was situated within classroom contexts (Yin, 2014). Each question provided an inquiry that contributed sequentially to the overarching, exploratory research issue.

1.7 The Significance of the Study

The findings of this study constitute contributions to theoretical, methodological, practical and policy knowledge to confirm what was already known about the issue, to enhance the understanding of what was known and to elicit new meaning by extending experiences (Merriam, 2002). Largely absent from the existing literature was a specific focus on teachers’ pedagogical approaches in the middle years that promote opportunities for students to self-regulate their learning (Dignath & Büttner, 2008).

This study offered elements of theoretical significance to extend the existing literature about self-regulated learning. A range of theoretical perspectives were synthesised based on the research evidence to develop a deep understanding of the processes and contexts applicable to this study.

My researcher role afforded collaboration with teachers to explore pedagogy within a primary school and a secondary school in regional, southeast Queensland. The methodological significance of this thesis is represented in the foregrounding of teachers’ pedagogy within qualitative case studies. This research design afforded me valuable access to the teacher participants’ insider perspectives on the field to make meaning about what constituted practice knowledge from my outsider’s position. I responded to the research questions to provide insight into the interrelated elements

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of the teacher participants' practices in ways that are meaningful and accessible to the reader (Loughran, 2013).

From an identified gap in the literature, this research represented a practice-based pedagogy that was informed through the motivational, behavioural and metacognitive dimensions of self-regulated learning. A *practice-based pedagogy* is defined as the teaching and learning that are interpreted from the socially constructed experiences of teachers in educational settings to generate a knowledge of practices. The practical significance of this study is that it has direct application to inform educators as a guiding philosophy for pedagogical reflection on their roles in potentiating students' self-regulated learning. The articulated findings in this thesis provide an enriching understanding of self-regulated learning to promote discussion in schools, in initial teacher education programs and with educational policy-makers.

Furthermore, McCaslin, Bozack, Napoleon, Thomas, Vasquez and Zhang (2006) affirmed: "The research on SRL and classroom management is in its infancy" (p. 249) and as such this study has substantial potential for significance. Empowering students to take responsibility for, and control of, their learning is a philosophical approach to classroom behaviour management that highlights the policy significance of this thesis. The link between professional philosophies, about teaching and learning, and classroom behaviour management is inextricably interwoven to define teachers' perspectives of their roles and the roles of the students in their classrooms (Landau, 2009).

In a recent report, *Developing behaviour management content for initial teacher training*, Bennett (2016) proposed recommendations for initial teacher education to frame the ways that pre-service teachers in the United Kingdom are to be prepared in the area of classroom behaviour management. The recommendations in the report highlighted the "3Rs of the behaviour curriculum" (Bennett, 2016, p. 5): Routines, Relationships and Response strategies by teachers. The teachers' roles were highlighted to include the task of making explicit to the students the "expectations of compliance and effort" (Bennett, 2016, p. 10). Yet I argue that there was a serious omission that represented the fourth R: teaching students to take Responsibility for their learning. Similarly, the United States Council on Teacher Quality (NCTQ) identified five key strategies for effective classroom management that include rules, routines, praise, consequences for misbehaviour and active student engagement (Greenberg, McKee, & Walsh, 2013). Once again, the ideals of students sharing the

responsibility for their learning were not included as a future priority for effective classroom behaviour management and yet are supported by research.

However, a shift in thinking requires the policy makers and the teaching profession to recognise the value of a proactive pedagogical approach for “improving student learning as opposed to controlling behaviour” (Eisenman et al., 2015, p. 2). The challenge is for those involved in education to understand the classroom as a social system for learning (Postholm, 2013) and to see beyond the immediate behaviour of students with the aim of knowing who they are and how to engage them in learning.

1.8 An Overview of the Thesis Structure

This thesis was structured as eight chapters to provide the reader with a cohesive and rigorous presentation. Chapter 1 has outlined the background, issue and aim of the study that corresponded with the design of the research questions. A brief review of the contexts that established the study’s original contributions to knowledge was provided.

Chapter 2 offers a comprehensive review and critique of the literature. References to the relevant literature and previous research endeavoured to identify the issue of investigation in context and to situate the research within the literature of the field. Chapter 3 presents the conceptual framework. Drawn from interrelated theoretical contributions, I developed the framework to inform the generated findings and to contribute conceptual knowledge to the theory of self-regulated learning.

In Chapter 4, the methodology, the study’s philosophical assumptions are presented that guided the interactions and communications with myself, my research, the teacher participants in the study and the readers of this thesis. The three research questions are articulated and the dual case study design and the research methods employed to respond to the questions are explained. The relevance of ethics and politics to this study are outlined and the research rigour and trustworthiness is highlighted.

Chapters 5, 6 and 7 are the data chapters that present a linked discussion that was organised as three sets of analysis and findings to address the research questions. The sequential nature of the three questions means that they speak with one another to explore the overarching research issue. In Chapter 5, each of the eight teacher

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participants is introduced through her or his story and positioned contextually within the study. Their identified pedagogical practices, expressed as the findings, detail how the teacher participants talked about fostering students' effective learning. In Chapter 6, the analysed data representing the teacher participants' pedagogical practices are articulated in the pedagogy model for self-regulated learning. The data were informed by the literature to examine how these practices provide opportunities for students to regulate their own learning. In Chapter 7, the findings from Chapters 5 and 6 were distilled and are presented in a transition pedagogy framework for self-regulated learning. This framework was operationalised as a tool for reflection to analyse snapshots from the data.

Chapter 8 returns to the purpose of the thesis and provides recommendations about how this study's contributions to theoretical, methodological, practical and policy knowledge can inform teaching. Considerations for future research endeavours are suggested to create further conceptual clarity and to recommend broadening the application of the findings from this exploratory research to different contexts with new participants.

1.9 Review of the Chapter

Chapter 1 has provided an overview and a rationale for the research presented in this thesis. In the background to the study, the issue of investigation is situated within previous research already conducted in the field to identify that few studies have explored how teachers in the primary–secondary schooling transition years provide opportunities for young adolescent students to regulate their own learning. The aim of this qualitative study was to investigate the issue and to explore its implications to contribute to the existing theoretical, methodological, practical and policy knowledge.

All teachers and students have different sets of skills, interests, experiences and motivators that enable them to engage in the processes of teaching and learning. However, how to inspire young adolescent students to connect with a learning desire (McLennan & Peel, 2011) is an art form that teachers develop from making “judgements about what they do, how and why, in response to not just the curriculum but more importantly, their learners and their pedagogical context” (Loughran, 2016, p. 255). The findings from the dual case studies presented in this thesis support

future research to advance the understanding of the complexities of a proactive pedagogical approach to lead, motivate, guide, encourage and support students to manage and regulate for themselves in the social learning system of the classroom (Briesch & Briesch, 2015). As Pintrich and Zusho (2002) acknowledged: “Self-regulation is not just afforded or constrained by personal cognition and motivation, but also privileged, encouraged, or discouraged by the contextual factors” (p. 279). In the next chapter, a large and growing body of literature is presented that has been reviewed comprehensively and critically to highlight the issue under investigation.

Chapter 2 The Literature Review

When science and art thus join hands the most commanding motive for human action will be reached, the most genuine springs of human conduct aroused, and the best service that human nature is capable of guaranteed. (Dewey, 2004, p. 23)

Pedagogy should at its best be about what teachers do that not only helps students to learn but [also] actively strengthens their capacity to learn. (Hargreaves, 2004, p. 27)

2.1 Overview of the Chapter

Self-regulated learning research has emanated from the challenge to explain how students demonstrate proactively a resourcefulness that empowers them to act, think and feel efficaciously about learning (Schunk, 2001b; Zimmerman, 1998). Extensive research over the past 40 years has highlighted the impact that self-regulated learning has on students' academic outcomes and it supports the value of contributing further—through this doctoral study—to the theory of self-regulated learning (Cleary, 2011; Dignath & Büttner, 2008; Grolnick & Raftery-Helmer, 2015; Schunk, Pintrich, & Meece, 2008; Zimmerman & Labuhn, 2012). The resourceful self-regulated learner recognises the anticipated purpose of the learning, applies strategies to achieve a learning goal and persists in the face of challenges (Derrick & Wighting, 2015; Jensen & Snider, 2013).

The purpose of this chapter is to acknowledge and to review critically the literature relevant to the research issue outlined in Chapter 1. This chapter is divided into the three sections. The key conceptualisations that structured and supported this thesis include:

1. Self-regulated learning theory;
2. Pedagogy and reflection; and
3. Primary–secondary schooling transition years.

In Section 2.2, a review of the complex concept of self-regulated learning is presented and traced through its historical background. Although the literature promoting self-regulated learning was prolific, it was important also to engage with the critiques and concerns that were identified with respect to the inclusivity of the social dimensions of educational settings represented in the current research (Ayers & Ayers, 2011; Martin & McLellan, 2008; Vassallo, 2011, 2013a, 2013b).

Significant for this study were the roles that teachers play in providing external sources of influence that enable students to engage in the learning processes. Given this emphasis on the teachers' pedagogies, in Section 2.3 the term *pedagogy* is defined in relation to this study and review pedagogical frameworks. Specifically, the focus is on a transition pedagogy framework to present six transition principles that were transformed for application in the primary–secondary schooling years for this study. In Section 2.4, an expanding body of literature supporting an intentionally philosophical approach to pedagogy for these middle years of schooling is reviewed. Finally, in Section 2.5, this chapter is concluded with an overview of this literature review. Significantly, from what was a thorough search, a gap in the literature was located that justified the significance of this research.

2.2 Self-Regulation and Self-Regulated Learning

Substantive research supported the view that self-regulated learning capabilities play a crucial role in empowering students as resourceful learners (McClelland & Cameron, 2012) and in enhancing their achievements at school and beyond (Adams et al., 2015; Alvi & Gillies, 2015; Boekaerts & Cascallar, 2006; Butler & Winne, 1995; Dignath & Büttner, 2008; Goss et al., 2017; Schunk & Ertmer, 2000; Vandeveld, Vandebussche, & Van Keer, 2012; Zimmerman, 2002b, 2008; Zimmerman & Cleary, 2009). Described by Cleary (2011) as an “academic enabler” (p. 77), students' capabilities to self-regulate their own learning were reported repeatedly in research findings as being correlated positively with students' academic performances (Bussey, 2011; Dembo & Eaton, 2000; Paris & Paris, 2001; Perry, Brenner, & MacPherson, 2015; Winne, 1995; Zimmerman & Bandura, 1994; Zimmerman & Cleary, 2009). In addition, Grolnick and Ryan (1989) suggested that the more that students feel that they have the strategies to regulate their learning the more enjoyment and constructive coping strategies that they have for school.

A second assumption, supported comprehensively in the literature, was that students' self-regulatory capabilities are contextually domain specific and as such are influenced strongly by teachers' pedagogical practices that create the social learning environments of classrooms (Bauer & Baumeister, 2000; Boekaerts et al., 2005; Hadwin et al., 2011; Perry & Rahim, 2011; Ryan & Deci, 2002; Schunk & Usher, 2013; Zimmerman, 2008). *Pedagogical practices* are defined as the teachers'

application of their professional knowledge associated with teaching intended to support students' learning. Consequently, teachers' pedagogical practices are considered to be an important contributor to external sources of support from which students are motivated to engage strategically in learning and in learning how to learn (Dembo & Eaton, 2000; Vandeveldt et al., 2012). *Learning engagement* is defined for the purpose of this study as a variable state of involvement that is influenced by the presence of a range of internal and external enablers.

A third assumption recognised from the literature is that students' engagement in or disengagement from learning directly influences their behaviour and their attempts to learn (Clark, 2012). Accordingly, there is a well-established link concerning student engagement, student behaviour and academic achievement (Goss et al., 2017; Hattie, 2003). Classroom conditions that promote academic engagement are reported as being crucial for productive student behaviour (Anderman, Andrzejewski, & Allen, 2011; Goss et al., 2017; Sullivan, Johnson, Owens, & Conway, 2014). Alderman and MacDonald (2015) supported this assumption, advocating a *self-regulatory approach to classroom behaviour management*, where the students' assumed responsibility influences their engagement in academic pursuits and their social interactions.

2.2.1 The origins of self-regulation theory

The term *self-regulated learning* was reported to appear first in academic literature in a paper written by Mlott, Marcotte and Lira in 1976 (Winne, 2005). Subsequently, self-regulated learning, as a theoretically defined term, emerged in the 1980s from an integration of research and theories, predominantly under the overarching concept of self-regulation (Boekaerts & Corno, 2005; Zeidner, Boekaerts, & Pintrich, 2000). Shanker (2016) claimed that there are hundreds of definitions of the term *self-regulation* and that "the original psycho-physiological sense" (p. 5) refers to how people manage stresses as the stimuli that use energy in order to enhance growth. Other theorists have applied the concept of self-regulation to academic or learning contexts that they refer to as self-regulated learning (Cleary, Callan, & Zimmerman, 2012; Dinsmore, Alexander, & Loughlin, 2008).

As such, the literature broadly used the terms "self-regulated learning (or self-regulation)" (Schunk & Usher, 2013, p. 1) interchangeably in educational research to suit the contextual intent and research application. The central idea agreed upon

generally in the literature was articulated in the comprehensive description by Pintrich (2000c), where he defined self-regulated learning as being “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment” (p. 453). This definition highlighted the reciprocation involving goal-directed learning and the influence of the context on the learning processes.

Described as a “science of the mind and human behaviour” (Boekaerts, Pintrich, & Zeidner, 2000, p. 4), the highly complex study of self-regulation theory is evidenced by the diversity of the literature that has appeared regularly in educational, organisational and health psychology journals since the 1980s (Vohs & Baumeister, 2011). Nevertheless, the diversity comes from the “kaleidoscope of terms and labels” (Boekaerts et al., 2000, p. 2) that exist, making self-regulation conceptually complex to research. The various theoretical viewpoints and models of self-regulation (Puustinen & Pulkkinen, 2001) have continued to generate a broad scope for researchers to set up studies that conceptualise self-regulated learning. Boekaerts, Maes and Karoly (2005) reviewed conference symposia, journal articles and research books about self-regulation to reveal the many approaches to the topic. They confirmed that there are “divergent bodies of literature” (p. 151) that describe self-regulation and how it is developed.

Diversity has developed among researchers who have studied the same phenomenon and yet viewed it through different theoretical lenses. The often overlapping theoretical positions that presented the learning processes included behaviourist, constructivist, social cognitivist, phenomenological, humanistic, sociocultural and information processing perspectives (Paris & Paris, 2001; Reeve, Ryan, Deci, & Jang, 2007; Zimmerman, 2001). These theoretical positions are discussed in relation to the conceptualisation of self-regulated learning in more detail in Chapter 3.

Schunk (2005) acknowledged that the initial significance of self-regulation grew from behaviourally based psychological research into learning and self-control. From this behavioural perspective, the concept of self-regulation was intermingled in the literature with “self-management” (Briesch & Briesch, 2015, p. 46), “self-control” (Carver & Scheier, 2011, p. 3), “self-discipline” (Bear, 2015, p. 15) and “effortful control” (Eisenberg, Smith, & Spinrad, 2011, p. 263). Interest in self-

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control within human behavioural research studies reinforced the view that modelling and social rewards or punishments influenced the development of self-control (e.g., Bandura & Kupers, 1964; Mischel & Liebert, 1966; Walters, Parke, & Crane, 1965). By way of clarification, *self-control* was defined by Carver and Scheier (2011) as the “overriding of one action tendency in order to attain another goal” (p. 3).

Research about self-control concentrated on the modification of adults’ and children’s behaviours for the outcomes of learned actions and responses (Mace, Belfiore, & Hutchinson, 1989; Zimmerman & Schunk, 2007). It was assumed that, when individuals were taught the expectations, customs and standards via modelling, they would gradually internalise the situation’s contextualised and cultural demands and reproduce the desired behaviours. During clinical studies, participants were taught by researchers to modify their dysfunctional behaviours—for example, aggression or addiction—to comply with the cultural norms (Zimmerman & Schunk, 2007). Hence, the focus of the related research was on teaching adaptable behaviours and reducing dysfunctional behaviours (Schunk & Usher, 2013).

Behavioural theorists (e.g., Mace et al., 1989; Meichenbaum & Goodman, 1971; Mischel, 1974), in studies of delayed gratification, impulsivity, procrastination and self-instruction during learning tasks, considered motivation to be influenced by an expectation of external rewards or by a desire to avoid a negative outcome, such as a punishment. However, research recognised more fully that there were more than just external sources of influence controlling behaviour (e.g., Bandura et al., 1967; Bandura & Rosenthal, 1966). Through the 1980s, researchers expanded the behavioural views about self-control by examining the internal cognitive processes and motivational influences that are implicated in self-regulatory behaviours (Perry et al., 2015). They moved beyond focusing on students’ immediate self-control responses and turned their attention to the behavioural, motivational and cognitive influences that impact on students’ regulation of their own learning (Schunk & Usher, 2013).

Comparatively, rewards were found to be effective motivators to control short-term desirable behaviour but also were found to be not as effective as the internal desires that support the development of longer-term self-regulatory functioning (Deci, Koestner, & Ryan, 2001). However, if students’ internal drive were deficient, the external sources that reinforce the purposes of and the possibilities for the

learning would stimulate their internal desire to engage (Deci & Ryan, 2000). This information was significant because it supported the optimistic educative opportunities for creating contexts that enable students to self-regulate their learning.

2.2.2 Critiques of self-regulated learning as behavioural compliance

Constructively, research about self-regulated learning has ridiculed the misconception that the goal of teaching students to self-regulate was so that they could teach themselves and compensate for inadequate teaching (Carroll, 1963; McCaslin et al., 2006). Nevertheless, the association of self-regulated learning with academic success and the steady increase of research in relation to self-regulated learning over the past decades have prompted noteworthy misgivings (Martin & McLellan, 2008). Questions have been raised about whether consideration has been given to the differentiation “between the self-regulation of behavior and behavioral regulation through other means, such as direction by teachers” (Martin & McLellan, 2008, p. 443).

Martin and McLellan (2008) voiced critical concerns with respect to the current focus on self-control in self-regulated learning research. They contended that inquiries into the nature and promotion of self-control in educational settings selectively ignored the complex social dimensions of self-regulation. Furthermore, they argued that studies about self-regulated learning were focused predominantly on controlling students’ behaviours rather than on attending to the students as agents within their sociocultural contexts. At best, Martin and McLellan considered self-regulated learning as a desirable aim for a student to become a self-governing citizen, and at worst “an especially clever form of socialization that secures student cooperation on the false grounds” (p. 445), whereby students themselves believe uncritically that they are truly self-directed and determining. Similarly, Ayers and Ayers (2011) warned that teaching that relied on using power to control students’ conformity may be caught up in a “hidden curriculum of obedience” (p. 104).

The ethical and ideological implications of integrating a “self-regulated learning pedagogy” (Vassallo, 2011, p. 45) in classroom environments were reported as being “taken for granted” (Vassallo, 2013b, p. 239), whilst educational research concentrated on the promotion of students’ self-regulatory capabilities. Hence, Vassallo (2013a) has raised concerns about a self-regulated learning pedagogy that was purported to ignore the pedagogical complexities associated with teaching in

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relation to students' cultural and socioeconomic backgrounds and one that was entangled "in politics and class-based power" (Vassallo, 2013b, p. 209).

Accordingly, Vassallo (2011) acknowledged the humanistic qualities associated with self-regulated learning of empowerment, agency, democratic participation and personal responsibility. However, in contrast to empowerment, Vassallo was emphatic that students' experiences of personal agency, where they felt capable of controlling their actions (Haggard & Tsakiris, 2009), were achieved merely through their behavioural compliance. Bandura (1986) articulated the notion of agency to describe how the self-awareness of thoughts affects subsequent behaviour: "People use the instrument of thought to comprehend the environment, to alter their motivation, and to structure and regulate their actions" (p. 1). Vassallo's notion of promoting students' agency for self-regulated learning in classroom environments was that teachers' pedagogical practices embed beliefs, norms and values for students' subsequent behaviours to comply with their demands.

Vassallo (2011) insisted that the intention of educational psychologists, theorists and researchers to make self-regulated learning systematic, explicit and pervasive in educational settings was a form of "institutionalizing" (p. 27) students' learning. In the context of contemporary schooling, the premise that students are valued as human beings rather than as objects to be controlled can be quite different in the institutional reality (Morrison & Vaandering, 2012). Harber and Sakade (2009) suggested that control and compliance are deeply embedded in schools globally as predominantly authoritarian institutions. The four sociological perspectives that Vassallo drew on to consider the complexities of crafting pedagogy to teach, value and reward self-regulated learning included: functionalism; neo-Marxism; symbolic interactionism; and cultural reproduction theory.

I acknowledged that it was pertinent that the critiques of self-regulated learning were addressed when designing a pedagogical framework that caters for all students within the school context. An analysis of these perceived conceptualisations presented me with an opportunity to investigate the concerns that had been raised and to define a *self-regulated learning pedagogy* as the practices that provide all students with the external learning enablers of challenges, structures and options that are adjusted strategically for them to affect what and how they learn. This analysis highlighted that enhancing students' self-regulated learning capabilities goes beyond the notion of achieving their behavioural compliance towards empowering them as

learners. The elaborations in Table 2.1 present my synthesis of the principles of each sociological perspective and the key considerations for a self-regulated learning pedagogy that challenge the critiques. These considerations are presented in Figure 2.1, as the external learning enablers that provide opportunities for students' self-regulated learning.

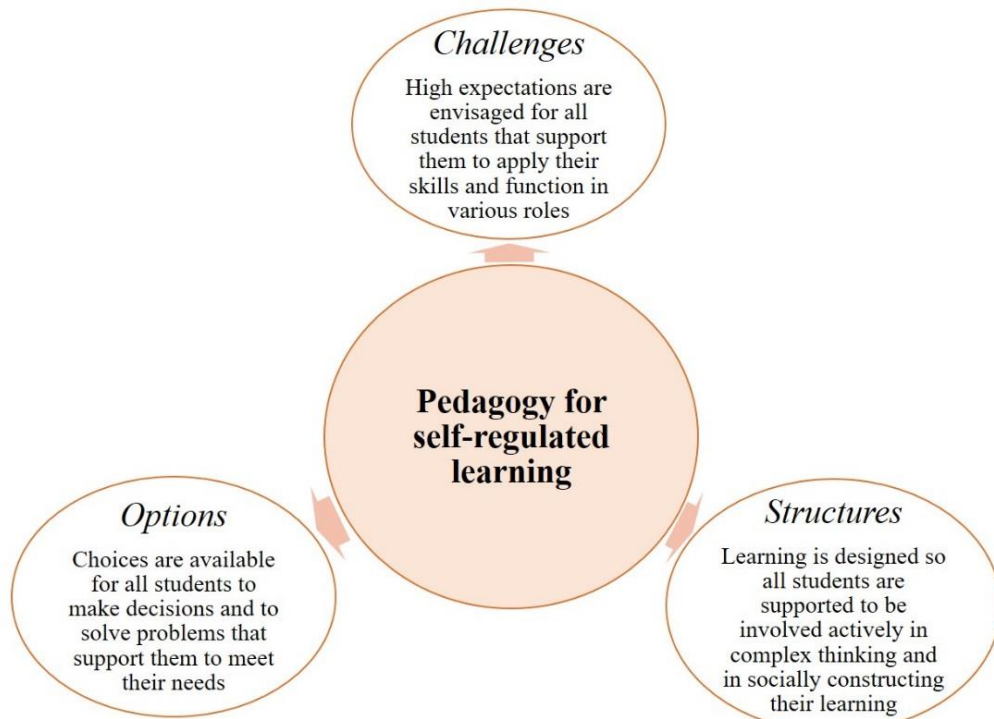


Figure 2.1. A pedagogy for self-regulated learning

Table 2.1. *The key considerations for a self-regulated learning pedagogy from different sociological perspectives (based on Vassallo, 2011)*

Sociological perspectives	Principles	Key considerations for a self-regulated learning pedagogy	External learning enablers
Neo-Marxism (Bowles & Gintis, 1976)	The disparity in wealth impacts on educational opportunities, as within a capitalist economic structure the labour force is managed and exploited to generate profit.	Self-regulated learning prepares students to operate productively within the demands of a prescribed social order. Students with an expected position in the labour division are set narrow intellectual tasks that focus on their behavioural compliance, although students who are being prepared for managerial positions learn to function in decision making roles.	High expectations provide the challenges that support all students to function in various roles.
Symbolic interactionism (Mead, 1934)	The social interactions among the self, others and the environment construct meanings that change the person and the environment.	Self-regulated learning engages students in social situations that involve complex thinking and problem solving. If self-regulated learning is viewed narrowly and if opportunities are prescribed, the students are not producers of their learning. The outcome transpires as social control without personal agency.	Learning is supported by structures so that all students are afforded opportunities to be involved actively in complex thinking and in constructing their learning.
Functionalism (Bell, 1977; Feinberg & Soltis, 2009)	Achievement comes from hard work, discipline, motivation and the application of thinking skills.	Self-regulated learning empowers students, who are advantaged by the opportunities provided. Directly oppressive structural forces and inequality of opportunities limit students' options that are key determinants of life's outcomes.	Options are accessible for all students to make decisions and to solve problems that support them to meet their needs.
Cultural reproduction theory (Bourdieu, 2004)	Culture shapes thoughts and actions to produce patterned behaviours and attitudes, described as habitus, within particular contextualised spheres.	The attitudes and practices identified as outcomes of middle-class habitus are aligned with the disposition to regulate learning. This creates a home to school fluidity that is not necessarily congruent with students from working-class or poor backgrounds.	An awareness of the (dis)continuity between students' home and school environments informs the differentiation of challenges, structures and options.

I propose that an effective self-regulated learning pedagogy depends on an awareness that students have diverse backgrounds and experiences. For example, some students from disadvantaged, ethnic minority and low socioeconomic backgrounds may be at risk if their capabilities to self-regulate in certain situations are expected and assumed unquestioningly (Bondy, Ross, Galligane, & Hambacher, 2007; Usher & Kober, 2012). Hence, I acknowledge the differences between the school environments, as institutions, and the home and community environments produce contextualised conditions that do not always optimise self-regulated learning for all students (Vassallo, 2013a). However, by precluding the integration of opportunities for students to develop their self-regulatory capabilities in educational contexts because of fears of reproducing inequalities and bias in schools and society, I would have ignored overwhelming research that identified self-regulated learning as being essential for thriving in the 21st century (Järvelä, 2011).

In leading contributions, researchers agreed generally that educational contexts were key spaces to potentiate students' self-regulatory capacities (Butler, 2002; Greene & Azevedo, 2007; Kistner et al., 2010; Perry, 1998; Schunk, 2005). Furthermore, McClelland and Cameron (2012) argued that there is potential for the development of students' self-regulation during the school years, and they viewed this development as a critical predictor that commences early in life to chart a positive social and academic course.

In addition, rich opportunities are afforded in home and community environments through real-world events and challenges requiring varying degrees of self-regulation. Hadwin (2013) suggested that "becoming attuned to the subtleties of these social contextual realms may be essential for adapting and succeeding in school and life" (p. 214). Any mismatch between school and outside-school contexts potentiates students to adapt and transfer self-regulatory capabilities to new sociocultural spheres.

2.2.3 A self-regulatory approach to classroom behaviour management

Overwhelmingly, the literature proposed fostering self-regulated learning as a foundation for successful learning and participation in the contemporary Australian community (Edwards & Watts, 2004). In the *Handbook of classroom management: Research, practice, and contemporary issues*, Evertson and Weinstein (2006) concluded that the authors "consistently call for an approach to classroom

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management that fosters the development of self-regulation and emotional competence” (p. 12).

How teachers define and identify the aim of classroom behaviour management influences the approaches that they take to discourage inappropriate behaviours and to develop *effective students' behaviours* (Bear, 2015) that are “personally fulfilling, productive, and socially acceptable” (O’Neill & Stephenson, 2012, p. 1133). In this study, the term *classroom behaviour management* is defined as the means by which teachers create and sustain productive and supportive learning environments that function by sharing the control of the classroom and the responsibility for the learning and behaviour with their students. This definition inextricably links classroom management with behaviour management (O’Neill & Stephenson, 2012) as it refers to the teachers’ actions to manage an environment that empowers and enables learners.

Since the early 20th century, the conceptualisation of classroom behaviour management has shifted back and forth between student-centred approaches to self-discipline development and teacher-centred techniques of prevention and correction (Bear, 2015; Freiberg & Lamb, 2009). For most of the second half of the 20th century, a teacher-centred, behaviourist approach was the dominant paradigm, whereby classroom behaviour management was aimed at achieving students’ behavioural compliance through reinforcements, sanctions and punishment. Freiberg and Lamb (2009) were critical of such an approach, stating: “After decades of use, the behaviorist model has not caused significant changes in student behavior. Rather, it has limited the ability of the learner to become self-directed and self-disciplined” (p.100). Bear (2015) reported that during this time, “developing self-discipline no longer was viewed as part of classroom management” (p. 33) yet students were expected to inhibit inappropriate behaviour and to exhibit prosocial behaviour but not necessarily under their own volition. Alternatively, current conceptualisations that uphold an ecological perspective characterise effective classroom behaviour management as being “proactive approaches that give rise to student self-regulation and school connectedness rather than external rewards and punishment” (Martin et al., 2016, p. 32). However, a large-scale Australian study by Lewis, Montuoro and McCann (2013) found that many of the students associated their acts of responsibility with the imposition of external controls. The students surveyed in the schools reported that they adopted a position of obedience or compliance to invite

social approval and to avoid punishments (Lewis et al., 2013). As such, employing a behaviourist approach reinforces students' behavioural compliance but fails to provide opportunities for them to internalise appropriate behaviour decisions (Landau, 2009).

Additionally, research conducted in 2013 investigated the extent to which students' behaviour was a concern for school teachers in Australian schools (Sullivan et al., 2014). The findings suggested that students' low-level disruptive behaviours and disengagement from learning occurred frequently in classrooms. The teachers reported that they found these behaviours difficult to manage. Around the same time, the Queensland Government announced its goal to enhance school discipline:

Discipline plays an important role in a young person's social development and facilitates good order and management in a school. Good order and discipline are necessary to create a safe, supportive and focused environment for students and teachers. The maintenance of a disciplined learning environment is of benefit to not only the school community, but to the community as a whole. (Langbroek, 2013, p. 1)

Subsequently, in 2013, legislation was passed by the Queensland Government—called the Strengthening Discipline in State Schools Amendment Bill—that provided principals with extended disciplinary powers to punish students. As a result, these proposed procedures appeared to be a reactive response to managing students' misbehaviour in the classroom. From this deficit viewpoint, the problem of managing unproductive behaviours centred on punishing the students' non-compliance rather than on proactive practices for increasing their engagement in learning or on teaching students to self-regulate their learning and behaviour. Sullivan (2016) suggested that one reason for this was that student misbehaviour in schools is a problematic and contested field. Political decisions aimed at ensuring students' safety, as described above, call reactively for authoritarian responses that ignore the complexity of misbehaviour.

More recently, key findings from the Programme for International Student Assessment (PISA) international comparative study of student achievement—directed by the Organisation for Economic Co-operation and Development (OECD)—identified issues not conducive to students' learning within the school environment:

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Student reports indicated that many Australian schools have a poor climate of classroom discipline. Australia scored significantly lower than the OECD average on this index, indicating a more problematic situation than across the OECD. About one-third of the students in affluent schools, and about half of those in disadvantaged schools, reported that in most or every class there was noise and disorder, students didn't listen to what the teacher said, and that students found it difficult to learn. (Thomson, De Bortoli, & Underwood, 2017, p. 248)

The media release of the report quoted the Australian Commonwealth Education Minister, Simon Birmingham, calling for the solution of a “zero tolerance approach to bad behaviour” (Balogh, 2017, p. 3). From the perspectives of the students surveyed, their experiences within the Australian classrooms often were not conducive to effective learning.

How students feel in their classroom environment influences their engagement and is an important precursor of academic achievement (Clark, 2012; Hattie, 2003; Kutsyuruba, Klinger, & Hussain, 2015). From a meta-analysis of learning achievement studies, Hattie (2009) confirmed that reducing disruptive behaviours in the classroom has a positive effect on learning. An international study by Blank's and Shavit's (2016) reported that “a disruptive classroom climate can hinder the learning process and lower the achievement of the entire class, regardless of the conduct of any particular student” (p. 1). Furthermore, Goss, Sonnemann and Griffiths (Goss et al., 2017) identified that nearly one in four Australian students are compliant but quietly disengaged. They contended that “Students who are quietly disengaged, do just as poorly, on average as disruptive students” (p. 6).

Therefore students' compliance and their engagement in learning are recognised as influencing behavioural and academic outcomes. For teachers in contemporary classrooms, this shifts the aim of classroom behaviour management beyond the function of maintaining order in the classroom to providing opportunities for students to take responsibility and to engage actively in their learning. Wilson (2004) described such an approach to classroom behaviour management as creating an atmosphere where the focus is on learning, being responsible and having fun. Moreover, Alderman and MacDonald (2015) suggested developing students' self-

regulatory capabilities to “provide the pathway for fostering lifelong learning skills that operate within a broader societal purpose for education” (p 56).

2.2.4 Self-regulatory capability

Self-regulatory capability has been acknowledged by Bauer and Baumeister (2000) as being “a key ingredient that can facilitate individual and cultural success” (p. 79). Furthermore, Geldhof and Little (2011) contended that self-regulation “represents a core aspect of human functioning that influences positive development across the life span” (p. 45). Overall, a broad consensus among researchers was that the capability to self-regulate learning has become an important educational goal (Boekaerts & Cascallar, 2006; Butler & Winne, 1995; Grolnick & Raftery-Helmer, 2015; Perry et al., 2015; Schunk & Ertmer, 2000; Shanker, 2010; Steinberg, 2014; Vandeveld et al., 2012; Zimmerman, 2002b, 2008; Zimmerman & Cleary, 2009).

From this potentiating viewpoint, the students’ inherent tendencies are supported by the social context (Ryan & Deci, 2002) and the classroom environment conceivably provides the ingredients, as the external sources of influence, to potentiate students’ self-regulated learning. However, self-regulated learning can flourish or be thwarted in different classroom environments and social settings (Deci & Ryan, 2002).

At this point, it is important to emphasise that students’ capabilities to self-regulate their learning vary in frequency, effectiveness and efficiency in response to different learning contexts. It would be inaccurate to think that all students self-regulate their learning in the same way (Vassallo, 2013a). Potentiating students’ self-regulatory capability empowers them, as resourceful learners, to grow their competencies beyond expectations of short-term desirable responses towards their being ready, willing and able to learn better (Schunk & Zimmerman, 1997).

The literature indicated not surprisingly that the students’ capabilities to self-regulate their learning vary among individuals’ personalities and their biological developmental years (Alexander, Dinsmore, Parkinson, & Winters, 2011; Paris & Paris, 2001; Pintrich, 2004; Winne, 2005; Zimmerman, 1990b). Additionally, the acquisition of self-regulated learning strategies enhances students’ perceived efficacy for a task (Zimmerman, Bandura, & Martinez-Pons, 1992) and can make a constructive contribution to self-assured social behaviour (Grolnick, Gurland, Jacob, & Decourcey, 2002).

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Therefore I am cautious about using the concept of capacity in relation to students' self-regulatory capabilities. Viewing self-regulation as a biological capacity could prejudice a student's future empowerment in learning. This could conjure a fixed mindset view rather than a growth mindset perspective (Dweck, 2006). When capacity signifies growth and change, it refers to the construction of new knowledge and skills in practice (Cohen & Ball, 1999).

Similarly, describing students as being either self-regulated or not self-regulated, as if self-regulation was a stable attribute of learning, should be avoided. Given the assumption that self-regulated learning is not a fixed personal trait or capacity but rather strategic actions that can be supported and practised (Paris & Paris, 2001; Perry & Rahim, 2011; Perry & VandeKamp, 2000; Stoeger & Ziegler, 2011), I purport that all students can develop self-regulated learning capabilities, although to varying degrees owing to their inherent diversities.

Admittedly, mastering new learning can be both challenging and overwhelming for different students in diverse classroom contexts. The research suggests that students' self-regulated learning capabilities vary situationally and individually, and that some students may be simply less able and inclined to self-regulate their learning in formal educational contexts than others because of their inherent personal characteristics (Zimmerman & Martinez-Pons, 1990). For example, neurological factors such as attention-deficit/hyperactivity disorder affect students' control to focus attention and to direct functions to self-regulate their learning (Barkley, 2000). Hence, these students rely heavily on external sources that act as scaffolds to support and guide their regulation and engagement in the processes of learning. Students' personality differences in patience and impulsiveness, and the degrees of optimism that students experience, impact on their self-regulatory functioning (Zimmerman, 1990b).

The recognition that a student's capability to self-regulate her or his learning improves through maturation was consistent in the literature (McCaslin & Hickey, 2001; Wigfield, Klauda, & Cambria, 2011; Zimmerman, Bonner, & Kovach, 1996). Developmentally, fundamental capabilities for self-regulation grow in the first five years of life and continue to mature through childhood, adolescence and into adulthood (Galinsky, 2010; Shanker, 2010). Potentially, students in the younger years at school develop their self-regulatory capabilities with guidance and support rather than from being constrained by contextualised features of the environment

(Pintrich, 2000a). Researchers observed students from the first foundation year of schooling to Year 3 in schools in Finland, the United States and Canada, planning, monitoring and self-evaluating as they engaged in complex, open-ended activities (Mykkänen, Perry, & Järvelä, 2015; Perry, 1998; Perry, VandeKamp, Mercer, & Nordby, 2002).

2.2.5 Teachers' roles in potentiating students' self-regulated learning

Because the implications of developing students' self-regulatory capabilities have been well established in this literature review, attention is now directed towards studies that foreground the significant roles that teachers play in shaping their students' behaviours, emotional responses and metacognitive thinking (Jensen & Snider, 2013). Research findings highlighted that the teachers' own learning experiences influenced whether they felt that it was important to provide opportunities for students to self-regulate their learning in their classrooms (Dignath-van Ewijk & van der Werf, 2012; Lombaerts, Engels, et al., 2009). Paris and Winograd (2001) found that teachers' self-awareness and understanding of their learning enabled them to nurture the self-regulatory capabilities of their students. Sautelle, Bowles, Hattie and Arifin (2015) confirmed: "It is likely that teachers with self-regulatory skills manage their workload better and seek feedback on their teaching from students and colleagues, thus working to improve their teaching" (P. 56). Marchis (2011) studied primary school teachers' self-regulated learning capabilities, highlighting the need for teachers to reflect on their own skills and understanding of self-regulated learning.

Moreover, Zimmerman and Schunk (2007) asserted that teachers have the responsibility to increase their students' competence and confidence in regulating their learning, as they progress through school. Nevertheless, a relatively large scale quantitative study conducted by Lombaerts, Engels and Vanderfaeillie (2007) identified teachers' pedagogical beliefs and their subsequent practices as limiting primary school students' opportunities to develop as self-regulated learners. Although their research did not extend to exploring secondary school teachers' pedagogical practices, a meta-analysis by Dignath and Büttner (2008) compared 74 studies to conclude that self-regulated learning can be promoted at both the primary and the secondary school levels and that productive classroom environments provide

opportunities for students to be aware of themselves as learners and to reflect metacognitively on their learning.

Research investigating teachers' pedagogical practices is critical to gaining information about which external sources provide opportunities for students to self-regulate their learning (Moos & Ringdal, 2012; Perry, Hutchinson, & Thauberger, 2008; Turner & Patrick, 2004). Perry, Brenner and MacPherson (2015) identified the gap in the existing research stating: "Few programs of research have focused on how practicing teachers in general educational settings promote self-regulated learning in regularly occurring activities in classrooms" (p. 233). In support of the exploratory method of investigation, Dignath and Büttner (2008) recommended that future studies explore self-regulated learning through collaborations between researchers and teachers reflecting on pedagogical practices to address an identified "lack of knowledge on how to support students' self-regulation effectively" (Dignath-van Ewijk & van der Werf, 2012, p. 8).

In the next section, the features of pedagogy presented in the contemporary literature and described and the significance of reflective practice is discussed. Following this, is a review of the relevant pedagogical frameworks intended to guide teachers' understanding of what they do in the classroom to foster students' effective learning.

2.3 Pedagogy and Reflection

The term *pedagogy* portrays the nature of teachers' professional knowledge associated with learning and teaching, and the practices that apply this knowledge to support students' learning (Loughran, 2010). Surprisingly, often in the research literature that elicits a pedagogical focus, the meaning of pedagogy was not defined at all (Watkins & Mortimore, 1999). Perhaps the ubiquitous use of the term in the educational literature assumes the readers' common understanding.

In this section, the meaning of pedagogy espoused in this study is clearly defined and the significance of pedagogical reflection is acknowledged. Following this, pedagogical frameworks—in particular, the First Year Curriculum Principles (FYTPs) (Duncan et al., 2009; Kift, 2008)—are reviewed in relation to the theory of transition pedagogy (Nelson & Kift, 2005).

2.3.1 The features of pedagogy

Learning and teaching are grounded in philosophical frameworks constructed personally by teachers to reflect on their beliefs, values, choices, aspirations, intentions and knowledge (Cuffaro, 1995). A teacher's pedagogy "serves to guide and inspire and contributes to determining the detail of the everyday life in the classroom" (Cuffaro, 1995, p. 1).

In the educational literature, the contemporary use of the term "pedagogy" (Beetham & Sharpe, 2007, p. 1) has lost its etymological connection with children (*paidia*), although it retains the sense of guiding or leading in reference to teaching. Marzano in his publication entitled *The Art and Science of Teaching* (Marzano, 2007) represented effective teaching characteristics in a framework, where he referred to the "three components of effective classroom pedagogy" (p. 6). These interrelated components propose that pedagogy involves teachers designing from the curriculum, applying instructional strategies and employing management techniques (Marzano, Pickering, & Pollock, 2001). In addition, Loughran (2010) suggested that pedagogy represents the relationship between learning and teaching, and that, when it is done well, it ignites in students a sense of wonder, curiosity and a desire to know and to ask questions.

These explanations supported the perspective that I have taken in this study with regard to understanding pedagogy as being considerably more than just teaching strategies. I maintained this complexity to define *pedagogy* as being a repertoire of theoretically aligned skills associated with learning and teaching that are supported by professional knowledge and that are contextually influenced to design curriculum, to select instructional strategies and to exercise management techniques within supportive learning communities. Through their pedagogy teachers: design and implement innovatively from the curriculum to engage students in learning; select judiciously instructional strategies that enable students to develop skills and conceptual understanding within the content; and exercise management techniques to create and maintain supportive learning communities (Marzano, 2007). Figure 2.2 connects the theories of learning and teaching, and the contextualised influences to illustrate the definition of pedagogy underpinning this study.

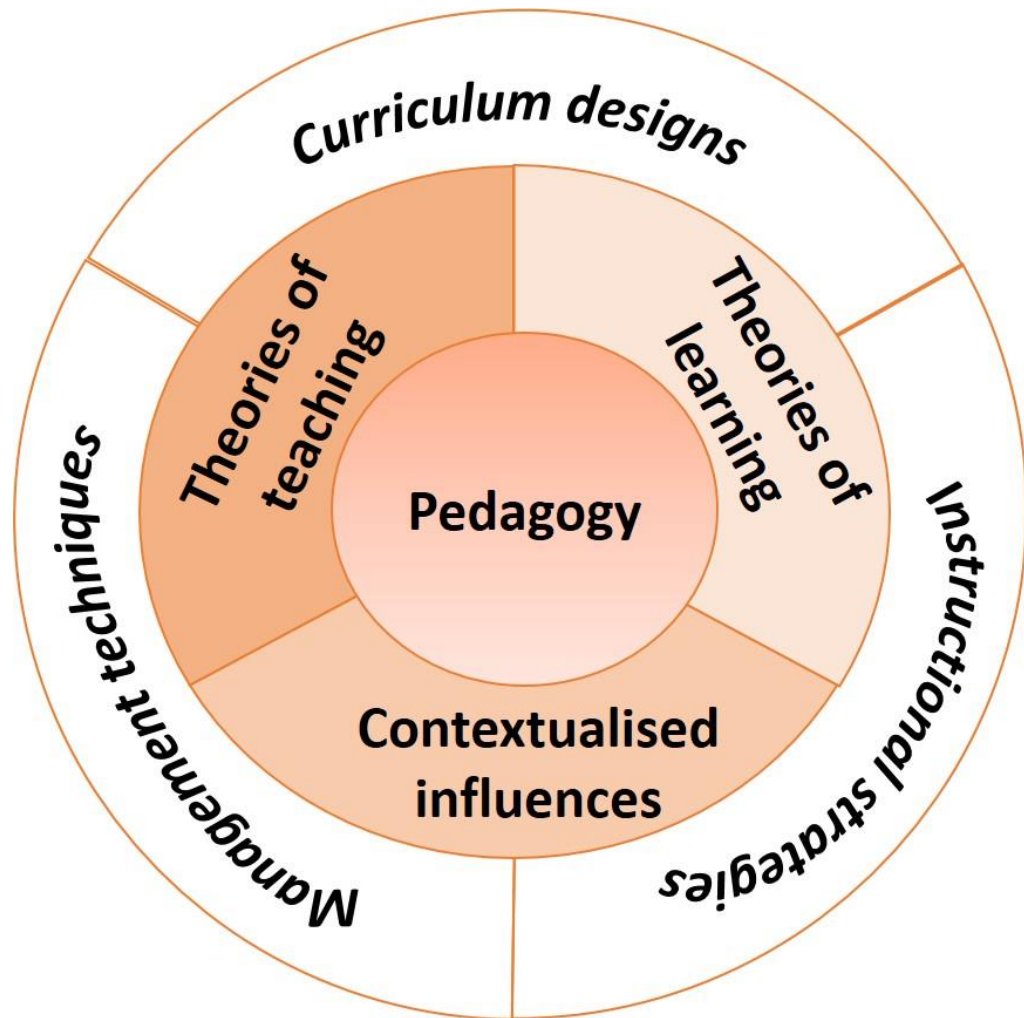


Figure 2.2. Pedagogy and the relationships between learning and teaching

A teacher's pedagogy precipitates a style of applied theoretical knowledge, innovations and personal understanding about learning and teaching (Claxton, 2007), making the business of teaching complex and sophisticated (Loughran, 2016), especially when the goal is to empower students as learners. This is not to be confused with a transmissive model of teaching as critiqued by Freire (1972) that consists of the teacher telling, and the students listening and absorbing the information. If the belief of teachers is that their students are empty vessels waiting to be filled with content knowledge then they are likely to adopt an authoritative role where students listen and perform as instructed (Landau, 2009). Significantly, Loughran (2010) argued that teachers' reflections must extend beyond the technical skills towards consciously understanding what is underlying their personal beliefs and the contextualised forces at play in the environment. The influence of contextualised conditions on teachers' enacted pedagogy was described by Scott, Chovanec and Young (1994) as being a "negotiation between what one assumes and

believes to be true about teaching and the contextualised factors (students, institutions, and societal assumptions and beliefs), which serve as enablers or constraints to playing out these assumptions” (p. 23). Teachers’ processes of reflecting on pedagogical experiences draw on and are shaped by relevant theoretical understandings and add to the growing body of theory of pedagogy (Beetham & Sharpe, 2007; Schön, 1987).

2.3.2 Pedagogical reflection

The role of reflection is to trigger new ways of thinking about and exploring knowledge of practice (Loughran, 2016; Schön, 1983). Reflecting on pedagogical experiences enables teachers to understand why they do what they do so that they can subsequently do what they do well (Seidman, 2012). Effective teachers are continually reflecting on the effectiveness and impact of their pedagogical practices on their students’ learning (Roehrig, Turner, Grove, Schneider, & Liu, 2009). This professional learning contributes to their ongoing development of knowledge, understanding and skills, with the ultimate purpose of improving students’ learning outcomes (Cole, 2012). Loughran (2002) emphasised that “the link between reflection and the development of a genuine wisdom-in-practice” (p. 36) is the recognition, articulation and response to what is learnt.

To guide teachers in the analysis and critique processes of pedagogical reasoning (Loughran, 2016; Shulman, 1987), pedagogical frameworks have emerged from educational research. *Pedagogical reasoning* creates knowledge of practice by defining, describing and reproducing effective teaching as standards of practice. However rather than suggesting a standardised pedagogy, these pedagogical frameworks provide evidence-based structures for teachers and researchers to unpack narratives of classroom activities and procedures to explore them conceptually in specific contexts.

2.3.3 Pedagogical frameworks

Pedagogical frameworks have been developed to represent key elements of quality pedagogical practices supported by educational theories, personal theories and empirical observations in classrooms. One such research developed framework (Newmann, 1993) entitled “authentic pedagogy” (Newmann, Marks, & Gamoran, 1996, p. 280) suggested elements to guide instruction and assessment. The

application of this pedagogical framework was intended to promote students' meaningful experiences that reflected the demands of various roles and expectations in society. Subsequently, the Queensland School Reform Longitudinal Study (Lingard et al., 2001) complemented this research within the contexts of Australian classrooms. The Productive Pedagogies model (Lingard et al.)—consisting of four dimensions each with six elements—was developed as a theoretical framework to guide teachers' critical reflections on their pedagogical practices. One of the four dimensions of the framework—Supportive Classroom Environment—identified self-regulation for students as an essential element to be supported by teachers' pedagogical practices. These studies have laid the groundwork for an abundant supply of evidence-based research into effective pedagogies, which was framed in their accompanying models.

2.3.4 Transition pedagogy

The theory of transition pedagogy creates cross-institutional connections for tertiary students between their secondary schooling and their educational experiences in tertiary institutions. Broad principles of transition pedagogy (Duncan et al., 2009; Kift, 2015) have been developed to form a guiding philosophy to facilitate students' active learning through the design of integrated classroom environments, learning experiences and assessments in the first year tertiary context intended to promote high quality student learning (Kift & Field, 2009). The First Year Curriculum Principles (Duncan et al., 2009; Kift, 2015) can be used to frame how educators: plan and deliver curriculum for active student-centred learning; provide students with worthwhile, enjoyable and interactive learning engagement opportunities; contribute to students' learning experiences by means of teaching strategies as capabilities for life; recognise and respond to the diversity of students' experiences and needs; assess students' progress to provide feedback about achievement; and evaluate and monitor to support students' learning outcomes.

The principles have “been rigorously evaluated by the higher educational community, nationally and internationally ... and feedback received has indicated the sector's overwhelming acceptance of their validity, and acknowledgement of their flexibility and applicability across contexts and delivery modes” (Kift, Nelson, & Clarke, 2010, p. 11). In addition, these principles provide an organising framework that can be “explicitly and intentionally deployed to facilitate student engagement,

mediate learning support and address the development of discipline knowledge and learning skills which are contextualised and embedded through the curriculum” (Kift et al., 2010, p. 11).

The theory of transition pedagogy has been explored through the concept of engagement and retention in the context of first year university students (Kift, 2015; Nelson & Kift, 2005). The next section of this chapter presents a review of the relevant literature to identify what is known about the transition experience for students in the primary–secondary schooling phase of education.

2.4 Primary–Secondary Schooling Transition Years

In this section of the literature review, the significant issues influencing policy and procedures in Australian education for the primary–secondary schooling transition years are outlined to acknowledge the relevance of promoting lifelong learning and self-regulated learning for students during this stage of their development. The debated issues from recent decades of Australian and international research and policy projects are reviewed. These have guided the middle years of schooling reforms in education. Following this, the learning needs of students associated with adolescence are discussed.

The Years 5 to 9 of schooling that span the primary school and the secondary school settings were referred to predominantly in the literature as *middle schooling*, *the middle years* or *the middle phase of learning* (Barratt, 1998; Chadbourne, 2001; Hunter, 2007; Pendergast & Bahr, 2010; Pendergast & Main, 2013). The middle years of schooling represent an important stage in students’ development. During this phase, students are moving from childhood towards adulthood within generally two systemically different school environments.

2.4.1 The transition from primary school to secondary school

The *primary–secondary schooling transition years* represent a phase of schooling where students in Years 5 to 9 are in the process of preparing and progressing between year levels and schools. The recognition of the field of middle years in education has emerged from an increased understanding of the changes young adolescents experience and the significance of these for their learning (Pendergast, 2017a).

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When transitioning from primary to secondary school, students are immersed generally in two layers of changes that can place a substantial burden on young adolescents (Ellis, Marsh, & Craven, 2005). Firstly, it is a period when they experience significant physical, emotional, cognitive, neurological and psychosocial changes (Aronson & Good, 2002; Nagel, 2014; Newman & Newman, 2017; Pendergast, 2017a; Schunk & Miller, 2002; Steinberg, 2010). During this period of change, students have needs that they must fulfil to avoid feeling largely frustrated with school (La Guardia & Ryan, 2002). In addition, entering the secondary school system presents social and academic changes to what has become a familiar learning environment in the primary school setting (Mackenzie et al., 2012). Changes that can impact on how well they adjust to meet their needs include: the physical structure of school; lesson timetabling; teaching practices; academic challenges; rules and behavioural expectations; assessment demands; and the relationships that students have with their peers and teachers (Ganeson & Ehrich, 2009; Mackenzie et al., 2012; McInnery, 2006). This combination of changes for some students has been identified as leading to social, emotional, behavioural and academic problems (Akos, 2002; Blakemore & Mills, 2014).

Research conducted in Australia by Mackenzie, McMaugh and O'Sullivan (2012) proposed that students leaving the primary school setting and entering the secondary school system have positive and negative perceptions of the changes they experience. The new expectations and requirements that challenge established routines and that require students' adaptability and resilience in the primary–secondary schooling transition years may undermine their learning motivation (Cleary & Chen, 2009; Grolnick & Raftery-Helmer, 2015). Indeed, what is of concern is the fact that the transition phase from primary school to secondary school has been described by parents and teachers and in the media as a “time of storm and stress” (Aronson & Good, 2002, p. 299) and, in terms of engagement and achievement, as the “middle school plunge” (West & Schwerdt, 2012, p. 63).

2.4.2 The middle years of schooling within an Australian context

In 2008, at the meeting of the Australian Ministerial Council for Education, Employment, Training and Youth Affairs (MCEETYA), the Melbourne Declaration on Educational Goals was presented by the Australian Ministers for Education (MCEETYA, 2008). The MCEETYA declaration recognised the middle years as “an

important period of learning, in which knowledge of fundamental disciplines is developed, yet it is also a time when students are at the greatest risk of disengagement” (p. 12). As such, sustaining students’ motivation and engagement in learning was identified as being significant during these years. Explicitly, the declaration acknowledged how students’ desires to learn are influenced by tailoring pedagogical approaches that specifically consider the needs and interests of young adolescent students.

Enhancing the development of the middle years as a phase of schooling was documented in the declaration as one of eight areas for action to achieve the goal for all young Australians to become “successful learners, confident and creative individuals, and active and informed citizens” (MCEETYA, 2008, p. 7). The connection is significant between the identified characteristics and the capabilities of successful learners that were prolific in the Australian educational policy documents (e.g., ACARA, 2017; MCEETYA, 2008) and those of self-regulated learners.

The ideals of successful learners and lifelong learning were used synonymously in the literature with self-regulated learning (Pendergast et al., 2005; Schloemer & Brennan, 2006). *Lifelong learning qualities* depict the strategic actions of active learners, who pursue strategies to acquire knowledge and skills (Pendergast et al., 2005; Schunk, 2005; Zimmerman, 2002b). Learners with these qualities are considered to be decidedly employable because they are aware of their capabilities and they are able to direct their learning and to adapt to changing situations (Aspin & Chapman, 2001). From a political perspective, lifelong learning has been a focus of European educational policies since 2000 (Lüftenegger et al., 2012) as it “encompasses formal and informal learning aimed at personal fulfilment, active citizenship, flexibility of employability and social inclusion” (Adams, 2007, p. 149).

Undoubtedly, the middle years of schooling have been targeted as a critical stage of development in young adolescents’ lives for effective lifelong learning (Adams, 2007; Barratt, 1998; Pendergast et al., 2005). Therefore how schools and teachers could contribute to fostering these learning qualities was identified as a topic relevant to current Australian and international educational policy and debate (Adams, 2007; Istance, 2003; Lüftenegger et al., 2012; Pendergast et al., 2005).

Research conducted in Australian schools explored teachers’ beliefs and practices involved in fostering self-regulated learning in primary classrooms (Alvi, 2012) and studied the development of students’ self-regulated learning skills in secondary

schools to provide guidelines for implementing a whole-school integrated approach (Salter, 2014). However, from what was a thorough search of the literature, I was unable to locate a pedagogical framework to guide teachers in establishing environments for potentiating students' self-regulated learning in the primary–secondary schooling transition years. This has been recommended as “a potent area for future research” (McCaslin et al., 2006, p. 249), particularly to build upon research around educational reforms in the context of the middle years of schooling (Grolnick & Raftery-Helmer, 2015).

2.4.3 Educational reforms in the middle years

Middle years' educational reforms from state and national educational authorities in Australia were initiated from an awareness of declining young adolescent engagement in school. An international review of the middle schooling literature by Dinham and Rowe (2007) concluded that student learning in the primary–secondary schooling transition years was influenced by teacher quality and the effectiveness of practices. Reform initiatives have grown a corpus of literature (Pendergast, 2017a) that recognises conclusively that competent teachers, equipped with effective and evidenced-based pedagogy, have a powerful influence on student achievement (Barber & Mourshed, 2007; Hattie, 2003; Jackson & Davis, 2000; Pendergast, 2017a; Rowe, 2006).

In the United States, the landmark report *Turning points: Preparing American youth for the 21st century* (Carnegie Council on Adolescent Development, 1989) debated the significance of the middle years of schooling. More recently, Jackson and Davis (2000), in the report *Turning points 2000: Educating adolescents in the 21st century*, have refined the ideas contained in the original report and provided seven design elements to improve the middle years of education. For the purpose of providing practical insights, effective pedagogy was acknowledged as being one of the design elements of reforming education in the middle years of schooling, with the other design elements being: curriculum; staff expertise; relationships; democratic governance; safe and healthy learner-centred classroom environments; and community partnerships (Jackson & Davis, 2000).

In Australia, reforms around education for early adolescents were published as a discussion of current practices in a report entitled *In the middle: Schooling for young adolescents* (Schools Council, 1993). The topics in the report included: young

adolescents' development; the structure of the middle school curriculum; the learning styles of young adolescents; and the expected outcomes of middle schooling. To address these considerations, Barratt (1998) presented findings on a project that was undertaken nationally entitled *Shaping middle schooling in Australia: A report of the national middle schooling project*. In the report, middle schooling was described as “bridging the conventional primary/secondary divide” (Barratt, 1998, p. 1). The collective view of the research highlighted the importance of appropriate principles of middle schooling practices to meet young adolescents' specific needs.

Since the publication of Barratt's (1998) report, middle schooling research has contributed a comprehensive range of pedagogical practices to engage young adolescents in relevant, meaningful and challenging learning. More recently, the Middle Years of Schooling Association (MYSA) released a position paper entitled *Middle schooling: People, practices and places* (MYSA, 2008). As a professional organisation in Australia, MYSA, subsequently referred to as “Adolescent Success” (Adolescent Success, 2016, n.p.), is committed to the educational development and growth of young adolescents. The MYSA position paper described a *middle schooling philosophy* as being “an intentional approach to teaching and learning that is responsive and appropriate to the full range of needs, interests and achievements of middle years students in formal and informal schooling contexts” (p. 1).

The middle schooling literature, internationally and in Australia, suggested the need for research and initiatives that articulated a comprehensive range of pedagogies that engage young adolescents in learning (Chadbourne, 2001; Chadbourne & Pendergast, 2010). Quality teaching has been identified as a “critical key to transition, as it engages and motivates students to reach their potential and helps to minimise the negative effects of transition” (Pendergast, 2017b, p. 100). From this review of the literature, I have analysed the common considerations that have informed middle schooling advancements and presented these in Table 2.2.

Table 2.2. *A comparative summary of key considerations that influence a middle schooling philosophy*

Middle schooling considerations	1989	1998	1999	2000	2001	2002	2003	2005	2008	2017
Self-regulated learning/lifelong learning					✓		✓	✓		✓
Adolescent identity and needs		✓	✓		✓					✓
Primary–secondary transition continuity			✓			✓				
Parent–community partnerships with schools	✓		✓	✓	✓		✓		✓	✓
Teacher professional learning	✓			✓	✓	✓	✓	✓	✓	✓
Learning and teaching resourced adequately		✓	✓							✓
Safe classroom environments		✓		✓	✓		✓			✓
Flexible student groupings					✓				✓	✓
Relationships (teacher–student–student)		✓	✓	✓	✓		✓		✓	✓
Flexible use of time and space		✓	✓							✓
Learner centred community	✓			✓	✓		✓		✓	✓
Differentiated approach to learning and teaching	✓						✓			✓
Teachers as models								✓		✓
Curriculum designed contextually				✓						✓
Integrated and disciplinary curriculum designs		✓	✓	✓	✓		✓		✓	✓
Collaborative teaching and co-operative learning			✓	✓	✓			✓	✓	✓
High expectations and rigour		✓					✓			✓
Higher order thinking				✓	✓				✓	✓
Authentic and aligned assessment		✓		✓	✓		✓	✓	✓	✓
Outcomes-based learning and teaching		✓	✓		✓					
Student success focus	✓				✓					✓
Fostering health, wellness and resilience	✓						✓			✓

✓Indicates that this element was included in the summary of findings

1989: *Turning points: Preparing American youth for the 21st century* (Carnegie Council on Adolescent Development, 1989).

1998: *Shaping middle schooling in Australia: A report of the National Middle Schooling Project* (Barratt, 1998).

1999: *Systemic, whole-school reform of the middle years of schooling* (Hill & Russell, 1999).

2000: *Turning points 2000: Educating adolescents in the 21st century* (Jackson & Davis, 2000).

2001: *Middle schooling in the middle years* (Chadbourne, 2001).

2002: *Middle years research and development project* (MYRD, 2002).

2003: *This we believe: Successful schools for young adolescents* (National Middle School Association, 2003).

2005: *Developing lifelong learners in the middle phase of learning* (Pendergast et al., 2005).

2008: *MYSA position paper. Middle schooling: People, practices and places* (Middle Years of Schooling Association (MYSA), 2008).

2017: *Quality teaching and learning* (Pendergast, Main, & Bahr, 2017).

The vision of a middle schooling philosophy emphasises the complexity of teaching for effective student learning and it argues for effective teaching in the middle years of schooling. A comprehensive model designed by Pendergast and Main (2017) includes most of the considerations included in Table 2.2 related to middle school subject content, pedagogical responses to students' characteristics, learning activities, the teaching space and specialised initial teacher education and teacher professional learning to ensure that teachers feel informed and competent to recognise the needs of young adolescent students. Bandura (1993) confirmed that a teacher's level of confidence to set tasks that motivate and promote student learning influences the type of classroom environments created and the students' academic outcomes.

2.4.4 Key considerations influencing a middle schooling philosophy

Dembo and Eaton (2000) recommended that educational reforms in the middle years of schooling go beyond structural changes in school organisation and they emphasised the importance of effective pedagogy to provide for the young adolescent students' social, emotional and academic development. Teachers who explore their practices are guided by pedagogical reasoning (Loughran, 2016; Shulman, 1987) to consider the complexities faced by young adolescent learners for effective teaching.

In addition, teacher efficacy has been linked with the level of effort that teachers invest in planning, organising and reflecting on their practices to meet the learning needs of students (Tschannen-Moran & Woolfolk Hoy, 2001). High self-efficacy beliefs in their teaching capabilities have been recognised as being an attribute of effective middle school teachers (Bruce, Esmonde, Ross, Dookie, & Beatty, 2010; Goddard, Hoy, & Woolfolk Hoy, 2004; Pendergast, 2010). Specifically, a study of teachers' self-efficacy beliefs in the middle years associated teachers' perceived self-efficacy with their co-operation with teacher colleagues and with the parents of their students, and with their confidence and competence to motivate students (Pendergast, Main, Garvis, & Kanasa, 2013). In contrast, it was reported that teachers' low self-efficacy beliefs result in reduced learning outcomes for students (Bruce et al., 2010; Goddard et al., 2004; Tschannen-Moran & Woolfolk Hoy, 2001) and in control orientated practices from teachers (Eccles & Roeser, 2011; Martin et al., 2016).

The degree to which middle years' teachers are prepared to allow students to take control of their learning has been identified as being problematic (Deci & Ryan, 1985; Zimmerman et al., 1996). Lombaerts, Engels and Vanderfaeillie (2007) proposed that teachers were more likely to release control of learning tasks in the later years of primary school. However, contrary to what might be expected, secondary school teachers compared with primary school teachers were purported to use more control orientated practices and to offer fewer opportunities for student to make decisions in their learning (Eccles & Roeser, 2011; La Guardia & Ryan, 2002; Midgley, Feldlaufer, & Eccles, 1988; Urdan & Midgley, 2003).

Researchers have identified the influence of students' maladaptive self-regulatory beliefs as being predictive of stress related and depressive symptoms during the middle years of schooling (Galton et al., 2003; Rudolph, Lambert, Clark, & Kurlakowsky, 2001). Maladaptive self-regulatory beliefs were described as students' feeling that they lacked control over their learning outcomes and therefore being reluctant to invest in their academic pursuits (Galton et al., 2003). Such beliefs were found to be vulnerability factors for the students within the middle years' transition contexts, resulting in less persistence in learning, helpless behaviours, decreased effort and lower levels of achievement (Galton et al.).

Furthermore, Eccles and Roeser (2011) reported that "a substantial number of adolescents become less interested in and less engaged in their education as they move into and through secondary school, leading to excessively high rates of school failure and drop out" (p. 233). Students' disengagement from their academic learning can have a profound effect on their learning progress and on the overall classroom environment. Pendergast (2017a) highlighted the "predictable, measurable decline in student achievement in the middle years" (p. 4) as a significant challenge to contemplate what quality teaching means in the context of meeting the needs of young adolescent students. Jackson and Davis (2000) referred to this stage of students' development as being a turning point that depends on their capabilities to manage their own learning, make decisions and meet their needs.

2.4.5 The learning needs of young adolescent students

The research acknowledged that the reasons for the changes in young adolescents' learning motivation and achievements during the middle years of schooling were as diverse as the students themselves and the experiences that shape their lives (Eccles

& Roeser, 2011; Pendergast, 2017a). In this study, the term *young adolescents* describes the developmental characteristics and learning needs of young people (Bahr, 2017) in the age group of 10 to 15 years. Although young adolescents should not be regarded as a homogeneous group (Barratt, 1998), they do experience similar and more rapid changes than at any other period in their lives (MYSA, 2008) and they do have specific needs (Bahr).

For the students' optimal development, teachers are required to recognise the challenges that their students face when attempting to negotiate successfully the pathways of adolescence (La Guardia & Ryan, 2002; MCEETYA, 2008). Young adolescents grow and develop physically, and they change the ways that they think and feel. This involves changes in family and peer relationships as students move from being egotistical and family orientated to caring more about their relationships with their peers (Blakemore & Mills, 2014; Nagel, 2014) and with adults other than their parents (Anderman et al., 2011). Furthermore, young adolescents are avid users of social networking websites (Lenhart, Purcell, Smith, & Zickuhr, 2010) and they rely on these websites to communicate and build relationships with their peers.

Failure to understand and meet the specific needs of young adolescent students “can manifest in disengagement from schooling, often reflected in poor achievement and behaviour” (Pendergast, 2017a, p. 8). Young adolescents' learning needs—challenge, curiosity, responsibly, capability and belonging—were identified as being prominent in the literature.

Taking on realistic learning challenges in an environment characterised by high expectations is an essential component of young adolescent students' schooling (Barratt, 1998; Chadbourne, 2001; Hoy, Tarter, & Woolfolk Hoy, 2006). Changes to the brain and cognitive development peak during adolescence and this period marks a significant developmental milestone in terms of brain maturation (Nagel, 2014). Apart from the first six years of life, at no other time does the functioning of the brain undergo such an overhaul (Steinberg, 2014). For example, during the stage of adolescence, students' cognitive capabilities have the potential to expand, moving from concrete learning to abstract understanding (Manning, 2002; Piaget, 1971). This affects the learning capabilities of young adolescents and their regulation of their behaviours and emotions (Steinberg, 2010).

With the requirement for students' higher order thinking comes increased curiosity and demands for decision making (Manning, 2002). Students' motivation to learn is

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heightened when they apply strategies to satisfy their intellectual curiosity due to a perceived gap in their current knowledge (Irwin, 1992; Keller, 2008). Students' curiosity provides an internal source of motivation that is likely to attract their interest (Malone & Lepper, 1987). For example, interest has been identified as being a powerful motivational construct (Renninger & Hidi, 2016) that is related to the formation and regulation of goal-directed behaviour (Wentzel, 1998). Research evidence about adolescent brain development supported the understanding that students control their impulses and become more inclined to inquire and to view situations from other people's perspectives as they move through adolescence (Albert, Chein, & Steinberg, 2013; Blakemore, 2008). Consequently, the desire of young adolescent students to explore their own world and social issues is strengthened as they become curious about ethical and moral questions.

The transition from the primary to the secondary schooling environments is characterised by new procedures, rules, expectations and learning conditions that the students are required to negotiate, as they assume greater responsibility and initiative to become successful learners (Eccles & Midgley, 1989; Mackenzie et al., 2012; Zimmerman, 2002a). Young adolescent students emotionally have an intense need to control their decision making, whilst striving for independence (Kellough & Kellough, 2008; Wiles & Bondi, 2001). Kaplan and Maehr (2002) argued: "Doing well in school involves taking responsibility for action and outcome" (p. 125). Providing young adolescent students with opportunities to accept responsibility engages them in active learning (Pendergast, 2017b). La Guardia and Ryan (2002) acknowledged that "internalizing specific norms and practices—shifting from mere compliance to self-regulation, willing adherence and endorsement of a coherent set of social values—is a central task towards identity formation and passage into adulthood" (p. 193). The norms and routines provide the structures that were described by Osler and Flack (2008) as establishing "an agenda for learning" (p. 8) with the students. Therefore promoting the class procedures, for example, empowers students to assume responsibility (Marshall, 2012) and informs them of what is expected for them to make decisions (Eccles & Midgley, 1989) within and outside classrooms (Zimmerman, 2002b).

Young adolescents are increasingly aware of their individual capabilities and the expectations that are placed on them by their parents, teachers and peers. This often correlates with a time when students make the least progress in learning and when

the gap between low and high achievers increases markedly (Boyd, 2000). Gradually, students can become disengaged from classroom tasks that are not pitched at a level that matches their literacy and numeracy capabilities (Effeney, Carroll, & Bahr, 2013a). Their enthusiasm for learning wanes at a time when the brain requires activation and stimulation for development (Steinberg, 2014). To develop capability, students need to have opportunities to practise the strategies required for them to achieve their desired learning outcomes. The students' personal perceptions of their capability to execute the skills successfully and to produce an outcome particular to the task at hand form their self-efficacy beliefs (Bandura, 1986). Students who experience success in learning potentially gain enjoyment from this process (Tulis & Ainley, 2011). In an analysis of Albert's (1992) co-operative discipline theory, Charles (2002) emphasised: "When students feel capable they are able to connect personally with peers and teachers to make contributions to the class" (p. 69).

Interpersonal relationships have a major external influence on young adolescents' attitudes, language, values and self-image that form an integral part of their overall development (Nagel, 2014). Their desire for peer acceptance (Blakemore & Mills, 2014; Burnett, Thompson, Bird, & Blakemore, 2011) and their perceived opinions of their peers are particularly important to shaping their self-concept (Burnett et al., 2011). For example, outward confidence can often be a cover for internal sensitivity and insecurity. As a result, young adolescent students can see themselves as being outcasts or alternatively they can experience belonging, when their interactions with others provide emotional security (La Guardia & Ryan, 2002). Aligned with their experiences of physical changes, young adolescent students are developing their identity to understand themselves and how they fit into their world (Erikson, 1980).

Providing young adolescent students with a sense of safety and belonging offers the constants for them to experience the physical and emotional changes associated with their growing independence, as they search to discover their self-identity (Manning, 2002). A sense of belonging is promoted in a learning environment that evokes calm (Pendergast et al., 2005), has an emphasis on strong teacher–student and student–student relationships (Certo, Cauley, & Chafin, 2003; Chadbourne, 2001) and establishes norms and routines that affect the dynamic classroom social system and their learning progress (Doyle, 2006). Through a sense of belonging, students "perceive that they and others are cared for, acknowledged, trusted, and empowered within a given context" (Guerra & Bradshaw, 2008, p. 12). For example, talking

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about learning is part of the language of the classroom that establishes a shared vocabulary amongst students and teachers as common understandings (Berry, Loughran, Smith, & Lindsay, 2009).

As the research indicated, young adolescent students have distinctive needs because they are experiencing cognitive changes, developing a set of moral beliefs and acquiring independence and autonomy. Table 2.3 presents an overview of the research evidence showing the identified five learning needs of young adolescent students.

Table 2.3. *The five learning needs of young adolescents*

Young adolescents' learning needs	Young adolescents' learning needs explained and supported by the literature
Challenge	A cognitive demand, often from higher order thinking, that stimulates students' intellectual development (MYSA, 1998; Chadbourne, 2001; Jackson & Davis, 2000; Manning, 2002; Middle Years of Schooling Association (MYSA), 2008; National Middle School Association, 2003; Pendergast et al., 2005).
Curiosity	A desire to explore relevant and meaningful learning that is goal and inquiry orientated (Irwin, 1992; Loughran, 2010; Malone & Lepper, 1987; Manning, 2002; Pendergast et al., 2005; Renninger & Hidi, 2016; Wentzel, 1998).
Responsibility	An empowerment potentiated through a shared ownership of learning between the teacher and the students (Barratt, 1998; Hill & Russell, 1999; Marshall, 2012; Pendergast et al., 2005; Zimmerman, 2002a).
Capability	An awareness of strategies learned through multiple opportunities from scaffolds and models offering different levels of structured support (Carnegie Council on Adolescent Development, 1989; La Guardia & Ryan, 2002; Pendergast et al., 2005).
Belonging	A sense developed through a collective, social learning community that provides opportunities for teacher–student and student–student relationships (Albert, 1992; Barratt, 1998; Brinthaupt, Lipka, & Wallace, 2007; Carnegie Council on Adolescent Development, 1989; Certo et al., 2003; Chadbourne, 2001; Charles, 2002; Guerra & Bradshaw, 2008; Hill & Russell, 1999; Jackson & Davis, 2000; La Guardia & Ryan, 2002; Manning, 2002; MYSA, 2008; National Middle School Association, 2003; Pendergast et al., 2005).

Freiberg and Lamb (2009) emphasised: “Movement from teacher to person-centered is a gradual progression of building trust and developing shared responsibility for the management of the classroom” (p. 100). Substantial evidence has been presented to confirm that teachers play key roles in providing opportunities that assist students to meet their needs whilst developing their self-regulated learning capabilities in the primary–secondary schooling transition years (Grolnick & Raftery-Helmer, 2015).

2.5 Review of the Chapter

This review and critique of the literature has identified and explained how this study was designed to develop knowledge and to build on the literature. The review traced the genealogy of the theory of self-regulation and of self-regulated learning. A platform for this research was provided through the strong correlations made between self-regulated learning and lifelong learning. In addressing the critiques of a self-regulated learning pedagogy, the external learning enablers— challenges, structures and options—were acknowledged as the pedagogical considerations to embed a social awareness of contextualised issues and complexities in the conceptual framework of this study. A pedagogy that involves developing students’ self-regulatory capabilities was argued as being an effective approach to classroom behaviour management.

The field of pedagogy was clarified as being the relationship between learning and teaching that theoretically and contextually influences teachers’ curriculum designs, instructional strategies and management techniques. Pedagogical reflection was acknowledged as a method for the growth of professional knowledge about learning and teaching. Pedagogical frameworks, supported by educational theories and empirical observations in classrooms, were discussed.

The area of the middle years of schooling—recognised as Years 5 to 9 in the primary to secondary schooling transition years—was targeted as being a turning point for young adolescent students’ engagement in learning at school (Jackson & Davis, 2000) and their development of self-regulatory capabilities for life’s future endeavours (Zimmerman, 2002a). Five young adolescents’ learning needs— challenge, curiosity, responsibility, capability and belonging—were distilled from the literature.

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In Chapter 3, a conceptual framework is presented that synthesises the conceptual complexity of self-regulated learning from a social cognitive perspective (Zimmerman, 1989b); to integrate the theory of self-determination (Deci & Ryan, 1985; Ryan & Deci, 2002); and to view self-regulated learning as a social practice (Hadwin & Oshige, 2011; Järvenoja et al., 2015; Volet & Vauras, 2013).

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The teacher is not in the school to impose certain ideas or to form certain habits in the child, but is there as a member of the community to select the influences which shall affect the child and to assist him [sic] in properly responding to these influences. (Dewey, 2004, p. 20)

Learning is not something that happens to students; it is something that happens by students. (Zimmerman, 1989a, p. 22)

3.1 Overview of the Chapter

In the previous chapter, the self-regulated learning literature was reviewed in order to evaluate the ethical and ideological issues of exploring a self-regulated learning pedagogy. The meaning of pedagogy, the significance of pedagogical reflection and the functions of pedagogical frameworks were considered. Furthermore, the literature was reviewed to acknowledge the primary–secondary schooling transition years as a phase of schooling aimed at meeting the learning needs of young adolescents.

The purpose of this chapter is to outline the conceptual framework as presented in Figure 3.1.

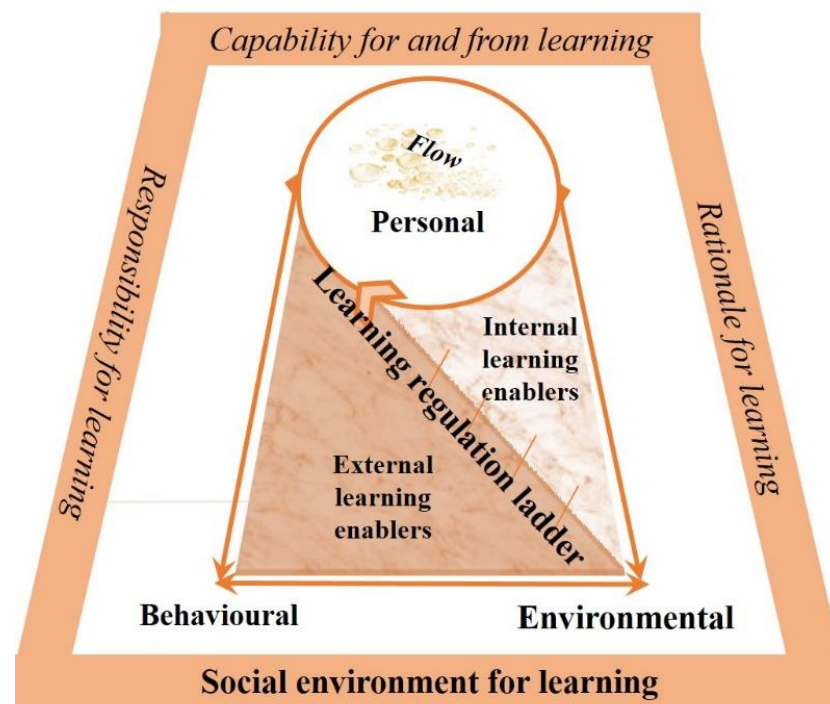


Figure 3.1. The conceptual framework

The Conceptual Framework

The conceptual framework informed the data collection and analysis, and guided the findings to address the research questions. Designing the conceptual framework involved reviewing, organising and evaluating information from the relevant literature to synthesise three self-regulated learning fundamentals and to recognise the relevance of the social learning environment for learning.

This chapter is divided into four topics as are represented in the conceptual framework to include:

Section 3.2 The Theoretical Perspectives on Self-Regulated Learning

- Environmental, behavioural and personal influences

Section 3.3 The Fundamentals of Self-Regulated Learning

- *Rationale for learning*
- *Responsibility for learning*
- *Capability for and from learning*

Section 3.4 The Social Environment for Learning

Section 3.5 The Internalisation Process of Learning

- The learning regulation ladder and flow
- The external and internal learning enablers.

In Section 3.2, the similarities and differences of the theoretical perspectives on self-regulated learning are discussed. In Section 3.3, the three interrelated fundamentals of self-regulated learning are presented. In Section 3.4, the social environment for learning are acknowledged that include the interactive and shared activities of the members of the classroom community. Introduced in Section 3.5 is the learning regulation ladder that I synthesised based on the self-determination continuum of motivation (Deci & Ryan, 1985; Ryan & Deci, 2002) to explain internalisation as a process of self-regulated learning. Finally, the chapter concludes with an overview that reviews how the conceptual framework offered contributions to knowledge and informed this study. The conceptual framework was intended to guide methodologically the research design and theoretically the analysis and interpretations of the data.

3.2 Theoretical Perspectives on Self-Regulated Learning

In this section, several theoretical perspectives on self-regulation that provide a solid sense of the conceptual complexity of this theory are discussed. Evolving definitions, theories and associated models of self-regulation vary depending on the foci of the studies (Moos & Ringdal, 2012; Paris & Paris, 2001; Reeve et al., 2007; Zimmerman, 2001).

3.2.1 Theoretical traditions of self-regulated learning

Different theoretical traditions are united in their view of depicting learners, as performers in specific contexts, who are positioned to exercise strategic control of their self-generated thoughts, feelings and actions (Järvelä & Hadwin, 2013; Postholm, 2011; Schunk & Usher, 2013; Zimmerman, 2008). Progressively, models of self-regulated learning have emerged from a number of theoretical traditions, including: constructivist, socioculturalist, information processing, behaviourist, phenomenological, humanistic and social cognitivist (Boekaerts & Corno, 2005; Paris & Paris, 2001; Puustinen & Pulkkinen, 2001; Zimmerman, 2001). Each one demonstrates its perceived significance of influence on learning motivation, metacognitive and cognitive processes, and the environmental learning context. Figure 3.2 provides a Venn diagram to show the similarities and differences, and to represent how the different theoretical traditions overlap and interconnect within the models of self-regulated learning.

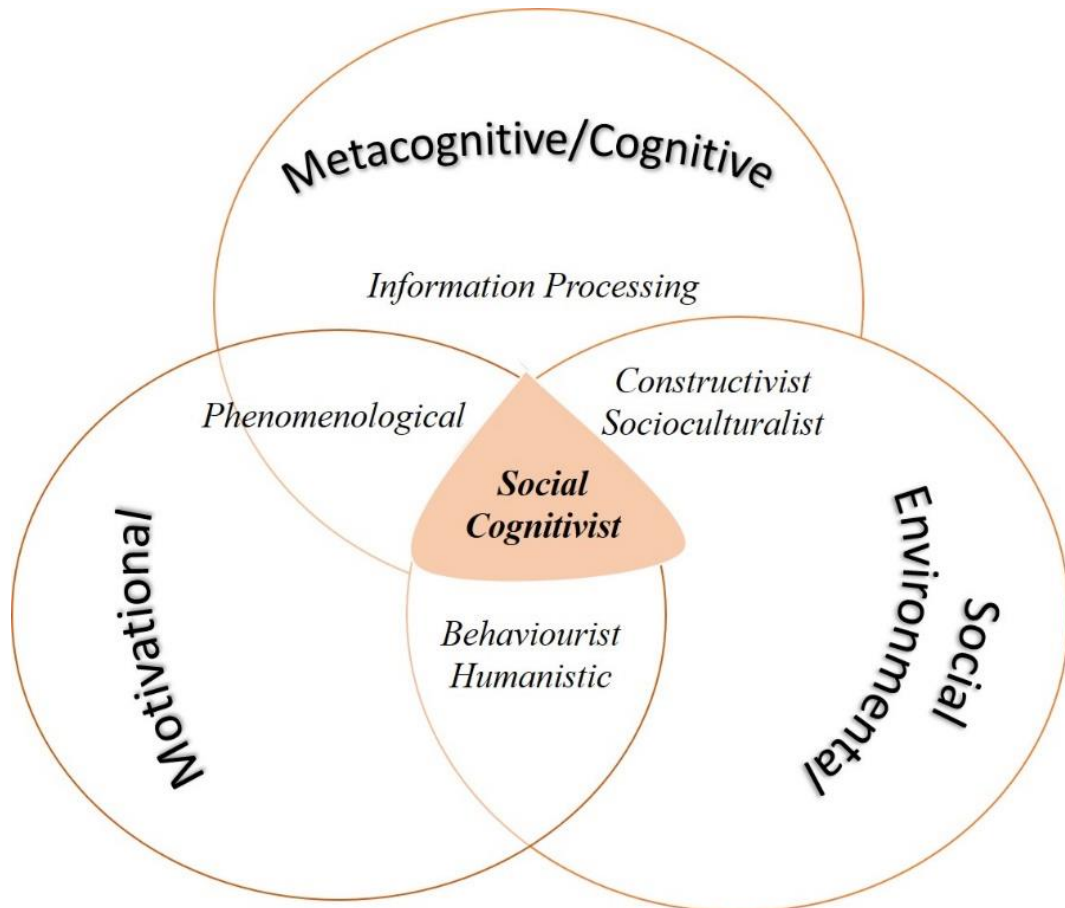


Figure 3.2. A Venn diagram to represent the interconnections of the different theoretical traditions about self-regulated learning

The social cognitivists promote self-regulated learning as social processes, involving academic goals, strategies and self-efficacy. (e.g., Kobayashi & Lockee, 2008; Pintrich & De Groot, 1990; Schunk, 2001b; Zimmerman, 1990a). Theorists from a humanistic approach to learning link the external and internal sources of motivation with the satisfaction of needs for achievement and wellbeing within the social context (e.g., Boekaerts, 2006; Deci & Ryan, 1985; Reeve & Jang, 2006). Adopting a sociocultural perspective, theorists view learning as an outcome of collaboration and interactions through social dialogue and self-directive speech (e.g., Hadwin et al., 2011; Hadwin & Oshige, 2011; Järvenoja et al., 2015; Perry, 1998; Vygotsky, 2012). These and other theoretical standpoints with respect to self-regulated learning theory are summarised in Table 3.1.

Table 3.1. *Theoretical learning traditions and self-regulation*

Learning traditions and theorists	Theoretical learning perspectives on self-regulation
Social cognitive (Bandura, 2001; Pintrich & De Groot, 1990; Schunk, 2001b; Zimmerman, 1989b, 1990a; Zimmerman & Schunk, 2001)	Active, goal-directed strategy use is influenced by the reciprocal interactions among behavioural, personal and environmental determinants.
Humanistic (Boekaerts, 2006; Deci & Ryan, 1985; Reeve & Jang, 2006)	Motivation is linked with needs satisfaction for achievement and wellbeing within a social context.
Sociocultural (Hadwin et al., 2011; Hadwin & Oshige, 2011; Järvenoja et al., 2015; Perry, 1998; Vygotsky, 2012)	Collaboration and interactions occur through social dialogue and self-directive speech.
Constructivist (Dewey, 1938; Piaget, 1971)	Knowledge is an active cognitive construction.
Information processing (Borkowski, 1996; Flavell, 1979; Winne, 2011)	Cognitive strategies are monitored through the metacognitive management of learning.
Behavioural (Mace et al., 1989; Skinner, 1984)	Behaviour is a response to external rewards or punishments.
Phenomenological (McCombs, 2001; Skinner, 1953)	Self-concepts emerge from covert perceptual processes as the primary motivators.

This study's conceptual framework drew from large bodies of research. Järvenoja, Järvelä and Malmberg (2015) acknowledged that "different perspectives together can provide a comprehensive view on self-regulated learning" (p. 216). Table 3.2 refers to the seminal theories that collectively generated the conceptual framework for this study.

Table 3.2. *Seminal theories represented in the conceptual framework*

Seminal theories	Theoretical contributions
Social cognitive theory:	
- Dimensions of self-regulated learning (Zimmerman, 1986, 1990b, 1994, 2001; Zimmerman & Labuhn, 2012)	Regulated engagement in learning through metacognitive, motivational and behavioural involvement.
- Triadic reciprocation model (Bandura, 1986, 2001; Zimmerman, 1989b)	Triadic reciprocation of environmental influences, behavioural control and personal self-regulatory functioning cycle.
- Self-regulated learning strategies (Zimmerman & Martinez-Pons, 1986, 1990)	Strategies to plan goals, select and activate strategies, monitor progress and reflect on judgements.
- Self-regulatory development framework (Zimmerman, 2000a, 2004, 2013)	Self-regulatory development pathway of observation, emulation, self-control and self-regulation.
Sociocultural perspective:	
- Social learning system (Hadwin et al., 2011; Hadwin & Oshige, 2011)	The co-regulation of learning and the socially shared regulation of learning through the interactions within a social environment for learning.
Self-determination theory (organismic mini-theory):	
- Continuum of motivational influence (Deci & Ryan, 1985; Ryan & Deci, 2002)	Motivational sources represented as degrees of external–internal influence on the regulation of learning.

A social cognitive viewpoint of self-regulated learning upheld and extended the behaviourist view to contend that behaviour is largely regulated antecedently through cognitive processes (Bandura, 1977, 1986). Seminal work grew from Bandura’s (1977) social learning theory signifying behaviour as “a product of both self-generated and external sources of influence” (Bandura, 1986, p. 454). Hence, the social learning theory was renamed the *social cognitive theory* by Bandura (1986) to recognise the behavioural, environmental and personal influences that impact on students’ learning. Bandura (1986) proposed the triadic reciprocal causation model on which Zimmerman’s (1989b) theory and research about self-regulated learning were based (Schunk & Usher, 2013).

3.2.2 The triadic reciprocal causation model

Entrenched in self-regulation research from a social cognitive perspective are the reciprocal interactions that suggest that learning is the consequence of personal, behavioural and environmental influences. In Figure 3.3, the arrows diagrammatically illustrate the interactions connecting these three key influences.

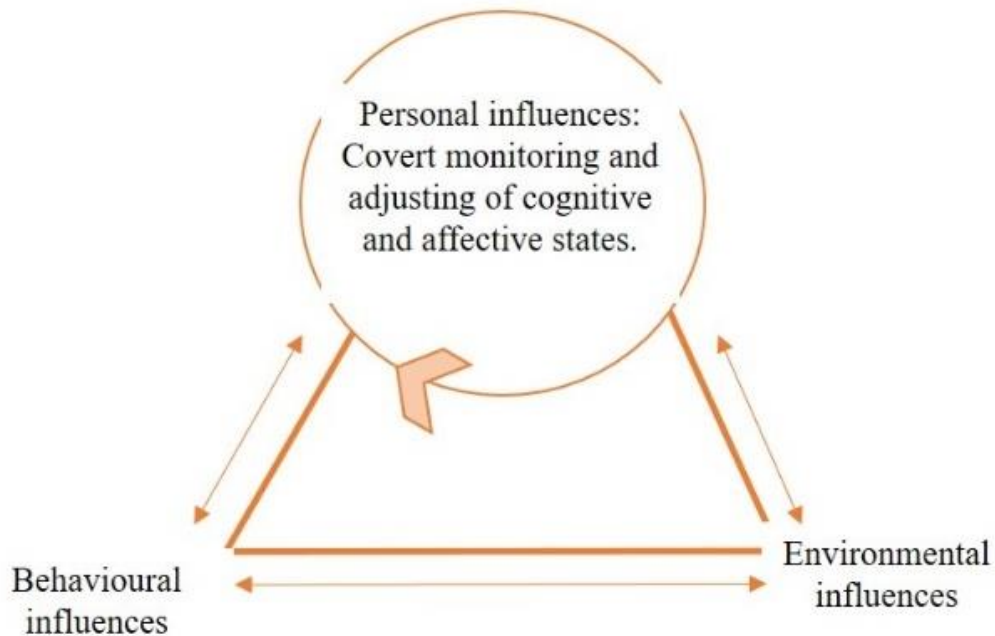


Figure 3.3. The triadic reciprocation view of self-regulatory functioning (based on Zimmerman, 1989a, p. 330)

Social cognitive theory recognises the interplay among the thought processes and feelings, the observable behaviours, and the environmental events in explaining why students' self-regulated learning is highly situationally specific and context dependent (Schunk, 2001b; Zimmerman, 2013). Behavioural influences, consequential to the students' experiences and their observations, impact on the ways that they respond through their strategic actions and decisions. Environmental influences, derived from the physical design of the classroom and the social interactions that occur within it, impact on students' opportunities to engage purposefully in the social learning system. Personal influences include students' cognitions and attitudes about their learning capabilities that affect their current learning and that inform their subsequent behaviours.

The inclusion of introspective thoughts and feelings form a personal capability feedback loop that represents the self-regulatory functioning cycle (Bandura, 1977). The processes in the self-regulatory cycle involve the students observing their

performances, judging their progress and forming evaluative efficacy responses from their performances that influence their future engagement in learning (Schunk & Usher, 2013). The triadic reciprocation view of self-regulatory functioning acknowledges that learners can influence their environment as much as the environment influences how they think and behave.

3.2.3 Self-regulated learning strategies

For self-regulated learning processes to be personally initiated, students require the motivation to engage in the learning and the capabilities to perform the strategies—will and skill—for optimal engagement and performance (De Groot, 2002; McCombs & Marzano, 1990; Paris & Paris, 2001; Reeve et al., 2007). A seminal study by Schunk (1981) revealed that, irrespective of student proficiency, teaching students self-regulatory strategies—as planned sets of skills—was a proven and effective way to progress their academic achievement. Extending this research, studies conducted by Zimmerman and Martinez-Pons (1986, 1988) indicated that academic achievement differences among students were influenced by the degree to which they applied self-regulated learning strategies. A further study by Zimmerman and Martinez-Pons (1990) found that the higher achieving students used these self-regulatory strategies more frequently. Furthermore, Effeney, Carroll and Bahr (2013b) conducted a study identifying the types of self-regulated learning strategies deployed by young adolescent males. The findings indicated that the more academically successful learners reported using a wider range of strategies more often than the other students, who relied consistently on help seeking.

Independently, the focus of empirical studies was based on instructional models designed to promote the learning of strategies, including: goal setting (e.g., Corno, 1986); self-monitoring progress (e.g., Pressley, Heisel, McCormick, & Nakamura, 1982); self-verbalising (e.g., Brown, Bransford, Ferrara, & Campione, 1983; Ghatala, 1986; Harris, 1990; Pressley, Borkowski, & Schneider, 1987); organising materials (e.g., Zimmerman & Martinez-Pons, 1986); rehearsing (e.g., Garcia & Pintrich, 1994); using strategies (e.g., Ghatala, 1986; Pressley et al., 1987); and restructuring work environments (e.g., Zimmerman & Martinez-Pons, 1986). Characterised in the literature (Zimmerman & Martinez-Pons, 1986, 1990) and presented in Table 3.3 are these self-regulated learning strategic actions that are utilised by students to plan goals, select and activate strategies, monitor progress and reflect on their judgement.

Table 3.3. *Self-regulated learning strategic actions (based on Zimmerman & Martinez-Pons, 1986, 1990)*

Processes and self-regulated learning strategies	Strategic actions
Plan goals:	
Goal-setting and planning	Set goals and plan the sequencing and timing of strategies to meet the goal.
Select and activate strategies:	
Organising and transforming information	Initiate overt or covert re-arrangement of instructional resources to improve learning.
Elaborating	Explain in own words the new learning.
Seeking information	Initiate efforts to secure task information from available resources.
Environmental restructuring	Select or arrange the physical setting to enhance learning opportunities.
Self-consequating	Promise and arrange personal rewards or punishments for meeting short-term and long-term goals.
Reviewing records	Re-read tests, notes or textbooks in preparation for assessment.
Rehearsing and memorising	Practise skills and memorise material.
Self-verbalising	Talk through thoughts to rationalise information and to understand the requirements of challenging tasks.
Seeking social assistance	Initiate efforts to pursue help from peers or teachers or other adults.
Monitor progress:	
Keeping records and monitoring	Record progress of learning and results of tasks.
Reflect on judgements:	
Self-evaluating	Judge the quality or progress of learning.

The early research (e.g., Hunter-Blanks, Ghatala, Pressley, & Levin, 1988; Pressley & McCormick, 1995; Rabinowitz, Freeman, & Cohen, 1992; Zimmerman & Martinez-Pons, 1990) about self-regulated learning focused predominantly on strategy development until the research showed that students required an

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understanding of the contextualised application of strategies for control and transference to different contexts. For example, how to perform strategies was effective initially and students applied them within the familiar learning situations. However, without further guidance students failed to transfer these self-regulatory strategies to other situations. Zimmerman (1995) cautioned that self-regulated learning strategies were situationally specific and that successful application required the students' metacognitive knowledge to understand the strategies, and metacognitive regulation to know how to apply the strategies in different situations.

Because of this poor transference of strategies to different and authentic learning contexts, strategy intervention teaching models were designed (Borkowski, 1996; Butler & Winne, 1995; Harris, 1990; Pressley et al., 1987). These models were focused on students not just practising strategies in isolation but also regulating metacognitively their learning to gain informed control over strategy selection, activation and adjustments. To be most effective, Schunk and Zimmerman (2007a) suggested that teachers should embed the development of self-regulation strategies infused with subject knowledge and skills so that students understand how to apply the strategies situated in context. Strategies are developed through systematic teaching and practice that begin with external sources and that shift to self-sources over the course of the four levels represented in the self-regulatory developmental framework (Schunk & Usher, 2013).

3.2.4 The social cognitive self-regulatory development framework

A social cognitive self-regulatory development framework (Zimmerman, 2000a, 2013) involves a multileveled pathway that emphasises the systematic scaffolding of self-regulatory strategies. This framework draws on Bruner's (1996) notion of scaffolding, where a temporary support system leads to more independent learning. The scaffolds can be taken down gradually and removed eventually (Rupley, Blair, & Nichols, 2009). Scaffolding affords a context for learning and teaching that is supportive, flexible enough to accommodate individual differences and designed to relinquish increasing responsibility to the students (Palinscar, 1998).

The first level of the self-regulatory development framework describes how students learn vicariously from observing teacher-directed instruction and modelled skills and strategies. This involves the teacher imparting new information to students through meaningful teacher-student interactions and teacher guidance of the

students' learning (Rupley et al., 2009). Effective teacher-directed strategy instruction includes: clarifying learning goals; asking students questions to monitor their understanding of the content or skills in focus; and providing and using feedback (Taylor, Peterson, Pearson, & Rodriguez, 2002). In the complex environment of the classroom, there are multiple modes of scaffolding that include peer modelling and digital technology tools (Puntambekar & Hubscher, 2005).

During the emulation level of the self-regulatory development framework, the students are scaffolded through the provision of directed practice, feedback and encouragement to approximate the action (Schunk & Usher, 2013). The teacher identifies what the students can accomplish independently and provides just enough scaffolding for them to be able to participate in the tasks that are currently beyond their reach (Pearson & Fielding, 1991).

These first two developmental levels are considered transitional levels as the learning and teaching focus is on acquiring and adapting strategies for potential self-regulation (Perry & Rahim, 2011). The students are enabled externally to connect with and commit to the learning, as the self-regulated learning strategies are internalised in this social-to-self progression (Schunk & Usher, 2013).

During the latter two developmental levels—self-control and self-regulation—learning progresses more from self-sources such as personal standards and performance outcomes. At the self-control level, students rely on self-instruction and independent practice to sustain their learning momentum that is guided by standards as sources of feedback for comparison. The performance moves towards the self-regulation level when the capability to modify performance internally is achieved (Schunk & Usher, 2013). This perceived efficacy of proficient and spontaneous execution is described as automaticity, whereby strategies are adapted and performed in a variety of contextualised situations (Zimmerman & Kitsantas, 1997). At this level of internalised learning, strategies are developed as students “initiate their use, adjust them to fit contexts, and maintain their motivation through their goals, perceptions of goal progress, and self-efficacy” (Schunk & Usher, 2013, p. 19).

Based on the self-regulatory development framework (Zimmerman, 2000a, 2013), Figure 3.4 presents the synthesised multileveled pedagogy framework to illustrate how learning shifts from relying on teacher-direction towards student-driven and self-sourced learning.

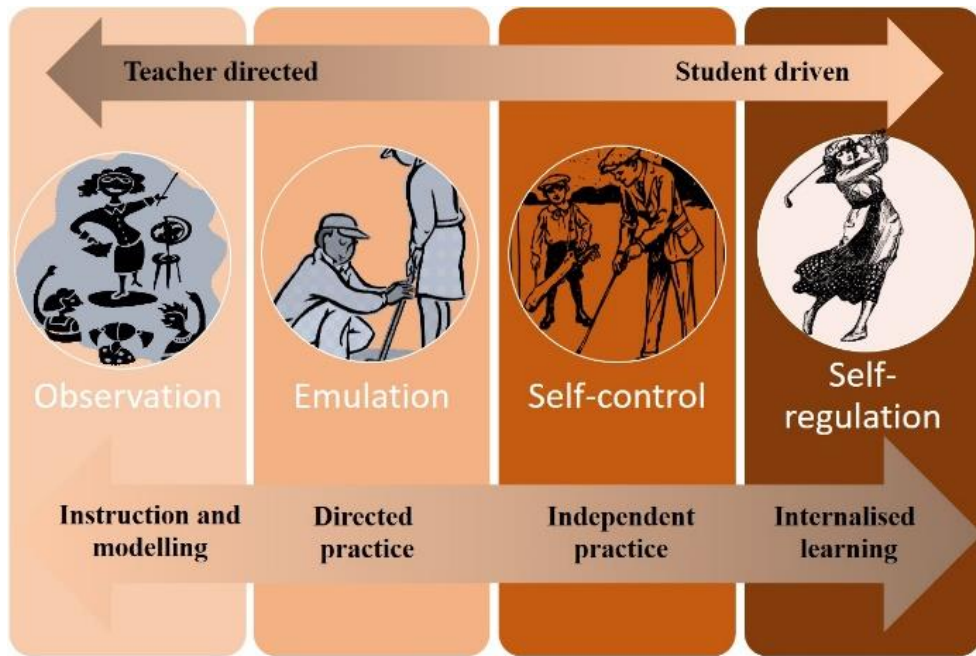


Figure 3.4. A multileveled pedagogical framework (based on Zimmerman, 2013, p. 140)

The following section presents the interrelated fundamentals of self-regulated learning that connect with the social environment for learning to form the conceptual framework of this study.

3.3 The Social Cognitive Perspective: The Fundamentals of Self-Regulated Learning

From my review of the literature about self-regulated learning, I synthesised the three fundamentals—the *rationale for learning*, the *responsibility for learning* and the *capability for and from learning*—that are presented in this section. Each fundamental was aligned with an internal learning enabler. The three learning enablers influence the extent to which students self-regulate their learning through: an interest to engage in purposeful learning; a sense of agency; and an expectation of success.

3.3.1 Substantiating the self-regulated learning fundamentals

Table 3.4 and Figure 3.5 present a summary of the fundamentals of self-regulated learning in relation to these internal learning enablers and their underpinning conceptual constructs.

Table 3.4. *The three fundamentals of self-regulated learning as represented in the conceptual framework*

Learning Processes	Underpinning conceptual constructs	Internal enablers of learning	Fundamentals of self-regulated learning
Set goals and engage in learning	<ul style="list-style-type: none"> - Sources of interest (Renninger & Hidi, 2016) - Goal orientated learning (Pintrich, 2000b; Schloemer & Brenan, 2006; Schunk & Ertmer, 2000; Zimmerman & Kitsantas, 1997) 	<p>An interest to engage in purposeful learning (Renninger & Hidi, 2016):</p> <p>The students' positive reactions to topics or events that occur naturally in the classroom or that are planned, organised learning experiences.</p>	<p><i>Rationale for learning:</i></p> <p>Involves students experiencing an interest in their purposeful learning by responding to triggers as sources of interest that gain their attention, and by setting learning goals to maintain their engagement.</p>
Activate strategies and monitor learning progress	<ul style="list-style-type: none"> - Self-regulated learning strategies (Zimmerman & Martinez-Pons, 1986, 1990) - Metacognitive awareness (Schraw, Olafson, Weibel, & Sewing, 2012) 	<p>Sense of agency (Bandura, 2001; Haggard & Tsakiris, 2009):</p> <p>The feelings experienced by the students that are associated with being in control of their actions and the events involved in the learning.</p>	<p><i>Responsibility for learning:</i></p> <p>Involves students experiencing a sense of agency by thinking about how they learn that empowers them to activate task strategies, monitor progress and adapt to different learning situations.</p>
Reflect on learning and sustain self-efficacy beliefs	<ul style="list-style-type: none"> - Self-efficacy beliefs (Bandura, 1986, 1997) - Causal attributions (Weiner, 2005) 	<p>Expectation of success (Bandura, 1997; Wigfield & Eccles, 2002):</p> <p>The students' anticipation of accomplishments, and beliefs about how well they will perform during different learning experiences.</p>	<p><i>Capability for and from learning:</i></p> <p>Involves students feeling an expectation of success by reflecting constructively on their judgements and attributing causes to outcomes that lead to constructive self-efficacy beliefs.</p>

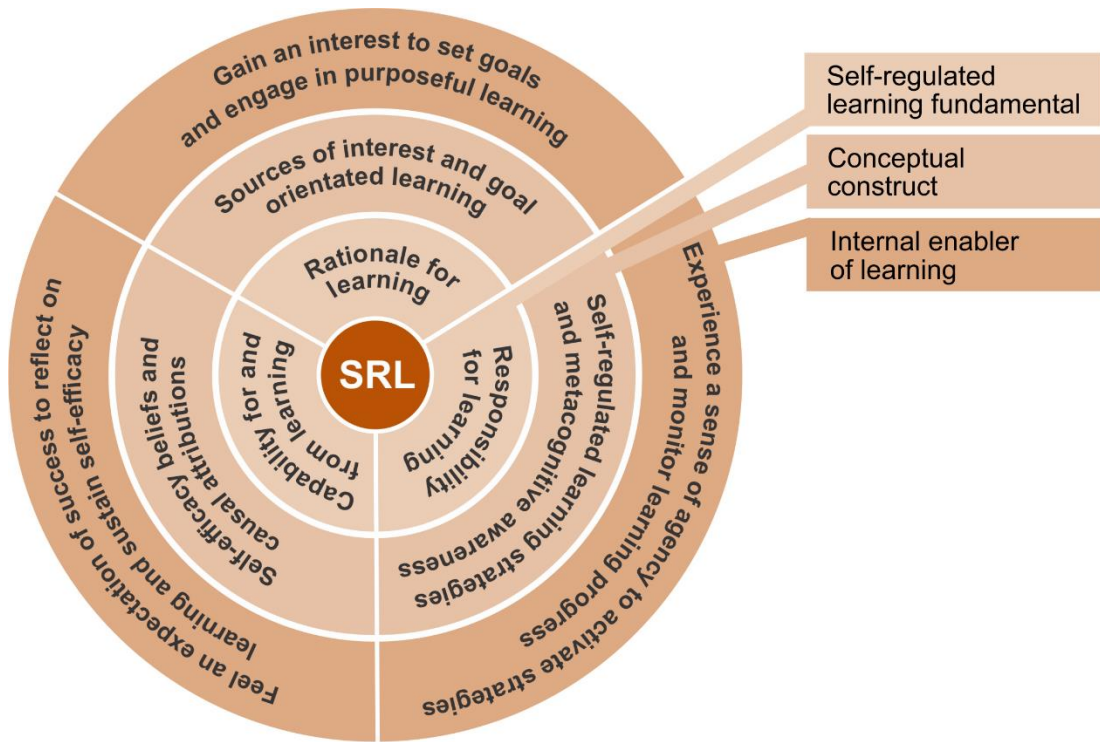


Figure 3.5. The fundamentals of self-regulated learning (SRL)

3.3.2 *The rationale for learning fundamental*

The *rationale for learning* fundamental for self-regulated learning involves students experiencing an interest (Renninger & Hidi, 2016) in their learning by responding to triggers and setting learning goals to maintain their purposeful engagement. Specifically, students’ interests to engage in learning are characterised by their attention, concentration and emotion during learning interactions (Hidi, 2006). In support, Sansone and Thoman (2005) suggested that the interest experience is “the missing piece of many self-regulation models, and should be integrated with other aspects of the self-regulation processes to better understand and predict self-regulatory success and failure” (p. 184).

Sources of interest

Renninger and Hidi (2016) described interest as a psychological state and a motivational disposition that is a product of the interactions between personal characteristics and the environment. Situational interest is characterised in the students’ positive reactions to topics or events as sources of interest that occur

naturally in the classroom environments or as planned, organised activities. Typically, situational interest is supported externally through the content of the activity, the task itself or the instructional style (Ainley, Hidi, & Berndorff, 2002; Hidi & Renninger, 2006). These external triggers can have positive and negative outcomes such as excitement or fear that contribute to whether the students maintain their situational interest and subsequent engagement in different situations. Therefore the experience of situational interest is considered central to the development of individual interest, where the students engage to seek knowledge (Renninger & Hidi, 2016).

Specifically, some learning may not be initially interesting to students so they require rationales to explain the purpose of the learning (Reeve, 2009). Ryan and Deci (2000a) emphasised that “because many tasks that educators want their students to perform are not inherently interesting or enjoyable, knowing how to promote more active and volitional (versus passive and controlling) forms of extrinsic motivation becomes an essential strategy for successful teaching” (p. 55). Correspondingly, Vansteenkiste, Simons, Lens, Soenens and Matos (2005) maintained: “If instructors provide a specific rationale to learners to help them understand the value of the learning, they might better indicate its intrinsic goal relevance” (p. 498).

Learning experiences that have been found to trigger students’ situational interest include authentic tasks that connect with reality and the students’ prior learning (Brophy, 1999), and learning that involves hands-on experiences (Pickens & Eick, 2009), social involvement, surprise, novelty and knowledge development (Dohn, 2010; Dohn, 2013; Swarat, Ortony, & Revelle, 2012). Furthermore, creating an environment that supports the development of the students’ self-regulated learning should include catering for their diverse interests (Harrison & Prain, 2009), providing options (Renninger & Hidi, 2016) and adopting learning orientated goals. Triggering students’ initial interest in the learning experience, in turn, can promote their subsequent interest (Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2008), especially when the students’ perceive it to be meaningfully related to their goals (Keller, 2008).

Goal orientated learning

Some researchers acknowledged appropriate goal setting as the most critical process in self-regulated learning (Butler & Winne, 1995; Nietfeld, Cao, & Osborne,

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2006; Schunk & Zimmerman, 1997). In particular, research has reported that teaching students to plan goals can increase their motivation to self-regulate their learning (Pintrich, 2000b; Schloemer & Brenan, 2006; Schunk & Ertmer, 2000; Zimmerman & Kitsantas, 1997). Goals optimise students' learning when they are proposed as: reachable, though set at a challenge level that inspires effort; personally valued, purposeful and desired so that achievement is meaningful; realistically attainable within the timeframe; and specific enough to be measurable through criteria-based feedback (Locke & Latham, 1990, 2002; Schunk, 1990).

Goals that are associated constructively with students' personal improvements and effort are referred to as mastery/learning orientated goals (Ames, 1992; Dweck & Leggett, 1988; Weiner, 1985). Learning orientated goals have been associated with a range of productive academic and affective outcomes (Anderman et al., 2011). Hence, students' interest may develop as a result of their pursuit to master a desired goal (Harackiewicz et al., 2008). Previous studies (Anderman et al., 2011; Covington, 2000; Kaplan & Maehr, 2002; Pintrich, 2000b) suggested that experiences guided by mastery goals were linked with students' appropriate use of strategies, positive self-efficacy beliefs and as such their self-regulated learning.

Alternatively, students orientating their learning to performance goals measure their success against that of other students (Dweck & Leggett, 1988; Kitsantas & Zimmerman, 2006). Goal structures and subsequent teachers' instructional practices are reported in the research as differing substantially in the schooling years from primary to secondary, with the latter typically emphasising performance goals (Urduan & Midgley, 2003). This can be detrimental to students' motivation and interest in future learning, especially when they respond by creating performance avoidance goals to escape the risk of experiencing failure (Anderman et al., 2011; Dweck & Leggett, 1988; Elliot & McGregor, 1999). Conversely, learning goals encourage students to understand themselves as learners and to determine the purpose of their learning (Kaplan & Maehr, 2007).

The *rationale for learning* fundamental within the conceptual framework includes sources of interest and goal orientated behaviour as being constructs that influence students' engagement in self-regulated learning. Students set goals and interact with the environment and with one another to source interest externally that enables their internal interest to engage in learning (Hidi, 2006; Renninger & Hidi, 2016).

3.3.3 *The responsibility for learning fundamental*

The *responsibility for learning* fundamental for self-regulated learning involves students gaining control over their learning and experiencing a sense of agency (Bandura, 2001; Haggard & Tsakiris, 2009). Students are enabled by a sense of agency to self-regulate their learning (Bandura, 2001). By thinking about how they learn, they are empowered to activate task strategies, monitor progress and adapt to different learning situations. *Empowerment* is a process whereby students possess the inner agency to control their efforts (Reeve et al., 2007), to understand themselves as learners (Bandura, 2001; Cleary & Zimmerman, 2004; Haggard & Tsakiris, 2009) and to apply and monitor strategies for given purposes (Bandura, 2001).

Strategies for self-regulated learning

Knowing when, where and how to apply strategies intentionally to achieve the desired goal extends a student's sense of agency (Bandura, 2001). A repertoire of self-regulated learning strategies (Zimmerman & Martinez-Pons, 1986, 1990) was presented in Table 3.3 to characterise how students take responsibility to plan, monitor and evaluate their learning strategically.

Furthermore, the self-regulatory developmental framework (Zimmerman, 2000a, 2004, 2013) presented in Figure 3.4 illustrates how students are taught and learn to perform these strategies. Teacher-directed instruction followed by opportunities for students to practise the application of the strategies in a variety of conditions supports the automation of self-regulated learning strategies (Dignath-van Ewijk, Dickhäuser, & Büttner, 2013; Kistner et al., 2010; Mason, Harris, & Graham, 2011; Postholm, 2010, 2011).

Teachers can promote self-regulated learning strategies indirectly by arranging learning environments that enable their students to develop and practise a repertoire of strategies (Kistner et al., 2010). Therefore the students can choose strategic actions to suit the situation and apply them effectively to “grapple with the demands and challenges learning can present” (Perry et al., 2015, p. 231). If the students feel as if their learning is in their control, they are more likely to feel a personal responsibility for the outcomes (Fishman, 2014). To gain informed control over their strategy selections, activations and adjustments, students need to be metacognitively

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aware of recurring cycles of task analysis, strategy use and monitoring of their own learning (Alvi & Gillies, 2015).

Metacognitive awareness

In seminal work by Flavell (1979), thinking about one's own thinking was broadly termed "metacognition" (p. 906). Research has indicated that metacognitive awareness is an important component of self-regulated learning (Schraw et al., 2012) that is represented as metacognitive knowledge and metacognitive regulation.

Students use their metacognitive knowledge to identify their personal capabilities and motivation to pursue goals. They think about what they know, as well as what they do not know, and they plan strategically how to proceed with their learning (Schraw, Crippen, & Hartley, 2006). Students source metacognitive knowledge about: their personal strengths and weaknesses; their desire for the goals; how they will need to restructure their environments to meet their goals; and the assistance that they will require to progress (Schraw, 2001). This knowledge assists them to understand themselves cognitively as learners in relation to the demands of particular learning tasks (Pintrich, 2002) and to make informed decisions by applying their strengths and developing their weaknesses. Using their metacognitive knowledge, students set learning goals and engage in learning that is suitable for their personal capabilities.

Metacognitive regulation requires metacognitive knowledge that acts as a source of information for students to make conscious judgements about their strategic actions and to become more responsible for their own thinking (Pintrich, 2002). Metacognitive regulation describes how students strategically monitor their performances and modify their strategy use to suit the situational conditions in pursuit of their goals (Balcikanli, 2011; Paris & Paris, 2001; Schneider, 2008). They compare their current performance with the desired goal and they endorse or adjust the goal and the strategies in relation to the environmental conditions. As a result, when students metacognitively regulate their learning, they activate strategies in an attempt to influence their level of motivation and to increase subsequently their performance on academic tasks.

Therefore metacognitive experiences include cognitive and affective states (Flavell, 1979). For example, when students promise themselves extrinsic rewards for achieving an outcome, they are using the cognitive strategy of self-consequating,

which has been shown to influence their affective state and to sustain their cognitive engagement in learning (Zimmerman & Martinez-Pons, 1990). Self-talk is a cognitive strategy of verbal self-encouragement that students use to motivate themselves to persist in challenging situations or to rationalise the advantages of completing a task (Wolters, 1999).

The *responsibility for learning* fundamental within the conceptual framework includes the development of self-regulated learning strategies and metacognitive awareness as being constructs influencing students' engagement in self-regulated learning. Students' feelings of being in control of their learning can be environmentally influenced and are dependent on them knowing how and when to apply strategies that enables their internal sense of agency.

3.3.4 The *capability for and from learning* fundamental

The *capability for and from learning* fundamental for self-regulated learning involves the students experiencing an expectation of success (Bandura, 1997; Wigfield & Eccles, 2002) by reflecting constructively on their judgements and attributing causes to outcomes that lead to constructive self-efficacy beliefs. The ways in which students approach and respond to learning situations form cumulative cycles that can contribute positively or negatively to their expectations for future learning (Nurmi, Aunola, Salmela-Aro, & Lindroos, 2003). Expectancies were referred to by Eccles and Wigfield (2002) as the "beliefs about how one will do on different tasks or activities" (p. 110). Hence, an expectation of success depends on students anticipating the possibility that they will succeed in mastering a task and on them not being overly apprehensive about failing (Nurmi et al., 2003). Research reported that the students' expectation of success predicted their academic achievement and satisfaction with the task, which increased their subsequent success expectation (Nurmi et al.).

Self-efficacy beliefs

Students' beliefs about whether they can perform the task for a successful outcome influence their expectation of success. Bandura (1986, 1997) defined *self-efficacy beliefs* as personal perceptions of one's capability to execute behaviour successfully and to produce a result particular to a situation. Self-efficacy beliefs are generated from self-observations, self-judgments and self-reactions as the personal

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feedback loop portrayed in Bandura's self-regulatory functioning cycle. The personal feedback loop substantiates that students' perceptions of their experiences influence their self-efficacy beliefs and therefore their motivation to use strategies again or to implement new strategies.

Bandura (1997) identified that self-efficacy beliefs about learning are sourced from enacted mastery experiences, through observing modelled performances as vicarious learning, through social persuasion and from feelings such as enjoyment rather than anxiety about learning. Research has acknowledged that enacted experiences are the most influential source of self-efficacy beliefs as they are based on the outcomes of students' personal experiences (Zimmerman, 2000b).

A significant body of literature supported the achievement effect of developing self-efficacy beliefs to enhance self-regulatory capabilities (Cleary & Zimmerman, 2004; Hattie, 2009; Villavicencio & Bernardo, 2013). Research indicated that, when students hold the belief that they have the capabilities to perform, they are more likely to persist and to maintain effort (Schunk, 1984); activate self-regulated learning strategies (Schunk, 2001b; Zimmerman & Cleary, 2009); sustain task interest (Hidi & Harackiewicz, 2000); and choose suitably challenging goals (Schunk, 2001a; Zimmerman & Bandura, 1994; Zimmerman et al., 1992; Zimmerman & Kitsantas, 1997).

Disturbingly, a decline in students' self-efficacy beliefs about their learning has been identified as students move into the higher year levels of schooling (Ellis et al., 2005), leading to diminishing learning engagement, reduced self-regulated learning and decreased achievement (Gibbs & Poskitt, 2010; Walker, 2009; Wigfield & Eccles, 2002). The beliefs that students hold about their learning capabilities derived from their previous academic achievements and their experiences in self-regulating their learning were identified as being important predictors of their academic success during the middle years of schooling (Zuffianò et al., 2013). Self-efficacy beliefs are dependent on students' self-judgements (Schunk & Pajares, 2009).

Causal attributions

Judgements of personal outcomes act as sources of motivation for students to self-regulate their learning (Zimmerman, 2011). Research has linked self-regulated learning with causal attributions (Schunk & Gunn, 1986), where students attribute the reasons for their performances successes and failures that can empower or

disempower them to progress in their current learning and to initiate their future learning (Schunk & Zimmerman, 2007a). Students' perceived capabilities from their learning experiences are enhanced when causal attributions lead to constructive self-efficacy beliefs (Schunk, 1983, 1984; Schunk & Gunn, 1986; Schunk & Rice, 1986; Weiner, 2005).

According to attribution theory (Weiner, 2000), there are three underlying causal properties: locus or the location of the cause; stability or the duration of the cause and opportunities for changes; and controllability for the performance success or failure. When students attribute causes of successes or failures constructively to changeable conditions that are under their volitional control, they are informed to make adjustments for their future learning and to sustain their self-efficacy beliefs for their learning (Zimmerman & Kitsantas, 1997). Alternatively, misdirected casual attributions lead to dissatisfaction with task performance, waning motivation and bad memories that reduce students' self-efficacy beliefs about setting future challenging personal goals.

The *capabilities for and from learning* fundamental within the conceptual framework includes self-efficacy beliefs stemming from causal attributions as being constructs influencing students' self-regulated learning. Students maintain learning momentum by believing that they have progressed in their learning. They are motivated to select more challenging tasks and this strengthens their self-efficacy that enables their internal expectation of success.

In this section, the complexity of the interrelated fundamentals of self-regulated learning were explained with reference to their underpinning conceptual constructs. In the next section, the social aspects of potentiating self-regulated learning are addressed.

3.4 The Sociocultural Perspective: The Social Environments for Learning

As a social practice, self-regulated learning is sensitive to the social context of the classroom. Seminal works by Vygotsky (1978) indicated the significance of language within the social environment for the development of self-regulated learning capabilities. Further research has revealed that self-regulated learning is enhanced through interactions in the social learning system of classrooms (Hadwin et al., 2011; Paris & Paris, 2001; Patrick & Middleton, 2002; Vygotsky, 1978). From

this sociocultural perspective, Järvenoja, Järvelä and Malmberg (2015) emphasised that the students' interact with the teacher and with other students "to form unique learning situations" (p. 205). Developing an effective community of learners involves the teachers and the students managing their classroom proactively and sharing the construction of knowledge (Hadwin et al., 2011; Martin et al., 2016). The co-regulation of learning and the socially shared regulation of learning are distinctive social processes that interact reciprocally with self-regulated processes for learning to be internalised (Hadwin et al., 2011; Perry & Rahim, 2011; Volet, Vauras, & Salonen, 2009; Zimmerman, 1990b).

3.4.1 The co-regulation of learning

The co-regulation of learning has been defined diversely in the literature. Schoor, Narciss and Körndle (2015) suggested using this term in situations where the learning is scaffolded. During the co-regulation of learning, students interact with their teachers and their peers, who model the expectations and support their learning (Hadwin & Oshige, 2011; Volet et al., 2009). Therefore the co-regulation of learning is a transitional phase, whereby students learn from others who demonstrate their expertise (Hadwin & Oshige, 2011). Through dialogue and interaction, the students learn to engage in and to control their learning. In addition, the cognitive demands of completing tasks are reduced as others assist in monitoring, evaluating and regulating the task processes (Hadwin & Oshige). Research has shown that modelling enables students to gain information by observing actions, processes and related consequences to improve their interest, self-efficacy beliefs and performance in learning (Hadwin et al., 2011; Kitsantas, Zimmerman, & Cleary, 2000).

3.4.2 The socially shared regulation of learning

During the socially shared regulation of learning, students are working on collaborative tasks in a form of interdependent learning with a co-constructed or a shared outcome (Hadwin et al., 2011). In collaborative learning, the goal is to construct knowledge shared among members of the group by dividing the labour of the task in a systematic way (Schoor et al., 2015). In the literature, *the socially shared regulation of learning* refers to individuals operating as a social entity aimed at a shared goal (Schoor et al.). They regulate their learning to perform a collective activity by sharing their prior knowledge and by seeking assistance and direction

from one another when required (Järvelä, Järvenoja, & Veermans, 2008). Students and teachers involved in the socially shared regulation have mutual goals and standards that are co-constructed.

In a community of learners, it is inevitable that self-regulated learning, the co-regulation and the socially shared regulation of learning are interdependent and they are concurrently influenced by environmental conditions (Hadwin et al., 2011). Therefore, in self-regulated learning theory, the self does not imply learning in a vacuum but instead it is to be interpreted as the empowered learners operating within a social environment where they interact with others.

3.4.3 Interactions and relationships

Loughran (2013) applauded the establishment of relationships as the “bedrock on which pedagogical practices are formed, are supported and are actively constructed” (p. 122). The research by Brown (2004) highlighted the significance of teachers developing respectful, caring, personal relationships with their students. Within a “culturally responsive teaching learning community” (Brown, 2004, p. 266), teachers create a safe place for their students to learn and an emotional climate where students can take risks, laugh and trust one another and their teacher. In addition, Noddings (2013) advocated a relational approach to developing communally and personally responsible behaviours, grounded in caring. Arthur, Kristjánsson, Cooke, Brown and Carr (2015) examined the research focusing on the personal qualities of professional teachers to describe the “good” (p. 7) teacher as “someone who, alongside excellent subject knowledge and technical expertise, cares about students, upholds principles of honesty and integrity both towards knowledge and student–teacher relationships, and who does good work” (p. 7). The research indicated that, within the social environment of the classroom, students develop their social responsibility, whereby they learn to care about others when they experience their teacher’s care for them (Evertson & Weinstein, 2006; Fogelgarn & Lewis, 2015; Noddings, 2013).

3.5 The Humanistic Perspective: The Internalisation Process of Self-Regulated Learning

This section addresses the concept of the internalisation of learning from a humanistic perspective through the continuum of motivation (Deci & Ryan, 1985;

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Ryan & Deci, 2002). Firstly, the theory of self-determination (Ryan & Deci, 2002) is drawn on to discuss how students' reliance on external and internal sources influences their motivation for learning. Secondly, the ladder of learning regulation is presented to illustrate the multiple levels of enablement that extend through students' being controlled externally, compliant to meet the requirements, connected with the task and committed to their learning. Thirdly, the external learning enablers are identified. These include: challenges for optimal learning; structures that facilitate achievement; and options that necessitate decision making. Students draw on these external sources of influence to empower them to self-regulate their learning.

3.5.1 The theory of self-determination

The continuum of motivation from the theory of self-determination (Deci & Ryan, 1985; Ryan & Deci, 2002)—specifically the organismic integration mini-theory—plots students' sources of motivational influence that extend through their being extrinsically motivated towards their being intrinsically motivated and self-regulated. Motivation is an internal process that is responsible for behaviours that are extrinsically influenced—performed to attain a reward or to avoid sanction—or are intrinsically influenced—volitional or performed because they are considered important (Deci, Ryan, & Williams, 1996).

The continuum represents the four types of regulation reliant on extrinsic motivation—external, introjection, identified, integrated—followed by internal regulation, as a form of intrinsic motivation towards the experience of flow (Csíkszentmihályi, 2008; Deci & Ryan, 2002). When students' motivation to engage in learning is controlled by demands external to them, the degree of self-regulation is very low. Such external regulation often includes extrinsic motivators of rewards or punishments as contingencies of control.

Partial internalisation of learning, referred to as “introjected regulation” (Ryan & Deci, 2002, p. 17), is present when students' engagement in the learning is reliant on extrinsic motivations that produce internal pressures to which they respond in sequence. Their regulation is controlled by the demands that are external, although these demands become internal through the students' sense of conscience or to avoid an undesired situation. However, this learning is not part of the students' personal self-desires. The students' perceived locus of causality (De Charms, 1968; Ryan &

Connell, 1989) for the learning—the students’ reasons for compliance with the learning—are therefore external, even though the demands are internally influencing them.

At the next level, “identified regulation” (Ryan & Deci, 2002, p. 16), students’ internalisation of their learning increases as they identify the learning as being important for them to achieve a goal. Even though the students consciously accept the learning as having a purpose, they still rely on extrinsic motivation as the utility may not be highly valued by them (Ryan & Deci, 2000b). Compared with introjected regulation, identified regulation has a greater internal locus of causality. This slight shift in reliance on external sources towards internal desires for the learning initiates the process of transforming an external regulation into self-regulated learning (Ryan & Deci, 2002).

Although still being classed as extrinsic motivation, “integrated regulation” (Ryan & Deci, 2002, p. 18) has similarities to intrinsic motivation. Once the goal personally becomes endorsed as being part of the self, the students behave volitionally to maintain engagement in their learning. Intrinsically motivated learning is spontaneous and is initiated and regulated within the students themselves (Deci et al., 1996). Absolute internalisation is where the student has complete control over the action and the environment, and learning is for pleasure rather than being instrumental for an outcome. When students are absorbed in the action, as an intrinsically rewarding experience, their learning is in a state of flow (Csikszentmihályi, 1975, 2008).

As can be reasoned, it is difficult to establish this state in a school classroom environment, where attendance is compulsory and the mandatory curriculum—with its time and assessment demands—influences the outcome expectations. That is not to say that students do not experience the intrinsic motivation of flow in learning at school. However, the realistic focus of teachers is for their students to reach a level of extrinsic motivation that engages them in the learning experience such as the levels of identified regulation and integrated regulation. For students to move towards a state of flow, their perception of the learning challenges and their capabilities must be aligned and sufficiently supported (Csikszentmihályi & Rathunde, 1993).

3.5.2 The learning regulation ladder

To extend the social cognitive perspective on self-regulated learning and to offer contributions to theoretical knowledge, the conceptual framework of this study was designed to include the ladder of learning regulation that explains how external enablers transpire into internal enablers. The learning regulation ladder represents the varying levels of students' regulation during learning experiences. Figure 3.6 illustrates the multiple levels of regulation that drive students towards personal empowerment to engage completely in their learning.

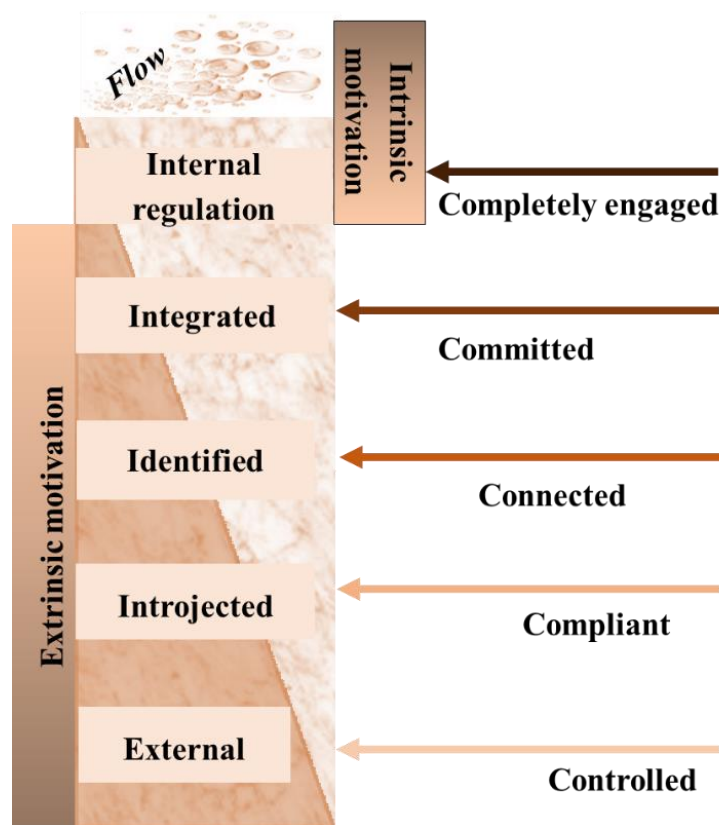


Figure 3.6. The ladder of learning regulation (based on Ryan & Deci, 2002, p. 16) and informed by the theory of flow (Csíkszentmihályi, 2008)

The five levels on the ladder of learning regulation emphasise that students' self-regulated learning is not a dichotomy, that is, either present or not. Rather they describe what self-regulated learning looks like in the classroom. Unfortunately, some students are reliant continually on external sources to enable them to regulate their learning. External contingencies can undermine student interest, engagement and motivation (Vansteenkiste et al., 2005). Without drawing on the internal enablers of learning, these students are controlled by proxy inducements. As such, they run the risk of disengaging altogether from the learning when these external enablers are

absent or do not meet their learning needs. At other times, students are compliant with responses that are considered by others as being favourable to the situation or to the demands of the teacher. These responses are aimed at inviting social approval and avoiding punishments and are reliant on others to exert a measure of control over their learning experiences.

The key word here is *reliance*. The challenge for teachers is to identify where students are on the ladder of learning regulation for a particular task and to provide opportunities through the external learning enablers, to shift them towards being enabled internally to: gain an interest in purposeful engagement; experience a sense of agency; and feel an expectation of success. Therefore the roles of the teacher go beyond managing students' behaviour for compliance and towards supporting students to develop their own connection with and commitment to their learning. The external learning enablers were identified in the literature review to authenticate a self-regulated learning pedagogy, as presented in Figure 2.1, and are presented in the next sub-section.

3.5.3 The external learning enablers of students' self-regulated learning

In relation to potentiating students' self-regulated learning, these external learning enablers—challenges, structures and options—were discussed in the literature review and were ubiquitous in the research. Jang, Reeve and Deci (2010) confirmed that pedagogies support students' engagement “by presenting interesting and relevant learning activities, providing optimal challenges, highlighting meaningful learning goals, and supporting students' volitional endorsement of classroom behaviors” (p. 588).

Optimal challenges provide students with external sources of support to invest effort and to engage in their learning (Jang et al., 2010). Challenges tap into students' curiosity, interests and their desire to be successful (Deci & Ryan, 1985; Reeve, 2009). Paris and Paris (2001) proposed that students' self-regulated learning is more likely to develop when “teachers create classroom environments in which students have opportunities to seek challenges, to reflect on their progress, and to take responsibility and pride in their accomplishments” (p. 99).

For a learning experience to be suitably challenging, the students need to perceive that they have the required skills to meet the challenges of the goals (Csíkszentmihályi, 1975, 2008). Schunk and Miller (2002) confirmed: “Self-efficacy

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is aided when environments are rich in interesting activities that arouse their curiosity and offer reasonable challenges” (p. 34). When this balance between skills and perceived challenges occurs, the student “feels more active, alert, concentrated, happy, satisfied and creative, regardless of the task being performed” (Csikszentmihalyi & LeFevre, 1989, p. 816). Ideally, teachers need to know their students as learners to set appropriate challenges for their progressive accomplishments (Hattie & Yates, 2014).

The concept of designing for learning differentiation is supported by Vygotsky’s (1978) zone of proximal development theory. Vygotsky (1978) proposed the optimal zone for learning as being the distance between the student’s current skill competence on a task and the level that can be achieved with support. Teachers who provide challenges that are directed within this optimal zone adjust the learning support for all students and they provide constructive feedback that informs the teachers and students of the learning progress (Hattie & Yates, 2014).

Structures provide students with varying degrees of support to clarify their expectations and their ways of achieving success in their learning (Jang et al., 2010). Teachers provide structures that empower students to regulate their own learning by:

- Communicating task directions and outcome expectations that specify the purpose and goals of the task (Jang et al., 2010);
- Leading teacher-directed instructional activities and modelling strategies (Dignath-van Ewijk et al., 2013; Kistner et al., 2010; Mason et al., 2011; Postholm, 2010, 2011);
- Offering step-by-step instructions that provide an awareness of the tasks as smaller units (Putwain, Nicholson, & Edwards, 2016);
- Setting procedures for routines and rules as behavioural expectations (Evertson, Emmer, & Worsham, 2000);
- Acknowledging, prompting and encouraging on-task behaviour (Brophy, 2006b);
- Connecting prior knowledge with new experiences (Travers, Sheckley, & Bell, 2003); and
- Offering constructive feedback in a timely manner to guide students towards attributing causes for academic goal achievements (Hattie & Gan, 2011).

Structures in learning provide students with the needed support and a protection from anxiety and fatigue that inhibit them from self-regulating their learning (Shanker, 2010).

The multileveled pathway of the self-regulatory development framework (Zimmerman, 2000a, 2013) was presented in Figure 3.4 to identify the four levels of structures that support students towards self-regulating their learning that included: observation; emulation; self-control; and self-regulation. As Schunk and Usher (2013) described: “This model predicts that self-regulatory skill development begins with social (external) sources and shifts to self (internal) sources over the course of these four levels” (p. 18). As the learning moves through the developmental levels, the learning changes from being teacher-directed to being student-driven.

Calibrated structures and options make important contributions to supporting students’ engagement in learning by providing enough guidance and ample choices (Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009). Conversely, students are discouraged and have little interest in the learning when they perceive that there are limited structures with few options (Jang et al., 2010).

Teachers afford appropriate options by offering opportunities for the students to make decisions and to feel that they have choices about the processes and products of their learning (Ames, 1992; Bozack, Vega, McCaslin, & Good, 2008; Jang et al., 2010; Reeve et al., 2007; Vanasupa, Stolk, & Harding, 2010). Options provide external sources of support that influence the intensity of the students’ metacognitive awareness (Schraw et al., 2012) and their motivational beliefs that are related to higher levels of self-regulated learning (Jang et al., 2010; Pintrich, Roeser, & De Groot, 1994). Options should be presented in such ways that the students’ choices are guided by their interests and not by an intent to minimise effort or to avoid failure (Ames, 1992).

Affording students options, as choices to negotiate their learning, was recognised in a number of studies as being conducive to students’ being able to act, think and feel as agents of their own learning (Bozack et al., 2008; Nolen, 2001; Reeve, 2009; Reeve et al., 2007; Stefanou, Perencevich, DiCintio, & Turner, 2004). When students have the opportunity to make decisions about how to proceed in a learning task, it engages them to plan goals, monitor their progress and self-assess to control the degree of the challenge (Mykkänen et al., 2015). Turner and Patrick (2004)

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found that offering students choices in tasks during mathematics lessons supported them to become more actively engaged and to participate as self-regulated learners.

The research has substantiated the learning enablers—challenges, structures and options—as a self-regulated learning pedagogy that co-exist in the social learning environment. To conclude this section, the review of the research is summarised to consider the three external learning enablers of self-regulated learning in Table 3.5.

Table 3.5. *The external enablers of self-regulated learning*

External Enablers	Research to substantiate the external enablers of self-regulated learning
Challenges	<ul style="list-style-type: none"> - Encourage students' experiences of successes and failures of strategy use (Paris & Paris, 2001). - Offer students criteria to self-evaluate their own learning (Bartolome & Steffens, 2011). - Provide students with non-threatening, appropriate feedback and opportunities to monitor and self-assess their own progress (Bartolome & Steffens, 2011; Hattie & Timperley, 2007; Labuhn, Zimmerman, & Hasselhorn, 2010; Mykkänen et al., 2015). - Provide students with criteria to judge their own performances and to evaluate peers' work (Perry, Phillips, & Dowler, 2004; Perry et al., 2002). - Offer encouragement for students' effort and persistence (Reeve, Deci, & Ryan, 2004). - Tailor learning goals to set the expectations (Travers et al., 2003). - Align goals with students' interests and their perceptions of the utility of the learning (Cleary & Chen, 2009). - Cue and praise students' mastery and progress (Reeve et al., 2004).
Structures	<ul style="list-style-type: none"> - Help students to develop concept connections (Travers et al., 2003). - Link students' new experiences with their prior learning (Travers et al., 2003). - Provide learning related materials for students to manipulate (Reeve et al., 2004; Swarat et al., 2012). - Develop frameworks for monitoring student progress (Harrison & Prain, 2009). - Provide teacher-directed instruction about self-regulated learning strategies (Dignath-van Ewijk et al., 2013; Kistner et al., 2010; Mason et al., 2011; Postholm, 2010, 2011). - Model expectations with clear instructions (Cleary & Zimmerman, 2004). - Guide to share with the students the organisation of the learning environment (Ley & Young, 2001).
Options	<ul style="list-style-type: none"> - Offer students choices of topics, tasks, resource selections and methods to record information (Boekaerts et al., 2006; Harrison & Prain, 2009; Mykkänen et al., 2015; Nolen, 2001; Perry et al., 2004; Perry et al., 2002; Sierens et al., 2009; Turner & Patrick, 2004). - Acknowledge students' perspectives (Reeve et al., 2004). - Encourage students' planning of their own learning activities (Bartolome & Steffens, 2011). - Create opportunities for students to work in their own ways (Reeve et al., 2004).

3.6 Review of the Chapter

The conceptual framework presented in this chapter has drawn from a vast amount of literature to synthesise the multidimensional and complex theory of self-regulated learning. It provides a platform to guide conceptually the data analysis of this study. Furthermore, the conceptual framework offers unique contributions to the existing theoretical knowledge about self-regulated learning.

As presented in Section 3.2, the different theoretical perspectives have provided a broad scope for researchers to study self-regulated learning through the interactions of environmental, behavioural and personal influences. A social cognitive perspective of self-regulated learning was prominent in this study as it encompasses the metacognitive, motivational and behavioural dimensions of the self-regulated learning prism within the social environment.

Acknowledged in Section 3.3 were the three fundamentals of self-regulated learning: the *rationale for learning*; the *responsibility for learning*; and the *capability for and from learning*. These fundamentals were analysed and synthesised from the broad research fields to determine the significant theoretical constructs relevant to each fundamental that described how students are enabled internally to self-regulate their learning.

In Section 3.4, the concepts of the co-regulation of learning and the socially shared regulation of learning from a sociocultural perspective (Hadwin et al., 2011; Hadwin & Oshige, 2011) were integrated with the social cognitive perspective on self-regulated learning. Embedded in the social learning system of classroom environments are social interactions that develop conducive relationships for learning.

In Section 3.5, the relevance of external and internal sources of influence to students' learning internalisation were reviewed. The learning regulation ladder was synthesised to provide a humanistic perspective that extends the social cognitive perspective on self-regulated learning and to contribute to theoretical knowledge.

The next chapter explains the methodological decisions that were informed by the conceptual framework presented in this chapter to position and guide this exploratory research.

Chapter 4 The Research Design

We must not negate practice for the sake of theory. To do so would reduce theory to a pure verbalism or intellectualism. By the same token, to negate theory for the sake of practice ... is to run the risk of losing oneself in the disconnectedness of practice. It is for this reason that I never advocate a theoretic elitism or a practice ungrounded in theory, but the unity between theory and practice. In order to achieve this unity, one must have an epistemological curiosity. (Freire & Macedo, 1995, p. 382)

4.1 Overview of the Chapter

The previous chapters presented the rationale for the thesis, the review of the literature relevant to the issue of investigation and the conceptual framework that informed the data collection and analysis. The purpose of this chapter is to provide for the reader an accurate picture of the research design and to clarify my position within this study for the reader to evaluate the quality of the responses to the research questions. The philosophical foundations that underpin the research design of this study are articulated. The research questions are at the centre of the inquiry framework that was designed to guide the practical decisions for this exploratory research.

This study investigated the prevalent roles that teachers play in managing classroom environments that potentiate students' self-regulated learning. This issue of investigation was explored through a case study approach. The selection of the context for the dual case studies in the transitionally connected primary and secondary school settings is rationalised and the involvement of the eight teacher participants is clarified. The tools used to collect the multiple sources of data and the stages of the thematic data analysis are described to explain how I generated the findings. Following this, the planning process and the thinking involved in ensuring that the research was ethically sound are discussed. To conclude the chapter, the rigour and the trustworthiness component of this qualitative case study research are outlined.

4.2 A Way of Being, Knowing and Valuing

Beliefs about the nature of things as they are known (ontology) and how what can be known should be conceptualised (epistemology) clarified my position as the researcher in terms of my philosophical orientation. I recognised the significance of the researcher's values (axiology) within the study. Therefore I have endeavoured to make my values known and I have acknowledged that biases were present.

In ontological terms, this qualitative study involved an interpretivist orientation that rejected the positivist assumption of an objective reality with one truth. The research was premised on a relativist ontology that supported multiple realities from the researcher and the participants, whereby there was no one true way of seeing the world (Creswell, 2013). These multiple realities were socially and experientially based and were time and context dependent (Lincoln, Lynham, & Guba, 2011).

I acknowledge that all knowledge is inter-related and value-laden, rather than being objective truths (Britzman, 2012). Hence, I understand that my personal biography and my worldview underpin my research practices and act as an interpretative filter to construct knowledge from this study. By acknowledging these influences, I ensured that I represented the participants' experiences within complex and changing contexts. Accordingly, I was able to provide a comprehensive account of the issue of investigation relative to my perspective.

From an epistemological standpoint, those involved in this study—the participants and me as the researcher—defined what was known and what was considered to be true through constructing meaning from personal experiences. However, as the researcher, I was the one intimately involved in the data collection and the analysis and I was operating as the “prime filter and interpreter” (Goodwin & Goodwin, 1996, p. 111). As pointed out by Drisko (2013), “the researcher serves as a witness and also a translator of experiences and understandings across different social groups” (p. 85).

Utilising a social constructivist paradigm, I understood reality to be socially constructed by individuals interacting in their social contexts and that this occurred at a particular point in time (Creswell, 2013; Merriam, 2002). A *paradigm*, described as a “loose collection of logically related assumptions, concepts, or propositions that orient thinking and research” (Bogdan & Biklen, 2007, p. 24) represents the basic belief system that guides the research (Denzin & Lincoln, 2011). Central to the

social constructivist views is the naturalistic process of values being respected and exchanged between the researcher and the participants in response to social interactions within the contexts.

Personal critical reflection guided me through this socially constructed research to view consciously the values, norms and beliefs operating as axiological assumptions. Therefore my approach to this research was derived from my background experiences, beliefs and values with biases evident in my selection of the issue, the research questions, the conceptual foundation and the context of the study. It was impossible for me to escape myself in terms of my experiences. However, it was important that I was self-aware and that I monitored how these experiences shaped my research design and interpretations. This process of reflexivity is portrayed by Creswell (2013) as “coming to know the self within the process of research itself” (p. 183). My attention to reflexivity acknowledged my personal influences and inevitable biases to inform explicitly my past experiences with the issue of this study (Creswell, 2013).

Through my practical teacher knowledge, as an experienced educator, I recognised that teachers play prevalent roles in managing classroom environments that potentiate self-regulated learning. This initially motivated me in the issue of investigation that guided this study. In Chapter 1, I affirmed my place as the researcher and I acknowledged and accepted the value-laden nature of the study with respect to the data collection and analysis. Additionally, the values and the perceptions of the reader have the potential to influence the interpretations of the findings.

4.3 The Philosophical Assumptions

The decisions made by me when undertaking this research were grounded in my ontological, epistemological and axiological worldviews, which provided the “key premises that are folded into interpretive frameworks used in qualitative research” (Creswell, 2013, p. 23). This qualitative research afforded me the opportunities to “study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2011, p. 3). The qualitative orientation included four key features: the researcher’s intention to construct meanings by foregrounding the teacher participants’

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experiences; the researcher as the interviewer and the observer for the data collection and analysis; the rich descriptions that emanate from the data extracts, using the teacher participants' own words; and the setting of the study situated within the contemporary classroom contexts (Creswell, 2013; Denzin & Lincoln, 2011; Merriam, 2009).

An interpretivist framework, warranting multiple realities, was utilised in the design of this study to interpret the complex meanings of the teacher participants' experiences and to capture what was particular to the places and times (Creswell, 2013; Denzin & Lincoln, 2011). To avoid an over-simplistic misrepresentation of the complex issue, a subjective view—described by Stake (1995) as “having meanings at least partly unique to the individual observer” (p. 173)—emanated from personal meaning making and interpretations. Subjectivity, supported by rich descriptions in this study, provided opportunities for the readers to make informed interpretations. Therefore the conclusions, subjective through their construction and interpretation, included multiple perspectives such as existing knowledge, the voices of the teacher participants, the researcher's standpoint and the readers' constructions as the personal meaning makers.

My understandings of the teacher participants' experiences and of their distinctive social contexts were integral to the intent of this research (Creswell, 2013). The social constructivist paradigm guided the approach to construct meanings from experiences that were a product of, and that were influenced by, the social interactions within the context of the research (Creswell, 2013; Merriam, 2009). I entered the world of the teacher participants, and I engaged and interacted in the contexts to explore intently the experiences that constituted the teacher participants' words and actions in response to the research questions (Denzin & Lincoln, 2011). Complementing one another, the qualitative approach, the interpretivist framework and the social constructivist paradigm were integrated to align the research design with the underpinning philosophical assumptions.

4.4 The Research Inquiry Framework

To address the three research questions, I designed a rigorous inquiry framework based on Butler's (2011) “roadmap to the main features of inquiry frames as employed in case study research” (p. 348). The interconnected practices include:

identifying the issue; collecting the data; preparing and engaging with the data; analysing thematically; interpreting the data analysis; and composing the research thesis, as presented in Figure 4.1.

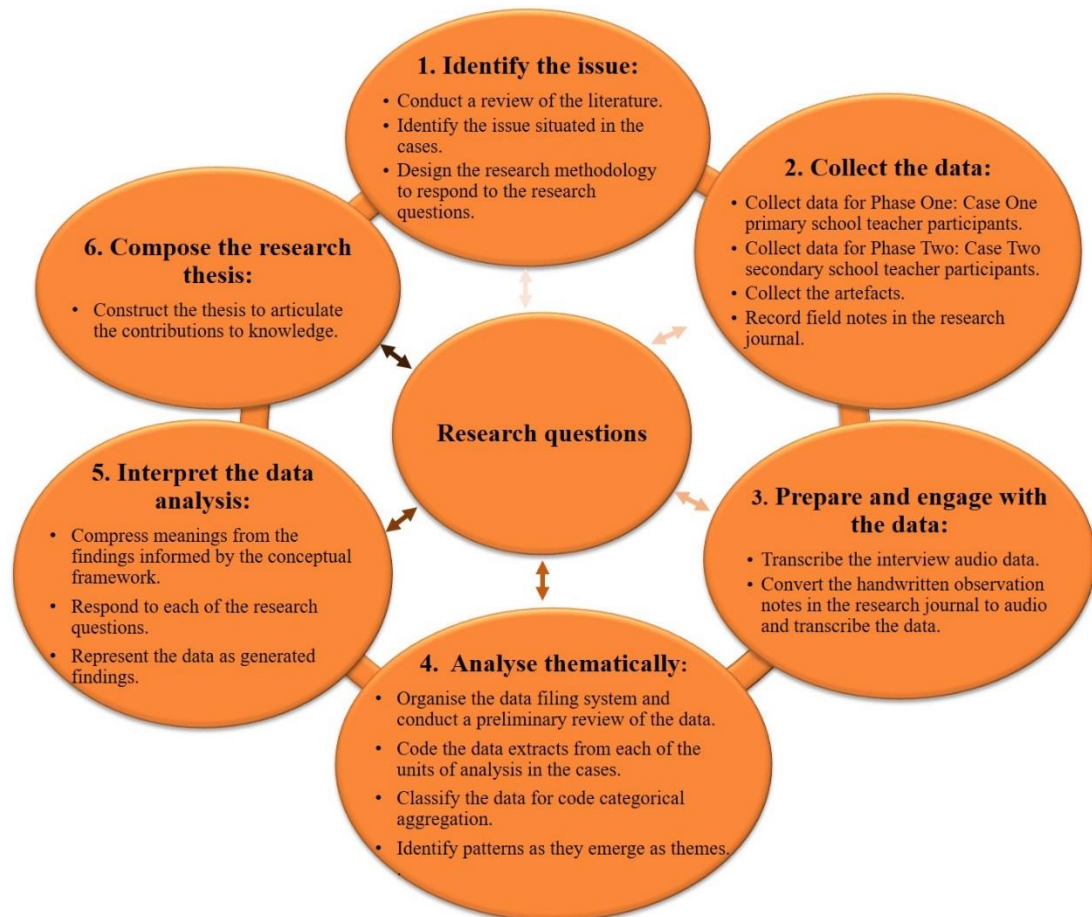


Figure 4.1. The research inquiry framework (based on Butler, 2011, p. 349)

4.5 The Research Questions

The research questions component formed the centre of the inquiry framework, as the sequential questions interacted with each of the other components. The design path began with a thorough review of the literature (Yin, 2014) to initiate thoughts for posing the following research questions:

1. How do teachers working across the primary–secondary schooling transition years talk about fostering their students’ effective learning?
2. How do teachers’ pedagogical practices for effective learning provide opportunities for students to regulate their own learning in the primary–secondary schooling transition years’ classroom environments?

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3. How does the exploration of teachers' pedagogical approaches inform a primary–secondary schooling transition pedagogy for self-regulated learning?

The research questions were designed to explore pedagogical practices intended for student' effective learning. *Effective learning* was defined for the purpose of this study as students enacting a suite of strategies to engage in tasks to achieve an outcome that advances their knowledge and skill development. It was essential that the exploration was open to draw broadly on the teacher participants' practices for fostering effective learning to avoid a restricted focus on their knowledge of self-regulated learning.

As articulated in the definition provided by Creswell (2013), this qualitative research begins with an issue and a review of the literature to develop a conceptual framework that informs the study of research. It proceeds then through an emerging approach of inquiry to collect data in natural settings. The preliminary review of the literature guided the placing of this practice-based study contextually in the primary–secondary schooling transition years of education to address the gap in the literature. Limited research had focused on how practicing teachers in the primary–secondary schooling transition years provide students with opportunities to self-regulate their learning in regularly occurring classrooms activities. In addition, there was no evidence of a transition pedagogy for self-regulated learning, as a practice-based framework, that could be used to inform and guide teachers' pedagogical approaches.

4.6 The Case Study Approach

Case study, as an empirical interactive inquiry method, provided multiple sources of evidence, which supported detailed and rich descriptions of the bounded settings (Merriam, 2009; Stake, 1995; Yin, 2014). For this research, the term *case study* referred to “a qualitative approach in which the investigator explores a real-life, contemporary, bounded system ... or multiple bounded systems ... through detailed, in-depth data collection involving multiple sources of information” (Creswell, 2013, p. 97). Case study design was presented in the research literature as a strategy of inquiry (Denzin & Lincoln, 2011), an empirical inquiry (Yin, 2014), a comprehensive research approach (Creswell, 2013) and an intensive, holistic description and analysis of a bounded system (Merriam, 2009). Stake (2010) preferred to view case study not as a methodology but instead as an approach to

researching the particularity and complexity of a unit of study. Common to all definitions was the emphasis on case study being a way to study an issue in depth.

The case study approach adopted for this research was exploratory rather than explanatory or descriptive in nature, as an approach that offers opportunities to develop ideas for further studies (Yin, 2014). Exploratory case studies were considered in the literature as being a valuable research method to gain new information about self-regulated learning and to bridge theory and practice (Butler, 2011). As observed by Butler, “bridges can be built through the process of case study inquiry itself, when complex, dynamic processes are investigated within authentic settings” (p. 358).

Three key characteristics highlighted why the case study approach was chosen for this qualitative research. Case studies were reported to be effective for exploring research questions related to under-researched issues within temporally and spatially enclosed systems and for collecting multiple sources of data that are embedded as units of analysis (Cousin, 2005; Creswell, 2013; Merriam, 2009; Stake, 2010; Yin, 2014).

4.6.1 The contexts and participants

The primary–secondary school transition years, from Years 5 to 9 in Australia, which provided the context for this study, were reviewed as being a distinctive phase of education. At the time of the study in Queensland, students in Preschool to Year 7 were in the primary school and Years 8 to 12 students were in the secondary school. In 2015, this changed with the introduction of junior secondary for Years 7 to 9 students and the shift of Year 7 students to the secondary school.

The chosen sites for the study were two Queensland regional Lutheran schools, selected specifically because of their student transitional relationship. The secondary school and the feeder primary school operated as independent schools that accessed federal, state and Lutheran educational frameworks. The schools were supported by three main funding sources: the federal government; the state government; and school fees. When I approached the two school principals separately, they were open in both their appreciation of the value of researching the issue of the study and their acknowledgement of the limited link existing between the two schools in terms of the knowledge of pedagogical practices.

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Systemically, the schools identified with an ethos that was suitable to exploring teachers' pedagogical practices that enhance self-regulated learning. This emanated from the schools' values-based approach to lifelong learning and specifically to developing "self-directed, insightful investigators and learners" (LEA, 2013, p. 8). Frameworks that provided overviews of what shaped the schools were drawn from four documents: *A vision for learners and learning in Lutheran schools* (LEA, 2013); Lutheran Education Queensland's curriculum framework (LEQ, 2017); the Australian Curriculum framework (ACARA, 2017); and the Queensland Curriculum and Assessment Authority curriculum framework (QCAA, 2015). Therefore this study explored the teacher participants' pedagogical approaches that aligned with the expectations of these curriculum and policy documents.

In choosing Australian schools for the study, I considered contextualised decisions that were important for achieving open, reliable and co-operative settings. It was also important that the school communities selected valued the opportunity for participation in the research and that the teacher participants were available and open to reflecting on their pedagogy. In agreement with Stake (1995), "we need to pick cases which are easy to get to and hospitable to our inquiry" (p. 4). As the researcher, I spent considerable time becoming acquainted with the contexts and the teachers, so it was important that the schools were located for my convenience of access.

The primary school setting and participants

The selected primary school for Case One was located in the centre of a southeast Queensland regional town. The school was established in 1982 and it has a growing population with contemporary buildings, facilities and resources. The 12 school values were prominent in displays around the school and in classrooms, as portrayed in the photograph presented in Figure 4.2.

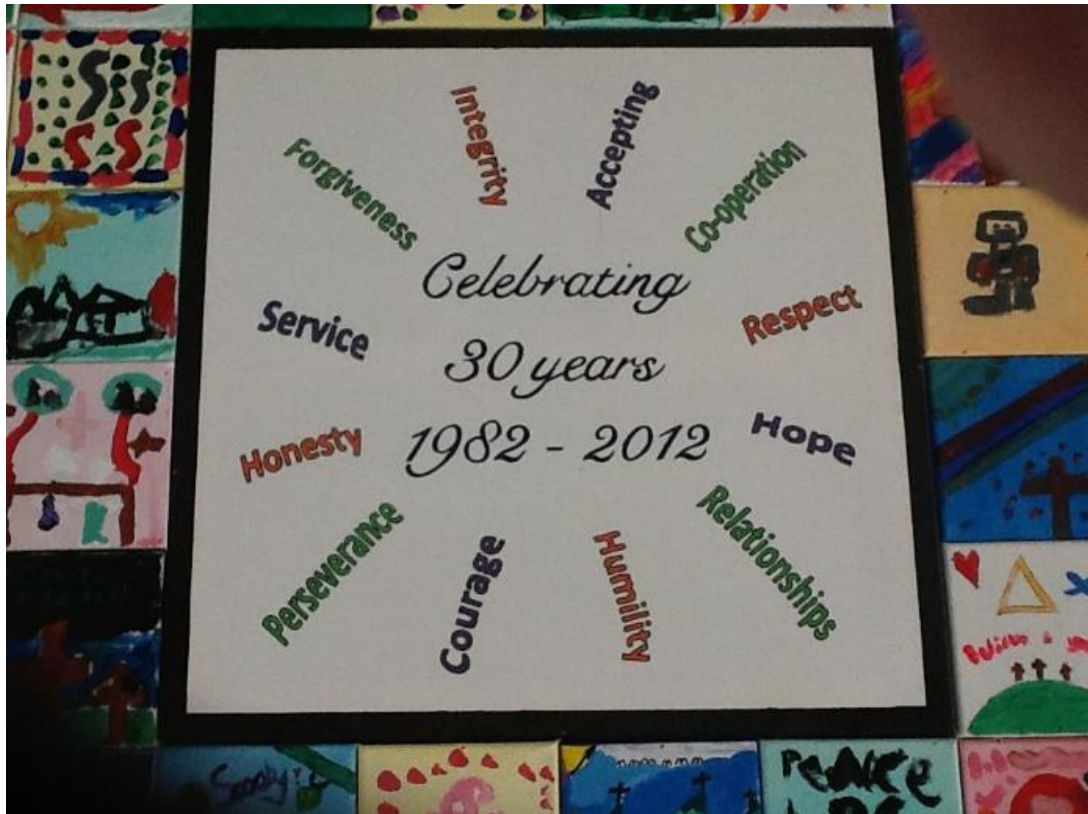


Figure 4.2. The school values on display at the primary school

At the time of the study's data collection, the school enrolments included the students in the Preparatory Year to Year 7 (P-7) and they were organised systemically into stage-based learning rather than year levels. Within each of the stages, year levels were combined so that the students were intentionally organised in multi-aged classes. The Stage 3 was a combination of Years 5, 6 and 7.

The four teacher participants from Stage 3 within the primary school volunteered to be involved in the study via the deputy principal's invitation. Represented through pseudonyms to protect their identities, Bec, Julie, Peter and Nicky were teachers—three female and one male—with varied personal experiences, ages, teaching proficiencies and professional backgrounds. Bec and Julie had established a strong collaborative teaching partnership at the time of the study's data collection, frequently operating the two classes as one larger class group of Years 5 and 6 students. Peter and Nicky worked together, both teaching Year 7 classes, co-operatively and collegially to varying degrees during the different timetabled events of the school day.

The secondary school setting and participants

The selection of the secondary school for Case Two was a natural decision as it was the school to which many of the Year 7 students would transition into Year 8. Located in regional, southeast Queensland, central to a number of small towns and residential development areas, this independent secondary school sought the same funding as the primary school to support its operations.

The secondary school's values were represented within the school's vision and policy statements, in a comparable way to those of the primary school. This Lutheran secondary school emphasised the provision of a caring environment, with the major focus being on learning and teaching within a curriculum structure offering a wide choice of elective subjects. Also embedded in the school-wide pedagogical framework were the Habits of Minds (Costa & Kallick, 2000), which in this school context emerged as a framework of attributes that comprised intelligent thinking behaviours that were characteristic of successful learners with respect to academic, vocational and relational success. These habits were displayed on charts in all the classrooms within the school and they were included in the students' school diaries.

Established in 1999, the school had grown rapidly in student population, particularly since 2010. With this growth came the development of state of the art buildings, facilities and resources. In 2014, at the time of the study's data collection, the school catered for students enrolled from Years 8 to 12 and it was preparing for the state-wide change in primary-secondary school year level arrangements. This activated new programming to cater for a junior secondary phase of schooling, Years 7, 8 and 9, and an increase in student numbers. The school staff was involved in planning for these changes. From a conversation with the principal and the head of teaching and learning, it was obvious that the school administration were very excited about the conceptualisation of this phase of schooling. I suspected that their enthusiasm for and interest in my study stemmed partly from this structural change.

At the time of the study's data collection, the secondary school was organised into year levels and subject disciplines for learning, with the teacher participants teaching, at least in part, the students from Years 8 and 9. I requested that the participating teachers, who were invited to join the study by the head of teaching and learning, were teaching various subjects within these year levels and that they were interested in and enthusiastic about being part of the study.

The volunteer teacher participants, represented by the pseudonyms Greg, Rachael, Brian and Sarah—two females and two males—were specialists in the disciplines of science, mathematics, Christian studies and history respectively. Comparable to the primary school participants, the teacher participants from the secondary school had varying years of experience in the teaching profession, and a diversity of backgrounds and specialties.

Rachael and Greg held leadership positions within the school and they were experienced in their fields, teaching in the junior and senior year levels. Greg was observed teaching science to Years 8 and 9 students, and Rachael was observed teaching Year 8 students mathematics. Brian, who had been a primary school teacher before working with secondary students, was observed teaching Christian studies with two Year 8 classes. Sarah, an early career teacher, was observed teaching Year 9 students in history lessons.

Communication with school coordinators and participants

Communication was essential to building relationships and productive research environments in the school contexts. I was aware of providing the stakeholders—the principals, the designated site coordinators and the teacher participants—with the required information so that they could make informed decisions about and plan for their involvement in the study. After initial face-to-face introductory meetings with the school principals, as the gatekeepers of the sites, I utilised email as the mode of communication to keep them informed and to establish and maintain conversations with all the stakeholders listed above. This enabled me to organise mutually agreed interview times, suitable locations for the interviews and a timetable for the classroom observations. I recognised and respected the busy schedule of the administrators, the teachers and the other staff members during a school day, having myself been a primary school teacher for many years. Through effective communication, I managed to blend in and observe classes, and to conduct time-managed interviews with the aim of not intruding too much in the daily school routines.

4.6.2 The tools of data collection

This qualitative research employed a threefold collection of data, utilising semi-structured interviews with teacher participants, classroom observations and

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subsequent follow-up interviews for clarification. Each triadic dataset was not viewed as being a separate unit but instead it was considered from a holistic perspective to enhance the understanding and the credibility of the data. The dual cases in this study were embedded with eight units of analysis.

The data collection was completed in two phases. Case One formed the first phase of the research, and data were collected from four teacher participants within the primary school setting, bounded by a six week time-frame. The second research phase, Case Two, involved four teacher participants within the secondary school setting, with the data being collected in a six week time-frame.

The initial semi-structured interviews were connected with the classroom observations and the follow-up interviews. These data were supplemented by the notes recorded in my research journal and the collected artefacts. The multiple sources of evidence guaranteed descriptive detail for a rich, in-depth discussion and robust interpretation to avoid the common criticism levelled at case study of a perceived lack of cross-referenced data for credibility (Creswell, 2013).

The semi-structured interviews

Semi-structured interviews were conducted with each of the teacher participants, guided by open-ended questions represented in the Interview Protocol (please see Appendix C). The *semi-structured interview* questions were designed around a set of themes or guiding topics rather than as a sequence of pre-planned questions (Glesne, 2011; Merriam, 2009). Each interview began with an introductory statement to introduce myself formally to the participant and to explain the nature of the study. In this introduction, I disclosed my interest in the research, I explained the design and the research background and I shared the envisaged data collection processes. Consent to discuss the topic, record the discussion and use the transcript for research was obtained from the teacher participants to confirm what was in the Participant Information Sheet and to reiterate the signed Consent Form details (please see Appendix B).

I endeavoured to develop an interviewing environment of trust and empathy by encouraging and prompting open dialogue and by using positive body language (Holstein & Gubrium, 2004; Shank, 2005) such as facing the participant, nodding to indicate understanding and leaning into the discussion. Communication depended on

the relationship that I formed with each participant and on my recognising and defusing power imbalances to develop a conversational interview style.

The teacher participants were asked to suggest locations where they felt comfortable for the interviews. To build a relaxed atmosphere, I had a general discussion prior to the interview, perhaps about a connection or a commonality that we shared. I assured them that I could relate to the multiple demands of teaching, having many years of experience in the profession. I also emphasised that I was not looking for specific information but instead that I valued the study's exploratory nature, seeking to learn from their experiences and expertise.

The aim of the semi-structured interviews was to elicit understandings from the teacher participants, not to tell them what to say, but rather to offer pathways to conceptualise issues and to make connections that “coalesce into emerging responses” (Holstein & Gubrium, 2004, p. 123). General topic discussions were guided by interpretative questions that assisted in focusing the discussion, advancing tentative explanations and working the identified areas into the one-hour conversation (Merriam, 2009). Five topic questions were included in the Interview Protocol: personal life history; contemporary professional experience; personal pedagogy; knowledge about student learning; and perceptions of successful learners in the transition years (please see Appendix C). Rather than posing a structured regime of questions, I encouraged the teacher participants to talk so that the topics were not introduced in any particular order but instead they evolved throughout the conversations (Merriam, 2009). Recalling what I had heard so that I could notice points to make connections was an interviewing skill that continued to develop for me. Accordingly, I was required to think on my feet to connect discussion topics (Glesne, 2011). Most importantly, as the interviewer, I needed to know how to listen, rather than dominating the conversation (Cousin, 2009).

Spradley (1979) advocated “grand tour questions” (p. 50) as an effective interviewing strategy, where the participant is asked to take the interviewer through a place, time or sequence of events. This proved to be an effective style of initial questioning to elicit experiential detail that was answered readily by the teacher participants and that helped to set a comfortable tone for the interview. I planned to begin each interview with the hypothetical (Merriam, 2009) question: “Think of a great day at school. What makes that a great day?” Even though this question did

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not always begin all of the initial interviews, it was a proven effective warm-up strategy when it was applied.

As useful sentence starters, I asked the teachers: “From your experience of ... can you recount ...?” and “Can you visualise ... and describe it to me?” I also used probes (Merriam, 2009) to encourage further discussion of a topic, to regulate the degree of detail and to clarify statements. For example, I would say: “That’s interesting. How do you know?” “Ah, I see” I would use non-verbal gestures such as nodding and smiling to indicate that I understood.

Patton (2015) suggested that how a question was worded affected how the participant responded. For instance, instead of asking: “Do you explicitly teach it?”, I would reword the question to elicit a more informative response by asking: “How do you assist students to develop these skills?” As Glesne (2011) emphasised: “the data you get are only as good as the questions you ask” (p. 113). As a result, I avoided dichotomous yes–no questions along with leading questions, where the teacher participants would be made to feel that they had to answer in a certain way (Merriam, 2009). For example, rather than stating: “Self-regulated learners are able to direct their own learning. What do you think that effective learners do?” I rephrased the question to: “What behaviours do you see from students when they are involved in productive learning situations?”

At the completion of the interviews, I thanked the teacher participants and I discussed the procedure for the classroom observations. Interviews were audio-recorded, labelled with the respective participants’ pseudonyms and transcribed. The recording provided a complete record of the discussion and it enabled me, as the interviewer, to apply my full attention to the course of the interview rather than being distracted by note-taking (Glesne, 2011). The transcripts were written verbatim, including repetitions, expressions and laughter, and with a pause being represented as an ellipsis.

The classroom observations

Naturalistic observations were utilised within the school settings. Consequently, I saw things first-hand in the researcher’s role of “an observer as participant” (Merriam, 2009, p. 124) and in my participant role I recorded these observations in my research journal. As an outsider to the group under study, I observed with no direct involvement with the events and the people, and I strived to be as unobtrusive

as possible. The durations of and the contexts for the observations varied from teacher to teacher, particularly between Cases One and Two. A range of observational situations was made available spanning the six week data collection period for each case.

Because the practicality of observing, recording and synthesising simultaneously was limited, I focused on writing suitable details quickly about what I was experiencing from direct observations of the contexts. The notes written in the research journal allowed me a space to suspend personal judgements and concerns by simply recording details of what I was seeing and hearing (Glesne, 2011). Immediately following each observation, my notes recorded in the research journal were reviewed, dictated to create digital text using the Dragon NaturallySpeaking voice-to-text software program, and then transcribed for coding analysis. It was important to record specific notes that were detailed and concrete rather than vague and overgeneralised (Hancock & Algozzine, 2006).

The advantage of observational fieldwork in this study was that I had the opportunity to see the teacher participants' pedagogical practices that were discussed in their initial interviews in action and, even though they were not the focus, I could also observe the students' responses. The observations also allowed me to notice practices implemented in their specific contexts that routinely could have escaped the awareness of the teacher participants (Merriam, 2009). These were discussed, along with other identified areas of clarification, in the follow-up interviews.

The follow-up interviews

To conclude the data collection process, follow-up interviews were conducted with the teacher participants. By reviewing statements in the transcripts from the participants' initial interviews, and by observing their pedagogical practices being implemented in the classroom, I took advantage of the follow-up interviews to question and confirm my understandings (Merriam, 2009). As in the process of member checking (Creswell, 2013; Merriam, 2009), these interviews ensured that opportunities were made for participants to discuss the data and to clarify any misunderstandings that may have otherwise contributed to my observation biases.

Follow-up interviews with the eight participants were not all conducted in the same way. The different contexts and the participants' teaching situations indicated the most appropriate ways of interviewing post-observations. In Case One, because

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the teacher participants Bec and Julie worked closely together and were aligned in their systemic operations of the classroom, the one-hour follow-up interview with them was conducted jointly. This created an opportunity for the two teacher participants to bounce ideas off each other, presenting a valuable group discussion. Given a choice, teacher participants Peter and Nicky requested that they adopt the same situation for their follow-up interview. In Case Two, teacher participants Greg, Rachael, Brian and Sarah taught with different timetables, with no collaboration in the face-to-face teaching of the different learning areas, so the one-hour follow-up interviews were conducted separately. I performed the data collection and preliminary analysis simultaneously, with the analysis becoming more intensive as the study progressed (Merriam, 2009).

Research journal

A research journal was utilised to write classroom observation notes and descriptive field notes following the interviews (Merriam, 2009). These memos recorded reflective decisions that actioned changes to research procedures and that assisted in answering self-generated reflexive questions. Field notes consisted of documented musings and references to artefacts, such as photographs and work samples that were created or collected in the field. The notes and the visual artefacts were dated and recorded with basic information such as the time, the location, who was present, quotations and descriptions of the physical settings, and the social interactions that occurred. Writing in the journal provided an avenue for thinking about the teacher participants' actions and interactions, as I recorded my behaviours and emotions throughout the research process.

4.6.3 The thematic data analysis

To align with the distinctiveness of this study, I developed a rigorous, six-stage data collection and thematic analysis process. Figure 4.3 summarises the phases of data collection and analysis.

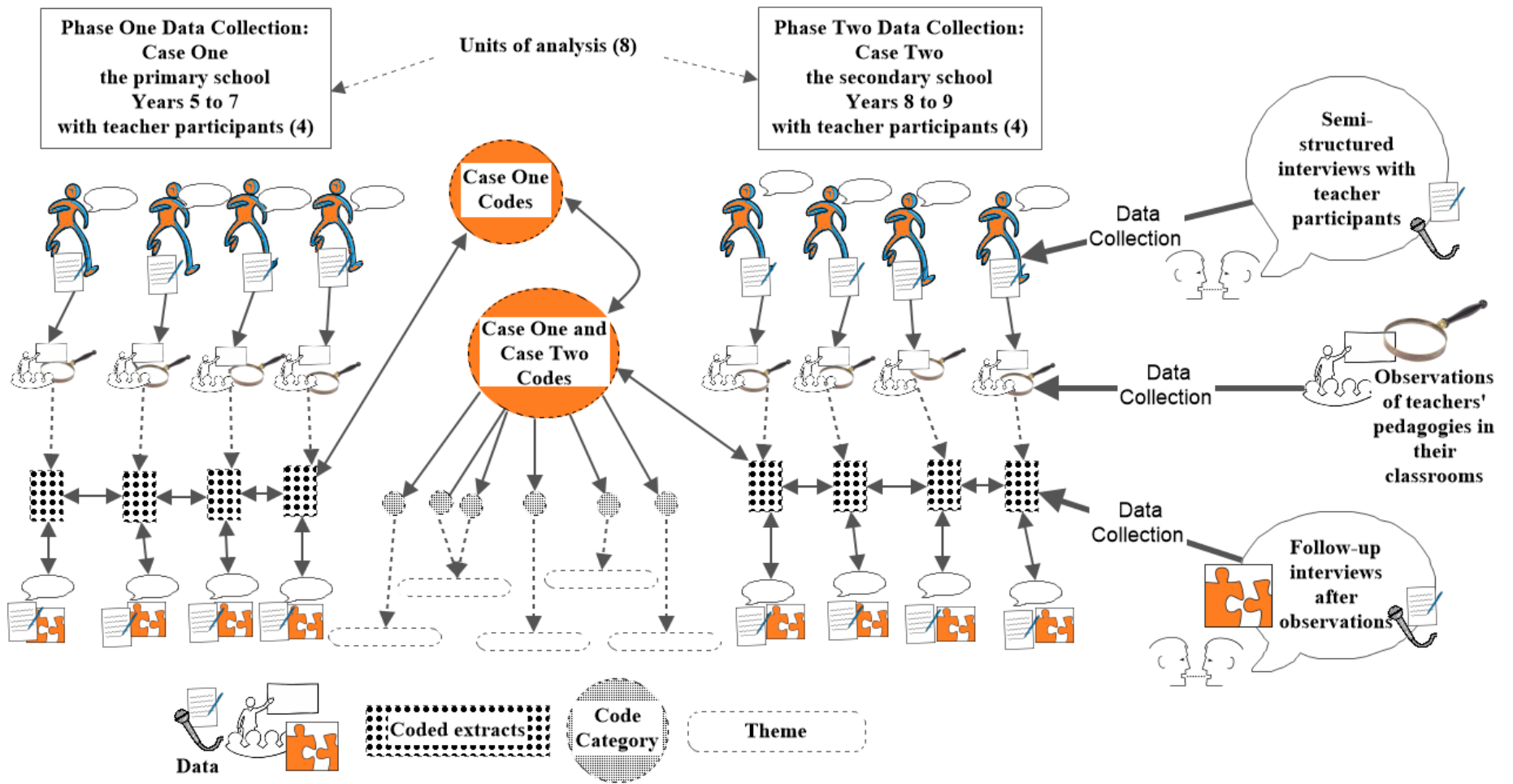


Figure 4.3. The phases of the data collection and analysis

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During the two data collection phases of this study, the analysis operated iteratively as “a flexible and useful research tool, to provide potentially a rich and detailed, yet complex, account of data” (Braun & Clarke, 2006, p. 4). The basic function of the analysis was to organise and simplify the complexity of the data into meaningful and manageable categories and themes. To suit the research design, I reviewed the methodologically aligned literature of four sets of prominent writers: Braun and Clarke (2006) who offered a six-phase thematic model; Creswell (2013) who presented the four procedures of data analysis as a spiral; Merriam (2009), who proposed that data analysis occurred at three levels and was “primarily inductive and comparative” (p. 175); and Miles, Huberman and Saldaña (2014), who explained how the process of data analysis connected four concurrent nodes of activity. The resulting six-stage data collection and analysis process included: (1) collecting; (2) engaging; (3) coding; (4) generating the code categories; (5) conceptualising the themes; and (6) contextualising and representing the findings. The flexible stages involved the complex processes of moving back and forth between concrete descriptions and the abstract interpretations that were informed by the conceptual framework (Merriam, 2009). The six-stage data collection and analysis are represented as an overview in Table 4.1 with references to these contributions.

Table 4.1. *The six-stage data collection and analysis (Braun & Clarke, 2006; Creswell, 2013; Merriam, 2009; Miles et al., 2014)*

Theoretical contributions	Six-phase recursive guide Braun and Clarke (2006)	Four procedural spiral Creswell (2013)	Three levels Merriam (2009)	Four concurrent nodes Miles et al. (2014)
The six stages of data collection and analysis	<ul style="list-style-type: none"> - Familiarisation with the data - Generation of initial codes - Theme search - Theme review - Theme name and definition - Production of the report 	<ul style="list-style-type: none"> - Data management - Read, memo - Description, classification and interpretation - Representation and visualisation 	<ul style="list-style-type: none"> - Descriptive accounts - Category construction - Theory building 	<ul style="list-style-type: none"> - Data collection - Data condensation - Data display - Conclusion drawing
1. Collect the data	Refer to all the data collected as the data corpus.		Collect the data.	Shift among the nodes iteratively during data collection.
2. Engage with the data	Become familiar with the data by reading and re-reading transcripts, listening to audio-recordings and noting any initial observations.	Manage the files by transcribing the data, organising the text files and reflecting in relation to the research questions for a sense of the issue.	Scan transcripts and jot down notes, comments, observations and queries as memos.	
3. Code the extracts from the data	Generate initial codes and labels to represent important features of the data relevant to the research questions.	Form a list of tentative codes that expand as the data are reviewed and re-reviewed.	Identify units of data that are potentially meaningful segments to reveal information relevant to the research questions.	Code the data extracts and write analytical memos.
4. Generate the code categories from the codes	Identify the ideas and concepts that inform the semantic content of the data.	Reduce codes to categories in the process of categorical aggregation.	Name categories that are abstractions derived from the data to reflect the data precisely.	Generate categories to condense data.
5. Conceptualise the themes from the categorised coded extracts	Search for themes as coherent and meaningful patterns in the data and define the nature of each theme in relation to existing literature.	Interpret the data to abstract beyond the categories to the larger meaning of the data by linking the raw data with the research literature.	Consolidate and reduce data to make meaning by linking interrelated elements in the data.	Develop themes.
6. Contextualise and represent the findings	Weave together the analytic narrative and vivid data extracts to inform the findings.	Present a detailed picture of the analysed data.	Interpret to make meaning and develop a model of interrelationships to build a framework.	Compress meanings that emerge from the data and assemble information using tables and networks.

Engaging with the data

The data corpus expanded (Braun & Clarke, 2006) as I interacted with the teacher participants through the interviews and as I conducted observations of the classroom environments. Braun and Clarke (2006) referred to the recursive nature of data analysis “where you move back and forth as needed, throughout the phases” (p. 16). Merriam (2009) concurred that “analysis begins with the first interview, the first observation, the first document read” (p. 165) and that it involves “consolidating, reducing and interpreting in the process of making meaning” (p. 175). The non-linear approach was described by Creswell (2013) as a procedural spiral “moving in analytical circles” (p. 182) and by Miles, Huberman and Saldaña (2014) as moving “among the four nodes” (p. 14) of activity.

Systematic management was required to organise the collected and transformed data. The system included a network of folders on my computer, where I could store the electronic files with a backup storage system to protect the valuable data. The interview audio-recordings and the handwritten notes from the research journal were converted to text files and printed. The hard copies provided a resource to scan and review, to jot down memos and to reflect generally on the data as they were collected. This was the beginning of the organisation of the data into manageable, connected chunks of related synergies that were assisted by the use of computer software.

Coding the extracts from the data

Following the first interview, I engaged with the data and then I commenced the coding stage by identifying extracts of significance in the transcripts and by generating initial codes. A *data extract* was described as being a potentially meaningful segment of data, revealing information possibly relevant to the research questions (Braun & Clarke, 2006; Merriam, 2009). At this stage, the analysis relied on my interpretations of the data and inferences about what the data were telling me about a single instance.

The analysis process of identifying codes to give meaning to the data extracts emanated from the transcribed data rather than from a developed a *priori* template of codes that were constructed to form expected answers to the research questions (Crabtree & Miller, 1999; Fereday & Cochrane, 2008). This stage of the analysis was recurring and it gradually involved the entire data corpus (Braun & Clarke,

2006). A list of tentative codes expanded as the data were reviewed and re-reviewed (Creswell, 2013).

Because this study was exploratory in nature, the inductive coding method invited me to focus initially on what the teacher participants were saying and on my descriptive observation notes to identify the underlying ideas and assumptions. At times, this involved moving from the semantic content of the data extracts to form latent labels as the initial codes (Braun & Clarke, 2006). During the creation of the code list, it was essential to consider suitable code labels and to write comprehensive descriptions to represent the codes so that the connotations associated with each of the codes were made clear (Braun & Clarke, 2006). Code labels to represent the data analytically came from the actual words and the behaviours signified in the data. For example, Nicky in Case One expressed how pleased she was that a group of students in her class exhibited the confidence to ask questions during mathematics lessons:

I was a bit surprised My three boys that are low academic achievers in maths, they actually ask the most questions. So I was really impressed with them They're not afraid and they just want to learn how to do it. (Nicky, interview 2)

I coded this as *safe learning* and described the code as being when *teachers value students feeling non-threatened and comfortable in the classroom environment*.

While reviewing the transcripts and writing the memos (Miles et al., 2014), I chunked sections as the extracts, and I questioned—"What is this about?"—before assigning a provisional code. For example, in Case Two during the follow-up interview, Rachael commented: "You have to make connections constantly because maths is relevant in life and in the real-world" (Rachael, interview 2). Drawn as an extract from the transcript, this comment was coded *linked learning* as it made reference to how the teacher participant makes learning connections between the concept of time zones from mathematical and geographical perspectives.

The tentative list of codes expanded as I built new codes and as I refined former ones. From the identified extracts, each of the code labels and descriptions progressively generated a code list. More importantly, during the process, I described the intent of each code from the teacher's perspective as being to clarify the code's meaning for future coding consistency. As a structure for the code descriptions, each description began with *teachers* as the subject, followed by the action or behaviour and then the object of the action. For example, the code labelled

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linked learning was defined as *teachers explaining why a learning task is chosen and how it connects with students' other learning and life.*

Having a detailed description for each code ensured accuracy in associating the extracts with a code, re-coding and recognising the need for a new code. At times an extract was suited to more than one code and it was included consequently in a number of codes. Where to include an extract was decided predominantly by considering the match connecting the teacher participants' words and actions and the descriptive statements that defined the codes. When the extract was identified as representing an already established code, the description was re-read to ensure that the newly coded extract of data matched the originally intended meaning of the code. If no existing codes were appropriate, a new code was created and described.

Exploration of the data when choosing the extracts required me to write memos, as I considered the disconfirming and confirming evidence, the absences and silences, and the subtle language use such as metaphors and figures of speech (Cousin, 2009). During the process of reading, re-reading and identifying the codes to find what was of key importance in the data, it was not necessary nor was it appropriate to code every word and sentence within the transcripts. However, I was careful to avoid over segmentation of the transcript, cherry picking quotations to make a point or using the frequency of a code alone as the credibility of its worth (Cousin, 2009).

The iterative data analysis process meant that the transcripts needed to be reviewed many times. As new codes emerged, previously coded data were checked to ensure that the original coding did not conflict with the establishment of newer codes. The code list created in the first phase of coding Case One data was transferred to construct a bank of 56 codes to be used during the second phase of data analysis for coding the Case Two data. As the codes continued to build throughout both phases of data collection and analysis, I memoed at which stage of data analysis the code was created. Once all the transcripts were initially coded, a code list of 96 codes with clear code descriptions was established. A final review of the transcripts provided me with the reassurance that many of the meanings had been represented in the codes (please see Appendix D).

HyperRESEARCH 3.7.3 (Researchware Inc, 2014) software provided a vehicle for the manual highlighting and organising electronically of the considerable number of qualitative data that this study had generated. HyperRESEARCH is a code and to

retrieve research tool that provided a convenient way to build my code-book and review my case interview transcripts. Figure 4.4 presents a screenshot that shows the basic layout of transcribed and coded interview data from this study in the HyperRESEARCH program.

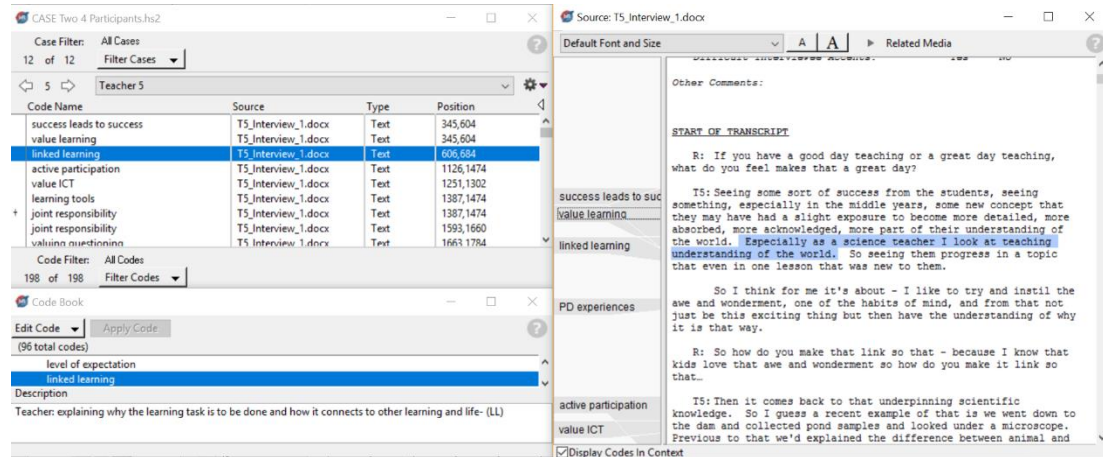


Figure 4.4. A computer screenshot of the basic case layout in HyperRESEARCH. In addition, the complex links within the data could be explored using the HyperRESEARCH tools. The reports generated from this database were able to be exported to the Microsoft Excel program, which provided a filter option to view the data in different patterns and alignments.

Generating code categories from the codes

The next stage in the data analysis involved categorical aggregation (Creswell, 2013) and it presented an opportunity to address the first research question through intra-case and cross-case processes. At this stage of the analysis, I was required to reduce the codes and to generate the code categories. A *code category* represented “a collection of similar data sorted into the same place, and this arrangement enables the researchers to identify and describe the characteristics of the category” (Morse, 2008, p. 727). Therefore I reviewed the extensive code list, the codes’ descriptive statements and the coded extracts to identify emerging patterns and correlations. Through this largely intuitive coding process, I generated six code categories that represented the teacher participants’ pedagogical practices intended for fostering students’ effective learning (please see Appendix D).

The convergence of the codes into the code categories was imagined by Baxter and Jack (2008) as braiding various strands of data together to promote a greater understanding of the case and to strengthen the findings. The various strands of data

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were braided to form the code categories that were named from the voices of the teacher participants in the transcribed data. In addition, I described each code category by identifying the prominent features of the pedagogical practice informed by the code descriptions and the data extracts. Using a similar structure to the code descriptions, the code category descriptions utilised a teacher/action/object statement. They were written beginning with the teacher's actions and the pedagogical intention. For example, the description for the code category labelled *design meaningful learning* began with: *Teachers design learning from the distinctive and conceptually aligned curriculum subject learning areas that provide topics ... — and continuing with the intended influence of the teachers' actions— ... for the students to experience meaningful learning and to transfer their learning into different contexts.*

Figure 4.5 presents pages from the research journal as an example of how I created connections to aggregate the codes into the code categories.

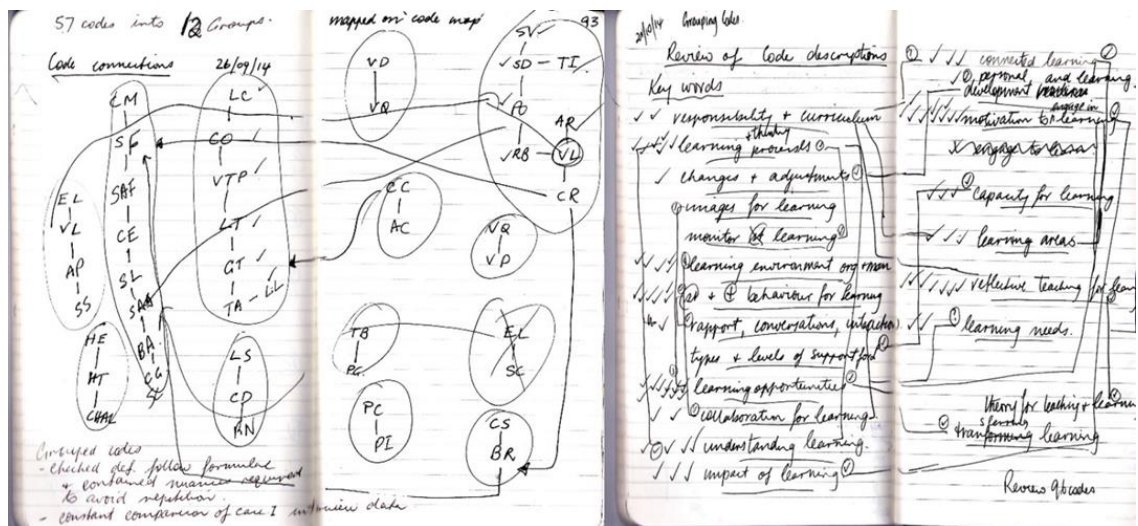


Figure 4.5. Pages from the research journal

Conceptualising themes from the codes and the code categories

To extend the findings, literature was used to inform and guide the thematic data analysis. I explored the entire data corpus (Braun & Clarke, 2006) to observe patterns in the data (Braun, Clarke, & Terry, 2014; Miles et al., 2014) and I was informed conceptually to identify the interconnections between how the teacher participants talked about their pedagogical intentions to foster their students' effective learning and self-regulated learning theory. The findings from this data

analysis were used to address the second research question. Subsequently, five data generated themes laid the foundations of a pedagogical model for self-regulated learning.

Contextualising the data to represent the findings

To address the third research question, I constructed a practice-based pedagogical framework for self-regulated learning in the primary–secondary schooling transition years by extending the data analysis. Graphic networks represented the alignment of the teacher participants’ pedagogical approaches presented in the themes with the five learning needs of young adolescent students and the six transition principles (adapted from Duncan et al., 2009; Kift, 2015). In this final stage of data analysis, I was able to braid together the data that were supported by extracts, organisational tables and data maps. The interpretations were formed from the data and informed by the literature. Table 4.2 represents the questions and the techniques used in the data analysis at iterative stages that reflected how the data fitted together in relation to the research questions, the data collection and the data analysis.

Table 4.2. *The research questions and the analysis processes*

Research questions (RQ)	Data analysis to address the research questions
<p>RQ1: How do teachers working across the primary–secondary school transition years talk about fostering their students’ effective learning?</p> <p>Interpret the findings to address RQ1 in Chapter 5.</p>	<ul style="list-style-type: none"> - Review the initial interview, observation and follow-up interview transcripts to focus on the teacher participants’ pedagogical practices. - Identify inductive codes from the extracts in the transcripts and describe the codes from a teacher/action/object perception to create the code descriptions. - Identify the patterns within the codes (96) to aggregate the codes into the code categories (6) and identify the prominent features to describe each code category as a pedagogical practice. - Select data extracts that provide examples of the teacher participants’ practices relevant to each code category from the two cases. - Map the findings from the units of analysis (8), as a cross-case analysis to synthesise the examples of the pedagogical practices represented in the code categories (6).
<p>RQ2: How do teachers’ personal pedagogical practices for effective learning provide opportunities for students to regulate their own learning in the primary–secondary schooling transition years’ classroom environments?</p> <p>Interpret the findings to address RQ2 in Chapter 6.</p>	<ul style="list-style-type: none"> - Informed by the literature, review the categorised examples of the teacher participants’ practices for fostering students’ effective learning and the coded data to analyse how teachers provide opportunities for students to regulate their learning. - Identify patterns in the data to realign the pedagogical practices into conceptualised themes (5), represented as core pedagogies (16), in the model for self-regulated learning.
<p>RQ3: How do teachers’ pedagogical approaches inform a primary–secondary schooling transition pedagogy for self-regulated learning?</p> <p>Interpret the findings to address RQ3 in Chapter 7.</p>	<ul style="list-style-type: none"> - Assemble data maps and tables to represent the network of connections through the alignment of the themes with the five young adolescents’ learning needs and the six transition principles (adapted from Duncan et al., 2009; Kift, 2015). - Synthesise the data to represent the embedded key elements (20) in a transition pedagogy framework for self-regulated learning.

4.7 Research Ethics and Politics

This qualitative study often involved a close liaison between the teacher participants and me as the researcher. Field relationships developed as time was spent together, and it was my responsibility to ensure that the rights of the people involved in the research were valued and that an atmosphere of mutual respect was maintained (Glesne, 2011). Shank (2005) described the spirit of the ethical researcher as being open, honest and careful, and as doing no harm.

4.7.1 Ethical approval

Generating an ethical framework supported the thoughtful conduct of the research and the credibility of the findings. As a protective function for the researcher and the research participants, the ethical orientation considered the facilitation of the research process as being to identify any potential risks (Cousin, 2009). I endeavoured proactively to avoid and overcome the potential ethical issues associated with the research by: adhering to ethical principles; thinking consciously about protecting the teacher participants; and committing to the ultimate goal of education being to improve student outcomes. The planning process involved in obtaining ethical approval for this study ensured a proactive approach to addressing the ethical issues. The Human Research Ethics Committee at the University of Southern Queensland (USQ) and Lutheran Education Queensland (LEQ) endorsed the study with full ethics approval and permissions (please see Appendix A).

4.7.2 Principals' and participants' approval

On approval from LEQ to conduct research in Lutheran schools and from the Human Research Ethics Committee at USQ, from each of the schools I sought the principal's approval. I clarified my proposed research purpose and procedure and I presented to the principals and the teacher participants the Participant Information Sheet and the Informed Consent Form (please see Appendix B). Informed consent was fundamental to protecting the rights of those involved who chose voluntarily to participate, emphasising that they could withdraw at any time from the study. The school principals and participants agreed to the terms and they signed the consent forms with an expectation of open communication in relation to the research procedures that I would follow.

4.7.3 Participants' low-level risk

While the personal demands on the teacher participants in this study were not excessive, a requirement of the study was my involvement, as the researcher, to be included in the environment of the schools and in the teacher participants' lives. This involvement included site attendance, email correspondence, interviews, classroom observations and discussions. In addition, the teacher participants were asked to give up their own time for interviews to share their personal views and circumstances. Therefore it was important that I considered the words of Stake (2000): "Those whose lives and expressions are portrayed risk exposure and embarrassment" (p. 447).

Classroom observations were aimed at causing minimal intrusion and disruption. However, I was prepared to remove myself from the room at any time if any anxiety occurred. There were no situations where this was required, although I remained aware proactively of my presence in the classrooms and around the school grounds. As was noted by Stake (2005), "Qualitative researchers are guests in the private spaces of the world. Their manners should be good and their code of ethics strict" (p. 459).

4.7.4 The teacher participants' and schools' anonymity

Assurances of anonymity with regard to the schools and the teacher participants involved were potentially problematic. There are only small numbers of Lutheran schools in regional, southeast Queensland. The schools involved communicated openly and publicly to staff members, students and parents about the school and the teacher participants' involvement in the research. However, to minimise any issues, the data and findings were de-identified and was kept secure during the research process. Folders for each teacher participant, labelled with pseudonyms, were established electronically and physically to store interview and observation information, as well as the audio-files, the transcripts and the researcher's journal.

4.8 The Research Rigour and Trustworthiness

The rigour of the research was demonstrated through its alignment with and the articulation of the philosophical assumptions that guided the research methods. This alignment of the procedures endorsed the trustworthiness of the methods and

substantiated the findings to assure the reader about the rigour of the knowledge claims (Merriam, 2009).

To represent the trustworthiness of this qualitative research study, I addressed four interrelated criteria: credibility; transferability; dependability; and confirmability (Lincoln & Guba, 1985, 2013). Lincoln and Guba (1985) tabled techniques as suggestions to “guide the field activities and to impose checks” (p. 330). The techniques utilised for establishing each of the criteria for trustworthiness within the study are addressed in the following sub-sections.

4.8.1 Credibility

The credibility of this study was dependent on the establishment and transparency of the research methods in accommodating the philosophically aligned practices directed at answering the research questions (Lincoln & Guba, 1985). The research design included direct data collection, where I maintained a prolonged engagement of approximately six weeks in each school, to develop a trust and a feel for the culture. The teacher participants were eager for me to provide feedback following my classroom observations with comments such as “How did I go?” and “What did you think?” Responding to such comments, I reconfirmed my appreciation of being availed the opportunity to observe their operational classrooms and that I had no expectations.

I wanted to observe a natural classroom environment rather than a contrived show, or a lesson created specifically for the research purpose. In addition, the teacher participants appeared comfortable to re-direct or correct my misinterpretations. For instance, in the Case Two follow-up interview with Rachael:

Researcher: A couple of times you said to the students, “Not much longer now.” So in the ideal world would you have preferred to have a 30 minute and another 40 minute lesson or one 70 minute lesson?
Rachael: No, I’d much rather have a 70 minute lesson. So if there’s something that I really need to get through ... and you know their attention span is 20 minutes, you stop. I called it “story time” and we have a chat for a few minutes and then we get back into it again.
(Rachael, interview 2)

This discussion illustrated how my classroom observations notes were clarified with the participant to cross-reference the data.

4.8.2 Transferability

Interpretations presented as rich descriptions provided readers with a platform to assimilate between the findings and their own experiences. As proposed by (Geertz, 1973), Stake (1995) recommended that writing using “thick descriptions” (p. 39) permits the reader to enter the research context, making the transferability of elaborations and theories possible. Therefore the potential transferability of this study’s findings have implications for other contexts (Lincoln & Guba, 1985) and the criterion of transferability rests with the reader who relates to the research through the descriptive, articulated findings.

4.8.3 Dependability

Because case study research is context specific and situationally and time bounded, the emphasis for this study was not on showing that the findings could be repeated. Instead dependability demanded an audit trail as a transparent chain of evidence during data collection and analysis (Lincoln & Guba, 1985; Merriam, 2009). To clear the way for careful, comprehensive interpretation and reflection, the thematic data analysis involved making auditable decisions because “clarity around process and practice method is vital” (Braun & Clarke, 2006, p. 7). This was achieved through: tabulating coded extracts of data systematically; providing explicit code and category descriptions and thematic elaborations; using graphical representations; and recording memos and field notes.

In addition, a timeline of the study, as it progressed over the six years, offers information about the research procedures. From its initiation in early 2011, this thesis was the culmination of the study that responded to the research questions. Through the rigorous collection and analysis of data, this study has contributed to practice-based knowledge and it has demonstrated my learning as a researcher (please see Appendix F).

4.8.4 Confirmability

Peer reviews and reflections confirmed that the research was conducted in the way described by the researcher (Lincoln & Guba, 1985). Throughout the research process, I have sought external reflection and input from my research supervisors, teachers, colleagues and peers acting as critical friends. From the inception of this study, I have met regularly with my supervisors, both experienced researchers, and I

was guided by their expertise in designing and conducting this research. Discussions with experienced school teachers and with my initial teacher educator colleagues at the university infused fresh perspectives, challenged my assumptions and provided feedback to strengthen this study. My conference presentations within Australia and internationally over the duration of the research have afforded feedback and critical reflection from peers within various sectors of the educational profession, who viewed elements of the study with real detachment. These publications and presentations are listed in the initial pages of this thesis.

4.9 Review of the Chapter

This chapter presented the philosophical assumptions underpinning this study. The research design was outlined in a six-stage inquiry framework that identified the research questions at the centre of the exploratory case studies. The primary school and secondary school settings provided the contexts for the dual case studies that included eight teacher participants. The multiple sources of qualitative data were collected through semi-structured interviews and classroom observations in two phases. Thematic analysis methods were used in inductive intra-case and cross-case processes of generating codes, categories and themes. The chapter concluded by emphasising the relevance of ethics and politics to this study and the research rigour and trustworthiness.

The next three chapters present the analysis of the data to address the three research questions. Firstly, I coded and categorised the data to find out how the teachers working across the primary–secondary schooling transition years talked about fostering their students’ effective learning. Secondly, I analysed the data informed by the literature to formulate themes and elaborations as core pedagogies that provided opportunities for students to regulate their own learning. These themes were communicated as five pedagogical approaches, in the pedagogical model for self-regulated learning. Thirdly, informed by the five identified needs of young adolescent students and the transition principles (adapted from Duncan et al., 2009; Kift, 2015), this study’s findings were distilled in the primary–secondary schooling transition pedagogy framework for self-regulated learning.

Chapter 5 Teachers Explaining Their Pedagogical Intentions

Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do.

(Bandura, 1977, p. 22)

Education systems aim to enable students not just to acquire knowledge but also to become capable, confident and enthusiastic learners. At school, students who have positive approaches to learning, in terms of both attitudes and behaviours, tend to enjoy good learning outcomes. Beyond school, children and adults who have developed the ability and motivation to learn on their own initiative are well-placed to become lifelong learners. (Artlet, Baumert, Julius-McElvany, & Peschar, 2003, p. 8)

5.1 Overview of the Chapter

This chapter is the first of three data analysis chapters that articulate the findings to address the research questions. In Chapter 4, the theoretical underpinnings that guided the methodological decisions to frame the design of this exploratory research were presented. The purpose of this chapter is to attend to the first research question: How do teachers working across the primary–secondary schooling transition years talk about fostering their students’ effective learning? Informing my interpretations were the teacher participants’ broad explanations of their pedagogical practices intended to engage students in tasks for knowledge and skill development. This was preferred rather than attempting to uncover their beliefs about and their knowledge of self-regulated learning, as findings from Spruce and Bol (2015) suggested that there was often an inconsistent alignment of teachers’ shared theoretical understandings about teaching and learning with their applied pedagogical practices.

From my analysis of the coded data extracts, I aggregated the codes into code categories (Creswell, 2013) that described what the teacher participants said that they did to: design meaningful learning; manage learning; scaffold learning; adjust learning support; build relationships for learning; and expand their practices. These interrelated code categories were data driven (Braun & Clarke, 2006) and they were constructed from my systematic, inductive data analysis. Figure 5.1 illustrates the alignment of the codes with the code categories to respond to the first research question.

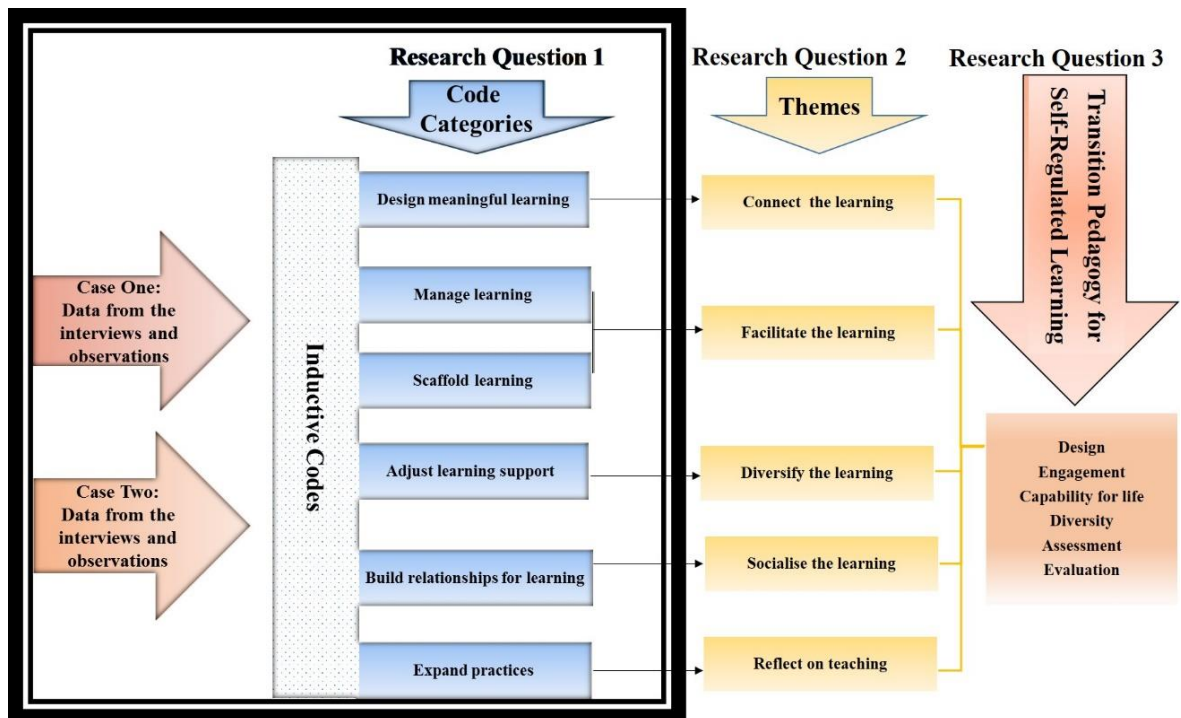


Figure 5.1. The alignment of inductive codes with code categories to address the first research question

This chapter begins with an explanation that articulates how I constructed the code categories that represented the pedagogical practices intended to foster students' effective learning. To prepare the way for a detailed analysis, it was important to articulate what the teacher participants emphasised about their work, their perceptions of the relationship between teaching and learning, and the frustrations that they felt because of imposed contextualised constraints. The Case One data from the primary school context are interpreted followed by the Case Two data interpretations from the secondary school context. To introduce each participant, her or his teacher story is presented. For the purpose of clarity of arrangement, the teacher participants were grouped in pairs to organise the findings into the six code categories. Following this, the interpretations of the findings are developed through a cross-case analysis that summarises the teacher participants' pedagogical practices within each code category. Acknowledged in the analysis is the pedagogical alignment with the elements of the professional standards of proficient teachers (AITSL, 2017), which research and workplace knowledge suggested contribute to successful learning outcomes for students. In addition, the external learning enablers of challenges, structures and options were considered in relation to the teacher participants' pedagogical practices. These were proposed in the literature review as being essential for an effective self-regulated learning pedagogy.

5.2 The Code Categories for Pedagogical Practices

Data were collected in two phases as an iterative process that generated an evolving list of codes. Over time, I created a list of 96 codes that were each labelled and described (please see Appendix D). I collated the data strategically by grouping the codes to create six code categories. Each code category distinguished the pedagogical practices that it represented and it provided an effective organising framework for me to communicate snapshots of the teacher participants' practices intended to effectuate the students' learning. I examined the aggregated codes in each code category for congruencies within the code descriptions and then constructed the explanation of each code category as presented in Table 5.1.

Table 5.1. *The six code categories and their explanations*

Code categories	Explanations of the code categories
Design meaningful learning	The teachers designed learning from the distinctive and conceptually aligned curriculum learning areas that provided topics for the students to engage in meaningful learning experiences and to transfer their learning into different contexts.
Manage learning	The teachers created safe learning environments that were conducive to learning and that communicated the expectations and the procedures clearly for the students to make responsible decisions about their behaviours for learning.
Scaffold learning	The teachers facilitated verbal, procedural and instructional scaffolds to teach the students strategies for learning and to support them to understand how they learn.
Adjust learning support	The teachers identified the appropriate levels of challenge and structure to support students to activate their control of and to gain success from their learning.
Build relationships for learning	The teachers established collaborative and socially connected environments for learning by caring for their students and by sharing the responsibility for the students' learning.
Expand practices	The teachers reflected on their pedagogy by uncovering their tacit knowledge and professional beliefs about teaching and learning. They utilised their experiences, professional discussions and theoretical understandings to adjust their existing practices and to apply new practices in different contexts to enhance the students' learning.

At this initial stage of the data analysis, I constructed inferential meanings from how the teacher participants fostered the students' effective learning. As a reflexive researcher, I recognised the layers of assumptions on my part in these inferences. The six code categories were constructed to represent the ways that the teacher participants talked about their practices of effective teaching to foster their students' effective learning.

5.3 Preparing the Way for a Detailed Analysis

This section presents a broad reflection on the data corpus (Braun & Clarke, 2006) and I discuss the nuances that prepared the way for the detailed data analysis. Throughout the interviews, the teacher participants spoke about their pedagogical intentions as everyday practices using conversational language. They talked about the multiple roles of teachers and about their teaching experiences. The teacher participants were open to sharing and recounting what they did in their classrooms.

5.3.1 Practices beyond the technical skills of teaching

Throughout the interviews, I encouraged the teacher participants to explain the impact of their pedagogy on their students' learning and to consider their practices beyond the technical skills of teaching (Loughran, 2010). Hence, the semi-structured interviews were open discussions and the teacher participants were encouraged to reflect on their personal life histories, their contemporary professional experiences and their perceptions of their students' learning (please see Appendix C). These reflections were expressed with mixed emotions of enthusiasm, pride, pleasure, frustration and satisfaction and these are portrayed within the data snapshots.

I did not ask the teachers to answer questions specific to their practices for effectuating students' learning but instead I directed the conversations to draw out the teacher participants' tacit knowledge (van Manen, 1977). Many of the teachers' practices were implicit to them and they were communicated most effectively when the teachers recounted what they did when working with the students in their classrooms. For example, the teacher participants were open to share what they thought were the characteristics of students who were learning effectively in their classroom. In Case One, Nicky shared her image of a student who is learning effectively:

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Someone who is willing to take a risk and make a mistake. Someone that will have a go. Someone who is willing to ask for help. Someone who can ask the right questions. Someone that can actually achieve something in their time. That someone is effective because they use the resources available. (Nicky, interview 1)

As with this data extract, throughout the data chapters of this thesis data snapshots are presented to substantiate my interpretations of the data.

At times during the conversations with the teacher participants, they included references to theoretical underpinnings to justify their practices. They identified from where they sourced their ideas for the applied practices that were often implemented school-wide. For example, Rachael, a Case Two participant, acknowledged that she derived an explicit teaching concept that was presented by Anita Archer (Archer & Hughes, 2011) in a workshop that she had attended. The concept was aimed at gaining feedback from the students during mathematics lessons. In addition, Rachael clarified: “We use whiteboard activities to find out what they know. It’s a new strategy we started this year. It’s an Anita Archer strategy” (Rachael, interview 1). Also drawing from this professional development experience, Sarah, a Case Two participant, described a reading strategy, “distributive practice” (Archer & Hughes, 2011, p. 3), which she used with the students in her history classes:

We went to Anita Archer and she was talking about paired reading, so I’ve actually introduced that since. That was really helpful. I had the students read one paragraph, then they had to say it back in their own words to their partner. That really helps, especially with the low ability readers. (Sarah, interview 1)

Rachael and Sarah talked about the ways that they had adapted and changed their practices in response to a formal professional learning situation.

5.3.2 Relationships between teaching and learning

Evident in the discussions with the teacher participants was their acknowledgement of the relationships that exist between teaching and learning (Loughran, 2010). In Case One, Peter recounted how he structured his lessons to give the students a purpose for the learning. Peter reasoned: “I try to explain to students at the start of lessons why we are learning about something and what I want them to achieve at the end of the lesson” (Peter, interview 2). Also in Case One, Bec

talked about how she viewed herself as being an “instigator of learning” (Bec, interview 1), where her role was to support students’ learning by:

Giving them the beginning framework, the skills, mainly to be able to continue the learning process independently. For different children that will look differently but I certainly see myself as being, I suppose [pause and spoken a little coyly], the spark that lights the fire. (Bec, interview 1)

In addition, the teacher participants were keen to share experiences of situations that they perceived were problematic for students’ learning and to explain the practices that they employed to improve the learning opportunities for their students. For example, in Case Two Greg described a practice that he implemented and reflected on to engage students in learning:

You always think that someone is going to get off task. But you also need to provide the opportunities for them to show that they can do it. I like to step away and then be able to come back and see them on task still and then praise them for that. (Greg, interview 2)

In this example, the data revealed, that the teachers’ experiences associated with the students’ learning were catalysts for pedagogical reflections (Schön, 1983).

5.3.3 Influences and frustrations

In contrast to previous research findings by Comber and Nixon (2009), the teacher participants did not overemphasise or focus on the bureaucratic demands of teaching or the factors external to the school that could influence students’ opportunities to learn, such as sleep and nutrition. However, similarly to findings from research conducted by Ertmer (2005), the teacher participants did identify some issues that impacted on the full alignment between their personal beliefs and their classroom practices. Fang (1996) proposed that a school’s contextualised features could interfere with the teachers’ enacted practices and specifically when the systemic barriers conflicted with the teachers’ personal pedagogical beliefs.

For instance, the teacher participants revealed constraints such as social pressures from some parents, who challenged the implemented contemporary practices rather than traditional teacher-centred approaches to teaching. In addition, the teacher participants articulated that they felt a lack of control over being able to embed innovative learning experiences into their everyday practices owing to budgetary and

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time restraints. As an example, in Case Two, Brian identified the lack of teaching time as being a problematic issue, particularly for secondary school teachers:

What tends to happen, I think, is that we as high school teachers have got a certain level of content that we need to take up and we've got a certain number of students and we've only got a limited amount of time. (Brian, interview 1)

Lack of time was a common issue expressed as a frustration by all eight teacher participants. Specifically, the teacher participants identified a discord between the demands of the curriculum and the limited time available to teach what the students were expected to learn. For example, in Case One from the primary school context, Julie articulated the value of developing the students' depth of knowledge about a particular topic rather than touching broadly on many disconnected topics of learning: "As a teacher, I would much prefer to consolidate something than just rush from one thing to another" (Julie, interview 2).

Generally, all the teacher participants agreed that they would prefer the depth of learning rather than a broad content coverage, especially when teaching students who were struggling to develop the literacy and numeracy capabilities required for successful learning. The balance between content breadth and depth and the risk of an overcrowded curriculum undermining the learning outcomes were not new issues and they remain current challenges in Australian schools (Harding, 2015). When teachers are required to cover a wide range of curriculum content, the students have limited time available to develop deep appreciations of core disciplinary concepts (Masters, 2016). Internationally, the National Commission on Teaching and America's Future (1997) recommended that schools rethink schedules for students to have more time for in-depth learning. Schwartz, Sadler, Sonner and Tai (2009) reiterated this endorsement more recently in their literature review and research.

Additionally, the teacher participants acknowledged that they adjusted the curriculum and their teaching to facilitate the inclusivity of all their students' literacy and numeracy skills. Brian explained: "There's no point in teaching kids how to do quadratics or trigonometry before teaching them how to add up without using their fingers" (Brian, interview 2). This pragmatic example illustrated the dilemma faced by Brian when teaching secondary school mathematics content and skills to students at a suitable level of challenge for them to learn. It reinforced the pressure placed on teachers to cover the content of the curriculum (Hurst, 2015).

In the following sections, the Case One and Case Two data from the interview discussions and the classroom observations is analysed more closely. This data analysis represents my interpretations that are supported by stories and snapshots, using the teacher participants' words to communicate their pedagogical intentions for fostering their students' effective learning.

5.4 Case One: The Primary School Context

In this section, the data in Case One is presented to tell the stories of the participants—Bec, Julie, Peter and Nicky—in their roles as teachers in the primary school setting. Firstly, Bec and Julie are introduced to reveal their distinctive styles of teaching and to show how they harmonised as cooperative teachers in their Years 5 and 6 double-spaced classroom. Secondly, Peter and Nicky are introduced. They worked in close cooperation with each other whilst teaching the Year 7 students in two physically separated classrooms. Table 5.2 presents the Case One participants and their teaching contexts.

Table 5.2. *The Case One participants and their teaching experience and contexts*

Case One teacher participants	Teaching experience	Primary school contexts
Bec	8 years	Years 5 and 6
Julie	12 years	Years 5 and 6
Peter	9 years	Year 7
Nicky	12 years	Year 7

5.4.1 Introducing Bec and Julie

Bec's story

Bec reflected that, as a child, she loved school and enjoyed “particularly learning new things” (Bec, interview 1). She expressed her genuine passion for teaching as she described her love for learning. Bec said that she perceived learning to be a collaborative event and she related: “I am happy to contribute ideas in discussions, and I have discovered over the years that I learn very well by interacting with others and bouncing ideas off of others” (Bec, interview 1). This appreciation of learning through discussions was echoed when she stated that a great day in the classroom for her was when there was “lots of buzzing. We call conversations ‘buzzing’” (Bec, interview 1).

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Bec's desire for communication and collaboration was also evident in the teaching partnership that she had established with Julie. Bec explained that previous to their professional association they had known each other socially through family connections. Bec was keen to share her views about why the effective partnership was performing well: "We're very similar in our approach to teaching and in our approach to our families, quite laid back and relaxed, and I suppose that would translate to a certain extent into the way that we manage our classroom" (Bec, interview 1).

The students in Bec's assigned class list were in Years 5 and 6. She had experience of teaching in all the primary school year levels, from the Preparatory Year through to Year 7, although Bec reflected that her preference was in the upper primary years:

I think I enjoy being able to have good conversations with kids and really explore the intricacies and the higher order level of thinking and functioning. I appreciate the fact that they are able to do things independently. (Bec, interview 1)

Julie's story

Julie recollected that she began her journey as a teacher "playing school all afternoon. I don't know. I just loved school" (Julie, interview 1). Before completing her pre-service teacher university studies "as a mature age student" (Julie, interview 1), Julie worked as a teacher-aide at a one-teacher school. After gaining her teacher qualifications, she taught in the primary school. Julie returned to university to complete a Master of Outdoor Education degree and she worked predominantly in the area of outdoor education. Julie recalled the events of this redirection following her first years of teaching: "I was fulltime in the classroom and after three or four years I went, 'This is not really what I want to do after all'" (Julie, interview 1).

Eventually, Julie shifted back to teaching in the primary school classroom and stated: "I am quite enjoying what we're doing now. Our classroom is a fairly active sort of place. The kids learn by just having that freedom to get up and move around—having a conversation" (Julie, interview 1). She related this style of teaching and learning to her involvement in outdoor education and her appreciation of the active learning approach. Julie shared the teaching responsibilities that she

valued: “My main role is to empower kids to become better learners. And I probably ask, ‘Is that a good learning choice?’ a million times a day” (Julie, interview 1).

Julie and Bec’s teaching partnership was inspired at the start of the school year by professional development opportunities that were focused on teaching for 21st century learning. Julie espoused that she shared an aim as a teacher with Bec, which was for their students to see themselves as learners:

We have this little philosophy about not teaching them what to learn but how to go about finding the answers that they want; basically to enrich their lives and, I suppose, to make them feel as if they’ve gained something from every day in the classroom. (Julie, interview 1)

5.4.2 Bec’s and Julie’s practices for fostering students’ effective learning

The following analysis presents my interpretations of the pedagogical practices that Bec and Julie talked about in their interviews. From these I inferred their intentions to foster students’ effective learning. Bec’s and Julie’s pedagogical practices were analysed through the lenses of the six code categories. These are represented in italics as sub-headings with examples that are provided from the data to support the analysis.

Design meaningful learning

Design tasks that teach the students real-world transferable skills and connect students’ learning with a real-life purpose

Julie explained how she and Bec designed learning around real-world, transferable skills by teaching the students how to create their own webpage: “They are so into setting up these webpages that they will often just want to get them done. We’d often catch them doing webpage work when they were supposed to be doing something else” (Julie, interview 1). Julie implied that the students’ involvement in the learning processes was intrinsically motivated (Csíkszentmihályi, 1975, 2008). She described how the students were so driven by the goal of creating the webpage that they would prioritise the task ahead of outside events or other tasks. Moreover, Julie shared an example that explained how she connected a student’s learning with a real-life purpose and how the student responded:

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For her synthesis, she wrote a letter to the school environment club with all of her suggestions for what we could do here around the school. I gave her feedback and she went and made adjustments to her work, so she probably did three or four drafts. She was quite chuffed because she sealed it in a little homemade envelope and wrote an address to the “Environment Club” and on the back “From Mary” and they read it during the Environment Club meeting. The school Environment Club even wrote a letter back. (Julie, interview 2)

This recount of events highlighted the dedication that the student displayed in relation to the learning when the task was situated in a context that extended beyond the classroom. Julie identified that the designed task had an authentic purpose to assist the student to transfer her learning to a real-world context.

Design learning that provides opportunities for students to formulate goals, make learning decisions and share ideas in discussions about learning challenges and knowledge gained

Julie and Bec described students’ learning experiences that they called “20% projects” (Bec and Julie, interview 2). These emanated from an idea that began with Google employees who were asked to spend 20% of their work time on a project of their own choosing (Pink, 2011). To activate and maintain the learning momentum, a planning template offered the potential to guide the students through their individual inquiry projects:

I did up a 20% planning template and they had to formulate a learning goal, which is based around their inquiry question. They decided on a presentation model and then set out the steps and planned a strategy. They date each of the steps as they accomplish them. (Bec, interview 1)

Bec’s description of the learning task emphasised the learner-centred inquiry approach (Murdoch, 2015) that they used in their classroom, whereby the students were required to formulate a learning goal, make decisions about how they could achieve that goal and monitor their learning progress. The photograph in Figure 5.2 provides an example of how knowledge was shared through the display of a student’s inquiry project in Bec’s and Julie’s classroom.

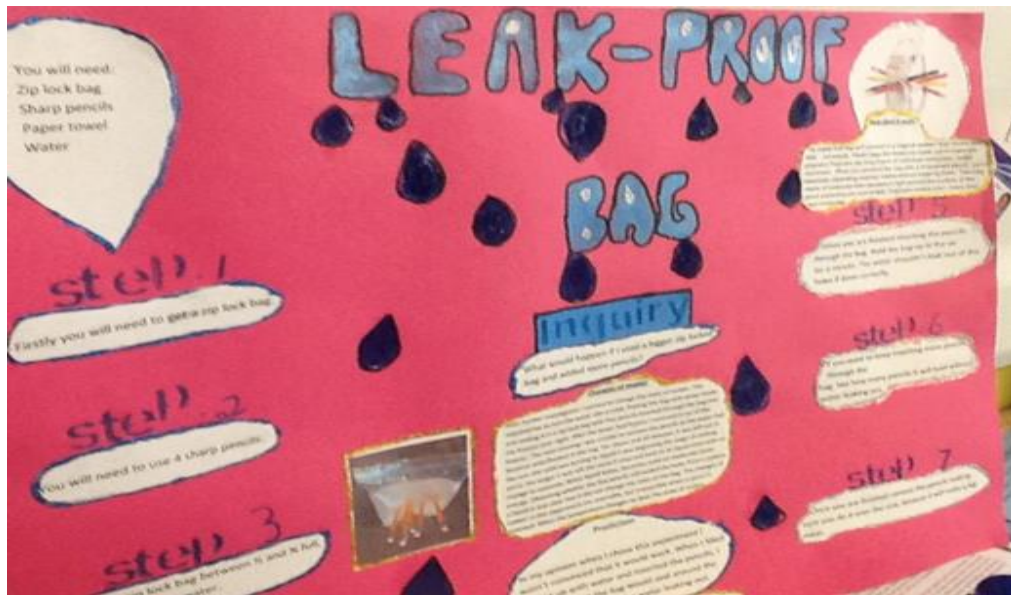


Figure 5.2. An inquiry project on display in a classroom at the primary school

Julie justified the inquiry pedagogical approach (Murdoch, 2015) by explaining that the project topics grew from the students' choices and interests in science questions. She suggested that these questions provided feedback for her and Bec to monitor the students' learning interests and that the provision of learning decisions enabled the students to feel autonomous about their learning (Deci & Ryan, 2002):

Research suggests that for 20% of learning kids should have autonomy. They should be able to make choices in some part of their learning day. We have hundreds of questions coming out of science, which is brilliant. For example, it might be, "Why is mercury blah, blah, blah?" (Julie, interview 1)

Julie explained how class discussions became opportunities for the students to share their learning with their peers. Questions and topics evolved from science lessons that provided prompts for the students to reflect on what learning challenged them and what knowledge and skills they had learned.

Manage learning

Guide and redirect the students to make decisions about where they sit in the classroom

Bec identified the challenges involved in sharing the organisation of the seating in the classroom with the students and she acknowledged that some teacher input into seating choice was appropriate:

We tried encouraging the students not to have a set desk at the beginning of the year and that they had to make their own learning choices. Some kids do a really great job; obviously, others needed to be directed. (Bec, interview 1)

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Bec talked about the consequences of some students' seating choices and about the times when it was necessary to guide and redirect their decision making. In addition, she emphasised the need for the students to feel that they could adjust their learning environments for effective learning:

From the furniture perspective, I encourage the kids to reorganise things to suit what they need it to do. I think some kids, in particular, struggled a bit more with that because they liked to have their space: "This is my desk and I'm sitting here." I encourage them, if they can't see the board, to turn their desk around. Something as simple as that has been needed with some of the students. (Bec, interview 2)

Bec recognised that for some students it was advantageous to suggest how to make adjustments to align their working spaces with their learning needs. Similarly, Julie expressed her views about students having control to move to a place in the classroom where they could learn effectively:

Probably the main thing is that the kids can make their own decisions about where they sit, who they sit with and who they work with. It took a little bit of encouragement to make good choices about where they're going to sit but largely now most of them can make these choices and be engaged. (Julie, interview 2)

Julie acknowledged the students required time to recognise and to learn how to make responsible decisions.

Teach the students to reflect on and to take responsibility for their behavioural choices

Bec explained the ways in which she and Julie provided support for the students to reflect on their behavioural choices and on how they affected others, through the restorative justice practices (Hopkins, 2002):

It's a bit of a school-wide philosophy because we have restorative justice practices here at school. Even detention is in a "reflection room". It's a time to sit and discuss how you are feeling, what your actions were, why you might have done those things and what can you do to restore the relationship. (Bec, interview 1)

Julie indicated that the cue charts associated with this behaviour management system were displayed prominently in the classroom and that the processes were explained to the students. The processes of restorative justice requires students exhibiting inappropriate behaviour to express their feelings and suggest more appropriate way of managing similar situations in the future (Hopkins, 2002).

Create visible lists of students' names to promote accountability for their learning

To afford students responsibility to manage their learning, Bec and Julie created visible lists of students' names that indicated that an action was required. They expected the students to be accountable for the completion of learning tasks and they indicated that the lists provided prompts for positive student reactions. From her experiences, Julie acknowledged that the students seemed to be comfortable to write their names on the whiteboard located at the front of the room. She said that they associated this with seeking assistance from the teachers:

The students are quite happy to put their names up because they know that we are then focusing on them for extra help or we will find a buddy tutor for them, so it's a positive thing and they see that as a positive thing. (Julie, interview 2)

As Julie indicated, the list of students' names displayed on the board was intended to be an external motivator that prompted them to complete their work. Similarly, Bec clarified the reasoning behind recording the students' names in a visible location and how this system of organisation served dual purposes:

I use my board probably more as an organising tool. So there's a big emphasis from me on them being accountable. Every time they look up, "Ooh, that's right." It's a reminder for them, just as much as anything else. Some students still don't act upon it and I still have to chase them down, but it gives them as many opportunities to be able to realise or come and check back with me. (Bec, interview 2)

Bec acknowledged that the list enabled her to share the learning responsibility with the students by reminding them of their accountability for the completion of the tasks. The photograph in Figure 5.3 presents the whiteboard being used as an organising tool to manage the learning in Bec's and Julie's classroom (the students' names have been blurred for confidentiality).

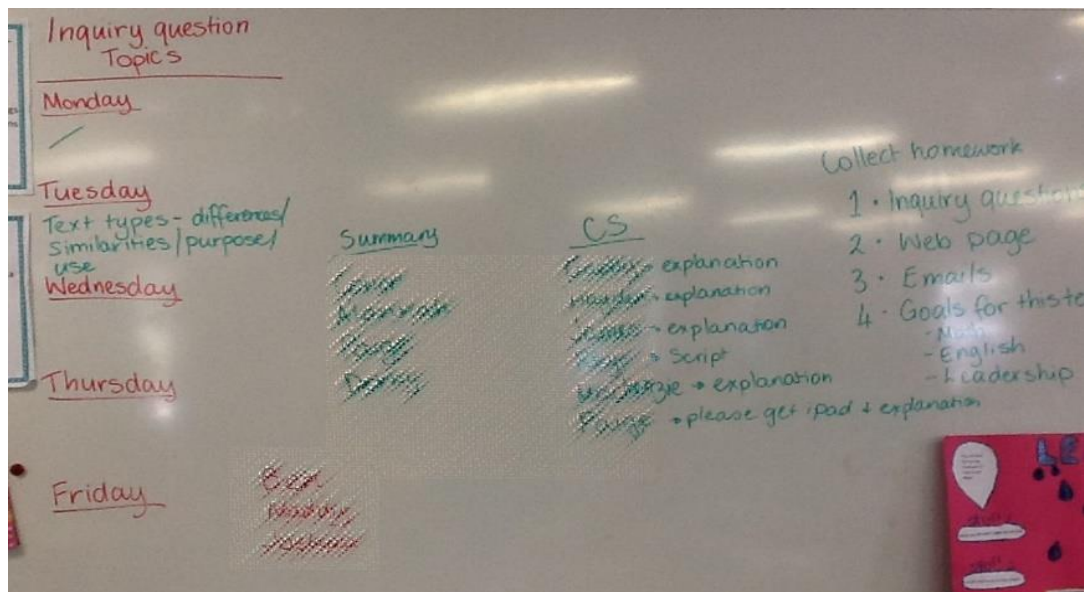


Figure 5.3. An example of an organising tool to manage learning

Establish a common class language to represent the procedures and the expected responses

To manage the learning in the classroom, Julie talked about how they established a common class language early in the school year through teaching a vocabulary that represented the planned procedures and the students' expected reactions:

We've just got this procedure in place where we count back "3, 2, 1 and pause". We give the kids a chance to finish their conversations and stop and listen and you can go into any classroom in the school and the kids know exactly what's expected of them. (Julie, interview 1)

As a common school-wide infrastructure, the procedures and expectations are expressed using the particular and succinct phrase that offers students take-up time (Rogers, 2015) to redirect their attention towards the teacher.

Scaffold learning

Provide the students with multiple sources to access learning instructions and information

Julie described what students were required to do to complete a task. After explaining the task to the class, she afforded the students the opportunity to access the task instructions through the class website:

We give instructions and, if they don't quite understand them, they know that they're written on the website for them to go to. As well as our instructions, it caters to different types of learning. They see it. They read it. They hear it. (Julie, interview 2)

Julie articulated the ways that the webpage offered students a source of support through visual cues for the verbal instructions. Bec emphasised how they taught the students to use the webpage to access information rather than relying on the teacher to be the only resource for instructions. An example of the visual instructions to support students' learning in Bec's and Julie's classroom is presented in Figure 5.4.

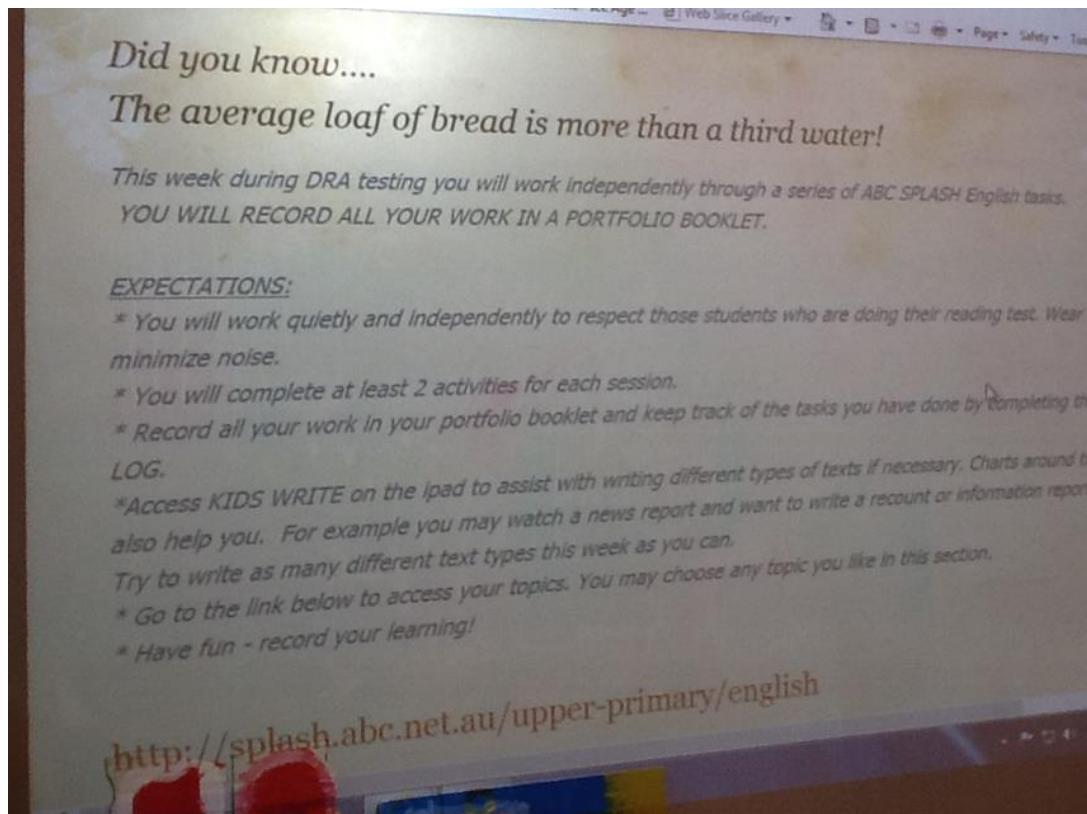


Figure 5.4. An example of the use of visual cues for learning

As well, Bec described the webpage “as my lesson planning tool” (Bec, interview 2). The website was set up with the lesson plans, the learning goals and the steps to follow.

Nurture questioning for learning to build the students' depth of knowledge

Rather than seeing teaching as being the transmission of information for students to learn, Bec emphasised the value of using questioning as meaningful dialogue:

Students are always encouraged to question. I ask leading questions to gain their prior knowledge and lead them in a particular direction rather than me talk and talk. I haven't put a veil over their eyes to think that I'm the fountain of all information. (Bec, interview 2)

Through this expression, Bec stressed that she encouraged the students to create for themselves new knowledge that is grounded in their experiences.

Teach the students to use a tool to self-assess their learning in relation to the particular learning goals

Bec and Julie embedded an assessment tool into their lessons that Bec described as serving multiple purposes. It provided them and the students with feedback about learning progress and teaching effectiveness:

It's like an achievement scale that the kids can identify with to self-assess their understanding of a particular learning goal. But also for us teachers to gain feedback. So, you know, part way through a directed teaching session I'll often do a windscreen check: "Who's bug splattered? Who's got the wipers going?" (Bec, interview 1)

If the students were not quite sure about their learning or if they had not understood the concept then the relevant pictures on the assessment tool indicated that they required assistance. Bec explained that they taught the students the strategies to self-assess their learning in relation to a particular learning goal and to share with the teachers how they perceived their levels of understanding or skill development. Using the metaphor of a clear or blurred windscreen, when the students felt that they had a good understanding, they were asked to select the clear windscreen and to become the "resident expert" (Bec, interview 1) as a celebration of successful learning:

We talk about having resident experts when we do our "windscreen check", which we do quite regularly. On their desk, you'll notice, they've got three pictures: one's of a muddy windscreen, another's of a bug splattered windscreen and one's a clear windscreen. (Bec, interview 1)

The windscreen check tool, also known as the "glass, bug, mud" (Brimijoin, Marquissee, & Tomlinson, 2003, p. 137), was laminated to the students' desks in Bec's and Julie's classroom as shown in Figure 5.5.



Figure 5.5. An example of a self-assessment tool

Bec explained that she and Julie used the assessment tool to help the students to develop an awareness of their learning progress. In addition, to inform their teaching-in-action (Schön, 1983), Bec and Julie gained feedback from the “windscreen check” (Bec, interview 1) to monitor the students’ levels of understanding and to adjust their teaching accordingly.

Adjust learning support

Support the students by adjusting the task product levels of challenge, whilst maintaining high expectations for all students

Bec described how she adjusted the levels of challenge during writing tasks for one of the students in her class:

He is a child that I have to prompt back on task because he just seems to not be there. So, if I expect a page of writing, I will expect a paragraph from him. He’s got lots happening conversation wise. He is quite an intelligent child and gets good results as long as I focus on getting quality from him, not quantity. (Bec, interview 1)

Bec demonstrated her high expectations for this student and a knowledge of the student with respect to his learning strengths and weaknesses so that she could support him in appropriate ways. The expectation was that the student would produce a quality written product, using a reduced number of words.

Build relationships for learning

Promote teamwork skills, student–student collaboration and communication as learning tools to construct knowledge socially

Bec talked about how she and Julie worked on developing the students' teamwork skills, social skills and interpersonal understanding for cooperative and collaborative learning:

The whole first week of the first term is based on teamwork skills, collaborating and group working skills. We really focus on getting the students out of their comfort zone and challenging them in new situations. This year we had a “messy day” with spaghetti and flour and a number of team initiative activities that involved the students communicating. (Bec, interview 1)

Bec emphasised that her intent of challenging the students during these group experiences was for them to feel the uneasiness associated with being in new situations. The “messy day” (Bec, interview 1) activity participation was aimed at the students overcoming feelings of anxiety about new situations with experiences of shared successes.

Communicate with the students' parents and caregivers to inform them about the class events and the proposed learning

Communication with the students' parents and caregivers was acknowledged by Julie as a way of forming relationships with them:

We regularly send a note home to the parents. It's a general note about all sorts of things but we tell them specifically what's happening in our classroom, a bit of an overview for the term but then we break it down: “This week in maths we're doing this. This week we're doing that.” So we try to keep them informed with the learning all the time. (Julie, interview 2)

Julie identified that she and Bec provided information to the parents about what learning they had planned and they reported what events were occurring in the classroom. Bec commented that this communication was in response to the parents asking for more details about assessments:

Well, I think they do value the information in that regard because we had feedback from parents that we were not giving enough information and that they just don't feel informed enough with regard to assessments. (Bec, interview 1)

Julie and Bec addressed the parents' concerns by providing the term overviews and by encouraging the students to share the assessment pieces via their personal websites with their parents.

*Expand practices***Learn from other teachers and with the students**

Bec described how she valued the professional learning gained from other teachers and how this opened her eyes to new learning during professional development (PD) opportunities: “Formulating my understandings, as shared understandings, had a very big impact not only on how I teach as a teacher, but in what I see in PDs. That’s what I find has informed my teaching practice” (Bec, interview 1). Additionally, Julie recalled how she was informed by her students about the ways that she could foster their learning. She talked about the learning that she experienced when working with the class of students who had been identified with lower academic achievements when compared with other students in the cohort:

I think I learned last year with my little class of iPadder learners, who were fiddlers and kids that couldn’t sit still and had to move. We had exercise balls, and they’d be rocking around on balls and I’d have teachers that would come in and say: “I don’t know how you can stand it in here; there’s so much movement.” And I’m thinking: “Well, look at the kids, though, they’re engaged in their learning.” Some of them might have been doing an app review at the front of the room and the rest of them had their iPads asking questions: “How did you do What was it called?” They were interacting but they were also listening. (Julie, interview 1)

Julie considered how her “little class of iPadder learners” (Julie, interview 1) engaged actively in the different learning activities. However, only after other teachers made comments did she realise the degree of activeness of the students in the classroom. Through her reflections, Julie expanded her pedagogical understanding about how the students in her class learned effectively as they moved and communicated to interact together.

Advocate a school-wide approach to implementing practices

Both Bec and Julie expressed an appreciation of the school-wide approach adopted as a “circle of practice” (Bec and Julie, interview 2) by the school, whereby the teachers shared their expertise in professional learning sessions. Julie discussed some of the structures and practices that the teachers in the school conveyed:

This school is very good at sharing their conference material and it depends on where teachers are with their journey as to how much of that content they take on. Simple little structures and things are shared across the school. (Julie, interview 1)

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Julie acknowledged that the teachers' sharing of their knowledge and practices with other teachers across the school established school-wide expectations for productive learning.

A summary of the examples of Bec's and Julie's pedagogical practices is presented in Table 5.3.

Table 5.3. *Examples of Bec's and Julie's pedagogical practices for fostering students' effective learning*

Code categories	Examples of Bec's and Julie's pedagogical practices for fostering students' effective learning
Design meaningful learning	<p>Design tasks that teach the students real-world transferable skills and connect students' learning with a real-life purpose.</p> <p>Design learning that provides opportunities for the students to formulate goals, make learning decisions and share ideas in discussions about learning challenges and knowledge gained.</p>
Manage learning	<p>Guide and redirect the students to make decisions about where they sit in the classroom.</p> <p>Teach the students to reflect on and to take responsibility for their behavioural choices.</p> <p>Create visible lists of students' names to promote accountability for their learning.</p> <p>Establish a common class language to represent the procedures and the expected responses.</p>
Scaffold learning	<p>Provide the students with multiple sources to access learning, instructions and information.</p> <p>Nurture questioning for learning to build the students' depth of knowledge.</p> <p>Teach the students to use a tool to self-assess their learning in relation to the particular learning goals.</p>
Adjust learning support	<p>Support the students by adjusting the task product levels of challenge, whilst maintaining high expectations for all students.</p>
Build relationships for learning	<p>Promote teamwork skills, student–student collaboration and communication as learning tools to construct knowledge socially.</p> <p>Communicate with the students' parents and caregivers to inform them about the class events and the proposed learning.</p>
Expand practices	<p>Learn from other teachers and with the students.</p> <p>Advocate a school-wide approach to implementing practices.</p>

5.4.3 Introducing Peter and Nicky

Peter's story

Peter shared how he was drawn to the teaching profession through his own secondary school experiences. He has taught students in most of the primary school year levels in his eight years of teaching: “everything from Years 2 to 7” (Peter, interview 1). Peter expressed his desire to teach upper primary students as he valued their “conversation and a bit more independency” (Peter, interview 1).

In implementing the Australian Curriculum (ACARA, 2017), Peter described himself as “the facilitator” (Peter, interview 1), whereby he was learning with the students. He stated: “You teach from the Australian Curriculum document instead of teaching to it” (Peter, interview 1). As an example, he elaborated that “there are many different ways of teaching addition in mathematics, although as a teacher you come up with your topic and have a good look at the ways you can teach it” (Peter, interview 1).

Peter explained how he worked co-operatively with Nicky, the teacher of the other Year 7 class at the school. They shared elements of the planning to design four units—one for each of the four terms in the year—that integrated the learning areas. The planned yearly overview joined the two Year 7 classes as a whole group for introductory lessons. More often, though, the students changed classrooms and teachers throughout the day for different lessons.

Peter advocated practical learning, pointing to a pile of glass-fronted boxes located at the side of the classroom. For the students to study the taxonomy of insects in science, he had borrowed these cases, filled with dead insect specimens, from the museum. Peter stated: “When students use hands-on inquiry, there’s a lot more thinking behind it. Like you get them finding out about the different levels of the insect taxonomy” (Peter, interview 1).

Nicky's story

Nicky acknowledged the impact that teachers have on peoples’ lives and she identified this as her motivation to becoming a teacher. In this, her 12th year of teaching, she reflected that she had taught students predominantly in Years 5, 6 and 7 classrooms, stating: “I do enjoy the older kids. They’re at that age where you can challenge them. They get the jokes” (Nicky, interview 1). Throughout the year Nicky and Peter shared teaching the Year 7 students in their classes, whereby she had

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taught one learning area to both class cohorts and Peter taught another, although Nicky indicated that she enjoyed teaching all the learning areas.

As a school student herself, Nicky had enjoyed being challenged: “I remember being at school thinking, ‘Oh, I wish my teacher would just ask that instead of telling us because I knew that.’ I love puzzles and problem solving” (Nicky, interview 1). At this point in the interview, Nicky moved to the side of the Year 7 classroom and she proudly opened a cupboard that was full of games and puzzles that she described as “the kinds of things that extend kids” (Nicky, interview 1). She specified learning through games and hands-on activities as being especially important for boys.

Nicky considered that one of her roles as a teacher was to be a motivator of students’ learning: “so that’s why I start my lessons, nearly every lesson, with some sort of game or something to motivate them” (Nicky, interview 1). Thus, Nicky shared her world travel experiences with the students through stories and photographs to connect their learning with reality. She recalled: “When I talked to the students about the Colosseum in a history lesson, I showed a photo, and then said that I was imagining the lions and the gladiators. I told them I could hear the roar of the stadium” (Nicky, interview 1). She laughed and said that sometimes she tells the students that if they get their work done then she will share a story with them: “so they do; they really like that” (Nicky, interview 1). Nicky identified with the role of being a facilitator of students’ learning: “I’ll give them what they need and plant the seeds, hopefully by asking the right questions” (Nicky, interview 1).

The 40 students in the Year 7 cohort were divided into two classes referred to as the “journey groups” (Nicky, interview 1). The students were organised again into two ability groups for mathematics and English lessons. These groups were referred to as “home groups” (Nicky, interview 1). Every school day began with the students in their journey group classrooms. The two Year 7 classrooms were physically separated in the school. Most students spent different parts of their school day in one room and then transitioned to the other, with either Peter or Nicky as their teachers.

5.4.4 Peter’s and Nicky’s practices for fostering students’ effective learning

The following analysis presents my interpretations of the pedagogical practices that Peter and Nicky talked about in their interviews. From these I inferred their intentions to foster students’ effective learning. Peter’s and Nicky’s pedagogical practices were analysed through the lenses of the six code categories. These are

represented in italics as sub-headings with examples that are provided from the data to support the analysis.

Design meaningful learning

Plan and implement an integrated curriculum design to link the content and the skills across the learning areas

Peter discussed how he and Nicky crossed the boundaries of the curriculum learning areas to teach the related material concurrently in an integrated approach (Beane, 1997; Dowden, 2014; Fogarty, 1991). For example, Peter explained that they used a common topic of study to align some of the content from the curriculum learning areas of English and history, and of geography and science:

This year we did an English unit that goes across history and looks at propaganda during the war times. We designed propaganda posters so we looked at real posters of the war. Some of the science seems to work in with the geography. Well, last year we did a “resources” unit in science and the geography curriculum includes the concept of “resources”. (Peter, interview 1)

In their planning and implementing of the content and the skills through an integrated design, Peter and Nicky made the links across the curriculum learning areas obvious to assist the students to make these connections.

Provide the students with choices to apply their strengths and to communicate their understanding of a topic

Nicky shared an approach that she said assisted the students who experienced difficulties presenting their learning in written form:

Well, what I was trying to think of was how can some of these kids, who struggle to write what they are thinking in a written test, show us what they know about it? We gave them the choice to show us how they wanted to do it. So some chose to do a PowerPoint and some of them acted it out. (Nicky, interview 1)

Peter explained: “They were really keen about this and were getting dressed up and acting it out” (Peter, interview 1). The teachers designed the learning to provide the students with various ways to communicate their understanding of the topic.

Supply authentic resources to the students for real-life learning

With the intention of connecting the students’ learning with reality, Nicky expressed her enthusiasm for sharing her authentic travel photographs with the students:

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In the history civilisation lessons, when we get to Egypt, I'll show them my pictures of the Sphinx and the Pyramids. I went to the Holy Land at Easter, so I presented "The Passion" in the real pictures, like where they occurred and that sort of thing. (Nicky, interview 1)

Nicky's photographs, unlike the photographs from a book, sent messages to the students that these were real-world places that she had experienced. Likewise, Peter highlighted the significance of the students experiencing real-world resources for effective learning by describing the field trips and authentic objects that the students could explore inside and outside the classroom: "We went out and had a look at the plants and classified the different plant types. I've got insect cases up there so students can go and have a look inside the box and explore" (Peter, interview 1).

Figure 5.6 presents the insect boxes on display in Peter's classroom as an example of authentic resources for real-world learning.



Figure 5.6. Examples of authentic resources for real-world learning

Manage learning

Establish the procedures that enable the students to organise their materials and seating arrangements

As the students were required to transition between the two physically separated classrooms, Peter explained how he and Nicky established procedures that enabled the students to organise their learning materials within the different learning locations:

We have folders, like mesh folders that the students take to their journey groups. If they go to a different classroom then they throw their stuff in there because we swap, like 40 minutes here and then 40 minutes in there. (Peter, interview 1)

Similarly, Nicky provided the students with places in the classroom to store their materials, depending on the students' groupings for different subjects:

For the home group, in my classroom, they've got the tidy trays for their maths and English books. But for the students that are in Peter's home group and come here for journey group, then the chair bag is theirs for their journey group stuff. (Nicky, interview 1)

Embed the procedures that offer responsibility to the students for the collective operationalisation of the classroom

Peter and Nicky embedded procedures in the daily classroom activities that offered responsibility to the students for the collective operationalisation of the classrooms. Peter described the timetabled structure of the school week and he emphasised how these organisational procedures were established in the first few weeks of the school year:

The students get a timetable to glue in their diary. It's just the routines you set at the start of the year; like that on Monday and Wednesday we swap classes and Tuesday we have assemblies and Thursday morning we have church. I write on the blackboard major things that are happening throughout the week. This term for the first 15 minutes the students run the morning sessions. We just set up a roster at the start of the term. (Peter, interview 1)

The roster in Peter's classroom was located on a wall at the front of the room, where all students had access to the information that was required for the efficient organisation of the morning session. Peter shared how the students made use of their diaries and how they used the reminder list on the blackboard. An example of a list of reminders displayed on the blackboard that offered students responsibility to support their involvement in the classroom events is presented in Figure 5.7.

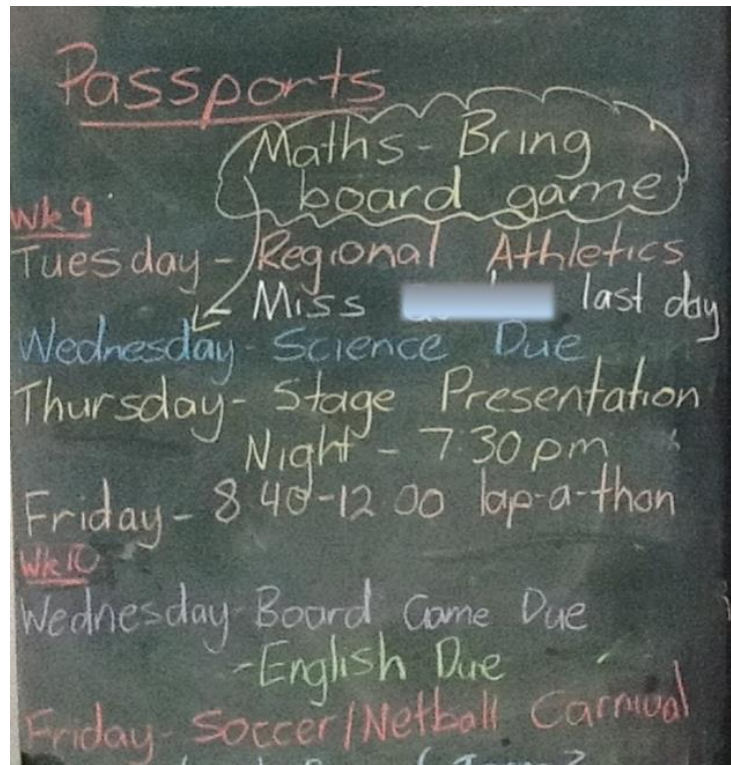


Figure 5.7. A list of classroom events on the blackboard as an example of embedded procedures that offered responsibility to the students

Nicky shared the general management of the learning environment with the students using a weekly jobs chart that indicated to the students their classroom responsibilities: “The students in my journey group do their classroom jobs: bins, windows, floors. I’ve got the job chart up there and their names rotate around the job list” (Nicky, interview 1). The jobs chart (with students’ names blurred for confidentiality) that was used as an organising tool to share the responsibility for the classroom management is presented in Figure 5.8.



Figure 5.8. An example of a classroom organising tool

Promote the behavioural expectations using redirection techniques to remind the students about their appropriate behaviours for learning

Nicky recognised that at times she needed to redirect the students and guide their decisions so that they were positioned in the classroom where they had opportunities to learn effectively: “I sometimes tell someone to move to a different chair so they’re not distracted. They generally sit where they want but in the same seat each day” (Nicky, interview 1). In addition, Nicky described a management technique that she employed to redirect students’ behaviour that included administering consequences for inappropriate behaviour and acknowledgement of when the students demonstrated the desired behaviours for learning:

I indicate with my hand: “Give me five minutes”. That signals to the student that he [or she] owes me five minutes of his [or her] lunchtime but it also gives him [or her] the opportunity to “work it back”. Most of the time it is just a way to remind them that they are not doing the right thing. Most of them work to make the time back. (Nicky, interview 2)

Nicky ensured that the students understood that they were required to adjust their behaviour and that they had the power to change their behaviour. Using the non-verbal hand signal, Nicky communicated with the students, thereby creating minimal disruption of the lesson when redirecting students’ behaviour.

Scaffold learning

Verbalise the personal learning strategies and stimulate discussions with the students about the learning strategies that they apply to suit the situation

Nicky explained how she modelled the strategy of self-verbalising (Zimmerman, 2011) to think aloud and share how she performed the mental calculations in mathematics lessons:

I try and share with the students my own way—how I see it, how I do it—when we do our mental mathematics. When it's adding certain numbers; well, how did you do it? I get them to tell me what strategies they use. I think we were doing one last week, like 17 plus 19. I said to them, "Well, 19 is near 20. So add the 20 and take the one, instead of doing the hard calculations." So I'm trying to give them as many tools and resources to learn [as possible]. (Nicky, interview 1)

Furthermore, Nicky encouraged the students to reflect on and identify their own thinking. She did not expect the students to use the same calculation strategies as she verbalised or as their peers used to find the answers but rather to appreciate the different ways that mathematical calculations could achieve the same answer.

Model the construction of a mind map to illustrate the conceptual interrelationships in the learning

Nicky scaffolded learning conceptually by constructing a mind map to represent visually the conceptual measurement connections in mathematics:

I try to highlight to my students that mathematics is all related. The more connections you have in your head, the more connections you can see—for example, between perimeter and area—the more likely you are to remember it. We actually drew a mind map so that they could see how they interrelate. (Nicky, interview 1)

To simplify and teach the conceptual interrelationships, Nicky illustrated graphically the similarities in the concepts so that the students were afforded the opportunity to draw on what they did know in mathematics to assist them to understand and remember the new learning. Nicky created the map with the students to model the organising information strategy for them to apply to represent their own learning connections.

Teach the steps of a writing process as prompts for the students to follow and develop an awareness of the building blocks of the finished product

Peter explained that he and Nicky taught the students to follow a learning process to develop an awareness of the steps that structured their writing experiences. They scaffolded the strategies for planning, composing and revising (Mason et al., 2011)

by modelling each step to show the students how the building blocks combined to create the finished written product:

The first lesson of the term we just got them to write a story, like over two days. Some of the boys found at the start that their stories were one paragraph long. Then at the end we went back and I'd say: "Here's the story you have now come up with, and here's the one before you knew all these kinds of things." Well, before we taught them the steps some were having trouble just coming up with an idea and did not know how to plan. (Peter, interview 1)

The process of the writing was scaffolded by being broken up into smaller tasks and the students compared their final product with their original sample to show them the increased mastery of their writing capabilities. As such, Peter and Nicky provided the students with time to reflect on their learning progress by comparing their initial draft piece of writing with a final product.

Adjust learning support

Support the students to reflect on their learning to experience a sense of achievement and success

Peter emphasised the value of students' personally reflecting on and experiencing achievement in their learning: "If they can do it a different way, it doesn't have to be better but they at least can feel they can do it" (Peter, interview 1). Nicky supported Peter's view by stressing the longer term impact of success on students' feelings of achievement: "Students have to have some successes in it because, if they don't have successes, well, they probably won't want to try it again" (Nicky, interview 1).

Build relationships for learning

Incorporate opportunities to connect with the students through everyday classroom events to learn more about their interests and needs

Nicky recognised the importance of having conversations with her students and she used everyday classroom events for building relationships with them:

Being someone the students can talk to and being an ear for whatever reason that they need to have a chat. When I do the roll call for instance, instead of just replying "present", on Monday, we usually answer with a highlight of their weekend and then maybe later in the week a sport or a food they enjoy. Just those little things—you just learn so much about them or how they're feeling. (Nicky, interview 1)

Organisational tasks like calling the attendance roll afforded Nicky opportunities to connect with the students in her class.

Unite the students in the class as a community of learners through a progression of group development activities

As teachers of the Year 7 students, Peter and Nicky aimed to unite the student group. The Year 7 students were in the highest grade in the school and so they were regarded by the school community as the “leaders” (Nicky, interview 1). During the establishment phase, as the first few weeks of the school year (Rogers, 2015), the students participated in a progression of group development activities. For instance, Nicky highlighted some of the team building games and she gave examples of YouTube videos that they used for the purpose of stimulating students’ interest:

In the first week, we do quite a different program. It’s all mainly about building relationships. With the Year 7s, it’s about building a leadership team. So our first day, we will start all together and I’ll try and have some sort of attention grabber, like a commercial or a clip. We did one about the thinkers of our time and one about Stephen Bradbury as the accidental hero. We will do relationship building stuff and lots of games in that first week. I’ll follow the progression of group developments, starting with the fun activities so functional understanding is not necessary; then moving onto de-inhibitor games, where you’re starting to get into each other’s spaces; progressing through to your problem solving games. (Nicky, interview 1)

Nicky described how she and Peter increased the level of cognitive and social skills that were integral in the games to challenge the students with the intention of building peer relationships and developing leadership skills. Accordingly, they offered scaffolded learning to the students to introduce new challenges such as initiating interactive problem solving situations.

Expand practices

Reflect on personal and professional experiences to inform teaching

Nicky considered how she integrated her personal life experiences into her teaching: “I have travelled lots and had quite a few different experiences. Just sharing these stories motivates the students” (Nicky, interview 1). Nicky recognised that her involvement in travel provided her with narratives that she could use for the purpose of inspiring the students’ learning. Peter discussed what he envisaged were constructive outcomes from school-wide professional learning experiences: “To have a really big push, well, you kind of need lots of different people on board. You can

do it a little in your classroom but it would be good from the whole-school approach” (Peter, interview 1).

A summary of the examples of Peter’s and Nicky’s pedagogical practices is presented in Table 5.4.

Table 5.4. *Examples of Peter’s and Nicky’s pedagogical practices for fostering students’ effective learning*

Code Categories	Examples of Peter’s and Nicky’s pedagogical practices for fostering students’ effective learning
Design meaningful learning	Plan and implement an integrated curriculum design to link the content and the skills across the learning areas. Provide the students with choices to apply their strengths and to communicate their understanding of a topic. Supply authentic resources to the students for real-life learning.
Manage learning	Establish the procedures that enable the students to organise their materials and seating arrangements. Embed the procedures that offer responsibility to the students for the collective classroom operationalisation. Promote the behavioural expectations using redirection techniques to remind the students about their appropriate behaviours for learning.
Scaffold learning	Verbalise the personal learning strategies and stimulate discussions with the students about the learning strategies that they apply to suit the situation. Model the construction of a mind map to illustrate the conceptual interrelationships in the learning. Teach the steps of a writing process as prompts for the students to follow and develop an awareness of the building blocks of the finished product.
Adjust learning support	Support the students to reflect on their learning to experience a sense of achievement and success.
Build relationships for learning	Incorporate opportunities to connect with the students through the everyday classroom events to learn more about their interests and needs. Unite the students in the class as a community of learners through a progression of group development activities.
Expand practices	Reflect on personal and professional experiences to inform teaching.

From this analysis of the data in Case One, I have interpreted how these Years 5, 6 and 7 teachers—Bec, Julie, Peter and Nicky—talked about their pedagogical

intentions for fostering students’ effective learning. In the next section, I extend my exploration of teachers’ pedagogical intentions into the secondary school context.

5.5 Case Two: The Secondary School Context

In this section, I present selected data in Case Two to tell the stories of the participants—Greg, Rachael, Peter and Sarah—in their roles as teachers in the secondary school setting. Firstly, I introduce Rachael, who taught Year 8 students mathematic, and Greg, who taught Year 8 science and an elective science related aquaponics subject. Secondly, I introduce Brian and Sarah. Brian taught Christian studies to Year 8 students and Sarah taught history to students in Year 9. Being secondary school teachers, the participants in Case Two also taught other learning areas and year levels, yet for this study they were asked to focus on their experiences of teaching young adolescent students in Years 8 and 9. Table 5.5 identifies the Case Two participants and their teaching contexts.

Table 5.5. *The Case Two participants and their teaching experience and contexts*

Case Two teacher participants	Teaching experience	Secondary school contexts
Rachael	12 years	Year 8 mathematics
Greg	8 years	Year 8 science and Year 9 aquaponics
Brian	22 years	Year 8 Christian studies
Sarah	5 years	Year 9 history

5.5.1 Introducing Rachael and Greg.

Rachael’s story

Rachael described school as a “launching pad to the many paths and avenues of life” (Rachael, interview 1). After Rachael completed Year 12 at school, she worked in corporate business offices and she said that she enjoyed training the new employees. This prompted her to pursue teaching qualifications and led her to the position as the head of department for mathematics, teaching students in Year 8 and Years 11 and 12. Rachael stated that teaching was the thing that she wanted to do: “It’s about helping people, and building relationships. It’s about getting to understand and master a topic and assisting others that have difficulty” (Rachael, interview 2).

Rachael began her teaching career working with secondary school students, many of whom came from low socioeconomic backgrounds, who said that mathematics was the “stupidest subject in the world” (Rachael, interview 1). As their teacher, Rachael understood that she could reinforce this mindset or she “could break it down by giving the students positive reinforcements” (Rachael, interview 2). Rachael referred to this as opening up an “avenue of confidence to keep going” (Rachael, interview 1). She emphasised that her confidence in mathematics teaching reassured the students: “Everyone likes to know they’re learning from an expert” (Rachael, interview 2). To break the cycle of mathematics anxiety that Rachael indicated came with students as they transitioned from the primary school to the secondary school, she suggested: “Giving students strategies, where they can feel success” (Rachael, interview 1).

Rachael attributed her own success with teaching mathematics to the relationships that she established with the students through showing that she cared about them and their learning. Rachael explained that it was particularly significant for the students to understand that they worked as part of a team with shared responsibilities, explaining that she told the students: “You have to do your responsibilities so I can do my responsibilities” (Rachael, interview 1).

Greg’s story

Greg encapsulated teaching science as “helping my students to understand the world” (Greg, interview 1). He declared: “I like to try and instil the awe of wonderment ... not just be this exciting thing, but then [for students to] have the understanding of why it is that way” (Greg, interview 1). Having achieved a Science degree—referring to himself as “a marine biologist by study” (Greg, interview 1)—Greg completed his Graduate Diploma of Teaching and began his teaching career in a London school.

Greg confided: “I come to work because I love my job. I love being able to teach and interact with the students and to see them progress” (Greg, interview 1). Greg shared that his desire to teach came from “an evolving understanding of the importance of educating others” (Greg, interview 2). He articulated his beliefs about teaching: “It’s the noblest and most important profession on Earth” (Greg, interview 2). He described his pedagogy as “my style and the way I get students learning”

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(Greg, interview 2). Greg emphasised why he valued fostering students' effective learning:

They can survive in the real-world. There's some point in time somewhere that they go, "Hey, I've got to start learning because I'm going to be in trouble if I don't." (Greg, interview 1)

As head of department for science at the secondary school and as a teacher for students in Years 8 to 12 over the past eight years, Greg had observed the students' progress through the school system. He expressed concerns about students' negative attitudes and habitual behaviours that became the barriers to their succeeding. Greg referred to the importance of:

... students' belief in themselves. If you get that right, if you can change that, then you've got them. Especially as the level of expectation significantly increases, as they move through secondary school. (Greg, interview 2)

Hence, he expressed his desire for all students—especially those who have an "I can't do that" (Greg, interview 1) attitude—to "grow up positively with an attitude that they can be more than what they think they are now" (Greg, interview 1). Greg considered the junior years—Years 8 and 9—as an essential time for students to feel successes when they had not done so before, and for their learning to be enjoyable.

5.5.2 Rachael's and Greg's practices for fostering students' effective learning

The following analysis presents my interpretations of the pedagogical practices that Rachael and Greg talked about in their interviews. From these I inferred their intentions to foster students' effective learning. Rachael's and Greg's pedagogical practices were analysed through the lenses of the six code categories. These are represented in italics as sub-headings with examples that are provided from the data to support the analysis.

Design meaningful learning

Teach the content and the skills that are distinctive to the curriculum learning areas

Rachael acknowledged that the content and the skills that are distinctive to the curriculum learning areas could be aligned with one another to create meaningful, cross-curricular connections. However, she emphasised that planning an integrated curriculum was a time consuming process and that this required the teachers'

commitment: “To be able to organise a unit correctly with cross-topics, you need time. There’s a lot of planning, and everyone needs to be on board in the same way” (Rachael, interview 1). Rachael was cautious about recommending that teachers embrace subject integration without an understanding of the complexity involved in doing this for fostering students’ effective learning:

If I was going to look at teaching the humanities and math, I would have to be very careful that I’ve planned it so the students are getting their math, because they still need to explicitly know how they’re using their mathematics. That’s the true trick in using an integrated subject approach. The lines can get blurred, and the students don’t actually think they’ve done any math. (Rachael, interview 2)

Rachael emphasised that the skills and content foundational to mathematics needed to be taught explicitly when undertaking an integrated approach to planning across subject areas.

Focus on teaching skills that offer the students a broader context for learning transference

Additionally, Greg recognised that the students needed to have their learning experiences designed so that they could make the links for skill transference from one learning area to another: “The students absolutely struggle with transference. They struggle with the fact: ‘I’ve just worked out how to do an average in mathematics and now you’re asking me to do an average in science. I don’t understand’” (Greg, interview 1). Greg proposed that a focus on contextualised learning could make more sense to students rather than the fragmented learning of subject-based skills:

I would think learning should be contextually based; here’s the big picture of the context and this is what we’re doing here in the subjects. That’s not going to happen for every unit but, even if you did that once a semester, I think you’d have great value out of it. (Greg, interview 2)

Where possible, Greg designed units for teaching and learning that included a coherent alignment of subject content and connected topics.

Clarify the purposes for authentic learning experiences

Rachael acknowledged the need for students to relate the learning to its purpose and within authentic contexts for them to take an interest in and to engage in the task:

You have to make connections constantly because math is relevant in life and in the real-world. If you don’t, they will see it as a separation and they will ask then why they’re bothering to do it. I think one of the most common questions you’ll get in math is: “Why do I have to do

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this?” “Well, because our world is mathematical.” What I mean is that we’re based on mathematical things. (Rachael, interview 2)

The connectedness referred to by Rachael involved introducing the authentic content (Lombardi, 2007) as knowledge and skills that can be applied to real contexts and issues beyond the classroom.

Identify what the students would enjoy learning about and contextualise their learning to relevant topics

Greg considered that effective learning was an outcome when the learning was fun for the students. He designed learning that involved his students in topics about which he considered that they would enjoy learning:

The students know in aquaponics they have fun, because it’s growing fish and plants and there’s a scientific side of understanding but they are also going out and handling fish. (Greg, interview 1)

To inspire the students in the aquaponics class, Greg addressed the need for fun in learning (Glasser, 1990) by drawing potentially on their intrinsic motivation (Csíkszentmihályi, 1975, 2008).

Connect the learning with the students’ prior and concurrent learning

Rachael emphasised that she provided opportunities for the students to make the links with their prior learning explicit and to integrate their conceptual understanding:

At the moment we're reviewing volume and capacity. I put to them the other day: “What’s the question asking you to do? Okay, what information do we have?” We looked at what strategies they needed to know to work out the capacity. They identified they needed to know how to calculate the volume. They’re like: “Yeah, we just now need to go measure and find the actual information to apply the formulae.” (Rachael, interview 1)

Through the discussion, Rachael intended to engage the students in the task by drawing on their prior knowledge and consolidate what they are learning.

Manage learning

Set the procedures and apply these consistently as the routines and the everyday practices

Greg emphasised the value of applying consistent procedures as the daily habitual routines. For example, he explained why he asked the students at the beginning of the lessons to: “Please open your books” (Greg, interview 2). He identified this as another part of the classroom routine intended to help the students to form the habits

for effective learning. Similarly, Rachael talked about the inconsistent procedural expectations of teachers as being one of the challenges for the secondary school student: “I think the hardest part for the students is learning the expectations of all the different classes. All the teachers are different; the expectation is different in every room” (Rachael, interview 1). As well, Rachael indicated that she was aware of young adolescent students’ needs to feel that they had volition rather than feeling controlled by the teacher:

You have to be consistent, but you can’t be authoritarian. You have to let them know the boundaries but you can’t be unfair. At the start of term, I let them know what I expect: “Two straight lines, quiet, come on in, and sit down.” I set it up in that initial term. (Rachael, interview 1)

Rachael specified that she maintained consistent and fair boundaries from the first lesson and she considered how she adjusted her everyday practices for the different classes that she taught:

I have a very set structure, but I don’t do it the same for [Years] 11 and 12 students. They don’t have to line up before they come in because they’ve already shown me they’re in my class ready to learn. In general, Year 8 students have not. If I don’t have a strict procedure before they come in, they will take more time to settle down. So I’m very, very consistent on the fact that they form two quiet lines, with all materials ready to go. I specify that, if they’re on time, they get to come straight in and if they are late they have to wait at the door to come in when invited. So there’s a very small consequence that isn’t huge but they come to realise that I value them being on time. (Rachael, interview 1)

Rachael explained that the older students had demonstrated responsible learning behaviours, whereas the Year 8 students were still at the stage of developing effective learning habits. Therefore the Year 8 classroom procedures were structured and Rachael exhibited more dominance (Marzano, 2007) to guide the students and to clarify the expectations. She administered the logical consequences with the intention of reinforcing to the students that she valued the specific learning habits.

Guide the students’ decisions about where they are to sit in the classroom

Greg explained how he managed the learning for group work initially by organising the students into small groups and then by providing them with the opportunity later in the year to decide with whom they could work effectively:

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What happens, early in the phase I will pick groups and then, as the students show that they're able to work together, I'll allow them to move to friendship style groups. That's when it's a really natural style of grouping. As long as they're on task then I'm happy with their group dynamic. (Greg, interview 2)

Rachael talked about her strategy for organising the students' seating arrangement, which was different from Greg's, although it was practised for the same outcome of maintaining the students' engagement in the learning tasks. She emphasised the advantages that came from students' being afforded the responsibility to make decisions about where they would sit and with whom they worked:

I don't have seating charts in my class. The purpose for that is that it gives the kids responsibility. In my first session, I say: "Choose where you want to sit." Like they'll all sit down and then I say: "Think about who you're sitting next to and, if you don't think you can be productive with that person, you need to move." I will let them make that decision. You find really quickly who works well together. You find those that don't and you say: "You're here until you can prove to me that you can work well and I'll let you sit back there." Allowing the students that bit of their own maturity and responsibility, they can develop those things, whereas if you just put them in seating, they don't get a chance to develop that. (Rachael, interview 1)

Rachael expected the students in her class to make responsible decisions for effective learning, although she accepted that she needed to guide these decisions at times.

Reinforce the availability of the students' personal learning materials to enable their learning

Rachael and Greg approached the management of students' personal learning materials in diverse ways, although they reinforced the availability of the resources as being essential to enabling effective learning. Rachael explained how she set the expectations and she trusted the students to be responsible for bringing a pen to class. In addition, she explained how she managed situations proactively when the students did not have the required equipment for learning:

I don't have any kids that don't bring pens. Well, because they need a pen. That's the expectation. I mean, I've had kids where they've run out of a pen or I have had one kid that just lost it but they usually see me before they get in class. Occasionally there's someone who has picked up the wrong materials. It happens, you know. They've picked up art instead of math because they were in a rush. I say: "Okay, well, you're going to have to just take a page out of your book and write on that and I'll need to see that transferred into your math book. That's fine; thank you for letting me know. You've got some paper? Or I've got some paper you can have." That's a reinforcement again. So that means next

time they'll take a bit more time to get the right books because they have to do work twice now. Some students do forget their materials sometimes. You just have to be a bit flexible and remind them to bring it next time but next time it might be: "Well, I have to see your diary and I'll have to write a note for your mum." (Rachael, interview 1)

Greg's view on the issue of students' bringing pens to class was that this was a problem that could be solved easily rather than making it a big issue with the potential to interrupt learning:

I don't see the point in there being a consequence for not bringing a pen to my class. I can solve that problem. If that's going to be the only barrier the students have to learn in my room, well, I'll solve it really quickly at the start of the lesson. Even for a student who's most troublesome. He'd never bring a pen or a pencil or a piece of paper. So as soon as he got in the room I had it waiting for him and then he was sitting down and actually engaging, whereas, prior to me not doing that, he would wait 10 minutes into the lesson, while I'm halfway through explaining something and go: "Oh, I don't have a pen, Sir," and interrupt. (Greg, interview 1)

In this example, Greg explained how he demonstrated to the student that he valued his learning. Greg's focus was on teaching and learning in his classroom, and avoiding intrusion into and interruption to the flow of the lessons.

Scaffold learning

Assist the students in making the concrete to abstract conceptual connections in their learning through hands-on learning tasks

Rachael explained how she intended to assist students to make the conceptual links for measurement in mathematics. When required, the students were provided with resources to manipulate so that they could represent the concrete measures and link them with the abstract system of measurement units:

For those kids that aren't getting the concepts, they still need concrete, because they're not thinking abstract. At this age, it is a varied age of concrete and abstract thinking. So it can mean getting toothpicks out and saying: "Okay, how long is the toothpick?" Not all the kids need this so you need to be flexible in the lesson. (Rachael, interview 1)

Rachael identified that the young adolescent students were in a transition phase of cognitive development and that their thinking capabilities were expanding from concrete learning to abstract understanding (Manning, 2002; Piaget, 1971).

Co-construct the meanings of the relevant, subject specific literacy terms

To avoid barriers to learning, Rachael emphasised that she reviewed with the students the meanings of the relevant literacy terms inherent in the subject's content. She discussed how she co-constructed the definitions and meanings of mathematics vocabulary to reinforce with the students the foundation of knowledge and to connect prior learning with new learning:

I'm very big on literacy terms and understandings. Simple things like "volume and capacity". To understand them we'll recap the literacy terms we're going to be using. For example: "Who can tell me what they think 'volume' is?" As a team, we construct the literacy term together. It's about knowing your terms and this is, as a high school teacher, knowing your stuff. The students then write it down and they start making the links. It's about them using the literacy to construct the knowledge. (Rachael, interview 1)

Furthermore, Rachael acknowledged the importance of the teachers having a knowledge of the mathematical terms as part of their pedagogical content knowledge (Shulman, 1986) to understand how to scaffold specific concepts that are recognised as being difficult for students to learn.

Teach the students to structure their bookwork based on the lesson goals as a strategy for organising and transforming information

Rachael and Greg demonstrated to the students how to structure their bookwork for each lesson so that the conceptual learning could be referenced in future learning. Consequently, the contents of their workbooks became a tool for learning:

The goal is written up on the board on the same spot all the time. The students always know where it is: "This is what we want to achieve by the end of the lesson." Then they write the title in their theory book. I'll write the title "Theory Book" on the whiteboard and then write the literacy terms. (Rachael, interview 1)

Rachael modelled the organising and transforming information strategy (Zimmerman & Martinez-Pons, 1986, 1990) with the intention of showing the students how they could refer to their theory books to connect the conceptual terms with the relevant skills and understanding goals. Similarly, Greg explained that the lesson goal could be used as a starting point to show the students how to structure their bookwork and how to store information about their learning for later reference:

Teaching them to set up their books is about tracking lessons. So there's a date, there's a title, there's a learning goal. If that's the least things they write down in my whole lesson, at least we've got some point to go back to. (Greg, interview 1)

In this example, Greg modelled an information organisation strategy that the students could apply during other learning opportunities.

Provide success criteria for the students to connect their work with their perceived achievement levels

Greg discussed how he encouraged his Year 8 students to use the strategy of self-evaluation (Zimmerman & Martinez-Pons, 1986, 1990). He provided the students with the success criteria that afforded them the opportunity to connect their work with their perceived achievement levels:

What I find is if I write a success criteri[on] and ask: “Who got to Level 5 today? They go: “Yeah, Sir, I did,” and they walk out of the room. You’ve got to take the time to go and check that they have achieved this level and are able to express why they think they got to Level 5 today: “What have you done that’s been successful?” (Greg, interview 1)

Greg highlighted the value of students’ reflecting on their learning and he acknowledged that he needed to spend the time to question the students so that they understood how to monitor their progress using the self-assessment criteria.

Provide time for students to process new concepts and to articulate their learning

Rachael recalled the conversations that she had with her students that provided them with the time to process and to make sense of new concepts:

I say to the students: “What do you feel you’ve learned this term? What do you feel you now understand?” So I didn’t even give them [the criteria of] what we’ve done. They actually had to come up with answers. (Rachael, interview 2)

Using elaboration as a strategy (Zimmerman & Martinez-Pons, 1986, 1990) to articulate their learning, Rachael prompted the students to explain in their own words what they had learned.

Adjust learning support

Know the students’ capabilities to support them to experience success in their learning

Rachael described how she would make learning adaptations for all her students so that they could feel capable of achievement in mathematics. She considered the importance of knowing the students’ capabilities to design tasks for them to experience successes in their learning:

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There will always be certain things the kids are really quick at and there will be some things where they need more time. There are times when I would say: “You can use your calculator.” So it’s about giving them a strategy where they can feel success and not just: “Look, you just failed again.” (Rachael, interview 1)

By providing more time and tools to progress the learning experience, Rachael aimed to steer her students towards effective learning and a feeling of success.

Adjust the level of the learning experiences for the students to work within their zone of proximal development

Greg identified the value of students’ being provided with learning at a level where they felt that they could achieve positive outcomes so that they were not overwhelmed by experiences that disengaged them from the learning:

We have a strong contingent of students that come to Year 8 that are still at the reading level of a Year 2 student. Now they’re getting pumped with these large volumes of text and that leads to behavioural issues. So it’s about recognising these students and then tuning the way that you teach so that they can still have success. (Greg, interview 1)

Greg described how he adjusted the level of the learning experiences for the students to work within their zone of proximal development (Vygotsky, 1978). This meant that he set the task challenges with consideration of the students’ current skill competence and he offered support so they could achieve the task.

Encourage the students to enjoy learning and to feel internal success

Greg talked about the importance of Year 8 students feeling success and finding enjoyment in learning: “I guess in the junior years it’s more about them being rewarded with successes where they haven’t before and therefore learning to enjoy learning. I give acknowledgement and we celebrate successes” (Greg, interview 1). The outcome of an internal sense of achievement was considered by Greg as being an important reward that students use to sustain their learning engagement.

Acknowledge the students’ learning efforts and progress with simple verbal and non-verbal gestures

Similarly, Rachael described how she acknowledged the students’ learning efforts and they progress with simple verbal and non-verbal gestures:

My rewards are more word orientated or as high-fives and thumbs up. It’s more an internal reward that keeps them going. Some kids work very well with stickers, but then, if they just start working for that, they’re not actually taking on the lifelong learning lesson. That’s a big transition thing in Year 8 because in primary school they will work just for that, but in Year 8, if they are just working for that, by Year 9 the

sticker can lose its little shine and then they can just fall apart, because they think: “Why bother? I’m just going to get a sticker.” They should build that resilience where they feel their own success. (Rachael, interview 1)

In this example, Rachael expressed concern about her young adolescent students building a reliance on tangible rewards, such as stickers, as having a less long-term effect on learning than informationally administered verbal rewards.

Build relationships for learning.

Take the time to learn about the students’ interests and their outside-school lives

Greg identified instances out of the class time where he worked to build relationships with the students: “I find playground time, sporting time, just those other moments that you stop and you have the conversation with them at lunchtime, sitting down with a new group of students, that sort of thing” (Greg, interview 1). Greg intended to form interpersonal connections with his students through making the time to learn about his students and their outside-school lives.

Care about the students and their learning

Rachael described how she attempted to form relationships with her students during class time: “Offering feedback in class is a chance to build a relationship” (Rachael, interview 1). She emphasised that “the relationship is so important” (Rachael, interview 1), referring to her students: “I care how they feel” (Rachael, interview 1). Rachael explained that she tried to build relationships with the students through caring about their learning progress:

Most of my relationships with students in my class are purely made through the math work that we do. We build it through the fact that they can see I care about their math. You might get to pick up what they do outside of class because they’ll mention it but you only see them for 70 minutes three times a week. Apart from that, most of them I don’t know outside my classroom. (Rachael, interview 1)

Ensure that the students feel that their teachers accept joint responsibility for their learning

Rachael described how she shared the mutual purpose of the learning in mathematics with her students. She acknowledged her class team approach whereby they were all working together and she included herself, when referring to the learning and teaching, as work that “we do” (Rachael, interview 2):

I have discussions with the students aimed at constructing meanings of words in relation to the lesson’s goal: “We need to know” I include

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myself in the learning journey by saying: “We do”. Then I model how to perform the percentage calculation. (Rachael, interview 2)

Greg concurred with Rachael’s team approach to learning and teaching, and he described how he encouraged the students to be responsible learners, as part of the collective unified group: “I say to the students, ‘Okay, This is where you’re at now. This is what we do to get that next step up and let’s just go’” (Greg, interview 1). Greg explained that it was important for the students to feel that, as their teacher, he accepts a joint responsibility with them for their learning.

Establish teacher–parent relationships through providing the parents and caregivers with an awareness about their children’s learning

Rachael and Greg expressed that relationships in learning extended beyond building teacher–student relationships to establishing teacher–parent relationships, through providing the parents and caregivers with an awareness about their children’s learning. For example, Greg organised opportunities to speak with the parents of his Year 8 students:

Usually, the parent–teacher interview is my place that I can talk to the parents. In the first parent–teacher interviews, I aim to establish a relationship. For my Year 8 students, I request an interview with every single student’s parents. (Greg, interview 2)

Rachael talked about the relationships that she tried to establish with the students’ parents via the students’ sharing about their mathematics work at home:

The math homework builds a relationship with the home. Like their whole homework this weekend is looking around their house at what holds capacity. So, when they pick up a container, they have to think and estimate the capacity. Their whole job is to look at it and try to estimate how much that it will hold. They talk to their parents about these measurements, so it’s me building a relationship with the parents too based on education and the math. (Rachael, interview 1)

Rachael identified that the mathematics homework provided situations for parents to experience what their children were learning about at school and to take advantage of the learning support provided by the parents.

Expand practices

Implement school-wide learning frameworks in response to the staff professional development experiences

Rachael and Greg explained that the school-wide introduction of learning frameworks had been implemented in response to the staff’s professional

development experiences. Rachael emphasised how the structures of the learning experiences that teachers planned for their students in the mathematics classes in the school were both fixed and flexible:

We've done a lot of research and we really like the "must, should, could" system that is in our mathematics planning programs. So the "musts" are very structured tasks, the "should" are fairly structured, the "coulds" are more open learning inquiries. We've started the Grade 8s on that and that will continue on as they go through high school. We have a high proportion of kids that do struggle if tasks are too open. It can cause a lot of stress for those students because the choices can seem so unfathomable and they don't know where to start and they get lost. (Rachael, interview 1)

Rachael described a tiered system for planning students' learning experiences that she had instigated as the school's head of department in mathematics. She justified the reasoning behind implementing such a structure by drawing on her teaching experiences and students' learning outcomes at the school. Likewise, Greg indicated that he agreed with the school-wide implementation of practices, referring to the learning impact of students' awareness of the lessons' goals: "Definitely having the learning goals has made a massive difference here at the school" (Greg, interview 1). Greg acknowledged the teachers' involvement in the regular school professional learning sessions that were based on the 10 instructional design questions espoused by Marzano (2007) and the adopted practices that came from them, one of which was to establish and communicate learning goals.

A summary of the examples of Rachael's and Greg's pedagogical practices is presented in Table 5.6.

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Table 5.6. *Examples of Rachael's and Greg's pedagogical practices for fostering students' effective learning*

Code categories	Examples of Rachael's and Greg's pedagogical practices for fostering students' effective learning
Design meaningful learning	<p>Teach the content and the skills that are distinctive to the curriculum learning areas.</p> <p>Focus on teaching skills that offer the students a broader context for learning transference.</p> <p>Clarify the purposes for authentic learning experiences.</p> <p>Identify what the students would enjoy learning about and contextualise their learning to relevant topics.</p> <p>Connect the learning with the students' prior and concurrent learning.</p>
Manage learning	<p>Set the procedures and apply consistently these as the routines and the everyday practices.</p> <p>Guide the students' decisions about where they are to sit in the room.</p> <p>Reinforce the availability of the students' personal learning materials to enable their learning.</p>
Scaffold learning	<p>Assist the students in making the concrete to abstract conceptual connections in their learning through hands-on learning tasks.</p> <p>Co-construct the meanings of the relevant, subject specific literacy terms.</p> <p>Teach the students to structure their bookwork based on the lesson goals as a strategy for organising and transforming information.</p> <p>Provide success criteria for the students to connect their work with their perceived achievement levels.</p> <p>Provide time for the students to process new concepts and to articulate their learning.</p>
Adjust learning support	<p>Know the students' capabilities to support them to experience success in their learning.</p> <p>Adjust the level of the learning experiences for the students to work within their zone of proximal development.</p> <p>Encourage the students to enjoy learning and to feel internal success.</p> <p>Acknowledge the students' learning efforts and progress with simple verbal and non-verbal gestures.</p>
Build relationships for learning	<p>Take the time to learn about the students' interests and their outside-school lives.</p> <p>Care about the students and their learning.</p> <p>Ensure that the students feel that their teachers accept joint responsibility for their learning.</p> <p>Establish teacher–parent relationships through providing the parents and caregivers with an awareness about their children's learning.</p>
Expand practices	<p>Implement school-wide learning frameworks in response to the staff professional development experiences.</p>

5.5.3 Introducing Brian and Sarah

Brian's story

Brian was keen to share a life's collection of sayings and morally-based stories to communicate his values about education and about individuals taking responsibility for their actions. In an imperturbable manner, Brian advocated teachers being role models for students, contributing to their preparation to "go into the world and work within the structure of the society we have" (Brian, interview 1).

In his 22 years of teaching, Brian had worked with students from the Preparatory Year to Year 12. He described his pedagogy in terms of the ways in which he engaged and connected with students, stressing: "If you don't have relationships with your kids, they won't learn" (Brian, interview 1). Brian esteemed his teaching position and said that he felt that when his respect was evident to the students they reciprocated this and attached genuine value to their learning.

Brian stated that students will experience a "different kettle of fish" (Brian, interview 1) when they arrived in Year 8. He stressed the need for more cross-communication between teachers in the primary schools and the teachers in the secondary schools.

Brian emphasised the importance of developing students' work ethic and fostering their positive attitude towards learning. He reinforced: "I don't want to see, five or ten years from now, kids in a position where they are struggling" (Brian, interview 1). His vision was for students to leave school as functioning people, whereby they were not "going to get duped out of money" (Brian, interview 1) and with the initiative to "get up and go so they're not going to sit in the corner with a broom waiting for someone to tell them where to sweep" (Brian, interview 1). Brian considered that he was rewarded for his teaching efforts because he was privileged to observe his students develop from children into young adults. Appreciating the experience of being a teacher, he stated: "It's been absolutely wonderful to watch that progression" (Brian, interview 1). He was adamant: "Teachers make a really large contribution to a children's development as a whole person" (Brian, interview 1).

Sarah's story

As an early career teacher, Sarah explained how she mused over solutions that she could implement to improve her practice. While at secondary school, Sarah

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recounted that she enjoyed teaching music in private tutoring lessons. She identified: “I knew I wanted to do some kind of job helping people” (Sarah, interview 1).

Leading a music department and teaching Christian studies and history, Sarah said that she felt that she had been kept very busy and she reflected her frustration about not having the time to prepare lessons as she would like. Sarah was concerned that she did not present to the students the structure of the classroom organisation system that she perceived that other teachers provided for the students. In her teaching, Sarah recognised: “I find myself needing to provide more rigid structures” (Sarah, interview 1). However, she defended her advocacy of a more independent approach to teaching and learning, stating that the students should not be waiting for the teacher to be the one to tell them that there was a certain way to organise their bookwork.

Sarah valued presenting challenges to the students in their learning by clarifying:

I’m not just going to tell them the answers: “You have to go find them out. So here’s how. Here are the places you can go to find it. Start with this place. Okay, let’s try this one first. Now you can do the second one by yourself because I’ve helped you with the first one.”
(Sarah, interview 1)

In her role as a teacher, Sarah wanted to provide her students with opportunities to be effective learners, whereby they could “see some information, think about it, figure out how it matches what they already know, and then externalise their thoughts” (Sarah, interview 1).

5.5.4 Brian’s and Sarah’s practices for fostering students’ effective learning

The following analysis presents my interpretations of the pedagogical practices that Brian and Sarah talked about in their interviews. From these I inferred their intentions to foster students’ effective learning. Brian’s and Sarah’s pedagogical practices were analysed through the lenses of the six code categories. These are represented in italics as sub-headings with examples that are provided from the data to support the analysis.

Design meaningful learning

Communicate the understanding goals and the skill goals to identify the purpose for the learning

Brian communicated and clarified to the students the understanding goals and the skills goals that framed the Christian studies lessons:

We've got skill goals and we've also got understanding goals, and we refer back to these during the course of the lesson: "Okay, so why are we doing this? How are we doing this?" So at the end of the lesson I can say: "Okay, did we do that?" (Brian, interview 1)

Brian explained that the goals were presented at the beginning of the lesson to establish the purpose of the learning and they were referred to throughout the lesson. He used questioning to gain feedback to determine whether the students understood the purpose of the learning. Brian made the understanding goals and the skill goals distinctive by identifying them through differently coloured text on the whiteboard:

I use a different colour for each goal, because, for those kids that are visual, it helps to differentiate between the understandings and the skills that we're doing. Straight away I've defined the skills and understandings goals differently. (Brian, interview 2)

By distinguishing the different goals, Brian assisted the students to identify what they had to know and what they were required to do.

Associate the learning with real-life learning beyond school and for future possibilities

Sarah explained how she connected what happened at school in the history lessons with real-world situations by providing the students with a reason to learn about the topic. Further, she assisted the students to make connections between what they were learning in the history lessons and how they could use this knowledge in the future: "I keep telling them how important it is to know what's gone before, so we don't make the same mistakes as in the past" (Sarah, interview 1). Sarah offered an example:

One day a student said: "Miss, why do we have to do this? This is really boring. I'm never going to need it." I said: "Well, you're going to turn 18 one day, right? So you're going to need to vote and you're going to need to know about the policies and things that affect humanity." Since that point, she has seemed to approach her studies differently. I like to think that perhaps it had something to do with our talk about approaching her studies from a different perspective. (Sarah, interview 1)

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Sarah associated the student's learning with the real-world content and with future possibilities to authenticate the learning (Lombardi, 2007) and to convey its meaning.

Manage learning

Set the expectations that create a safe environment for all students to feel comfortable to participate in learning

Brian explained how he created a classroom environment that he intended would help the students to feel comfortable by providing the expectations for them to feel safe to participate in learning:

You have to put your line in the sand so the kids know exactly where that line is. Students need to be safe and confident in their learning environment. Because of that feeling of safety, they have no qualms about asking questions and no fear of failure so to speak. (Brian, interview 1)

Brian referred to establishing a "line in the sand" (Brian, interview 1) that he intended would provide the boundaries for the students and he emphasised that they needed to be made aware of these expectations.

Teach the students to prepare their state of readiness for learning

Sarah discussed that she established procedures to teach the students to prepare for learning:

We come in, we set up and the students stay standing until we're all settled, hats are off and we're all quiet. Sometimes it takes a while and I've explained to them that it's not about me making them stand up till I'm ready. I think it's a way of centring ourselves and getting ready for learning. (Sarah, interview 1)

Sarah explained that she wanted the students to realise that it was not her intention to control their behaviour but instead to teach them what it felt like to be in the state of readiness for learning.

Scaffold learning

Share analogies and stories with the students to promote their productive learning habits

Brian shared analogies and stories in discussions with the students:

I use lots of different analogies, lots of sports ones. I say to the students: "What you do here, what you do in training, you take into the game." We've got their exams on next week and I say to them: "You need to get into the habit of doing the right thing all the time so it just becomes your normal way that you operate, so that when it comes time

for you to do your exam you won't have any extra stress. You'll just do it like you always do it and go from there." (Brian, interview 1)

In this example, Brian described how he shared an analogy with the students by tapping into their sporting experiences to attach meaning to the learning habits that he was encouraging.

Adjust learning support

Collaborate with the students to negotiate the learning arrangements and to adjust the tasks and the provision of resources

Brian emphasised the importance of removing the barriers to learning to support the students emotionally.

When my students come across a new concept, any hint that I can possibly think of I give them, because I want to alleviate the anxiety and stress or just the sheer deer in the headlights feeling, as early as possible. (Brian, interview 1)

He shared an example of how he used his knowledge of the learning capabilities of a student to collaborate with him to negotiate working arrangements:

I have one young fellow that's a really reluctant writer. I've got an arrangement with him where I will indicate the points that I want him to write down. I'll put a little star beside the absolute minimum. He knows he only has to copy to that star. (Brian, interview 2)

Brian reduced the load of writing expected for the task so that the volume that the student was expected to copy down did not overwhelm him.

Provide visuals and texts suited to the students' literacy capabilities

Sarah expressed her frustration about the learning barriers confronting students with low literacy skills in her history class: "The lower literacy kids were just so disengaged. They'd go: 'Ah, history. No, not doing it'" (Sarah, interview 2). Sarah described how she provided visual modes and texts as reading materials that were suited to the students' literacy capability:

Using visuals and reading resources suitable to their level was certainly a way to help the lower literacy students. A lot of one-on-one teaching seems to help, but then I've got so many special needs kids in that class I feel really strapped. I find it hard to meet all of their needs all at once. With the students who have literacy issues, an exam is just ridiculous. These kids are smarter than they show up in an exam and that makes me want to cry. But, when it comes to an assignment, if they've had assistance with their literacy, they can demonstrate their higher level thinking. (Sarah, interview 2)

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Sarah offered the students individual assistance to scaffold their learning. However, she shared her disappointment about not being able to meet the many learning demands of the students in this class group and the dissatisfaction that the types of assessments offered to students at times did not provide them with opportunities to demonstrate their learning and to feel the success of achievement.

Build relationships for learning

Contact the students' parents and caregivers with positive feedback to reinforce their children's constructive behaviours for learning

Brian communicated with the students' parents and caregivers as a way of building relationships. He advocated contacting the parents and providing positive feedback to reinforce their children's constructive behaviours for learning:

I do simple things like writing notes in the student's diary home to say: "Hey, just wanted to let you know that such and such had a fantastic lesson in maths today and deserves a pat on the back." Or I will ring parents and all too often parents will answer and you'll just hear this sigh. You can hear their brain ticking over. They're like: "Oh, what have they done now?" I'll just say: "Look, no, no, no, I just wanted to ring you and tell you that such and such had a fantastic lesson today. She worked really, really well. I'm really pleased." I'll tell the kid that I'm going to ring home and of course she's all expectant. They get home in the afternoon and Mum's really happy. (Brian, interview 1)

Brian indicated that the parents and the students benefited through the sharing of positive feedback that he intended would open up communication lines to support the students in the future.

Expand practices

Communicate with the other teachers to work together as a team

Brian identified the benefits of teachers working as teams to communicate regularly with one another:

I think it's beneficial if you're working in a small team and if you are constantly in communication with one another as to what's going on. Potentially there're six different teachers that the Year 8 students have in a week. But I think being in that small team, it's a positive. (Brian, interview 1)

Brian continued to explain that he appreciated the single, open staffroom at the secondary school: "Actually, one of the great things that we have here is we don't have department staffrooms. We're all in that one staffroom so there's this constant

communication going on all the time” (Brian, interview 1). Brian suggested that the open staffroom provided teachers with opportunities to communicate with one another.

Learn with the students

Sarah acknowledged how she was always learning with the students: “I think a really good day is when I’ve learned something new, as well as the students” (Sarah, interview 1). Sarah judged the satisfaction of her day at school by what both she and the students learned, which indicated her self-awareness and openness to self-development.

A summary of the examples of Brian’s and Sarah’s pedagogical practices is presented in Table 5.7.

Table 5.7. *Examples of Brian’s and Sarah’s pedagogical practices for fostering students’ effective learning*

Code categories	Examples of Brian’s and Sarah’s pedagogical practices for fostering students’ effective learning
Design meaningful learning	Communicate the understanding goals and the skill goals to identify the purpose of the learning. Associate the learning with real-life learning beyond school and for future possibilities.
Manage learning	Set the expectations that create a safe environment for all the students to feel comfortable to participate in learning. Teach the students to prepare their state of readiness for learning.
Scaffold learning	Share analogies and stories with the students to promote their productive learning habits.
Adjust learning support	Collaborate with the students to negotiate the learning arrangements and to adjust the tasks and the provision of resources. Provide visuals and texts suited to the students’ literacy capabilities.
Build relationships for learning	Contact the students’ parents and caregivers with positive feedback to reinforce their children’s constructive behaviours for learning.
Expand practices	Communicate with the other teachers to work together as a team. Learn with the students.

From this analysis of the data in Case Two, I have interpreted how these Years 8 and 9 teachers—Rachael, Greg, Brian and Sarah—talked about their pedagogical

intentions for fostering students' effective learning. In the next section, I present the cross-case analysis to identify the commonalities in and variations on the primary and secondary school teacher participants' practices that signified the broad scope and the richness of the collected data. At this initial stage of the data analysis, I focused on what I inferred was most significant from the collected interview data. The analysis served to represent the teacher participants' practices that were illuminated within the bounded time of the data collection. Accordingly, it was not intended to portray in detail all of what was discussed in the interviews. Moreover, I did not intend to present comprehensive, pedagogical repertoires of the teacher participants' practices nor to judge the distinctions between the practices of the primary school teachers and the secondary school teachers or the teachers themselves.

5.6 Cross-Case Data Analysis

In the cross-case analysis, I synthesised the examples of the teacher participants' pedagogical practices that were organised under the headings of the six code categories (please see Appendix E). The practices were aligned with the Australian Professional Standards for Teachers (APST), which offer criteria to describe the proficiency of practices based on research and experiential knowledge for successful students' learning (AITSL, 2017). In addition, I was informed by the literature to consider the findings in relation to the external enablers—challenges, structures and options—that were identified in the literature review as being essential for an effective self-regulated learning pedagogy. These have been underlined in this section to highlight their significance.

5.6.1 Design meaningful learning

The teacher participants designed learning from the distinctive and conceptually aligned curriculum learning areas. The teachers talked about how they provided topics intended for the students to engage in meaningful learning experiences and to transfer their learning into different contexts. A synthesis of the examples of the teacher participants' pedagogical practices from the code category design meaningful learning is presented in Figure 5.9.

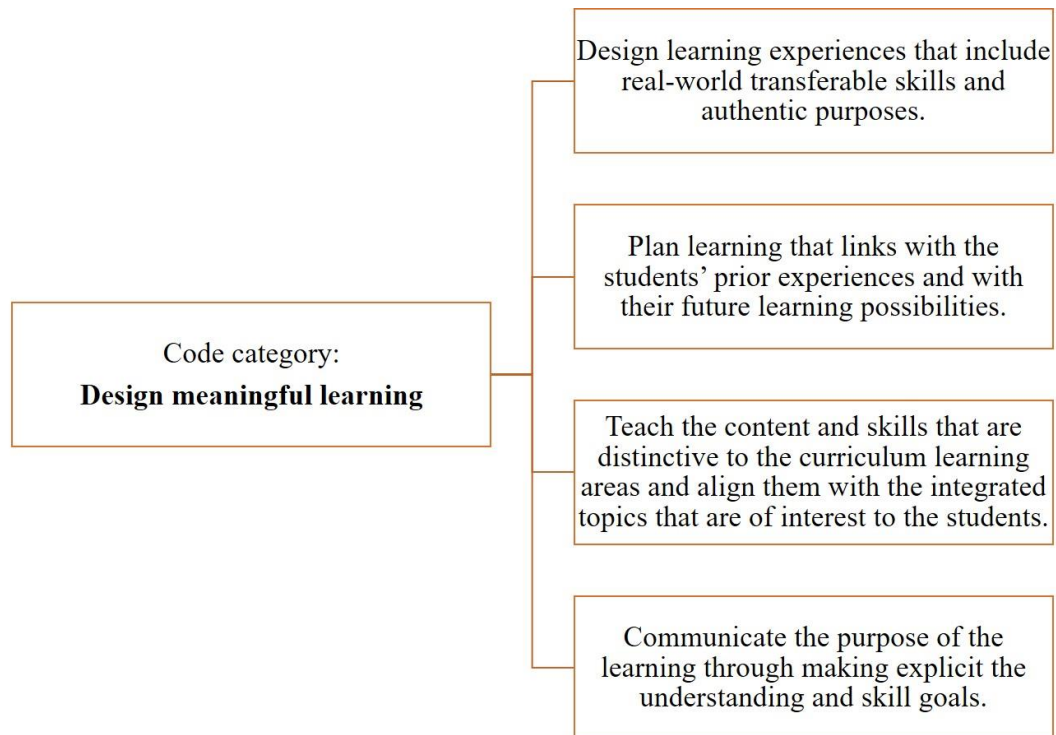


Figure 5.9. Pedagogical practices associated with the code category design meaningful learning

Transferable real-world skills and authentic purposes

To contextualise the learning to a relevant topic, the teacher participants contemplated what issues would interest and engage the students and what they would enjoy and be curious about learning. Standard 3.2 of the APST states that proficient teachers: “Plan and implement well-structured learning ... that engage students and promote learning” (AITSL, 2017, p. 5). The teacher participants described how they structured learning experiences as challenges for the students to learn real-world skills and provided them with practice opportunities to transfer this learning to different contexts. They talked about exposing the students to authentic resources to approximate real situations with authentic purposes. The literature indicated that authentic learning motivates students to engage in learning as it situates the learning tasks in contexts for future use with real-world relevance (Herrington, Reeves, & Oliver, 2014; Lombardi, 2007).

Learning linked with prior experiences for learning transference

The teacher participants articulated that they provided learning structures for the students to link their prior experiences with the new learning. Travers, Sheckley and

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Bell (2003) reported that instructional strategies focused on linking new learning with students' prior experiences assists them to self-regulate their learning. Additionally, the teacher participants provided the students with options for demonstrating their understandings and skills. Research by Perry, VandeKamp, Mercer and Nordby (2002) confirmed that, when teachers offer students options for completing tasks and then assist their decision making, opportunities are provided for the students to control the task challenge through that choice.

Content and skills from distinctive and aligned learning areas

The teacher participants emphasised the importance of considering how the students required subject specific knowledge and skills from the learning areas. The curriculum learning areas provide the structures for the disciplinary knowledge, as described through the content descriptions and skills (ACARA, 2017). Standard 2.2 of the APST states that proficient teachers: "Organise content into coherent, well-sequenced learning and teaching programs" (AITSL, 2017, p. 3). The teacher participants suggested that the content and skills should be taught to reflect the distinctive practices associated with the specific curriculum learning area. They also designed cross-curricular learning area connections through integrated topics of interest to the students. The literature recommended curriculum integration for the middle years of schooling as it provides meaningful learning that crosses the discipline boundaries to assist students to develop knowledge (Beane, 1997; Dowden, 2014; Fogarty, 1991).

Understanding goals and skill goals

Through meaningful topics, the teacher participants worked with the students to formulate and identify learning goals (Marzano, 2007) that guided their learning challenges. Standard 3.1 of the APST states that proficient teachers: "Set explicit, challenging and achievable learning goals for all students" (AITSL, 2017, p. 5). The teacher participants described how they communicated to the students the goals for understanding and skills as structures that afforded the purpose of and the reason for the learning. Archer and Hughes (2011) purported that students achieve better if they understand the goals and know how the information and skills presented will assist them.

5.6.2 Manage learning

The teacher participants' intention was to manage safe learning environments that were conducive to learning. The teachers talked about how they communicated the expectations and the procedures clearly for the students to make responsible decisions about their behaviours for learning. A synthesis of the examples of the teacher participants' pedagogical practices from the code category manage learning is presented in Figure 5.10.

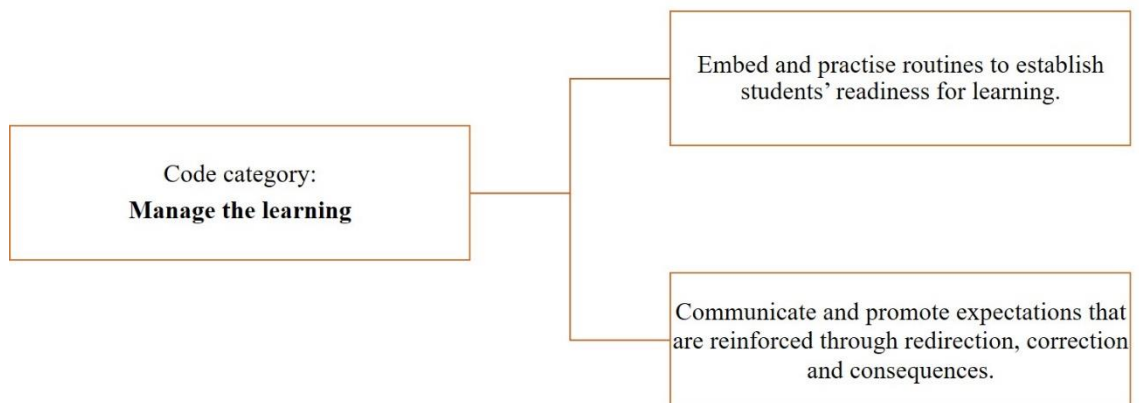


Figure 5.10. Pedagogical practices associated with the code category manage learning

Routines for learning readiness

The teacher participants talked about how they established routines and procedures within the classrooms. The procedures provided the students with structures that afforded them occasions to take responsibility for themselves and for the cohesive operationalisation of the classroom. Standard 4.2 of the APST states that proficient teachers: “Establish and maintain orderly and workable routines to create an environment where student time is spent on learning tasks” (AITSL, 2017, p. 7). The teacher participants embedded everyday classroom procedures that provided opportunities for the students to be empowered to organise their materials and structure their readiness for learning. Additionally, they provided the time and space for these to be practised by the students. Rogers (2015) proposed that teachers are required to outline and discuss with their students the general and specific responsibilities that assist them to gain a readiness for learning. The teacher participants communicated the expected responses through a common class

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language. The literature acknowledged that teachers establish a shared vocabulary as a class language of common understandings for efficiency of interactions within the classrooms (Berry et al., 2009; Evertson et al., 2000).

The communication and promotion of expectations

The teacher participants considered the importance of communicating and promoting expectations as structures that were reinforced through redirections, corrections and consequences. They discussed how they taught and modelled the behavioural expectations in the initial weeks and throughout the school year. Rogers (2015) advocated the communication of expectations to occur in the establishment phase of the school year and for these to be maintained throughout the year by clarifying them within a shared learning community. Standard 4.3 of the APST states that proficient teachers establish and negotiate: "... clear expectations with students and address discipline issues promptly, fairly and respectfully" (AITSL, 2017, p. 7). The teacher participants acknowledged the guidance that the students required to redirect their decisions when provided with options about where to locate themselves in the classroom for effective learning.

5.6.3 Scaffold learning

The teacher participants facilitated verbal, procedural and instructional scaffolds (Echevarria, Vogt, & Short, 2004) to teach strategies for learning. The teachers talked about their intentions to support the students to understand how they learned. A synthesis of the examples of the teacher participants' pedagogical practices from the code category scaffold learning is presented in Figure 5.11.

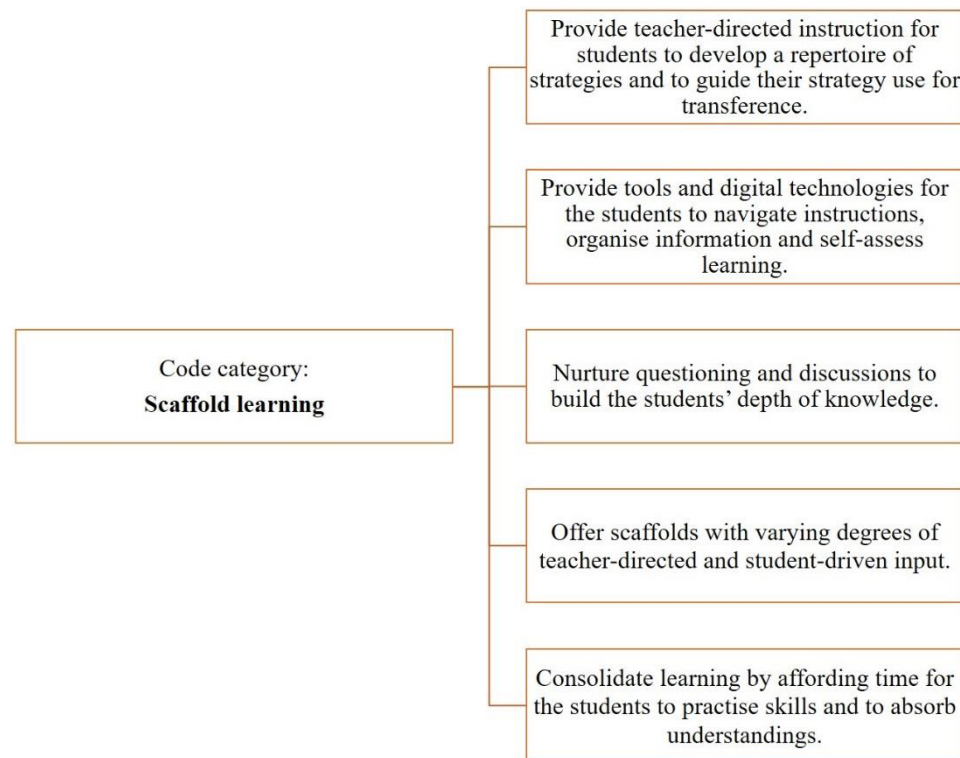


Figure 5.11. Pedagogical practices associated with the code category scaffold learning

Repertoire of strategies

The teacher participants supported the students to understand how they learned by immersing them in cognitive strategies as structures for learning with the intention of transferring the responsibility for the learning gradually to the students (Vygotsky, 1978). They described how they explicitly taught the students to apply a repertoire of strategies. For example, they suggested that making explicit the goals of the lesson provided the students with structures for their bookwork to organise and transform the information. They used subject specific language to verbalise the learning strategies and they co-constructed glossaries with the students to frontload the literacy terms inherent in a learning area's content. Shanahan and Shanahan (2008) suggested that frontloading the subject specific literacy prepared students for the new learning and provided a glossary of terms for them to refer to in the future.

The provision of tools and digital technologies

The teacher participants described the tools and the digital technologies that they provided as structures. Standard 3.4 of the APST states that proficient teachers: "Select and/or create and use a range of resources, including ICT, to engage students

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in their learning” (AITSL, 2017, p. 5). They offered varied challenges to support students to build their depth of knowledge of topics. Puntambekar and Hubscher (2005) suggested that the tools for scaffolding students’ learning should be designed to fade out the levels of support as students gain understanding for themselves. The teacher participants offered multiple sources, including visual displays, for the students to gain information about learning expectations and to navigate learning instructions. Valentini (2004) acknowledged that visual cues assist students to learn new skills and follow a sequence of skills. In addition, the teacher participants described the assessment tools that they introduced to the students for them to self-assess the product and processes of their learning. Paris and Paris (2001) emphasised that learning depends on the assessment of both product and process to know what is known and what skills are effective.

Questioning and discussions

The teacher participants identified with the ideals of nurturing questioning that requires the students to elaborate information and to build their depth of knowledge. They stimulated discussions to probe the students for knowledge, to challenge them to think broadly and to assist them to explain their thinking. Standard 3.5 of the APST states that proficient teachers: “Use effective verbal and nonverbal communication strategies to support student understanding, participation, engagement and achievement” (AITSL, 2017, p. 6). The teachers told stories that provided the structures for the students to organise and store information and to clarify their conceptual understandings. Nuthall (1999) conducted research that suggested that the embedding of narratives in learning provides powerful cognitive structures for students to organise and store information.

Teacher-directed and student-driven input

The teacher participants explained how they offered combinations of scaffolds during different stages of the learning process with varying degrees of structures and challenges from teacher-directed and student-driven input. The teachers modelled the construction of mind maps to show the students how learning was linked conceptually, and they taught the students how to use prompts to develop an awareness of the steps in a learning procedure. Banchi and Bell (2008) proposed that

teachers need to provide students with guidance for them to develop competencies and confidence when experiencing a range of complex learning situations.

The provision of time

The teacher participants shared how they provided the time for the students to practise skills, to absorb learning, and to articulate and consolidate what they had learned. They provided the options for the students to participate in hands-on learning by offering access to concrete materials when required (Manning, 2002; Piaget, 1971; Pickens & Eick, 2009). The teacher participants recognised the significance of assisting the students to flow from simple to complex cognitive processes through challenges that enable them to make the concrete to abstract conceptual connections in their learning. Alvi and Gillies (2015) identified directing students’ learning from simple tasks to more complex and cognitively demanding tasks as developing the processes of learning.

5.6.4 Adjust learning support

The teacher participants identified the appropriate levels of challenges and structures to support the students to activate control of and gain success from their learning. A synthesis of the examples of the teacher participants’ pedagogical practices from the code category adjust learning support is presented in Figure 5.12.

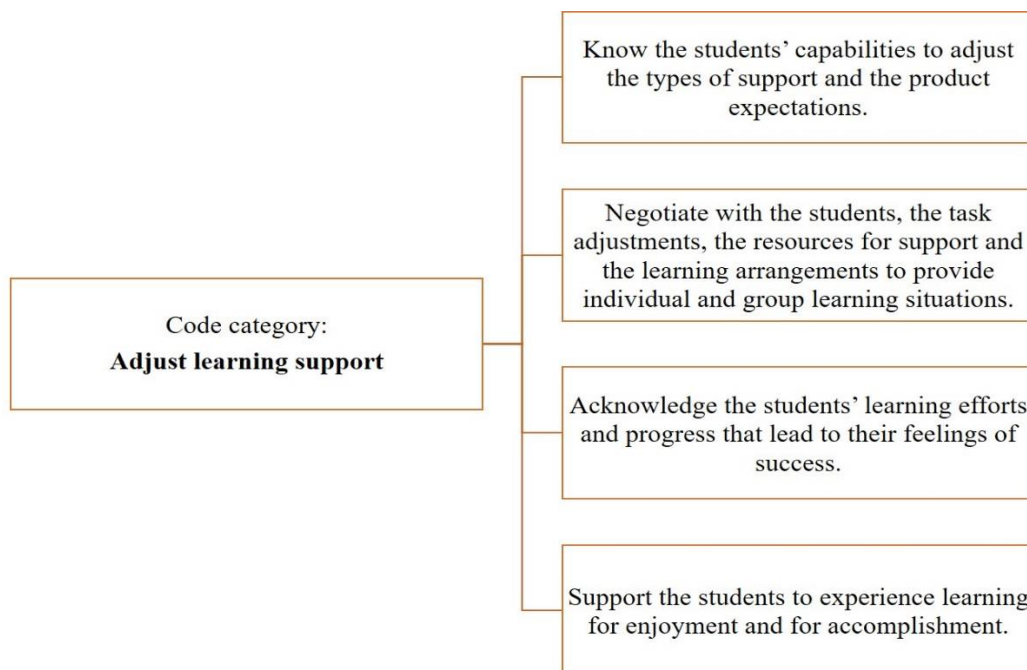


Figure 5.12. Pedagogical practices associated with the code category adjust learning support

Knowledge of the students' capabilities

The teacher participants communicated that they set the challenges for the students' learning experiences at an appropriate level for them to build on their learning and to achieve success. To do this they articulated that they needed to know their students' capabilities so that they could adjust the learning experiences for the students to work within their zone of proximal development (Vygotsky, 1978). Standard 1.1 of the APST states that proficient teachers: "Use teaching strategies based on knowledge of students' physical, social and intellectual development and characteristics to improve student learning" (AITSL, 2017, p. 1). The teacher participants used feedback from the students' performances to inform their teaching and to provide appropriate learning structures, whilst maintaining high expectations for all students. Marzano (2007) acknowledged teachers' high expectations as a positive influence on students' achievements.

Negotiations with the students

Through collaboration with their students, the teacher participants provided them with options by negotiating the working arrangements, adjusting the expectations of the task products and offering access to resources. They explained how they supported the students individually and in a social learning situation, including a form of peer-tutoring, whereby the students would teach and learn from one another (Bowman-Perrott, De Marín, Mahadevan, & Etchells, 2016).

The acknowledgement of learning efforts and progress

The teacher participants acknowledged, through simple verbal and non-verbal gestures, the effort that the students put into their learning (Reeve et al., 2004) and their learning progress. Furthermore, they identified the types of structures for support that the students required to safeguard their future learning successes. Standard 5.2 of the APST states that proficient teachers: "Provide timely, effective and appropriate feedback to students about their achievement relative to their learning goals" (AITSL, 2017, p. 9).

Enjoyment for and accomplishment of learning

The teacher participants' support extended to encouraging the students to feel internal success from the challenges experienced during learning. They recognised

the importance of the students feeling enjoyment for and accomplishment from their learning experiences to sustain their learning engagement (Eccles & Wigfield, 2002) and to build their resilience for future learning challenges.

5.6.5 Build relationships for learning

The teacher participants' intention was to establish collaborative and socially connected environments for learning. The teachers talked about how they cared for their students and provided opportunities for them to share with them the responsibility for their learning. A synthesis of the examples of the teacher participants' pedagogical practices from the code category build relationships for learning is presented in Figure 5.13.

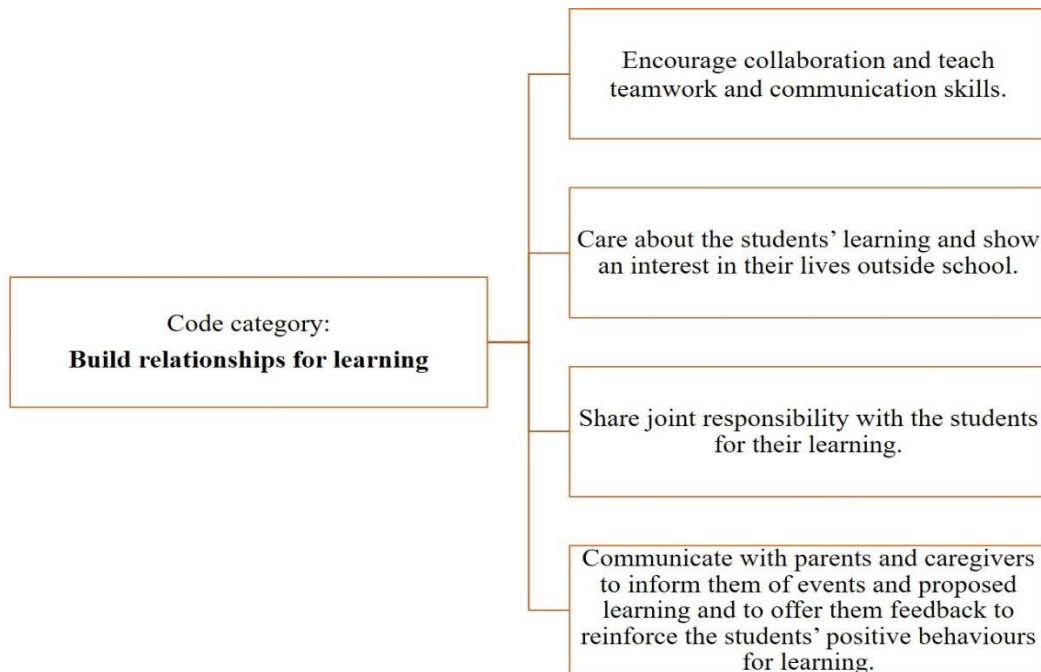


Figure 5.13. Pedagogical practices associated with the code category build relationships for learning

Collaboration through teamwork and communication

The teacher participants talked about the ways that they established collaborative and cohesive learning environments. They designed a range of class unity tasks to engender empathy, tolerance to value others' opinions and appreciation of individual differences. To unite as a community of learners, the teacher participants emphasised that they promoted teamwork skills, student–student collaboration and interpersonal communication as structures for cooperative and collaborative learning. Standard 4.1 of the APST states that proficient teachers: “Establish and implement inclusive

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and positive interactions to engage and support all students in classroom activities” (AITSL, 2017, p. 7). The literature supported the benefits of growing student–student relationships and the inclusion of collaborative learning for positive effects on students’ motivation, academic achievement, socialisation and personal development (Gillies, 2007; Main, 2017b; Schoor et al., 2015).

Care and interest

The teacher participants commented on the advantages afforded to students’ learning that came from taking the time to get to know their students and to find out about their interests beyond the school context. The literature suggested that the quality of the teacher–student relationship can be enhanced when teachers are mindful of their students’ personal and developmental characteristics (Dowden, 2017; Poskitt, 2011). The teacher participants explained how they connected with the students through everyday classroom experiences and through showing them that they cared about them and their learning. Osterman (2010) proposed that students are more likely to be engaged in learning when teachers establish positive relationships, show students that they care for them and empower them as learners.

Joint responsibility

The teacher participants talked about how they established organisational structures for their students to share with them the joint responsibility for the learning. This was demonstrated in the classroom when the teachers referred to the learning repeatedly as something with which they were all involved, using the pronoun *we*. The literature acknowledged joint decision making and shared responsibility for effective learning (Weimer, 2002) and recognised the teacher–students partnerships for learning as a signature pedagogy for effective learning for students in the middle years (Main, 2017a). The teacher participants provided the social support to establish collaborative learning environments where the students could support one another through a shared responsibility for the learning.

Communication with the parents and caregivers

The teacher participants discussed how they built teacher–parent relationships through informing the students’ parents/caregivers about the class events and the proposed learning. They described the value of making contact with them to share

encouraging feedback about their children’s learning and behaviour. Standard 3.7 of the APST states that proficient teachers: “Plan for appropriate and contextually relevant opportunities for parents/carers to be involved in their children’s learning” (AITSL, 2017, p. 6). Garbacz, Sheridan, Koziol, Kwon and Holmes (2015) reinforced that the quality of the parent–teacher relationships supported the students’ future academic and behavioural outcomes.

5.6.6 Expand practices

The teacher participants talked about their personal pedagogy by uncovering their tacit knowledge and their professional beliefs about teaching and learning intended to enhance students’ learning. They were informed by their experiences, professional discussions and theoretical understandings to adjust existing practices and to apply new practices in different contexts. A synthesis of the examples of the teacher participants’ pedagogical practices from the code category expand practices is presented in Figure 5.14.

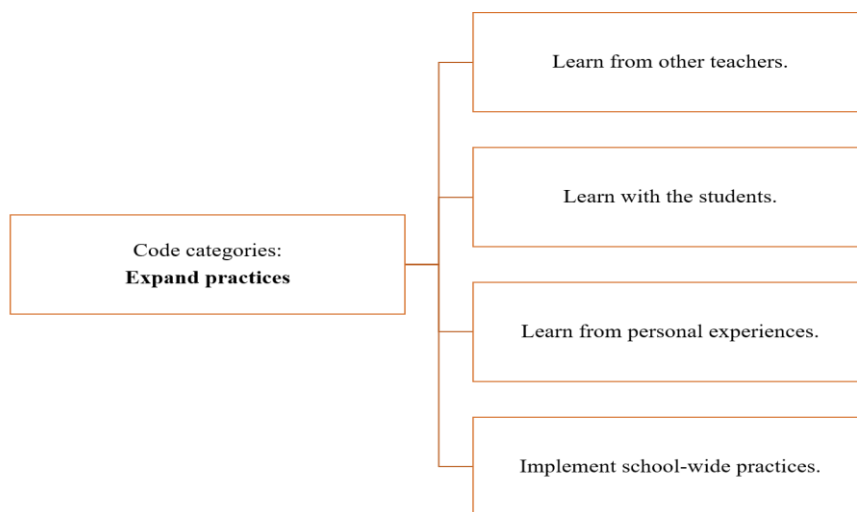


Figure 5.14. Pedagogical practices associated with the code category expand practices

Learning from other teachers and with the students, and through personal experiences

During the interviews, the teacher participants discussed how they utilised personal experiences in different contexts to expand their practices. They emphasised the professional learning that came from their interactions with other teachers and from learning with their students. Standard 3.6 of the APST states that proficient teachers: “Evaluate personal teaching and learning programs using evidence, including feedback from students and student assessment data, to inform

planning” (AITSL, 2017, p. 6). Through their personal and professional learning experiences the teacher participants adjusted their existing practices and they applied new practices to enhance students’ learning in their contexts.

School-wide practices

The primary and secondary school teacher participants confirmed that they valued reflecting on their practices through discussions and whole-school professional learning opportunities. Standard 6.3 of the APST states that proficient teachers: “Contribute to collegial discussions and apply constructive feedback from colleagues to improve professional knowledge and practice” (AITSL, 2017, p. 11). The teacher participants emphasised the advantages of establishing and implementing school-wide practices based on relevant theoretical understandings.

5.7 Review of the Chapter

In this chapter, the teacher participants were introduced through their stories and to position them contextually within the study. An analysis of the data was presented to address the first research question: How do teachers working across the primary–secondary schooling transition years talk about fostering their students’ effective learning? Described broadly, the teacher participants talked about their actions to: design meaningful learning; manage learning; scaffold learning; adjust learning support; build relationships for learning; and expand their practices. The code categories were used as lenses to present my interpretations of the data snapshots as the examples of the teacher participants’ practices. The cross-case analysis was informed by the literature and through the APST to align the identified practices with the existing research (AITSL, 2017). The pedagogical practices were synthesised and then discussed how they offered students challenges, structures and options as the external learning enablers associated with an effective self-regulated learning pedagogy.

In the next chapter, the data analysis is extended to address the second research question. This analysis explores how the teacher participants’ pedagogical practices for effective learning provided opportunities for the students to regulate their own learning. To guide this data analysis and to interpret the findings theoretically, I have drawn on the conceptual framework presented in Chapter 3.

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People use the instrument of thought to comprehend the environment, to alter their motivation, and to structure and regulate their actions. (Bandura, 1986, p. 1)

In today's world, (inter)acting in a social plane has become increasingly vital, as no single individual can create new knowledge as effectively as can be done in collaboration with other learners. (Järvenoja et al., 2015, p. 217)

6.1 Overview of the Chapter

In Chapter 5, how the teacher participants talked about their pedagogical practices intended to foster their students' effective learning was explored. I constructed six code categories from the data to assemble the findings. The examples of the teacher participants' practices were intertwined with data snapshots. A cross-case analysis synthesised the findings to address the first research question.

In this chapter, the data analysis is extended to respond to the second research question: How do teachers' pedagogical practices for effective learning provide opportunities for students to regulate their own learning in the primary–secondary schooling transition years' classroom environments? Hence the research questions were designed to be sequential. To build on the findings and contribute to the existing knowledge, the data were analysed in relation to evidence from the literature. The conceptual framework highlighted in Chapter 3 informed this stage of the data analysis.

To contribute to a practice-based, pedagogical model for self-regulated learning, five themes were generated from the data to describe the teachers' pedagogical approaches: *connect the learning*, *facilitate the learning*, *diversify the learning*, *socialise the learning*, and *reflect on teaching*. Figure 6.1 highlights the connections that were made between the code categories and the themes that extended the findings to respond to the second research question.

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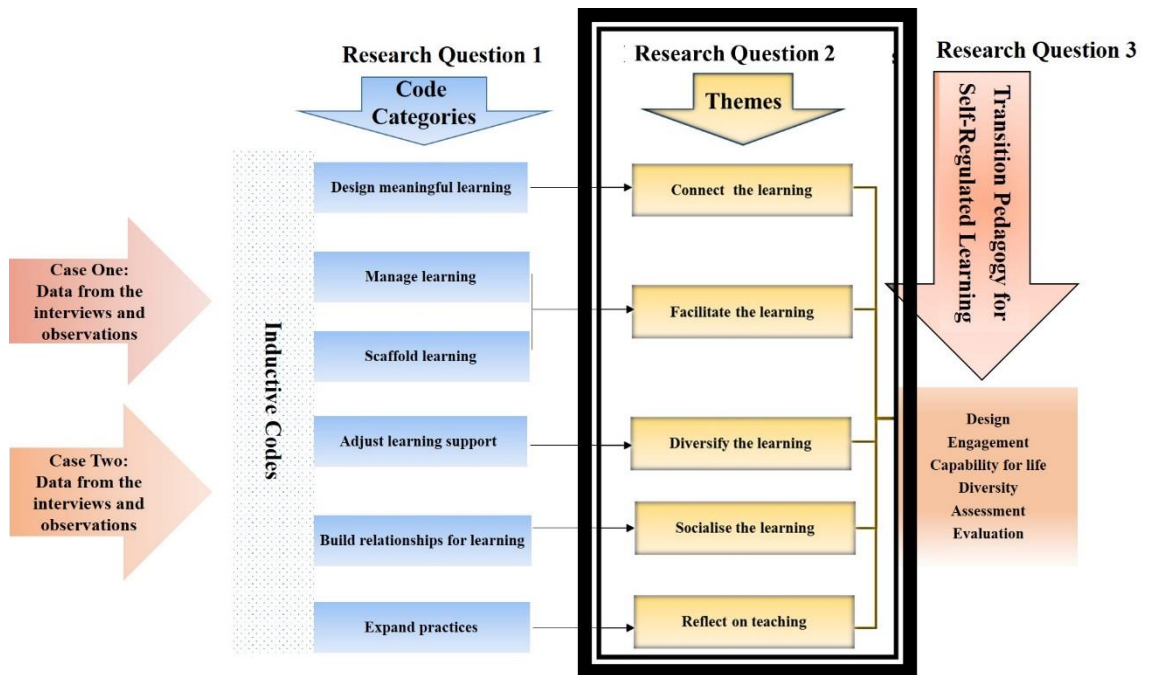


Figure 6.1. The alignment of code categories and themes to respond to the second research question

In Sections 6.2, 6.3 and 6.4, the first three data generated themes in association with the self-regulated learning fundamentals were introduced. Applying a conceptual lens, I created data maps to illustrate the alignment of the teachers' pedagogical approaches with the theoretical constructs and the internal enablers supporting students' self-regulated learning. A combination of illustrative snapshots and supportive research evidence were employed to represent the findings. Table 6.1 presents the data as code categories and themes that were framed within the theoretical constructs of the fundamentals.

Table 6.1. *The data represented as code categories and themes and framed within the theoretical constructs of the fundamentals of self-regulated learning*

Data		Conceptual framework	
Data code categories	Data themes	Theoretical constructs	Fundamentals of self-regulated learning
Design meaningful learning	<i>Connect the learning</i>	Sources of interest (Renninger & Hidi, 2016). Goal orientated learning (Pintrich, 2000b; Schloemer & Brenan, 2006; Schunk & Ertmer, 2000; Zimmerman & Kitsantas, 1997).	<i>Rationale for learning</i> , enabling students' interest to engage in purposeful learning.
Manage learning Scaffold learning	<i>Facilitate the learning</i>	Strategies for self-regulated learning (Zimmerman & Martinez-Pons, 1986, 1990). Metacognitive awareness (Schraw et al., 2012).	<i>Responsibility for learning</i> , enabling students' sense of agency.
Adjust learning support	<i>Diversify the learning</i>	Self-efficacy beliefs (Bandura, 1986, 1997). Causal attributions (Weiner, 2005).	<i>Capability for and from learning</i> , enabling students' expectation of success.

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In Section 6.5, the fourth theme, *socialise the learning*, is discussed through a sociocultural perspective on self-regulated learning (Hadwin & Oshige, 2011; Järvenoja et al., 2015; Volet & Vauras, 2013). In Section 6.6, the fifth theme, *reflect on teaching*, is presented as it draws from the data the ways in which the teacher participants gained professional learning to inform their future teaching. To conclude the chapter, a pedagogical model for self-regulated learning is proposed that is a representation of pedagogical approaches, as data generated core pedagogies supported by the literature, that provide opportunities for students to regulate their own learning and for teachers to reflect on their teaching.

6.2 Theme: *Connect the Learning*

The *connect the learning* theme—generated from the design meaningful learning code category—was associated with the *rationale for learning* fundamental, which describes how students set goals that enable an interest for purposeful engagement. The theme captures four core pedagogies that are listed below and that are represented in Figure 6.2 in the thematic analysis map:

1. Focus on real-world transferable skills;
2. Link the students' prior learning with the purposeful learning goals;
3. Contextualise the learning to topics that are of interest to the students; and
4. Design understanding and skill goals.

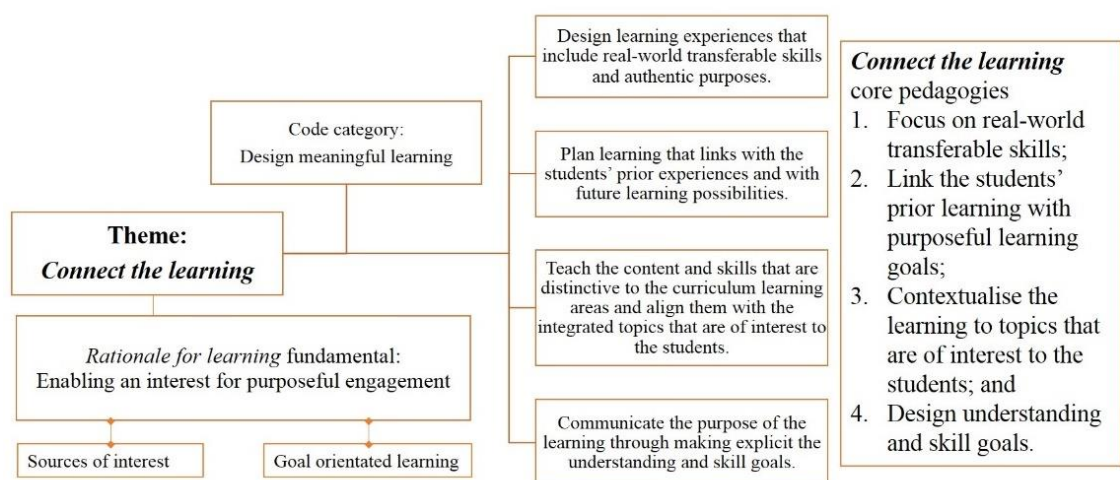


Figure 6.2. A thematic map representing the *connect the learning* core pedagogies

Data generated core pedagogies, aligned to the *connect the learning* theme, are presented in the next sub-sections. During this stage of the analysis, I positioned and supported the findings within the theoretical constructs of the existing literature that were associated with the *rationale for learning* fundamental: sources of interest (Renninger & Hidi, 2016) and goal orientated learning (Pintrich, 2000b; Schloemer & Brenan, 2006; Schunk & Ertmer, 2000; Zimmerman & Kitsantas, 1997).

6.2.1 Core pedagogies: Sources of interest

Interest for learning is not static but has the potential to be influenced by interactions with others and the environment to enhance self-regulated learning. As identified in the research, learning experiences that trigger students' situational interest influence their readiness for learning, learning engagement and long-term development (Dohn, 2010; Hidi, 2006; Renninger & Hidi, 2016; Swarat et al., 2012).

Focus on real-world transferable skills

In the following snapshot, Greg provided opportunities for his Year 8 science students to source interest through hands-on learning within authentic contexts that focused on real-world transferable skills. In the example, Greg explained how he designed learning to at least approximate the experiences of scientists, to which the Year 8 students responded with interest to engage in the authentic experiences:

Especially as a science teacher, I look at teaching the understanding of the world. It comes back to that underpinning scientific knowledge. So I guess a recent example of that is we went down to the dam and collected pond samples and looked under a microscope. Previous, to that we'd explained the difference between animal and plant cells and we were able to find these single-celled animals, with perfect cell structure, in the slide Then you had this: "Quick Sir, get over here. Have a look at this one." I'd have a look at them and be: "Okay, so what type is that?" And they'd tell me: "Oh, that one's got to be a plant because it's got a thick wall." Then this other student found this perfect one, like a little jelly bean shape, no wall, just a membrane with a perfect nucleus, and there was just so much excitement. So it is the link between the theory of seeing these things in diagrams and actually seeing something come out of a real-life environment. (Greg, interview 1)

By connecting the learning with an authentic context, Greg provided the students with opportunities to apply real-world transferable skills. Real-world skills can be applied in life to match the skills of professionals in practice (Lombardi, 2007) and include critical thinking, communication and collaboration (Harmes, Welsh, &

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Winkelman, 2016). Research supported that learning focused on real-world transferable skills connects students' learning with authentic contexts beyond school (Harmes et al., 2016) and acts as a source to trigger their situational interest (Hidi & Renninger, 2006). Greg explained: "We use the nature around us for that connectedness, through things like agriculture, to bring the real-world into the classroom and give them the skills and understanding to transfer these to the outside world" (Greg, interview 1).

In addition, these skills were offered as opportunities for the students to engage in a purposeful, hands-on learning task. The students' descriptions of the cell structures, to communicate what they viewed under the microscope, demonstrated their excitement about discovery, knowledge acquisition and active involvement in the task. Findings from studies have reported the positive influence of students' interest in hands-on engagement in learning (Dohn, 2010; Dohn, 2013; Swarat et al., 2012).

Link the students' prior learning with purposeful learning goals

In the aquaponics subject taught by Greg, the Year 9 students studied the scientific side of growing fish and plants that combined the content of aquaculture and hydroponics. He attributed the popularity of the elective subject to the purposeful opportunities that it provided for the students to apply their prior knowledge. For example, Greg explained how the learning goals for the subject were tailored for the students to create conceptual connections:

You're tapping into something that they've already got a connection to. They like fishing and they know about fish, so you're expanding on that interest, and that's where you just find them absorbed. If the students want to do it and if you've set the scene for them to be engaged by explaining the purposeful goals then that's most of the battle; giving the learning a purpose so that they want to learn, then they're going to learn. (Greg, interview 1)

Greg clarified that designing purposeful learning gave students meaning to their learning experiences. The literature acknowledged that learning involves applying and linking existing knowledge to new information (Anderman et al., 2011; Brophy, 1999; Tobias, 1995; Travers et al., 2003). Greg linked the students' prior learning with purposeful learning goals that clarified to the students the value of the learning (Reeve, 2009). Research by Harackiewicz, Durik, Barron, Linnenbrink-Garcia and

Tauer (2008) reported that the accumulation of knowledge has the potential to trigger the students' situational interest and to deepen their interest in the future to adopt their own learning goals.

Contextualise the learning to topics that are of interest to the students

Julie discussed how she and Bec contextualised learning for their Years 5 and 6 students to engage in inquiry learning tasks based on topics of their own choice:

We have a specific formula that we follow as our inquiry model: "This is my question. What's my prediction? And then this is my research."
One student came in straight away with: "How do I make a cinnamon cake?" (Julie, interview 1)

The literature suggested that teachers' instructional strategies and the students' anticipation of learning about a topic act as sources of interest for students to engage in learning (Ainley et al., 2002; Hidi & Renninger, 2006; Swarat et al., 2012).

Further, the inquiry approach was identified in the research as an effective instructional strategy for stimulating students' situational interest (Palmer, 2009; Swarat et al., 2012). In the following snapshot, Julie reflects with one student about the inquiry task through a discussion about the content:

I said: "What have you actually learnt from your inquiry?"
"Oh, I've learnt about measuring."
And I said: "How does that connect to what we are doing?" We happened to be talking about measuring in class, so she was able to make the connection of how she was strengthening her learning by doing this.
Then we talked about: "Well, how have you actually written this up? What can you tell me about the structure that you have used for writing this?"
And she said: "Oh, it's one of those procedural things."
"Yes, it is a procedural text." So she has linked it with that. (Julie, interview 1)

This example described how Julie could take advantage of and build on the mathematics and persuasive writing knowledge and skills that were familiar and of interest to this student (Travers et al., 2003).

In another example, Nicky shared how she contextualised the learning for one Year 7 student who was not keen to learn about the scientific theories of forces:

When we were talking about and writing out the definitions associated with friction, one of my boys says: "Oh, this is boring."
I said to him: "We need to get the information so that you have enough knowledge about the different forces to see the forces in action when

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we do the experiments.” I explained to him that sometimes we have to be able to write, so that we can then use that knowledge and apply it in the hands-on things. That turned him round. He is loving doing some experiments with friction like dropping balls or cars down ramps and putting them onto the different surfaces to see how far they roll. (Nicky, interview 1)

Nicky conveyed that she observed the student’s attitude to the learning change in anticipation of the future learning experiences when he was provided with the purpose of the learning. Once provided with a rationale, the student engaged his attention in a topic about which he had little previous interest in learning. This strategy aligns with findings from a study by Dohn (2010) suggesting that teachers can find ways to foster students’ involvement in specific content areas and increase their interest in a broader range of topics regardless of their prior interests.

Renninger’s and Hidi’s (2002) research proposed that students can be supported by teachers to develop an interest in and to work with subject content for which they have a less-developed interest and that it is “incumbent on educators, in particular, to take responsibility for supporting the development of their students’ interest” (Renninger & Hidi, 2016, p. 3).

6.2.2 Core pedagogy: Goal orientated learning

The research acknowledged the link between the degree to which students use purposeful learning goals and how they self-regulate their learning (Covington, 2000; Kaplan & Maehr, 2002; Pintrich, 2000b; Schloemer & Brenan, 2006; Zimmerman & Kitsantas, 1997). Furthermore, students’ learning goals play an important role in shaping their interest because the goals reflect the purpose of the learning (Dweck & Leggett, 1988).

Design understanding and skill goals

To stimulate the Year 8 students’ interest in the mathematics concept, Rachael designed and implemented lessons with a commitment to the displayed understanding and skill goals:

Research journal: The lesson begins with the goals written on the whiteboard. The goals for this lesson are to understand why there are 24 hours in a day and to be able to calculate across the Australian time zones. These goals have two parts: an understandings goal; and a skills goal. (Rachael, classroom observation)

The literature clarified that learning goals provide students with purposeful learning when they challenge them to engage in a task that is meaningful (Locke & Latham, 1990, 2002; Schunk, 1990). Rachael referred to the goals at the beginning of, during and at the end of the lesson:

We've got a skill goal and an understanding goal and we refer back to them during the course of the lesson. I say: "Okay, so are we doing this? How are we doing this?" At the end of the lesson I can say, "Okay, did we do that?" (Rachael, interview 2)

In this example, Rachael used the learning goals to provide opportunities for the students to close the knowledge gap (Dohn, 2013; Hattie & Yates, 2014) between what they already knew and what they needed to find out. For the students to acquire further knowledge, Rachael informed them that the goals linked their prior learning with future learning:

Research journal: Rachael states what the lesson is about and how it connects with a previous lesson on "time". Rachael addresses the students: "You are going to be looking at time zones in Australia. You will be able to call people living in different zones in Australia when you understand this. Why would you be needing to know when to call them?" A discussion is prompted and the students offer suggestions. (Rachael, classroom observation)

Rachael encouraged the students to question curiously and to seek knowledge about the topic about which they had some prior understanding. Learning goals literature emphasises the need to focus on the students' personal improvement in acquiring the new knowledge and skills (Ames, 1992; Dweck & Leggett, 1988; Weiner, 1985). To communicate the utility of the learning goal and for the students to make the learning connections, Rachael discussed with the students how they could transfer the learning to other situations that they may encounter (Bransford, Brown, & Cocking, 1999; Cleary & Chen, 2009). Accordingly, Rachael provided some background knowledge of the topic to increase the students' interest in the learning (Schraw, Flowerday, & Lehman, 2001).

This snapshot illustrates how the learning goals framed and shaped the lesson; evidenced by the way that Rachael ticked the goal written on the whiteboard to indicate the achievement of the goal:

Research journal: Rachel concludes the introductory discussion by pointing out that it is important that the students have this knowledge as future workers. Rachael again reflects on the learning goals with the students and ticks one of the goals on the whiteboard.

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[Half way through the 70 minute lesson] Rachael refocuses the lesson by referring to the learning goal: “Are we getting off track?”

Students answer: “Yes.”

Rachael asks: “Do you want to?”

Students reply in jest: “Yes,” and they all laugh together.

Rachael states: “We finish at 11:45 am,” and, with this time reminder, the students continue working on their tasks. Rachael concludes the lesson by reflecting on the learning goal again. She then explains what the plan is for the next lesson and how they will extend this learning goal. (Rachael, classroom observation)

Rachael shared with the students how they were going to meet the goals progressively during the phases of the lesson. The students were informed of the time frame that was available for the goals to be attainable realistically (Anderman et al., 2011; Locke & Latham, 1990, 2002; Schunk, 1990). Research by Sansone and Thoman (2005) supported the contention that students’ interest fluctuates according to their evaluation of the goals and their expectations of achievement. Rachael explained how she indicated to the students that there was a need to re-assess their goal progress at the end of the lesson. She used this information to inform her teaching, to steer the students’ interest towards appropriate challenges and to create the next learning goals (Hattie & Yates, 2014).

The data related to the *connect the learning* theme highlighted four core pedagogies that were informed through the constructs that constitute the *rationale for learning* fundamental. This conceptual analysis substantiated how the teacher participants provided opportunities that could enable students to self-regulate their learning through their interest to engage in purposeful learning (Renninger & Hidi, 2016).

6.3 Theme: *Facilitate the Learning*

The *facilitate the learning* theme—generated from the manage learning and scaffold learning code categories—was associated with the *responsibility for learning* fundamental, which describes how students activate strategies and monitor their learning progress that enables a sense of agency. This theme captures four core pedagogies that are listed below and that are represented in Figure 6.3 in the thematic analysis map:

1. Integrate the expectations, the procedures and a common class language;
2. Provide teacher-directed strategy instruction and time for the students to practise a repertoire of strategies;
3. Scaffold to make the *what* and the *how* of learning visible; and
4. Embed questioning and assessment tools to clarify understanding.

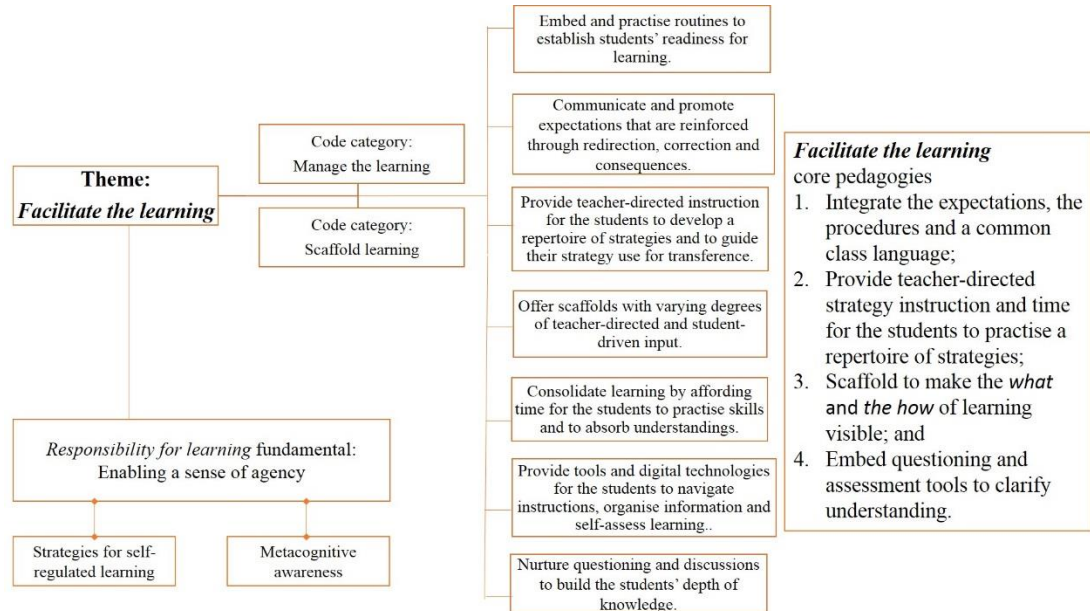


Figure 6.3. A thematic map representing the *facilitate the learning* core pedagogies

Data generated core pedagogies, aligned to the *facilitate the learning* theme, are presented in the next sub-sections. During this stage of the analysis, I positioned and supported the findings within the theoretical constructs of the existing literature that were associated with the *responsibility for learning* fundamental: strategies for self-regulated learning (Zimmerman & Martinez-Pons, 1986, 1990) and metacognitive awareness (Schraw et al., 2012).

6.3.1 Core pedagogies: Strategies for self-regulated learning

The key features of students experiencing a sense of agency are their feelings of empowerment to activate learning strategies for given purposes (Bandura, 2001). However, to accept *responsibility for learning*, it is not enough for students to believe that they have control of their learning (Anderson & Prawat, 1983); they also require the knowledge of a repertoire of strategies (Zimmerman & Martinez-Pons, 1986, 1990) and the expectations and the procedures that empower them to select appropriate strategies for the situation and the task (Balcikanli, 2011; Schraw, 2001).

Integrate the expectations, the procedures and a common class language

In the following snapshot, Greg prescribed the consistent everyday practices so that the Years 8 and 9 students were informed of the procedural and behavioural expectations (Evertson et al., 2000) in preparation for learning readiness:

I put across my expectations through the routines: “You come into my room, you stand behind your chair quietly, without talking.” When the room is completely silent then I’ll invite them to be seated. Then once they’re seated the expectation is to be opening their book ready. Every day I repeat it. So if they come in all noisy, I’ll be: “This is not right; let’s go back outside and start again.” I finish my lesson the same way so they don’t leave the classroom until everyone in the room is quiet. They have a clear understanding of what’s going to occur in my room. (Greg, interview 1)

Greg emphasised the value of establishing, implementing and enforcing clear expectations and procedures that were specialised to his classroom environment. He recognised that the transitions from one classroom to another, and from one phase of a classroom activity to the next, can be problematic for optimising teaching and learning time. A substantial amount of literature reinforced that established expectations and organisational procedures prepare students for learning transitions and their state of readiness to select appropriate learning strategies (Arthur-Kelly, Lyons, Gordon, & Butterfield, 2006; Brophy, 2006b; Jang et al., 2010; Ley & Young, 2001; Rogers, 2015) that empower them with a sense of agency.

In another example, part of the culture of Bec’s and Julie’s Years 5 and 6 classroom were the common understandings that formed a social literacy (McLennan & Peel, 2011). For example, Julie shared how learning strategies were labelled and taught as a common class language with which the students familiarised themselves to guide their expected responses:

Right at the beginning of the year, I say to the students: “You need to find yourself a partner that you can work with.” So we follow simple little guidelines like: “Talk to an elbow-partner; talk to an across-the-room partner,” so that’s somebody across the room. They physically have to get up and move across the room to that student. (Julie, interview 1)

Research by Berry, Loughran, Smith and Lindsay (2009) supported the establishment of a shared vocabulary amongst students and teachers for “talking about learning” (p. 586) that enables students to feel in control of activating the learning strategies.

Provide teacher-directed strategy instruction and time for the students to practise the strategies

In the following snapshot, Bec and Julie involved the Years 5 and 6 students in a class discussion to draw on their prior knowledge and to clarify the learning strategies required to meet the challenges of a task. They provided strategy instruction for synthesising the main ideas from a documentary:

Research journal: Julie begins the discussion: “Okay, remember when we summarise, we come up with the main ideas. So then we look for?” Students say together: “Keywords.”

Julie informs the students that what they write will be used to generate an e-book. Julie asks: “Who remembers what synthesising is?” The students offer some suggestions. Julie continues: “Synthesising is making new meaning, thinking about what that information means to you.”

From the corner of the room a student responds: “Oh, I know, subjecting to the text.”

Julie repeats the student’s answer and says: “You’re right. Let’s look at today’s learning goal.” Julie explains the steps of the task and Bec presents a visual display of the steps on the Smartboard. (Bec and Julie, classroom observation)

Julie highlighted to the students the purpose of the task and explained that they would be referring to the blogs to produce their own synthesis for an e-book. The questions provided an introduction to outline the upfront learning goal and the strategies that the students were required to perform in order to meet the demands of the task. The literature confirmed that teachers support students’ feeling of empowerment to self-regulate their learning when the students understand the requirements of a task (Travers et al., 2003) and are provided with instructions about how to perform a repertoire of learning strategies (Cleary & Zimmerman, 2004; Dignath-van Ewijk et al., 2013; Kistner et al., 2010; Mason et al., 2011; Postholm, 2010, 2011). Bec modelled for the students how to record their ideas from the video on the class blog site:

Research journal: Bec types up an example of the sort of blog comments they are looking for and the blog site is projected on the Smartboard. The task involves watching a *Behind the News program (BTN)*. The television documentary describes a market garden that some students have set up in an Australian school to supply their tuckshop with freshly grown salad items. As they are watching the 15 minute video, the students are asked to record any notes to express the key ideas on a specific blog site that is displayed on the Smartboard at the front of the classroom. All of the blogs representing the students’ key ideas are going to be printed out for them to use in the future. The

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documentary is played again, and then time is provided for the students to reflect on their learning. In the next lesson after lunch, the students are to write the summary from the blogs and then write their short synthesis to be shared in the e-book. (Bec and Julie, classroom observation)

The students were required to identify the key words by applying an organising and transforming information strategy (Zimmerman & Martinez-Pons, 1986, 1990). The literature acknowledged that to self-regulate their learning students require the time and space to practise information organising strategies and to absorb the learning (Kistner et al., 2010). Moreover, during this collaborative task the students were empowered to co-construct and share ideas with one another in a form of shared agency.

Scaffold to make the what and the how of learning visible

As an example of articulating the structure of the learning to make the processes explicit and visible (Lucas, Claxton, & Spencer, 2013), Greg scaffolded a strategy with his Year 8 science students. He modelled the strategy of information searching on the Internet and he utilised the interactive Smartboard, as a teaching tool, to make the learning strategy visible to the students:

Research journal: Projected on the Smartboard is the text structure of the assignment, which is a comparative essay. Greg moves to the whiteboard to draw a diagram of the human brain. He emphasises that he wants the students to go deeper in the research process about the brain and models on the Smartboard some Internet search strategies. Greg explained: “You type ‘cerebellum’ rather than just ‘brain’ or type ‘mandala oblongata’. Let’s say that one together.” Clearly, the students are impressed, as the searched information flashed on the screen and they echo the newly introduced term. Greg reminds the students that they are doing a biology study and that the words they use in their comparative essays need to reflect this scientific discipline. (Greg, classroom observation)

Research affirmed that scaffolded teaching and learning offer varying degrees of procedural support for the students to apply strategies for learning using the available tools and resources (Anderman et al., 2011; McLoughlin, 2002). Furthermore, when students feel and know that they can control their strategy selection and use, they experience a sense of agency (Bandura, 2001; Haggard & Tsakiris, 2009).

Nicky modelled and verbalised the strategies that the Year 7 students were to employ to complete a mathematics task. They were required to collect the data, create a data table and construct a graph to represent the data:

The way I broke the mathematics data project down was that the students had to decide what data to collect as their information. Then I modelled how to make a handwritten table to show the data and how to find the fractions and decimal, percentage calculations needed to construct the graph. After that I then showed them how to draw the graph in their books to represent the data. I talked about how to do it all again but this time I showed them the steps using the Excel computer data program. Then the next week they had to do the calculations, the tables and the graphs using the computer and present the project.
(Nicky, interview 1)

Making her thinking visible, Nicky structured the learning process to teach the students how to apply new strategies. The students were provided with opportunities to observe and then emulate each step of the task (Zimmerman & Labuhn, 2012). The literature indicated that scaffolds, designed to break complex tasks into manageable parts, support the students to visualise and to verbalise what is to be done (Brown et al., 1983; Ghatala, 1986; Harris, 1990; McLennan & Peel, 2012; Pressley et al., 1987) and that they assist students to focus on particular aspects of the task to gain a sense of agency as their learning progresses (Putwain et al., 2016).

6.3.2 Core pedagogy: Metacognitive awareness

Students can experience a sense of agency by being metacognitively aware of their learning needs and of the strategies that they can apply to meet these needs (Hacker, Dunlosky, & Graesser, 2009). To be “agents of their own thinking” (Kluwe, 1982, p. 222), students require a knowledge of themselves as learners. Given this knowledge, they have the potential to control their thoughts and behaviours and to regulate their thoughts and actions (Bandura, 1986).

Embed questioning and assessment tools to clarify understanding

In the Years 5 and 6 classroom, Bec and Julie used questioning to provide opportunities for the students to clarify and demonstrate their understanding:

Research journal: During the reading response activity, the students are asked to report on the topic about which they have chosen to read. Julie selects students from both ends of the room to respond to her questions. She hands around the microphone, asking the students: “How did this book make you feel? How does this book inspire you?”

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One student responds: “Well, at first it didn’t make sense so I read it again and loved it.”

Bec joins in the conversation: “What made it make sense from the second reading? What was the difference with reading it a second time?”

The student answers: “I think the first time I read it, I rushed it.” (Bec and Julie, classroom observation)

As the student was prompted by Bec’s questioning, she talked through her thoughts and evaluated her own understanding. Anderman and Andrzejewski (2011) reported that instructional conversations encourage students to be metacognitively aware of what they know and what they need to learn. When faced with a learning task, students’ metacognitive awareness may precede their effective strategy use (Sperling, Howard, Staley, & DuBois, 2004). The teachers probed the students’ knowledge to monitor their understanding (Taylor et al., 2002) by drawing on their ideas about the concepts of study and by asking them to share their own experiences with the other students in the class. Hence, students’ metacognitive awareness is complemented by their perception of agency to modify their strategy use according to the situational conditions (Balcikanli, 2011; Paris & Paris, 2001; Schneider, 2008).

In a further example, Rachael embedded a feedback tool in her Year 8 mathematics lessons that provided opportunities for the students to clarify their understanding of a new concept and for Rachael to adjust her teaching:

When I’m doing a session that’s not a discussion—when there’s a specific answer I’m looking for—we’ll use whiteboard cards [A4 laminated sheets]. That means the students all get their whiteboards in front of them. I can see every single kid’s card, with what they thought was the answer written on it, so I get immediate feedback. As a teacher, I have feedback and you can see automatically how many of them missed it or if there’s that misconception out there. If they missed the point, that’s straight into a teaching moment. You can use the whiteboard card, as a learning reflection tool before you start teaching, or as a quick quiz. You can see where they are at before you even start so you don’t bore them to death. (Rachael, interview 1)

As explained in this data extract and as was acknowledged in the literature, self-assessment tools provide teachers and students with feedback that supports them for future learning (Alvi, 2012; Hattie & Gan, 2011; Ley & Young, 2001).

During the lesson, Rachael provided the students with time, resources and non-threatening feedback to control and regulate their own cognitive processes (Schraw et al., 2006). Research confirmed that students require time to reflect on their learning (Travers et al., 2003; Turner & Patrick, 2004) and constructive feedback to

monitor and self-assess their own progress (Bartolome & Steffens, 2011; Hattie & Timperley, 2007; Labuhn et al., 2010; Mykkänen et al., 2015). The students were provided with the opportunity to demonstrate to Rachael and themselves their understanding and progression towards mastering the lesson goals:

Research journal: The students take out their individual whiteboards, which are A4 sized laminated cards. To reflect on their learning, Rachael informs the students that they can write a plus or a minus sign on their whiteboard cards to indicate whether they think that the time difference between the two destinations requires them to add or subtract when working out the time zone problems. She questions the students and they write their answers, with a time limit applied for all students to respond: “Hold up in 5, 4, 3, 2, 1.” Rachael scans the cards the students are holding at chest level to monitor what they have written and she moves to the next question. She states the correct answer and explains why the answer is correct. The students clear the card by erasing what they have written with the non-permanent pen. There is little risk of being seen to be wrong or failing the task. Rachael acknowledges the students’ responses with: “Oh, excellent!” (Rachael, classroom observation)

Rachael praised the students’ task mastery and their learning progress (Reeve et al., 2004). She provided them with the option to write a question mark that indicated that they were unsure and required assistance. When the students held up their whiteboard cards, none of the other students could see their answers so the risk involved in participating in the assessment task was reduced. Paris and Paris (2001) asserted that, as students learn to monitor and interpret their actions, they are able to assess the amount of assistance needed to accomplish a task with more insight about possible causes for learning progress and issues. The students were provided with the opportunity to accept that the learning offered challenges to be mastered with support. This is different to the students feeling that they needed to escape the risk of experiencing failure that reflected on their ability.

The data related to the *facilitate the learning* theme highlighted the four core pedagogies that were informed through the constructs that constitute the *responsibility for learning* fundamental of self-regulated learning. This conceptual analysis substantiated how the teacher participants provided opportunities that could enable students to self-regulate their learning through experiencing a sense of agency (Bandura, 2001; Haggard & Tsakiris, 2009).

6.4 Theme: *Diversify the Learning*

The *diversify the learning* theme—generated from the adjust learning support code category—was associated with the *capability for and from learning* fundamental, which describes how students reflect to sustain their self-efficacy beliefs that enable an expectation of success. The theme captures four core pedagogies that are listed below and that are represented in Figure 6.4 in the thematic analysis map:

1. Adjust the product expectations and the learning processes;
2. Negotiate the nature of the learning tasks and the individual and group learning situations;
3. Offer resource access for the students to support and monitor their learning processes; and
4. Acknowledge the students’ successes and enjoyment from learning.

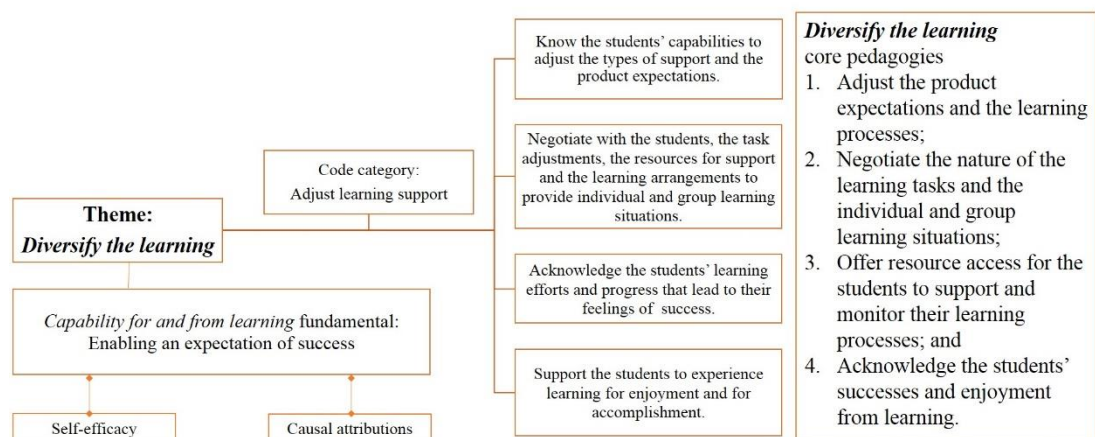


Figure 6.4. A thematic map representing the *diversify the learning* core pedagogies

Data generated core pedagogies, aligned to the *diversify the learning* theme, are presented in the next sub-sections. During this stage of the analysis, I positioned and supported the findings within the theoretical constructs of the existing literature that were associated with the *capability for and from learning* fundamental: self-efficacy beliefs (Bandura, 1986, 1997) and causal attributions (Weiner, 2005).

6.4.1 Core pedagogies: Self-efficacy beliefs

Constructive self-efficacy beliefs enhance students' motivation and their self-regulated learning to plan for, control and reflect upon their actions (Bandura, 2001; Eccles & Wigfield, 2002; Haggard & Tsakiris, 2009; Schunk & Ertmer, 2000; Vroom, 1964; Weiner, 2005).

Adjust the product expectations and the learning processes

Greg discussed how he used his knowledge of his students, as learners, to provide them with support. During the interview, I asked him whether he thought all of the Year 9 aquaponics students, including the students with low literacy skills, would complete and present their science reports:

I believe they will. I would probably have a good half-a-dozen students in there who would struggle to write a single sentence, yet they're still willing to have a go. We're doing quite heavy scientific work. The goal for all the students is to write about the multimodal fish life cycle and we'll model that a few times in the class. The students with low literacy skills, well then, they'll just talk to the class, live in front of everyone, rather than making it a whole formal written presentation. So I think that those guys will be right to talk about their fish investigation. It's probably all about achievable goals and being able to differentiate and set them at a level of success that is higher than where they are but not out of reach. (Greg, interview 1)

Greg explained how he endeavoured to motivate one of the students to feel efficacious about his learning by providing the opportunity for him to verbalise his learning and to meet personal learning challenges:

For instance, we have one boy currently who struggles to write and he'll engage verbally during the whole theory part of the lesson. However, if you go back and check his written work he hasn't actually put anything down on paper. Therefore he looks at someone else's writing to see how to write it down. That way he engages and challenges himself. (Greg, interview 1)

Greg provided challenges suitable for the students' perceptions that they could complete the task and he adjusted the expectations to suit their capabilities. Shanker (2010) recommended that to enhance students' self-regulation it is essential to minimise their feelings of stress when facing learning challenges. Pertinently, the research by Vygotsky (1978) emphasised the importance of teachers adjusting the task product expectations and the learning processes to meet the students' optimal zones for their learning success. Tomlinson and Murphy (2015) reported that

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teachers' knowledge of the learning strengths and needs of their students enables them to respond with effective instructions and feedback designed for their consistent growth and readiness for future learning.

Negotiate the nature of the learning tasks and arrange individual and group learning situations

In the following snapshot, Brian described an example of how he used his knowledge of the learning capabilities and needs of one Year 8 student to negotiate the learning:

There's a student who sits down the back of the classroom. He's actually listening and paying attention. He just doesn't give you that impression. But, if you don't have that background knowledge of him, it's very easy to point the finger and say: "Turn around, pay attention." He and I came to an understanding fairly early on, where he was drawing and things in class. He was still listening, but I said to him: "Mate, if you want to draw I don't really have a problem with that, but I'd really like you to be drawing things that relate to what we're talking about." He went: "Oh, okay." So it was all good. He actually takes in quite a bit, a lot more than what you might think. (Brian, interview 2)

Brian was confident that the student was listening actively during the lesson. He consulted with the student, stating that he understood his need to be writing as he listened. Brian recognised and accepted this as a strength of this student's preference for learning and negotiated the learning with him so he could work in his own way. Zimmerman (2000b) suggested that students having personal involvement in the learning decisions and learning by doing are potential sources of self-efficacy beliefs.

In another example, Nicky arranged the desks in the classroom to suit the learning situation to allow her to circulate and offer constructive feedback to the Year 7 students. The physical layout of the classroom was structured in a u-shape that functioned effectively for Nicky to monitor the progress of each student's hands-on block constructions. Nicky began the mathematics lesson by revisiting previous learning and by sharing feedback to the students on their earlier performances, where they did not have a successful outcome:

Research journal: Nicky walks around the inside of the u-shaped desk arrangement handing out plastic coloured blocks to each of the students: "From your tests, I see a lot of you didn't identify the patterns. We will work on this in this lesson, which will also help you with your homework. You can work on your own or in pairs if you like." (Nicky, classroom observation)

Grouping the students in pairs suited the resource requirements of the learning task, although Nicky did offer the students the option of working independently if they preferred. Using these flexible groupings provided opportunities for Nicky to model the strategies and to provide individual feedback to the students on an as needed basis. The literature supported the sharing of learning experiences that afforded meaningful interactions, where the teachers could work with the students and the students could work with other students (Perry & Rahim, 2011; Rupley et al., 2009; Volet et al., 2009).

Nicky offered the students instructions, feedback and resources and she considered the required adjustments to meet their varied levels of attainment:

Research journal: The students are asked to use the blocks to build the shape that is drawn on the whiteboard. Students call for affirmation: “Miss, is this it?”
 “Miss, is it like this?” Nicky observes the students’ constructions, as she hands out the worksheets from the centre of the u-shape, providing positive feedback to the students. She models the next step, using the drawings on the whiteboard to demonstrate how to construct the pattern. The students are shown how to use the table on the worksheet to represent the predictive patterns by creating a rule: “When we need to find a pattern, my number one rule for you is to find the difference.” A student comments: “Going up in four.”
 Nicky confirms: “Good, that is the pattern, adding four.” The rule is written on the whiteboard and the students are asked to repeat the process using the blocks to form a different pattern. The hands-on activity allows the students to create, see and count the blocks; they are repeating a familiar process a second time and they are curious to see if the rule that they created for the first situation works for another situation. One student calls out: “I get it now,” as Nicky smiles and represents the new pattern as an equation on the whiteboard. (Nicky, classroom observation)

Through teacher-directed instruction, Nicky modelled to the students how to create a mathematical rule that was represented as connected blocks and visual patterns. Schunk and Miller (2002) identified the modelling of strategies by teachers as an important source of self-efficacy information, as it helps students to feel capable, and this is often followed with the students’ practising the strategies and receiving subsequent feedback. Nicky supported the students individually as they progressed at their own pace and emulated what they had observed to gain an understanding of the abstract mathematical concept. Nicky provided the students with materials to manipulate to support their understanding as the learning flowed from simple to complex cognitive processes (Alvi & Gillies, 2015).

Offer resource access for the students to support and monitor their learning processes

In the following snapshot of Bec's and Julie's Years 5 and 6 classroom, the students were provided with opportunities to select their own reading resources and to make learning decisions about how they would respond to their reading activity:

As part of our reading and writing process, the students are doing a non-fiction focus, comparing the differences between non-fiction texts and fiction texts. So at the moment, because they are reading at varied levels, they've all got their selection of non-fiction and fiction books in their book box for quiet reading time. They read, then they will discuss what they've read with somebody else: "Oh, I've just read about this and I'm thinking this kind of thing." Or they'll write it down: "I've just read this and I think" They've got about 10 different activities that they can do with their reading. They record their responses in what is called a "Reader's Notebook" and they know which topic they are working on from the list provided at the front of the notebook. They might talk about their favourite character in the book; they might predict what's going to happen next. Initially, when we did the reading response activities with the students, we told them exactly what they were going to be doing. We probably modelled five or six reading response activity expectations at the start and then we sort of let them flow to set their own goals. "Gradual release" we call it, to make their own learning choices. (Julie, interview 1)

Julie and Bec modelled to the students the expectations for each reading response activity and they described how they intended to release the responsibility for the learning gradually to the students (Vygotsky, 1978). They acknowledged that their class consisted of students operating at various levels and as such the students were provided with a choice of varied reading resources and of comprehension response tasks. Nolen (2001) suggested that students, empowered with choosing the type of resources that they were to use during literacy tasks, were more likely to engage in the task. The teachers offered opportunities for the students to acquire feedback from observing their peers performing a similar task. Bandura (1997) and Schunk (1991) acknowledged that observing others succeed can convey that they too are capable. Research by Fishman (2014) confirmed that students who perceived that they were capable of achieving the outcome were more likely to feel internally capable to produce the outcome.

6.4.2 Core pedagogy: Causal Attributions

Causal attributions are the reasons proposed for successes or failures that influence students' self-efficacy beliefs and their future expectations of success (Kitsantas & Zimmerman, 2002; Weiner, 1985). Students attribute causes that affect how they perceive their capabilities to accomplish the expected outcomes. Extensive research (Schunk, 1983, 1984; Schunk & Gunn, 1986; Schunk & Rice, 1986; Weiner, 2005) links causal attributions with self-regulated learning.

Acknowledge the students' successes and enjoyment from learning

During the interviews, Rachael described how, from her teaching experience, she recognised that “success breeds success” (Rachael, interview 2) for students:

The worst thing a student can do is stress that they haven't got it. Then they haven't, and they will not try. So it's about allowing students the time to learn and helping them to see what they can do. It's better to take the time so they get what they need. That's the flexibility you have to have in your program. (Rachael, interview 1)

Students' experiences of achievement were identified by Määttä, Mykkänen and Järvelä (2016) as powerful success indicators for students to understand and appreciate what they have done well.

Furthermore, Brian discussed that the students in his Year 9 mathematics class have experiences of failures in previous learning situations that have restricted their behaviour for future learning:

If a kid has had trouble with a subject in the past, then, well, I think particularly with maths, they start to look for problems that aren't there. It's a question of being able to get across to them that there are no tricks. That this is the formula. If you do this every single time, if you follow this formula and you put the numbers in the right places then you'll get it right. If you don't get it right, you can go back and you can follow that formula as a road-map. I call formulae “road-maps”. You can follow that road map to find out where you might have made the mistake. (Brian, interview 1)

Brian simplified the conceptual understanding by teaching the students to apply formulae to calculate the mathematical problems. The step-by-step “road-maps” offered the students systematic directions for calculating the answer and for retracing their steps when their answers were wrong. Brian described how he taught the students to use the “road-map” to find out the correct answer or to find out where they may have made the mistake. Weiner (2005) acknowledged that for future

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learning success it was important that students view their learning capabilities as changeable and under their control. Dweck (2006) advocated students adopting a “growth mindset” (p. 7) perspective, where they believed their intelligence could be developed, because how students perceive their abilities plays a key role in their motivation and achievement.

The data related to the *diversify the learning* theme highlighted the four core pedagogies that were informed through the constructs that constitute the *capability for and from learning* fundamental of self-regulated learning. This data analysis substantiated how the core pedagogies provided opportunities that could enable students to self-regulate their learning through an expectation of success (Bandura, 1997; Wigfield & Eccles, 2002).

6.5 Theme: *Socialise the Learning*

The *socialise the learning* theme—generated from the build relationships for learning code category—was associated with students’ self-regulated learning within the social environment for learning. This theme captures three core pedagogies that are listed below and that are represented in Figure 6.5 in the thematic analysis map:

1. Create caring and respectful communities for collaborative learning;
2. Share joint responsibility for the learning with the students; and
3. Communicate with the students’ parents and caregivers.

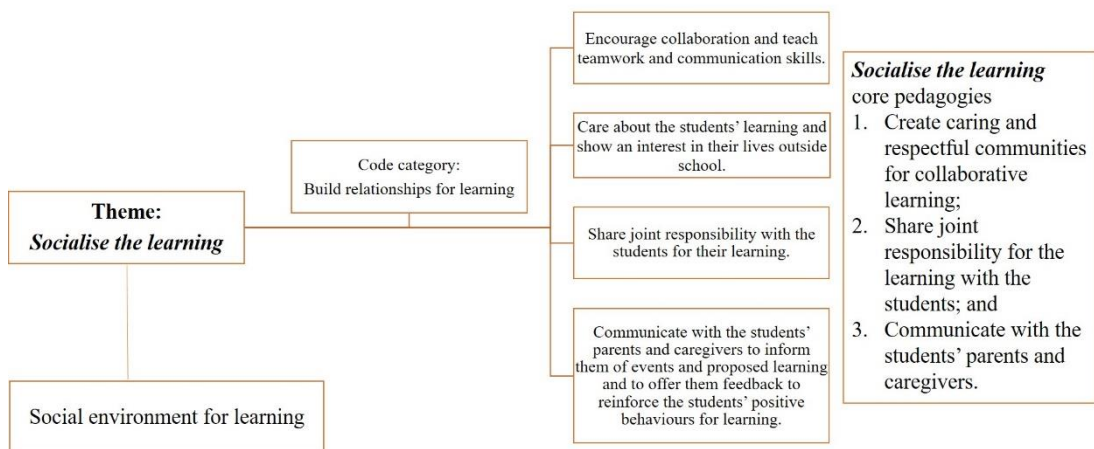


Figure 6.5. A thematic map representing the *socialise the learning* core pedagogies

In the next sub-sections, data generated core pedagogies, aligned to the *socialise the learning* theme, are presented through an analysis of my observations within each distinctive social environment for learning.

6.5.1 Core pedagogy: Create caring and respectful communities

Social interactions and conducive relationships are essential for developing students' self-regulation through cooperative and collaborative tasks (Perry & Rahim, 2011). In a study by Mykkänen, Perry and Järvelä (2015), the students considered that the teachers and their peers influenced their self-regulated learning opportunities and academic achievement. The following snapshot illustrates how Brian created a caring and respectful community during the Year 8 Christian studies lesson:

Research journal: Brian leads the prayer, as the students bow their heads in response to their teacher model. At the end of the prayer: "Amen." Brian reminds the students of not just the behavioural expectations during the prayer-time but also the expectation that they should be thinking about the person in the subject of the prayer. As some volunteer students distribute the booklets, Brian shares a funny story about an event that happened with a Year 3 class he had once taught and the students laugh together.

Brian redirects the students back to the lesson goal: "Who is ready to go? What we are going to do this lesson is" Brian emphasises to the class that they are going to do the thinking together today, so he expects them to join in the discussions. He then clarifies his expectations by stating: "Year 8, if you have a comment you need to raise your hands." To link this lesson with the previous learning, Brian questions the students about the three parables that they have studied previously. "Good one," he encourages the student who answers his question. Brian accepts the students' comments and adds to them. His voice is strong and dominant but casual and welcoming of suggestions from the students. The class discussion continues with Brian weaving stories and entertaining phrases into the conversation. This keeps the students focused and at times creates ripples of laughter around the room: "We're not couch potatoes today." One of the students, who has been previously given a non-verbal warning—the teacher look that indicated he was being monitored by Brian—is asked to move to the front. He quickly complies with Brian's respectful request. (Brian, classroom observation)

In addition, Greg emphasised the importance of building relationships with his young adolescent students by getting to know them: "You've got to build those relationships and have an understanding of them, because when you do that you get their respect" (Greg, interview 1). He described his role as the teacher in developing

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these relationships: “There’s this pastoral side to teaching. That is big for me and is reflected in empathy and compassion. You’ve got to know your students. You’ve got to know what goes on in their lives” (Greg, interview 1). Hattie and Yates (2014) confirmed that trusting relationships between teachers and their students impact on all aspects of classroom life and are foundational for the co-regulation of learning and the socially shared regulation of learning.

6.5.2 Core pedagogy: Share joint responsibility

The following snapshots illustrate how the teacher participants in Case One and Case Two provided opportunities for the co-regulation of learning, the socially shared regulation of learning and self-regulated learning (Hadwin & Oshige, 2011). The annotated snapshots recall the events of the observed lessons where the students and the teachers shared joint responsibility for the learning during the lessons in different ways and to varying extents. The co-regulation of learning occurs when students interact with their teachers and their peers, who model the expectations and scaffold the learning (Hadwin & Oshige, 2011; Volet et al., 2009). During the socially shared regulation of learning, students are working on co-operative and collaborative tasks in a form of interdependent learning with a co-constructed or a shared outcome (Hadwin et al., 2011). Freiberg and Lamb (2009) suggested: “When teachers release responsibility to student [as] managers for important classroom tasks, the outcomes are mutually beneficial: students feel empowered, while teachers have more time to teach” (p. 102).

Case One: Nicky’s Year 7 science lesson

The data were collected during an observation of a science lesson in Nicky’s Year 7 classroom:

The students in the mixed ability “journey group” enter the room for an afternoon science lesson. As the students locate themselves in their seats, the noisy arrival calms and the room settles.

The lights go off, as Nicky projects onto the Smartboard a video of a rocket about to launch. The students are provided with two viewings of the take-off and a discussion begins to connect this lesson about scientific forces with the previous science lesson.

Co-regulation of learning

<p>Following this discussion, the students are asked to take out a worksheet and to continue completing the questions from the previous forces lesson. Nicky asks the students to stay focused, as they need to complete this worksheet so that they can begin the hands-on activities that she has planned.</p>	<p>Self-regulated learning</p>
<p>The students are seated in rows of two or four desks joined and are invited by Nicky to share their answers with the students near them. In response to an increased noise level of discussions. Nicky offers clues to assist the students to answer some of the questions. She circulates around the room, assisting the students and offering encouraging comments. One of the student responds with: “Ah, I’ve got it!”</p>	<p>Socially shared regulation of learning</p>
<p>In the next part of the lesson, Nicky prepares the students to complete the simple machine experiments by demonstrating each activity at the various stations set up around the room. At each station, the task expectations for the hands-on experiments are displayed and they include the step-by-step instructions and the list of resources that the students are to use.</p>	<p>Co-regulation of learning</p>
<p>Nicky announces to the students to prepare to work in small groups of three and she reinforces the requirements of appropriate co-operative behaviours within the group. One student asks if he could work alone and Nicky clearly stresses the value of working together but also that they are to let her know of any issues that are causing trouble. Another student inquires: “What if I break the equipment?” Nicky answers firmly and frankly: “Don’t break it.” The students are provided with the opportunity to choose which station they will be working at first, so long as there is a group at each one. With few issues, the groups of students soon disperse to the stations and the experimenting begins.</p>	<p>Socially shared regulation of learning</p>
<p>Once the students complete the practical element of the task, they are to illustrate this observation on a template worksheet independently and then to write a couple of sentences to explain the concept in relation to the content knowledge about forces that they had revised at the start of the lesson. After a 10 minute learning window, the students are instructed by Nicky to: “Stop where you are,” and they are given instructions about how to rotate in their groups to the next activity, being sure to leave all the equipment at the original location. (Nicky, classroom observation)</p>	<p>Self-regulated learning</p>

Case Two: Greg’s Year 8 science lesson

This observation was conducted in the science laboratory that seemed an appropriate and even an inspiring classroom for Greg’s Year 8 science class:

Developing a Self-Regulated Learning Pedagogical Model

Research journal: Greg's voice is strong and clear, as he emphasises the key words that provide the students with the instructions about how they are to enter the room. The white laboratory coats hang on a stand in the corner of the room and the experiment workstations provide a mood to think scientifically.

Greg details to the students what has to be completed before they leave the classroom today. They are provided with a template, as a worksheet, where they are to record what they find out with their partner about their chosen "organ and organelle". Greg explains how to use the template and he provides an example to demonstrate that by filling in the information on the form they will complete the assignment essay. There is a pile of books in the centre of the classroom that are offered as resources and each group has the availability of at least one technology tool to access the Internet for information.

Co-regulation of learning

The students are asked to find a place to work with a partner at the experiment desks around the perimeter of the room. Greg moves amongst the groups giving advice to each partnership that can be heard clearly by every student in the room, even if they are not in that group. Every so often Greg calls out: "Stop." The students turn their attention to the examples of students' work that he is holding up and praising: "That's the sort of work we want. Brilliant."

Socially shared regulation of learning

Greg then uses the opportunity to question the students about how they are recording the information on the structured template. The students respond to Greg's questions and are asked to continue their work.

Co-regulation of learning

With 15 minutes to go, the students' individual goal is to complete the diagram and to record the information that they have found on the function of the organelle. Towards the end of the 70 minute lesson, Greg writes the homework on the whiteboard, which is to review their completed information template. (Greg, classroom observation)

Self-regulated learning

In Figure 6.6, the photographs of Greg's classroom portray the science laboratory from two perspectives to illustrate the physical layout of the classroom that provided the flexibility of groupings for the co-regulation of learning, the socially shared regulation of learning and self-regulated learning.



Figure 6.6. The secondary school science laboratory classroom

The literature acknowledged the co-regulation of learning and the socially shared regulation of learning as being distinctive social processes that interact reciprocally with students' self-regulated learning (Hadwin et al., 2011; Perry & Rahim, 2011; Volet et al., 2009; Zimmerman, 1990b). In the snapshots provided, within each of the classroom social environments for learning, the data reflected how the teacher participants modelled and scaffolded the learning to provide opportunities for the students to internalise the learning gradually. Perry and Rahim (2011) advocated students learning through participation in collaborative tasks that involve interactive relationships with their peers and the teacher.

6.5.3 Core pedagogy: Communicate with the students' parents and caregivers

To create classrooms founded on unifying social structures, the teacher participants established a communication style that was positive and accepting (Charles, 2002) to form relationships with the students' parents and caregivers.

For example, Brian explained how he worked to strengthen relationships quickly with the Year 8 students through extra-curricular activities and how he formed productive communication links with their parents. He described educating students being as a partnership between the teachers and the parents:

Developing a Self-Regulated Learning Pedagogical Model

We can't be in isolation to the family. It's a partnership. It's as simple as that. I think it comes back to the fact that when I find an opportunity and a time to ring the parents, I don't just ring them for bad news; I ring them for good news as well. (Brian, interview 1)

Parent support was identified in the literature as a potential predictor of the students' school-related interest and goal orientations (Wentzel, 1998).

In the following example, Peter described the communication that he and Nicky found to be an effective way to keep the Year 7 students' parents informed:

We send out a note that shows everything that's happening that week. So we'll put down like if there's a maths task, what we're doing for English, the homework for this week. For example, in maths: "We're doing angles this week. Your task is due this week." We have all the dates down on the side, like the things for the whole term. We get the kids to give it to the parents because they like knowing what's coming up, I suppose, without having to make phone calls and things like that. (Peter, interview1)

Research evidence supported that creating trusting relationships with families increases the likelihood that students will feel connected with school (Allen & Bowles, 2012).

6.6 Theme: *Reflect on Teaching*

The *reflect on teaching* theme—generated from the expand practices code category—was associated with the teacher participants' involvement in pedagogical conversations and reflections intended to continue their ongoing development of practices for effective student learning. The theme captures one core pedagogy that is listed below and that is represented in Figure 6.7:

1. Reflect on personal experiences and learn from other teachers and with the students.

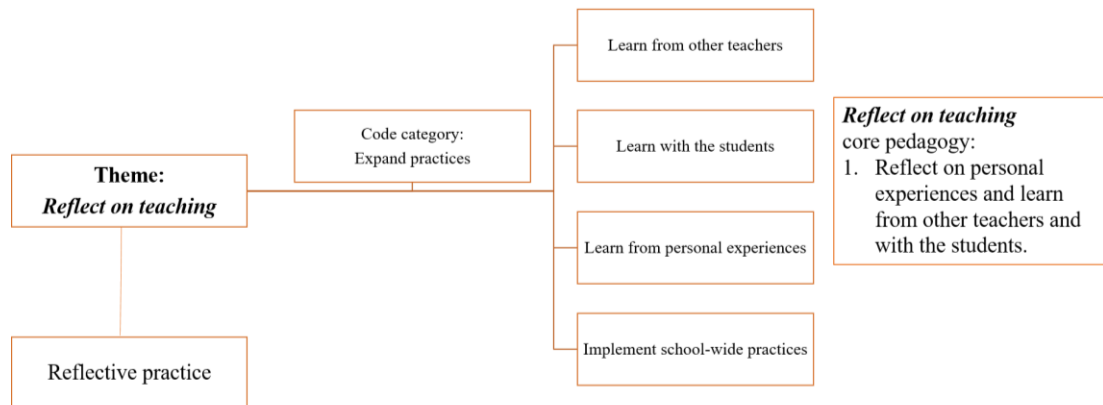


Figure 6.7. A thematic map representing the *reflect on teaching* core pedagogies

6.6.1 Core pedagogy: Reflect on personal experiences and learn from other teachers and with the students

The teacher participants engaged in professional learning accessed from various sources that contributed to their professional awareness and their application of newly acquired practices. They acknowledged that their ongoing professional learning enabled them to apply new practices in their contexts and, where applicable, to implement these practices school-wide. Cole (2012) outlined the purpose of professional learning as producing more effective practice for both the teacher and the school with the ultimate purpose of improving the students' learning. The teachers talked about the theoretical understandings that empowered them to adjust existing practices and to apply new practices to enhance students' learning and learn with the students. The teacher participants identified that they reflected on their personal experiences, that they belonged to a group where their professional learning was sourced from one another and that they learned with their students. The literature comprehensively supported the value of teachers reflecting on their pedagogical practices for the purpose of improving students' learning outcomes (Cole, 2012; Loughran, 2016; Schön, 1983; Shulman, 1987).

6.7 Review of the Chapter

In this chapter, an analysis of the data was presented to respond to the second research question: How do teachers' pedagogical practices for effective learning provide opportunities for students to regulate their learning in the primary–secondary

Developing a Self-Regulated Learning Pedagogical Model

schooling transition years' classroom environments? The findings were presented from the teachers' perspectives and they were informed by the literature to develop the pedagogical model for self-regulated learning. Five themes were generated from the data and they were informed conceptually by the literature to describe 16 core pedagogies that were identified as providing opportunities for young adolescent students to regulate their learning. The data were analysed in relation to the fundamentals of self-regulated learning; the social learning system of a classroom; and the processes of pedagogical reflection. Figure 6.8 presents the pedagogical model for self-regulated learning generated from this research.

The next chapter presents a response to the third research question to extend the data analysis. I explored how the core pedagogies represented in the self-regulated learning pedagogical model informed a transition pedagogy framework for self-regulated learning in the primary–secondary schooling context.

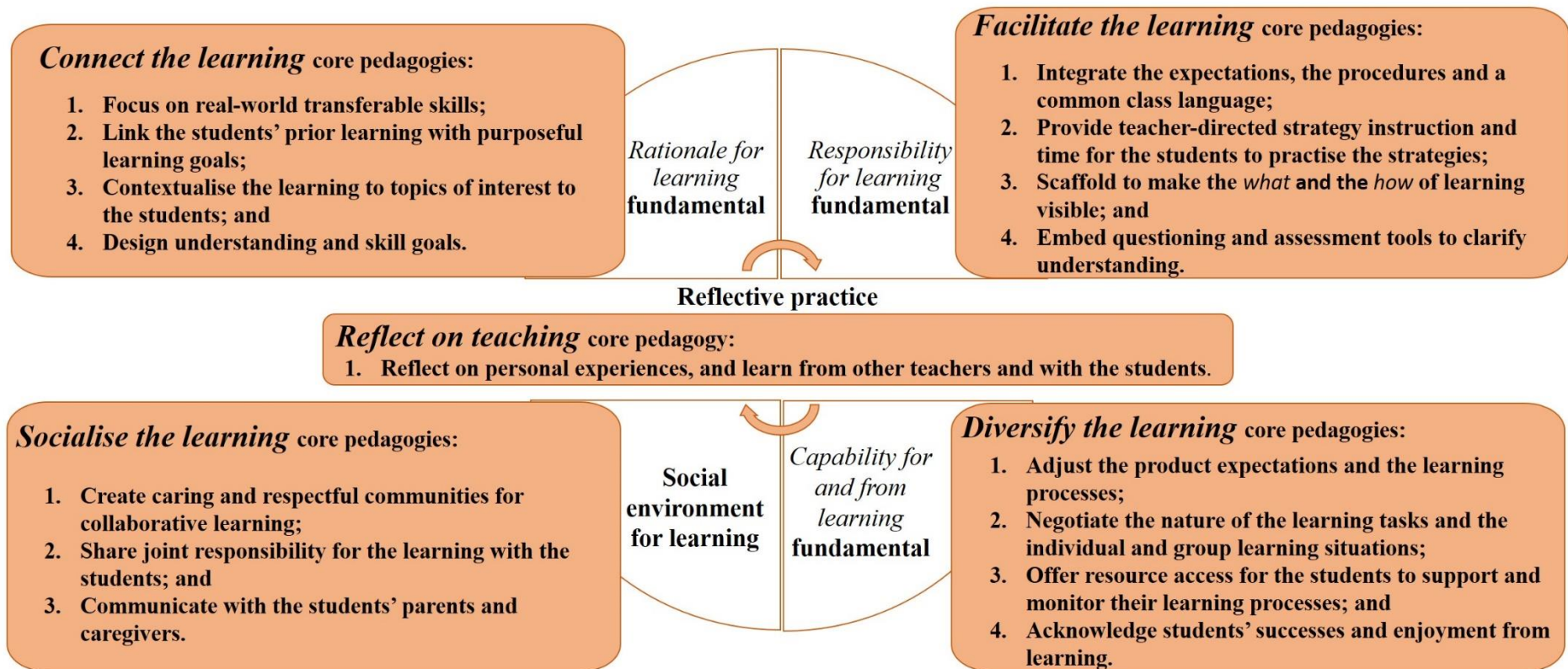


Figure 6.8. The pedagogical model for self-regulated learning

Chapter 7 Framing a Transition Pedagogy for Self-Regulated Learning

He [sic passim] must survey the capacities and needs of the particular set of individuals with whom he is dealing and must at the same time arrange the conditions which provide the subject-matter or content for experiences that satisfy these needs and develop these capacities. The planning must be flexible enough to permit free play for individuality of experience and yet firm enough to give direction towards continuous development of power. (Dewey, 1938, p. 58)

If actions were determined solely by external rewards and punishments, people would behave like weathervanes, constantly shifting direction to conform to whatever momentary influence happened to impinge upon them. (Bandura, 1986, p. 335)

7.1 Overview of the Chapter

In Chapter 5 of this thesis, the case studies were introduced through the accounts of the teacher participants and were examined to explore how they talked about fostering students' effective learning. In Chapter 6, I analysed the teacher participants' pedagogical practices to inform a pedagogical model for self-regulated learning. The data showed that the teacher participants endeavoured to provide opportunities for their students to regulate their own learning through core pedagogies that ***connect the learning, facilitate the learning, diversify the learning, socialise the learning*** and ***reflect on teaching***. This data analysis chapter addresses the final research question: How does the exploration of these teachers' pedagogical approaches inform a primary–secondary schooling transition pedagogy for self-regulated learning?

To frame the transition pedagogy for self-regulated learning in the primary–secondary schooling years, the First Year Curriculum Principles (Duncan et al., 2009; Kift, 2015) were adapted to this transition context. In addition, the distinctive learning needs of young adolescent students, acknowledged in the literature review in Chapter 2, were revisited. Figure 7.1 presents the conceptual framework introduced in Chapter 3, which now includes the five needs of young adolescents and the six transition principles.

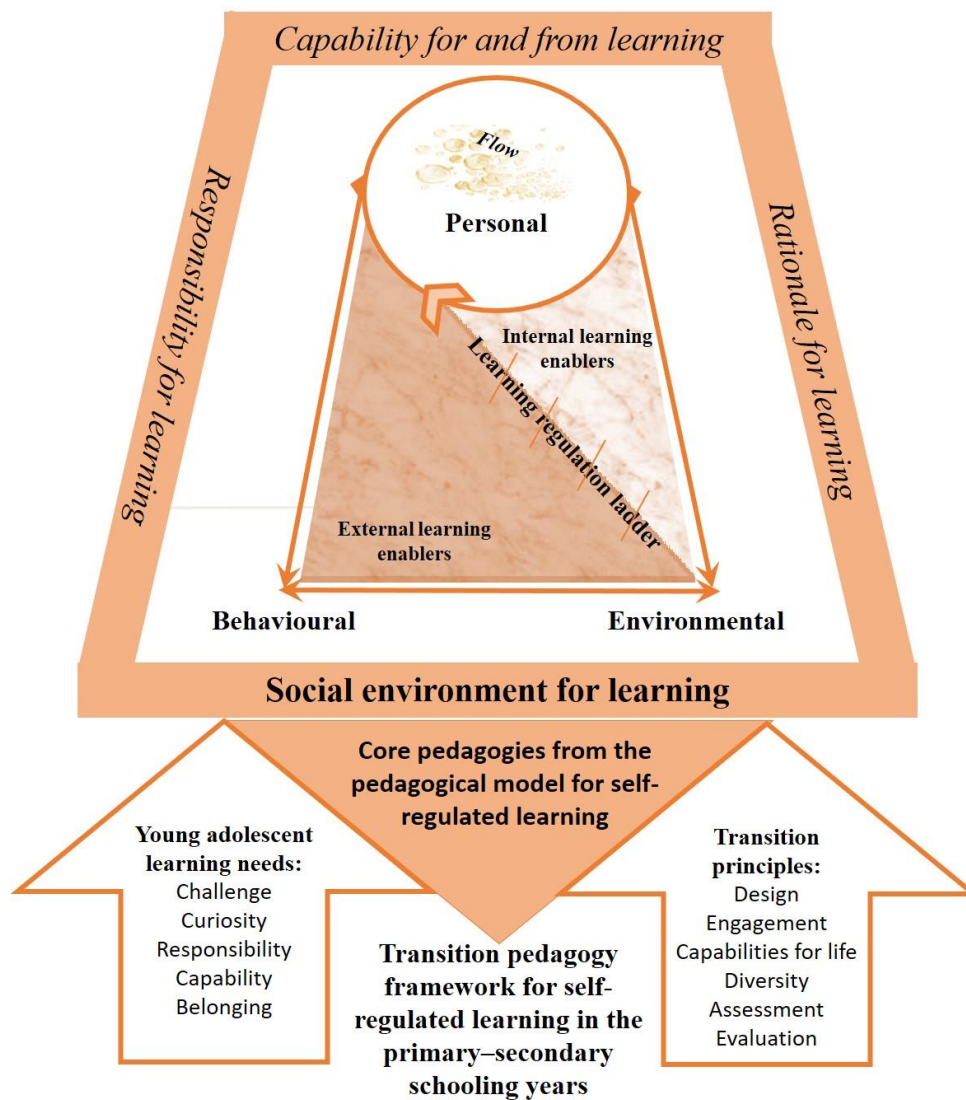


Figure 7.1. The conceptual framework expanded to include the young adolescents' learning needs and the transition principles

Section 7.2 of this chapter articulates the complexity of the data analysis that involved aligning the learning needs of young adolescent students and the transition principles with the core pedagogies drawn from the model of self-regulated learning. Extending this model, I was informed by the data and the literature to construct the transition pedagogy framework for self-regulated learning. In Section 7.3, I operationalise the primary–secondary schooling transition pedagogy framework by annotating snapshots to analyse how Greg's aquaponics lesson created a social environment to potentiate self-regulated learning opportunities for his students. To conclude the chapter, the findings are presented to respond to the third research question. The stage of the data analysis that addressed this research question were identifiable in the analysis design as represented in Figure 7.2.

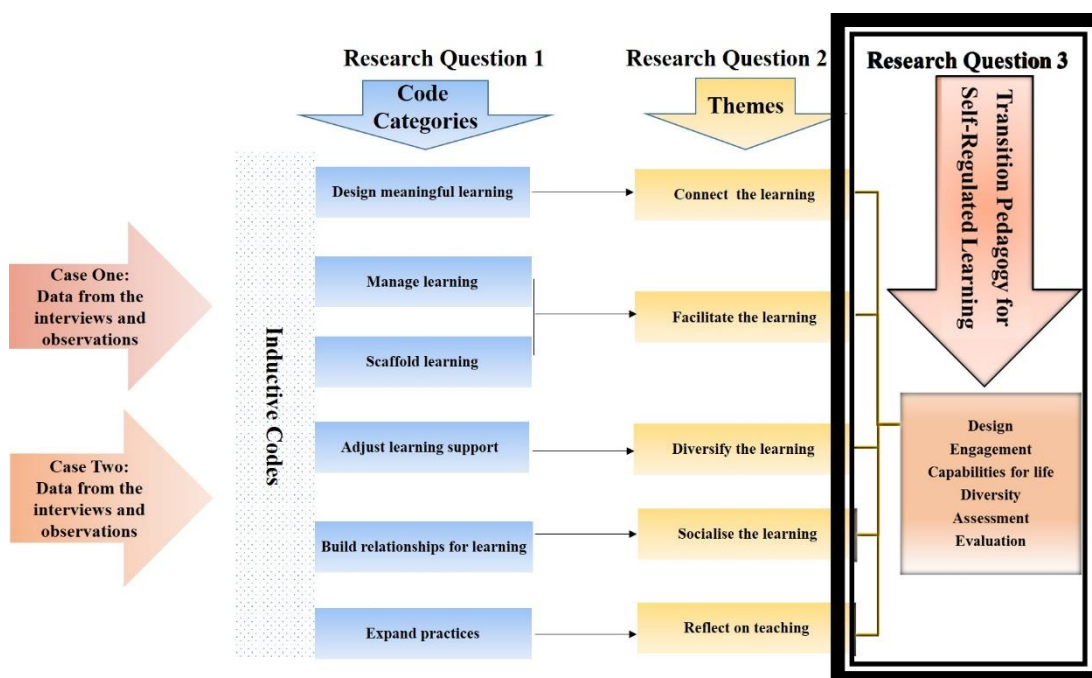


Figure 7.2. The stage of data analysis addressing the third research question

7.2 Constructing the Transition Framework for Self-Regulated Learning

The teacher participants proposed that a prerequisite for students' successful transition to the secondary school phase of their education was that they needed to be organised, independent, able to self-manage and motivated to learn:

A successful transition from primary school to secondary school happens for the students who are independent. Those kids that have learned the organisational skills for independence and they have actually applied them in Years 6 and 7. I find those students will be more confident to go into high school. (Nicky, interview 1)

I think self-motivation: "I'm going to give this a go." It is in their ability to take in huge change and organise themselves in that change. Because during these years, yes, they're learning how they learn and they like that but there's so much more. They're transitioning into a school with all these other kids. Just the relationship component in a high school is so much for them to take in. Like in primary school they had their one class. Now they have the emotional pressure from other kids' expectations as peer pressure. (Rachael, interview 1)

I guess one of the big differences between primary school and high school is you need to be much more of an independent learner. I think maybe things like personal organisation and time management. Time management is a big thing obviously because you need to be organised to get yourself ready for classes. You need to be organised in terms of making sure you write down your homework, making sure you get the

right books in your bag for the next day. I'd say that is probably the most basic thing. Of course in primary school, you come to school, you throw your bag in the corner and all your stuff's in your tote tray and you don't have to carry anything around with you. (Brian, interview 1)

The judgements expressed by Nicky, Rachael and Brian align with findings from a study in Western Australian Catholic schools, where the teachers identified that being organised was the biggest hurdle for students transitioning into secondary school (Coffey, Berlach, & O'Neill, 2013). The teacher participants' perceptions of the issues faced by students in the primary–secondary schooling years supported the development of a pedagogical transition framework aimed at potentiating self-regulated learning. To construct such a framework, I was informed by research evidence to align the core pedagogies with the learning needs of young adolescent students and the primary–secondary schooling transition principles.

The complexity of the data analysis to synthesise the key elements embedded in the pedagogical framework for self-regulated learning is illustrated in Figure 7.3.

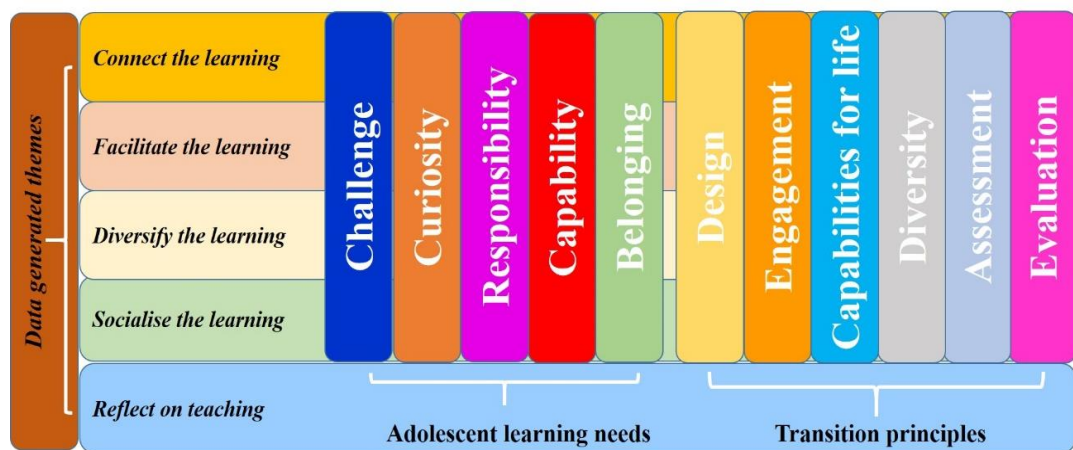


Figure 7.3. The complex synthesis to construct a transition pedagogy framework for self-regulated learning

7.2.1 A synthesis of the learning needs and the core pedagogies

The alignment of the core pedagogies for self-regulated learning with five distinctive learning needs of young adolescent students presents a web of connections. Each of the core pedagogies may address one or more learning need/s. Figure 7.4 graphically represents my literature informed inferences that form the significant connections. For a less complicated view, the complex relationships between the core pedagogies and the multiple learning needs of the young adolescent are evidenced in the colour shaded sections in Table 7.1.

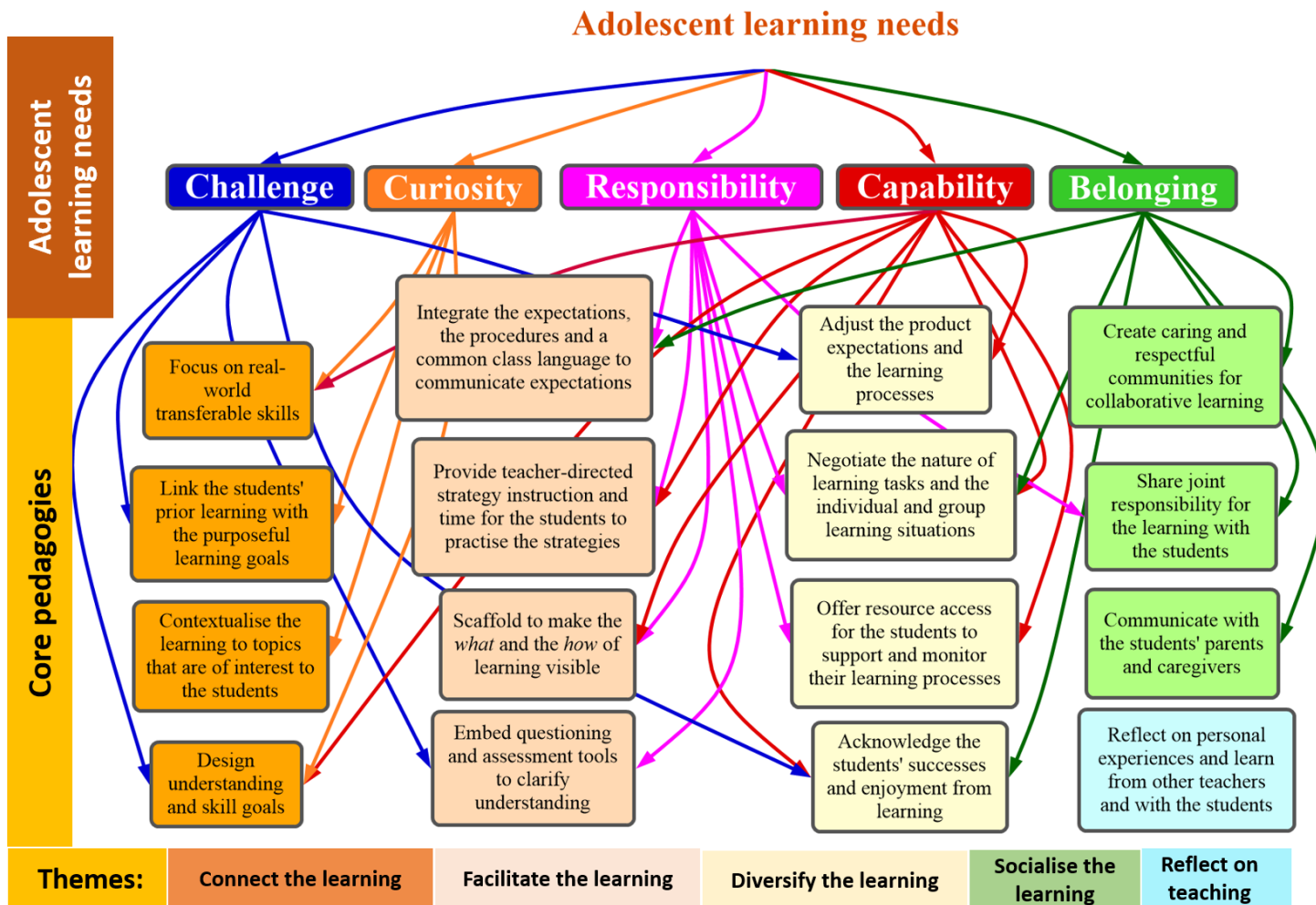


Figure 7.4. A data map illustrating the alignment of the young adolescents' learning needs with the core pedagogies for self-regulated learning

Table 7.1. *The alignment of the core pedagogies with the learning needs of young adolescents*

Pedagogical approaches and core pedagogies	Five young adolescents' learning needs				
	Challenge	Curiosity	Responsibility	Capability	Belonging
Connect the learning approach designed for providing opportunities for students to develop a <i>rationale for learning</i> to experience an interest in their purposeful learning.					
1. Focus on real-world transferable skills.					
2. Link the students' prior learning with the purposeful learning goals.					
3. Contextualise the learning to topics that are of interest to the students.					
4. Design understanding and skill goals.					
Facilitate the learning approach designed for providing opportunities for students to develop a <i>responsibility for learning</i> to experience a sense of agency.					
1. Integrate the expectations, the procedures and a class language.					
2. Provide teacher-directed strategy instruction and time for the students to practise the strategies.					
3. Scaffold to make the <i>what</i> and the <i>how</i> of learning visible.					
4. Embed questioning and assessment tools to clarify understanding.					
Diversify the learning approach designed for providing opportunities for students to develop a <i>capability for and from learning</i> to experience an expectation of success.					
1. Adjust the product expectations and the learning processes.					
2. Negotiate the nature of the learning tasks and the individual and group learning situations.					
3. Offer resource access for the students to support and monitor their learning processes.					
4. Acknowledge successes and enjoyment from learning.					
Socialise the learning approach designed for providing opportunities for students to develop communally and personally responsible behaviours, grounded in caring.					
1. Create caring and respectful communities for collaborative learning.					
2. Share joint responsibility for the learning with the students.					
3. Communicate with the students' parents and caregivers.					
Reflect on teaching approach designed for providing opportunities for teachers to develop new ways of thinking about and exploring their knowledge of practice.					
1. Reflect on personal experiences and learn from other teachers and with the students.					

The teacher participants talked about their personal experiences that enabled them to learn from other teachers and with the students. Therefore the core pedagogy that represents the teachers' reflective practices is shaded lightly to represent this indirect influence on students' learning needs. For coverage, each need is highlighted independently in the following, although it is clear that the needs are interrelated and co-dependent.

Challenges as a need for young adolescent students' learning

Offering students challenges was identified from the review of the literature as an external learning enabler. Rachael related students' successful learning to their acceptance of challenges: "The really successful learner is that person who is willing to try, and take a risk, find out what they need, ask a question, and give it another go" (Rachael, interview 1). As a learning need of young adolescent students, challenges are a cognitive demand that are often associated in the research with the higher order thinking strategies for intellectual development (Barratt, 1998; Chadbourne, 2001; Jackson & Davis, 2000; Manning, 2002; MYSA, 2008; National Middle School Association, 2003; Pendergast et al., 2005). The core pedagogies associated with the need for challenge describe the teacher participants' actions to:

- Link the students' prior learning with the purposeful learning goals;
- Design understanding and skill goals;
- Embed questioning and assessment tools to clarify understanding;
- Adjust the product expectations and the learning processes; and
- Acknowledge successes and enjoyment from learning.

Curiosity as a need for young adolescent student learning

Curiosity is related to interest (Renninger & Hidi, 2016). As an internal enabler of self-regulated learning, an interest to engage in purposeful learning is associated with the *rationale for learning* fundamental. Nicky described her impression of curiosity evoking students' learning: "Some of my favourite days are when the kids have a great 'aha moment'. Oh, that moment of realisation; I love those moments" (Nicky, interview 1). The literature acknowledged that curiosity emanates from a desire to explore relevant and purposeful learning that is goal and inquiry orientated (Irwin, 1992; Loughran, 2010; Malone & Lepper, 1987; Manning, 2002; Pendergast et al., 2005; Renninger & Hidi, 2016; Wentzel, 1998). The core pedagogies associated with the need for curiosity describe the teacher participants' actions to:

- Focus on real-world transferable skills.
- Link the students' prior learning with the purposeful learning goals.
- Contextualise the learning to topics that are of interest to the students.
- Design understanding and skill goals.

Responsibility as a need of young adolescent learners

The *responsibility for learning* fundamental of self-regulated learning involves students experiencing a sense of agency (Bandura, 2001; Haggard & Tsakiris, 2009) to activate strategies and monitor their learning progress. A sense of agency empowers them to take a degree of control over their actions, thoughts and feelings. Brian emphasised the importance of the teachers' roles in empowering students: "If we aren't preparing these kids to take responsibility for their actions and to be prepared to work within the structures of the society that we have then we fail them" (Brian, interview 1). Research has established that meeting the need for responsibility is a source of empowerment potentiated through a shared ownership of learning between the teachers and the students (Barratt, 1998; Joselowsky, 2007; Marshall, 2012; Pendergast et al., 2005). The core pedagogies associated with the need for responsibility describe the teacher participants' actions to:

- Integrate the expectations, the procedures and a class language.
- Provide teacher-directed strategy instruction and time for the students to practise the strategies.
- Scaffold to make the *what* and the *how* of learning visible.
- Embed questioning and assessment tools to clarify understanding.
- Negotiate the nature of the learning tasks and the individual and group learning situations.
- Offer resource access for the students to support and monitor their learning processes.
- Share joint responsibility for the learning with the students.

Capability as a need of young adolescent learners

The *capability for and from learning* fundamental of self-regulated learning involves students' reflecting constructively on their learning to experience an expectation of success (Bandura, 1997; Pajaras, 2008; Wigfield & Eccles, 2002). Peter described his observations of students feeling that they can achieve success:

You can see students in that bit of a zone, where they are writing or typing away, thinking and planning The light bulb is switched on when you can see they've presented something or have done something that they're really proud of and you just see how happy they are once they've done it. (Peter, interview 1)

Framing a Transition Pedagogy for Self-Regulated Learning

Research has established that students' judgements of their capability for knowing and performing are perceived through their awareness of learning strategies that are developed through multiple experiences of scaffolded strategies and their own successful emulation (Bandura, 1986; Carnegie Council on Adolescent Development, 1989; La Guardia & Ryan, 2002; Pendergast et al., 2005). The core pedagogies associated with the need for capability describe the teacher participants' actions to:

- Focus on real-world transferable skills.
- Design understanding and skill goals.
- Provide teacher-directed strategy instruction and time for the students to practise the strategies.
- Scaffold to make the *what* and the *how* of learning visible.
- Adjust the product expectations and the learning processes.
- Negotiate the nature of the learning tasks and the individual and group learning situations.
- Offer resource access for the students to support and monitor their learning processes.
- Acknowledge successes and enjoyment from learning.

Belonging as a need of young adolescent learners

Research indicated that a sense of belonging is developed through a collective, social learning community that provides opportunities for teacher–student and student–student relationships (Albert, 1992; Barratt, 1998; Brinthaupt et al., 2007; Carnegie Council on Adolescent Development, 1989; Certo et al., 2003; Chadbourne, 2001; Charles, 2002; Jackson & Davis, 2000; La Guardia & Ryan, 2002; Manning, 2002; MYSA, 2008; National Middle School Association, 2003; Pendergast et al., 2005). Bec emphasised: “It is empowering for students when they realise they have value in their learning space” (Bec, interview 2). For Sarah, learning with the student provided a way to build relationships within a learning community: “I like it when the students and I have a really interesting discussion and we’ve all learned new things; they get a new perspective and they’ve seen me think about something in a new way. We become a learning team” (Sarah, interview 1). The core pedagogies associated with the need for belonging describe the teacher participants' actions to:

- Integrate the expectations, the procedures and a class language.
- Negotiate the nature of the learning tasks and the individual and group learning situations.
- Acknowledge successes and enjoyment from learning.
- Create caring and respectful communities for collaborative learning.
- Share joint responsibility for the learning with the students.
- Communicate with the students' parents and caregivers.

Egeberg, McConney and Price (2016) recognised: “With the diverse backgrounds, interests and capabilities of students, meeting their needs and engaging them in meaningful learning requires care and skill” (p. 6). This synthesis confirmed the rigour of the self-regulated learning pedagogical model in terms of the core pedagogies addressing the learning needs of the students in the primary–secondary schooling transition years. The construction of the transition pedagogy framework for self-regulated learning is continued in the next sub-section, integrating the transition principles (adapted from Duncan et al., 2009; Nelson & Kift, 2005) and the core pedagogies for self-regulated learning.

7.2.2 A synthesis of the transition principles and the core pedagogies

To develop a pedagogical framework for self-regulated learning, I adapted the First Year Curriculum Principles (Duncan et al., 2009; Nelson & Kift, 2005) that were designed from research in the tertiary educational sector. These interconnected principles addressed the pedagogical issues of design, engagement, capabilities for life, diversity, assessment and evaluation. Informed by the data, six transition principles structured a framework to describe what the teacher participants did to: plan and deliver curriculum to activate learning; target worthwhile, enjoyable and interactive learning; contribute to lifetime learning capabilities; recognise and respond to learning differences; judge progress to provide feedback about learning; and communicate to generate timely interventions.

The transition principles were aligned with the core pedagogies from the pedagogical model. Figure 7.5 assembles the information that represents the web of connections that confirmed the complexity of the transition pedagogy framework. For a less complicated view, Table 7.2 presents a tabulated representation of this complex network as evidenced in the colour shaded sections.

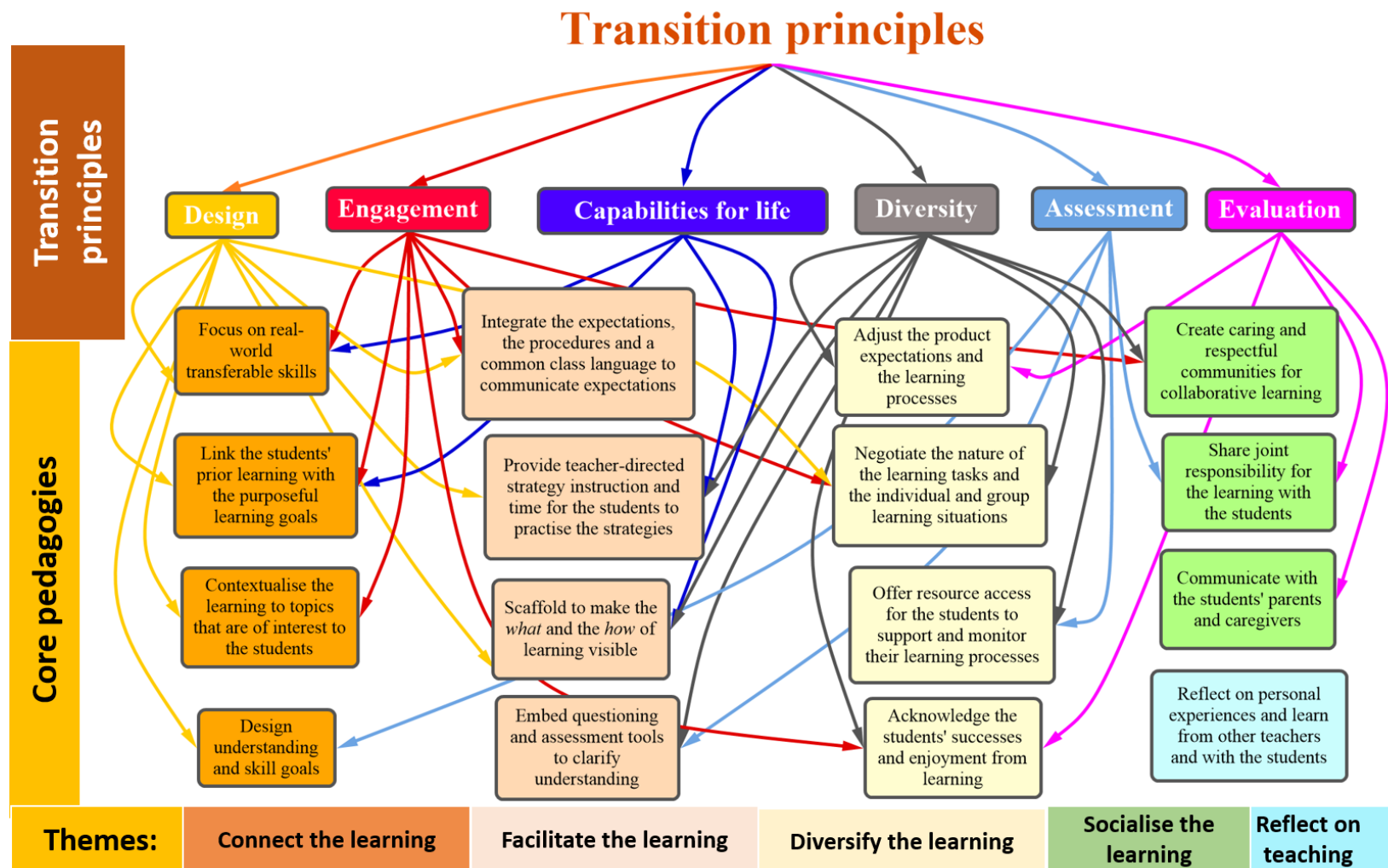


Figure 7.5. A data map illustrating the alignment of the transition principles with the core pedagogies for self-regulated learning

Table 7.2. *The alignment of the core pedagogies with the transition principles*

Themes and core pedagogies	Transition principles					
	Design	Engagement	Capability for life	Diversity	Assessment	Evaluation
Connect the learning approach designed for providing opportunities for students to develop a <i>rationale for learning</i> to experience an interest in their purposeful learning.						
1. Focus on real-world transferable skills.	■	■	■			
2. Link the students' prior learning with the purposeful learning goals.	■	■	■			
3. Contextualise the learning to topics that are of interest to the students.	■	■				
4. Design understanding and skill goals.	■				■	
Facilitate the learning approach designed for providing opportunities for students to develop a <i>responsibility for learning</i> to experience a sense of agency.						
1. Integrate the expectations, the procedures and a common class language.	■	■				
2. Provide teacher-directed strategy instruction and time for the students to practise the strategies.	■		■	■		
3. Scaffold to make the <i>what</i> and the <i>how</i> of learning visible.	■		■	■		
4. Embed questioning and assessment tools to clarify understanding.				■	■	
Diversify the learning approach designed for providing opportunities for students to develop a <i>capability for and from learning</i> to experience an expectation of success.						
1. Adjust the product expectations and the learning processes.				■		■
2. Negotiate the nature of the learning tasks and the individual and group learning situations.	■	■		■		
3. Offer resource access for the students to support and monitor their learning processes.				■	■	
4. Acknowledge the students' successes and enjoyment from learning.		■		■		■
Socialise the learning approach designed for providing opportunities for students to develop communally and personally responsible behaviours, grounded in caring.						
1. Create caring and respectful communities for collaborative learning.		■		■		
2. Share joint responsibility for the learning with the students.					■	■
3. Communicate with the students' parents and caregivers.						■
Reflect on teaching approach designed for providing opportunities for teachers to develop new ways of thinking about and exploring their knowledge of practice.						
1. Reflect on personal experiences and learn from other teachers and with the students	■	■	■	■	■	■

7.2.3 The key elements of a transition pedagogy

The data maps that follow represent the 20 embedded key elements framed through the primary–secondary transition principles.

Design as a primary–secondary schooling transition principle

The teacher participants planned and delivered curriculum to involve students actively in goal oriented learning. Rachael shared how she designed future goals with the students to involve them in their learning:

This is what we want to achieve by the end of the day. So it doesn't necessarily mean that we will. This is what we're aiming to do. At the end of the lesson, we'll go back through the goals. It's the celebration phase of completing a learning goal or, if we haven't completed the goal, we plan what we will do to complete this in the next lesson or where we will start the next lesson. (Rachael, interview 2)

The five key elements that were aligned with the design transition principle include the ways that the teacher participants actioned:

1. Challenging goal orientated learning;
2. Practical skills and relevant topics of interest;
3. Teacher-directed instructions, scaffolded learning and practice time;
4. Communicated expectations and procedures; and
5. Negotiated groupings that suit the task.

Figure 7.6 displays the network of connections to synthesise the alignment of the learning needs and the core pedagogies with the transition principle of design (adapted from Duncan et al., 2009; Nelson & Kift, 2005).

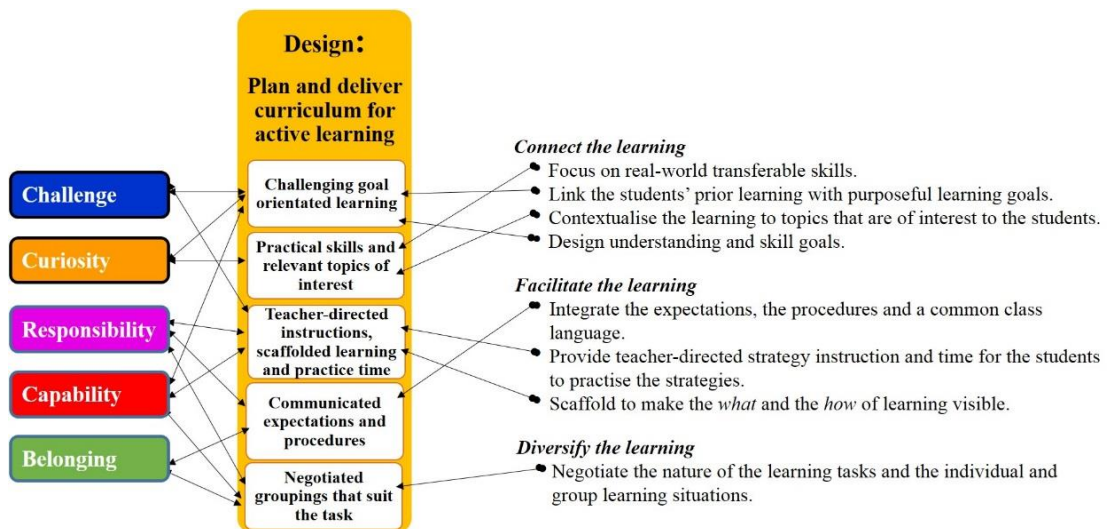


Figure 7.6. The five key elements embedded in the design transition principle

Engagement as a primary–secondary schooling transition principle

The teacher participants targeted worthwhile, enjoyable and interactive learning tasks to engage their students. For example, Julie recounted a situation of peer collaboration and learning engagement:

During the lesson, everything just felt good. The kids were engaged. It was noisy and it was messy. We had lots of discussions. They started thinking ... and the little light bulbs were going on. (Julie, interview 1)

The three key elements that were aligned with the engagement transition principle include the ways that the teacher participants actioned:

1. Collaborative learning;
2. Feedback that celebrates accomplishments; and
3. Meaningful experiences and elements of fun.

Figure 7.7 displays the network of connections to synthesise the alignment of the learning needs and the core pedagogies with the transition principle of engagement (adapted from Duncan et al., 2009; Nelson & Kift, 2005).

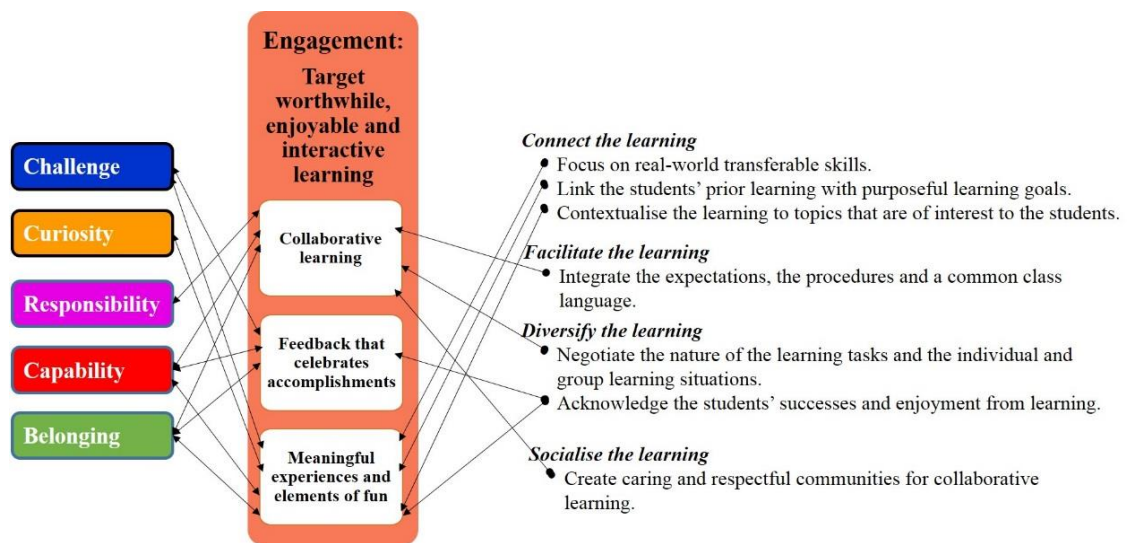


Figure 7.7. The three key elements embedded in the engagement transition principle

Capabilities for life as a primary–secondary schooling transition principle

The teacher participants acknowledged that experiences that contributed to students developing learning capabilities were valuable for lifetime learning. For example, Greg highlighted the need to instil a love of learning:

The most important thing is the desire to learn; the willingness to acknowledge that they don't know everything in the world, that there is a lot of things that they can still learn, and that by doing so they're going to develop as a person. (Greg, interview 1)

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The three key elements that were aligned with the capabilities for life transition principle include the ways that the teacher participants actioned:

1. Modelled learning strategies to emulate;
2. Real-world transferable skills; and
3. Purposeful learning constructed from prior knowledge.

Figure 7.8 displays the network of connections to synthesise the alignment of the learning needs and the core pedagogies with the transition principle of capabilities for life (adapted from Duncan et al., 2009; Nelson & Kift, 2005).

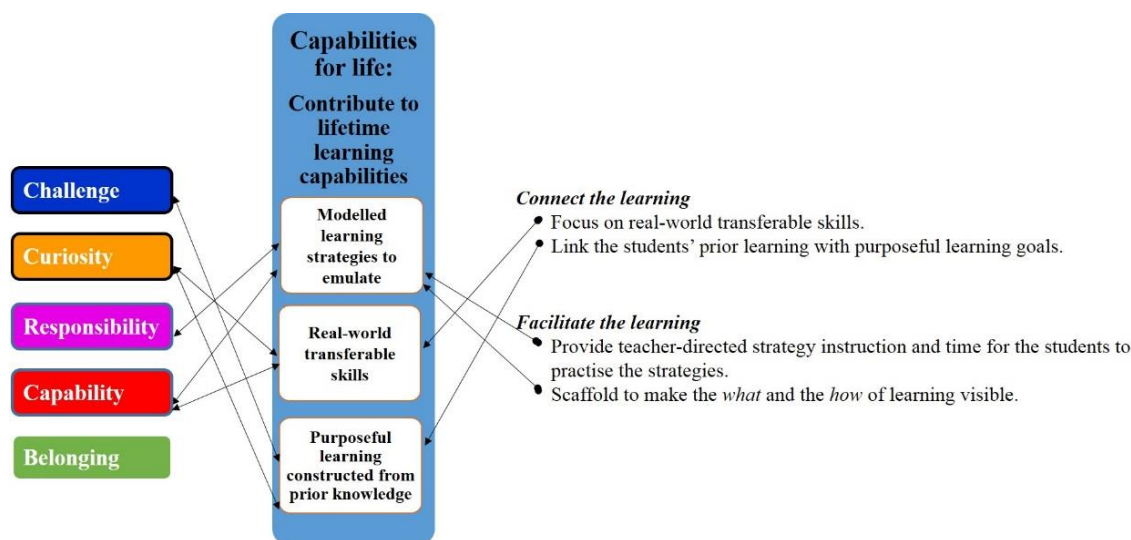


Figure 7.8. The three key elements embedded in the capabilities for life transition principle

Diversity as a primary–secondary schooling transition principle

The teacher participants recognised and responded to their students' learning differences. For example, Sarah explained how she encouraged them to articulate their ideas and to listen also to the viewpoints of others:

I want to encourage my students to recognise that their opinions are important and when to voice them but I also want them to pick-up on other peoples' opinions. (Sarah, interview 1)

The three key elements that were aligned with the diversity transition principle include the ways the teacher participants actioned:

1. Structured learning for visible thinking;
2. Respectful communities with accessible resources; and
3. Adaptations of processes and products.

Figure 7.9 displays the network of connections to synthesise the alignment of the learning needs and the core pedagogies with the transition principle of diversity (adapted from Duncan et al., 2009; Nelson & Kift, 2005).

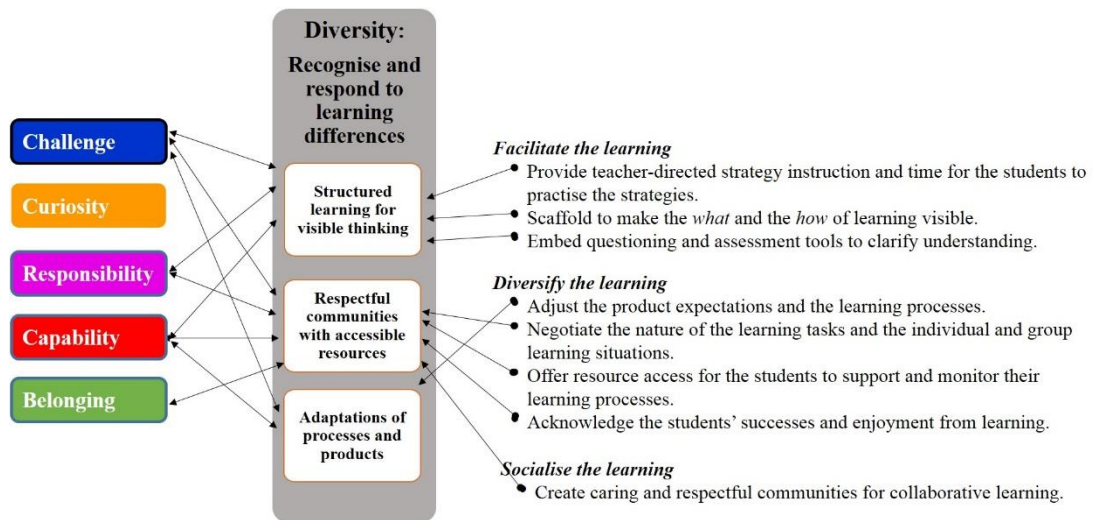


Figure 7.9. The three key elements embedded in the diversity transition principle

Assessment as a primary–secondary schooling transition principle

The teacher participants formed judgements to provide students with progressive, formative feedback about their learning and tools to self-assess their own progress. For example, Greg emphasised the value of specifying criteria for the students to form judgements about their learning:

So the middle years is the time for students to realise what they are learning: “I’m being asked to do this. How shall I respond?” Because that’s the truth. We as teachers, in the end, we mark to a criteria [sic passim] and that criteria reflects a set of skills. So the students need to be clear on what they’re doing. (Greg, interview 1)

The three key elements that were aligned with the assessment transition principle include the ways that the teacher participants actioned:

1. Questioning that clarifies and monitors understanding;
2. Tools to self-assess strategy use and time management; and
3. Goal focused feedback.

Figure 7.10 displays the network of connections to synthesise the alignment of the learning needs and the core pedagogies with the transition principle of assessment (adapted from Duncan et al., 2009; Nelson & Kift, 2005).

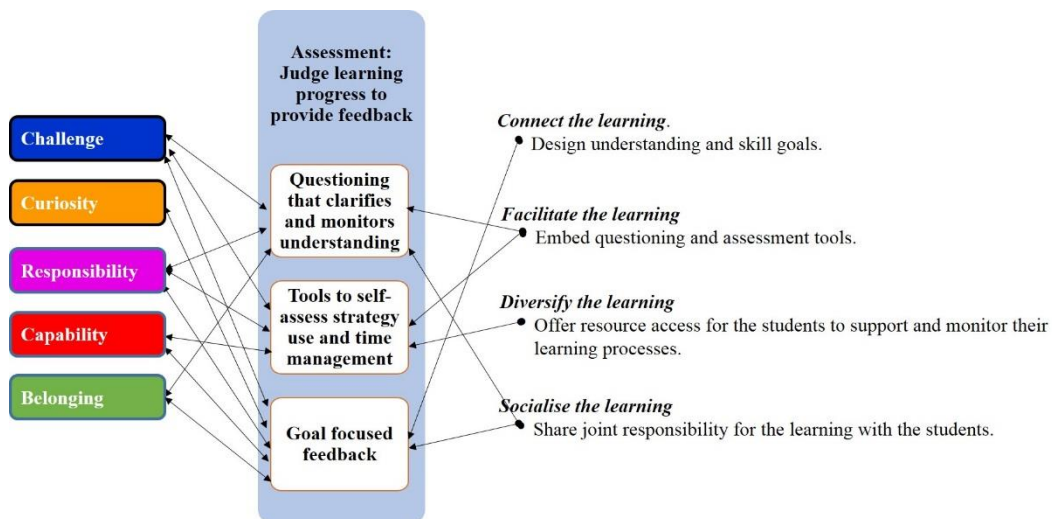


Figure 7.10. The three key elements embedded in the assessment transition principle

Evaluation as a primary–secondary schooling transition principle

The teacher participants communicated with their students to generate timely interventions for future support. For example, Rachael described a conversation that she had had with her students to determine the effectiveness of lessons:

You’d be surprised how many kids come out of classes and don’t actually feel that they’ve learned anything. So that’s the big [criterion] for me: “Do you feel you’ve learned something?”
 “Yes.” Then I’ve been a success. (Rachael, interview 2)

The three key elements that were aligned with the evaluation transition principle include the ways that the teacher participants actioned:

1. Acknowledgement of learning growth;
2. Interventions that safeguard future accomplishments; and
3. Interpersonal communication.

Figure 7.11 displays the network of connections to synthesise the alignment of the learning needs and the core pedagogies with the transition principle of evaluation (adapted from Duncan et al., 2009; Nelson & Kift, 2005).

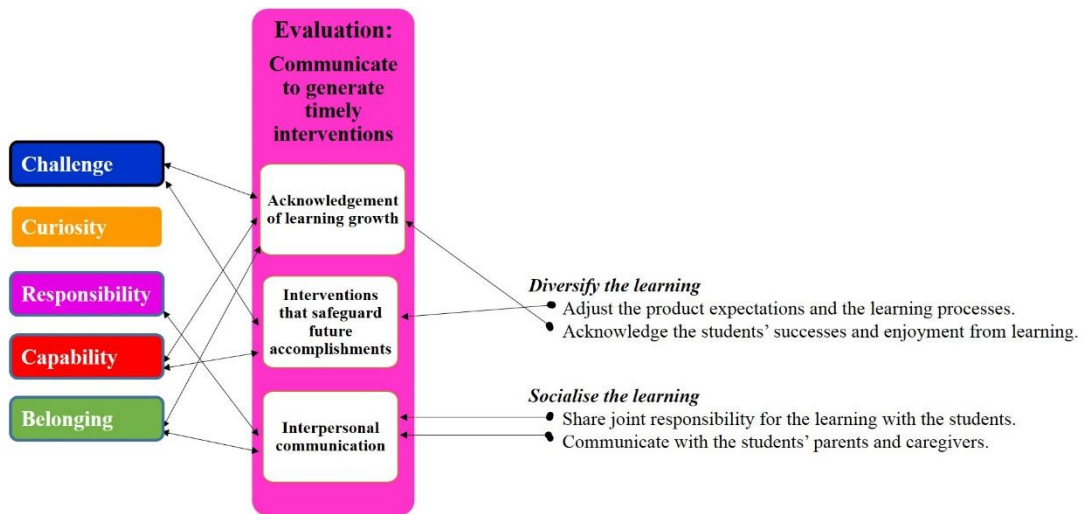
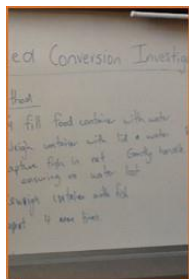


Figure 7.11. The three key elements embedded in the evaluation transition principle

In this section, the complex data analysis processes was articulated to synthesise the key elements framed in the transition principles. It is acknowledged that the 20 key elements do not communicate absolutely all the ways that the teacher participants actioned to provide opportunities that potentiate students' self-regulated learning. However, they are embedded in a comprehensive framework that articulates the literature informed findings from socially constructed experiences with the teacher participants within the practice-based settings. In the next section, the self-regulated learning transition pedagogy framework is operationalised, as a tool for reflection, to evaluate its rigour in relation to snapshots from the data.

7.3 Operationalising the Transition Pedagogy Framework for Reflection

The following data analysis portrays a contextually and time bounded, rich description in Case Two of Greg's aquaponics lesson. I operationalised the transition pedagogy framework by annotating snapshots from Greg's classroom. Aiming beyond achieving his Year 9 students' behavioural compliance, Greg actioned the key elements from the pedagogical framework for self-regulated learning to provide the students with opportunities to connect with and commit along the ladder of learning regulation presented in Figure 3.6. In Figure 7.12, the key elements of the transition pedagogy framework are represented as symbols—letter/s and number—to provide an annotation coding system for the interpretation of the snapshots.



Design:

Plan and deliver curriculum to activate learning

- *Des1. Challenging goal orientated learning*
- *Des2. Practical skills and relevant topics of interest*
- *Des3. Teacher-directed instructions, scaffolds and practice time*
- *Des4. Communicated expectations and procedures*
- *Des5. Negotiated groupings that suit the task*



Diversity:

Recognise and respond to learning differences.

- *Div1. Structured learning for visible thinking*
- *Div2. Respectful communities with accessible resources*
- *Div3. Adaptations of processes and products*



Engagement:

Target worthwhile, enjoyable and interactive learning.

- *En1. Collaborative learning*
- *En2. Feedback that celebrates accomplishments*
- *En3. Meaningful experiences and elements of fun*



Assessment:

Judge learning progress to provide feedback.

- *A1. Questioning that clarifies and monitors understanding*
- *A2. Tools to self-assess strategy use and time management*
- *A3. Goal focused feedback*



Capabilities for life:

Contribute to lifetime learning capabilities.

- *C1. Modelled learning strategies to emulate*
- *C2. Real-world transferable skills*
- *C3. Purposeful learning constructed from prior knowledge*



Evaluation:

Communicate to generate timely interventions.

- *Ev1. Acknowledgement of learning growth*
- *Ev2. Interventions that safeguard future accomplishments*
- *Ev3. Interpersonal communication*

Figure 7.12. The transition pedagogy framework for self-regulated learning with the symbols used in the analysis of Greg’s aquaponics lesson

7.3.1 Greg's aquaponics lesson: Snapshots from the classroom observation

Prior to the lesson, Greg informed me that within the class the students' capabilities were varied and that most of the students required structured sources of learning support. At the beginning of the observed lesson, Greg's instructions provided an external influence that was aimed at achieving the students' behavioural compliance. The Year 9 students followed the established routine and lined up outside the classroom to comply with Greg's communicated expectations (Des4):

Research journal: Greg invites the students to file into the room: "Quietly." They stand behind their chosen chairs and are noisily chatting to one another. Greg reminds them: "It's the same thing every day; silence and compliance." I flinch a little at the blunt demand for behavioural compliance and look with interest to see the students respond by focusing their attention immediately on Greg. They wait quietly for the next instruction: "Please open your books and be ready to start working." (Greg, classroom observation).

Snapshot summary:

Des4. Communicated expectations and procedures

During this lesson, Greg challenged the students to energise and satisfy their natural curiosity and desire to learn about the feeding habits and growth of the fish in the aqua ponds (Des2). Greg introduced the investigation task to the students and he provided a template that explicitly structured the steps of the learning involved in the task, articulating the product required for assessment (Div1). I was surprised that none of the students reacted negatively to what could have been perceived by some as a threatening exam situation, with higher stakes for learning success or failure than a normal lesson:

Research journal: Greg clarifies that today's lesson is a practical exam and states: "We will be conducting a feed conversion investigation." Once again I scan the students' faces this, time looking for any hint of fear or anxiety at the realisation that they would be subjected to test conditions. The students remain unruffled and continue to listen to Greg's instructions: "You will be given a template worksheet to write the method you come up with and you will follow this to conduct the investigation." (Greg, classroom observation)

Snapshot summary:

Des2. Practical skills and relevant topics of interest

Div1. Structured learning for visible thinking

Greg introduced the task by linking the learning goals with the task and its purpose (Des1). He aligned these goals with the marking criteria from the

assessment tool (A2) so that the students were informed of the expectations required to achieve success. Greg used sequenced, teacher-directed instructions by thinking out loud to externalise the strategies required to perform the task (Des3). He made explicit the practical skills and strategies, the inquiry thinking and the communication skills that the students would be required to apply to meet the goals of the investigation (A3):

Research journal: Displayed on the Smartboard are the goals of the lesson. On the adjacent Smartboard, the task instructions are listed in a sequence and the success criteria articulate the outcome expectations of the learning experience. Greg reviews the step-by-step directions with the students by reading each instruction. He emphasises the skills required to complete the investigation task that are suggested in the marking criteria: investigating, planning, ethical handling, recording data and calculating statistics. (Greg, classroom observation)

Snapshot summary:

Des1. Challenging goal orientated learning

A2. Tools and resources to monitor strategy use and time management

Des3. Teacher-directed instructions, scaffolds and practice time

A3. Goal focused judgements of understanding and skill development

The skills were listed as the “success criteria” (Greg, classroom observation) and it was anticipated that the students’ performance would be graded on a scale that illustrated their learning growth (Ev1). Greg provided the set of criteria for the students to self-assess their learning (A2). He used questioning to monitor the students’ understanding and to provide them with feedback, and in this way, he shared the responsibility for monitoring and acknowledging the learning progress with the students (A1). By negotiating the marking of the assessment task with the students rather than allocating a grade, Greg was able to communicate constructive feedback and plan for interventions to safeguard the students’ future success (Ev2):

Research journal: Greg points out to the students that the success criterion for evaluation is not an A to E grading but that their written report is judged on an “extended to emerging” scale. The students are informed that they will need to use the set of criteria to judge how they meet the goals of the task. Greg continues to explain that at the completion of the investigation they are required to evaluate their work and during the next lesson he will discuss and negotiate with individual students the mark that they award themselves. (Greg, classroom observation)

Snapshot summary:

Ev1. Acknowledgement of learning growth

A2. Tools and resources to monitor strategy use and time management

- A1. Questions and shared feedback to monitor progress*
- Ev2. Interventions that safeguard future accomplishments*

Greg structured a whole group questioning and discussion forum to probe the students' thinking and to build on their prior knowledge of the topic (C3). He modelled the calculation of the mean, median and mode for the students to emulate (C1). Through this collaborative task, the students interacted with the teacher and their peers to share their collective expertise towards achieving the lesson's learning goals (En1):

Research journal: Greg begins to write on the whiteboard and questions the students about the mathematical concepts of mean, median and mode. I look around the room half expecting to see some of the students' attention waning, only to find that all 30 students are focused on the whiteboard and Greg's instructions. Greg draws out a definition for each term from the students' prior knowledge. As the students reply to his questions, he constructs a practical example to explain each term on the whiteboard with the associated statistical formulae for the calculations. (Greg, classroom observation)

Snapshot summary:

C3. Purposeful learning constructed from prior knowledge

C1. Modelled learning strategies to emulate

En1. Collaborative learning

The investigation involved the students applying practical skills (Des2) that were transferable to real-world situations (C2). Greg organised the students into mixed ability groups for collaborative learning, as the task required a joint effort, with the jobs of the investigation being divided in a systematic way (En1). This task required the students to have access to shared resources (Div2). They could also provide support for one another whilst conducting the investigative task (Des5). Embracing a relaxed manner, Greg had integrated a culture of fun with elements of humour into the focused and structured learning environment (En3):

Research journal: Greg informs the students that they will be working in groups of four to write their methodology. He reminds them that they did a similar task together in a previous lesson. They are about to catch, weigh and calculate the average weight gain or loss of the fish in their aqua pond. It is made very clear to the students that before the practical experimenting with the fish can occur they are to write-up the procedure for the investigation. Greg states: "You will need to be efficient." A student makes a joke about the word "efficient" sounding like "fish". The students and teacher, as a class group, laugh together at the pun. (Greg, classroom observation)

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Snapshot summary:

Des2. Practical skills and relevant topics of interest

C2. Real-world transferable skills

En1. Collaborative learning

Div2. Respectful communities with accessible learning

Des5. Negotiated groupings that suit the task

En3. Meaningful experiences and elements of fun

Working in small groups (Des5) involved the socially shared regulation of learning (Hadwin & Oshige, 2011), where the students collaborated to design their methodology for the investigation (En1). Previously they had performed a similar task and Greg reminded them of this before they moved to a less teacher-directed learning situation (C3). When unsure of the next step in the writing-up process, the seating arrangement for the group work task provided the students with opportunities to model, observe, prompt and emulate strategy use (C1). Greg provided the students with a template that included headings and subheadings as sequenced instructions to scaffold the learning task (Des3) and to make the steps of the learning visible (Div1). However, as a group, the students had to negotiate how they would plan each step of the investigation to perform and complete the task successfully (En1):

Research journal: On Greg's signal, the students move quickly into what are obviously pre-organised mixed ability groups of four students and they find a place within the classroom to work on the writing task. Greg encourages the students to discuss with one another the steps to be included in the investigation and he reminds them that the template worksheet sets out the structure of what they have to write. (Greg, classroom observation)

Snapshot summary:

En1. Collaborative learning

C3. Purposeful learning constructed from prior knowledge

C1. Modelled learning strategies to emulate

Des3. Teacher-directed instructions, scaffolds and practice time

Div1. Structured learning for visible thinking

Greg communicated his procedural and behavioural expectations to the students (Des4) and he reinforced these through offering on-task acknowledgements and positive prompts where appropriate (En2). When necessary, he redirected the students back to the task without breaking the flow of the lesson:

Research journal: Prior to transitioning from the four walls of the classroom to the fishpond that became the outside classroom, Greg acknowledges that he has the attention of all the students: "Great to see

that you are listening.” He scans the room and waits before explaining the importance of teamwork and the expectations of collaboration. He pauses and requests: “David, could you please turn and face so I know you are listening, as it is important for your group to cooperate together?” David, who is packing up items into his pencil case, complies with Greg’s redirection. (Greg, classroom observation)

Snapshot summary:

Des4. Communicated expectations and procedures

En2. Feedback that celebrates accomplishments

The students were provided with opportunities to assume responsibility and to make the decisions about their learning within the clearly communicated expectations and procedures (Des4):

Research journal: Greg provides an example of how the group members can allocate the different jobs to all participants in the hands-on fish catching, weighing and recording of the results. He emphasises that at some stage all the members of the group need to have a turn at each job. (Greg, classroom observation)

Snapshot summary:

Des4. Communicated expectations and procedures

Greg offered praise and encouragement that celebrated the students’ accomplishments to sustain their engagement (En2). He ensured that the learning was structured for all students to participate in the hands-on investigation and to collect the required data (Div1):

Research journal: The classroom transforms to an outdoor location near a large fish tank. As I approach, I hear a student call: “Sir, I caught a fish!” and Greg gestures his approval by holding his hands in fists at chest height in celebration. Other students are leaning into the tank with their fishing nets and plastic bags, working together to catch the fish and then transfer them into the bags. Each bag is filled with water and is supported by a plastic container, so that once the fish is placed inside the bag it can be transported to a table to be weighed. The students record, in a data table, the details for future calculations. (Greg, classroom observation)

Snapshot summary:

En2. Feedback that celebrates accomplishments

Div1. Structured learning for visible thinking

Greg provided feedback to the students that acknowledged what they were doing well (En2). He was respectful and caring in his relational approach to developing the students’ responsible behaviours. Greg’s interpersonal communication with the

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students provided opportunities to develop the relationships in this learning environment (Ev3):

Research journal: Greg calls out: “Make sure we are all sharing and that you are talking with one another. The returning is going well.” He is referring to the way that the students are putting the fish back into the tank with care. I look around to observe what appears to be widespread student interest and engagement in the investigation, as they share the jobs to: catch the fish; weigh the fish; record the results; and release the fish back safely. The students are given a time reminder and are later requested to head back to the classroom. (Greg, classroom observation)

Snapshot summary:

En2. Feedback that celebrates accomplishments

Ev3. Interpersonal communication

The group task changed to an independent task, as the students were required to produce their own report (Des5). Greg structured the seating arrangements so that the students could still ask one another questions, ask for the teacher’s assistance when it was required and collaborate to share the collected data with their group members (Div2). The independent element of the task provided opportunities for the students to demonstrate their skill competence and for Greg to extend individual support through variable scaffolding and modifications made to the processes involved in the task (Div3):

Research journal: Inside the classroom, the energy for the task remains alive, as the students make the calculations from the results in their group’s data table. Independently the students write their reports (Des5). One student seeks Greg’s help and they talk through the first calculation together. He offers her a calculator and encouragingly says: “Now have a go at the next one on your own.” (Greg, classroom observation)

Snapshot summary:

Des5. Negotiated groupings that suit the task

Div2. Respectful communities with accessible learning

Div3. Adaptations of learning processes and products

Examples of the 20 key elements framed in the transition principles were identified within the snapshots to substantiate how Greg’s proactive pedagogical approach provided many opportunities for the students in the class to self-regulate their learning. During the lesson, I observed that the opportunities provided by Greg shifted from a reliance on external controls, which were prominent at the beginning of the lesson, to a less teacher controlled learning environment. As the lesson progressed, the students were required to move along the learning regulation ladder

(Figure 3.6) and to draw on internal sources to regulate their learning. There was evidence in the data that Greg shared the responsibility for the learning with the students, whilst proactively supporting them to meet their learning needs.

7.4 Review of the Chapter

This chapter responded to the third research question to articulate a practice based framework that was constructed from an exploration of the teacher participants' pedagogical approaches. Literature was used to inform the complex data analysis process and, as a consequence, to construct the primary–secondary schooling transition pedagogy for self-regulated learning. The key elements of the framework were synthesised from the core pedagogies that were represented in the pedagogical model for self-regulated learning. This model, presented in Chapter 6, articulated data generated core pedagogies that were supported by the literature to explain how the teacher participants' practices provided opportunities for their students to regulate their learning. To extend this model, this next stage of the data analysis focused on the learning needs of young adolescent students and the six primary–secondary schooling transition principles to frame a pedagogy for self-regulated learning. I operationalised the framework by analysing Greg's Year 9 aquaponics lesson to provide authentic examples in the data of the key elements of the transition pedagogy. This chapter brings together the findings from this study to present the primary–secondary schooling transition pedagogy framework for self-regulated learning as represented in Figure 7.13. In the next chapter, the implications of this research are discussed to highlight its significant contributions to knowledge.

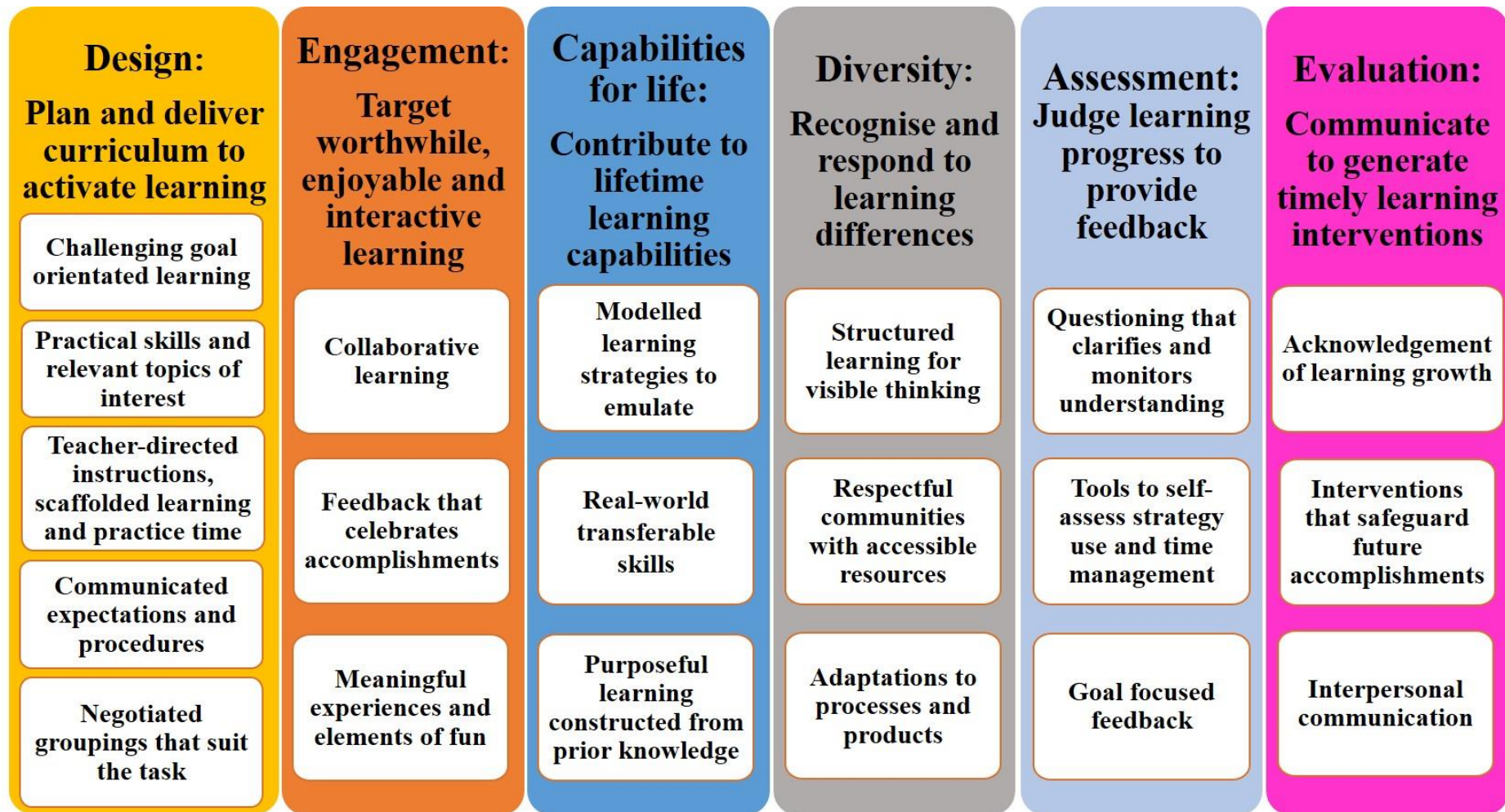


Figure 7.13. The primary–secondary schooling transition pedagogy framework for self-regulated learning

Chapter 8 Implications and Conclusions

I have said that education plans and projects, seeing education in terms of life-experience, are thereby committed to framing and adopting an intelligent theory or, if you please, [a] philosophy of experience. Otherwise they are at the mercy of every intellectual breeze that happens to blow. (Dewey, 1938, p. 51)

You have brains in your head.

You have feet in your shoes.

You can steer yourself any direction you choose.

You're on your own. And you know what you know.

And you are the one who'll decide where to go.

From: Dr Seuss "Oh, the places you'll go!" (Geisel, 1990, p. 2)

8.1 Overview of the Chapter

The concluding chapter of this thesis begins by revisiting autobiographically my place as the researcher. As acknowledged in Chapter 1, it has been my intention to position myself in this study and to make explicit my experiences as a teacher, teacher educator and researcher. Considered is the impact that my researcher's subjectivity has had on this study, specifically in relation to the consequential outcomes for me as a researcher and as an initial teacher educator. Thereafter, the issue of investigation is re-encounter and the discussion returns to the aim of this qualitative study. Proposed in Chapter 1 were three research questions that guided this exploration of the prevalent roles that teachers play in managing classroom environments that potentiate students' self-regulated learning. From the responses to these questions, conclusions are drawn to articulate the constituted theoretical, methodological, practical and policy contributions. Following this, the limitations of this study are discussed to suggest possibilities for future research endeavours.

8.2 The Biographically Situated Researcher Revisited

As a dedicated teacher educator, I am continually challenging myself to explore the complexity of teaching aimed at meeting the learning needs and expectations of my students who are predominantly pre-service teachers. In my multiple roles, I am constantly making judgements about what to do, how and why, in response to the demands of the pedagogical context, the curriculum and my students (Loughran,

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2016). This is as true for me in my current position, as a tertiary initial teacher educator, as it was for me during my 25 years' experience as a primary school teacher.

Through this extensive experience as a school teacher, my knowledge of practice was saturated initially in what was described by Schön (1983) as the “swampy lowlands” (p. 42) of front-line classroom teaching. I valued these opportunities and through my reflective practice I heightened the tacit knowledge that I gained from my practical experiences. Furthermore, I began to share my knowledge through stories of my classroom experiences.

Primarily, it was in my privileged position as a teacher (Loughran, 2016) that I was able to explore and research my practice and to problem-solve in-action. Schön (1983) recognised the significance of a problem being the catalyst for teachers' reflections-in-action. Accordingly, action research into my own practice offered me information about a previously subconscious process that enabled me to manage new, uncertain and disputed situations.

Extending my experiences as a practitioner researcher, my research journey in this doctoral study has enabled me to conceptualise further my vision of effective teaching and learning. Fenstermacher (1994) articulated the distinction concerning the knowledge that “teachers generate as a result of their experience as teachers, in contrast to the knowledge of teaching that is generated by those who specialize in researching teaching” (p. 3). My commitment to this study has afforded me with a rationale and extended time to scrutinise the theories underpinning pedagogy and to explore knowledge of practice through the experiences of other teachers. Loughran (2016) advocated that “it is in the underlying pedagogical reasoning that the ability to create knowledge of practice begins to come to the surface” (p. 260). My role as a researcher facilitated a “shift in focus from doing to thinking” (Loughran, 2016, p. 260). It is through pedagogical reasoning that I explored what works in practice within classrooms and how these practices have been made possible to work.

There is a great need for research findings to connect with teachers' experiences in their classrooms and their understanding of how students learn. This resonates with the following statement by Loughran (2016):

From a teacher's perspective, it does not matter how generalizable research findings might be, nor how robust or rigorous the method that led to those findings might be, if when applied they do not make a difference in an individual's classroom, they do not matter. (p. 259)

My experience in the roles of researcher and practitioner has heightened the value of translating the potential of research into practice to address the theory–practice nexus. This is important to me as an initial teacher educator when I am teaching the “students of teaching” (Loughran, 2016, p. 255). I recognise that it is essential that I model how educational research can be made relevant to the enhancement of teachers' professional knowledge and students' effective learning.

8.3 An Acknowledgement of the Aim of the Study

The aim of this study was to contribute to existing knowledge by extending understanding about how teachers promote opportunities for students' self-regulated learning in the primary–secondary schooling transition years. It was established in the literature that students' self-regulated learning capabilities can be developed and that teachers play pivotal roles in managing environments that support or impinge on this development (Jensen & Snider, 2013; Perry et al., 2015). Self-regulated learning represents students' metacognitive, motivational and behavioural participation in learning to rationalise goals, to accept responsibility and to develop capabilities as resourceful learners in social learning environments.

The review of the literature presented in Chapter 2 revealed long-standing interest in the impact of self-regulated learning on students' achievement (Dignath & Büttner, 2008; Zimmerman & Labuhn, 2012). There is a growing body of educational literature suggesting that contemporary research focuses on the implementation of a self-regulatory approach to teaching and learning (Alderman & MacDonald, 2015; Briesch & Briesch, 2015; McCaslin et al., 2006; Perry & Rahim, 2011). However, limited research has foregrounded teachers' practices in the primary–secondary schooling transition years for potentiating students' self-regulated learning (McCaslin et al., 2006; Perry & Rahim, 2011).

The Organisation for Economic Cooperation and Development (OECD, 2011) presented a review to confirm that the primary–secondary schooling transition years were a key phase of basic education for young adolescents. The review emphasised

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that students be offered opportunities to gain the knowledge, skills and self-regulatory capabilities required for functioning in adult life. Research by Miller, Heafner and Massey (2009) identified “the acquisition of self-regulation abilities as a critical milestone in the transition from adolescence to adulthood” (p. 121).

Nonetheless, for some young adolescent students, the transition experience may demand new expectations, challenges and requirements that threaten to undermine their opportunities to self-regulate their learning (Grolnick & Raftery-Helmer, 2015).

A significant factor that influences young adolescent students’ engagement in learning and their subsequent learning achievements is the degree to which they are provided with opportunities to make decisions and to take responsibility for their learning (Bozack et al., 2008; Chadbourne & Pendergast, 2010; Fishman, 2014). It would be expected that as students transitioned to secondary school they would be provided with increased options to control their decision making for learning (Zimmerman, 2002a). Joselowsky (2007) proposed: “For young people, the most authentic learning and engagement happens when they are treated respectfully by adults and given the appropriate mix of support and freedom to assume responsibility and make decisions” (p. 271). However, it should not be taken for granted that teachers will share the responsibility for and control of learning with the students. An understanding of the contexts that promote self-regulated learning should be of the utmost priority for research, especially during times of motivational risk, such as when students transition from primary school to secondary school (Grolnick & Raftery-Helmer, 2015). Intentionally, I positioned the dual case studies in the contexts of a primary school and a secondary school as transitionally connected settings in Queensland, Australia. An inadequacy of literature justified the value of exploring teachers’ pedagogical practices to manage classroom environments beyond the focus on students’ behavioural compliance towards an aspiration “to empower students and teachers for lifetime learning” (Alderman & MacDonald, 2015, p. 52).

8.4 Responses to the Research Questions

Three key conceptualisations were prominent in the study—self-regulated learning theory; pedagogy and reflection; and primary–secondary schooling transition years—and thus they structured and supported this thesis. These concepts underpinned the research questions and they guided the data analysis. They were

linked logically, as the theory of self-regulated learning framed the field of pedagogical exploration within the area of the primary–secondary schooling transition years. The exploratory research questions were sequential in nature and the findings were presented in Chapters 5, 6 and 7 as my interpretations of the accounts of the teachers who participated in this study.

To respond to the first research question, the data were coded and analysed within each of the cases and through a cross-case analysis. In Chapter 5, the findings were represented in six code categories to describe how the teacher participants talked about what they did in the primary–secondary schooling transition years to: design meaningful learning; manage learning; scaffold learning; adjust learning support; build relationships for learning; and expand practices.

This initial exploration was extended to respond to the second research question. Informed by the literature, I generated five themes from the data—*connect the learning, facilitate the learning, diversify the learning, socialise the learning* and *reflect on teaching*—to construct a pedagogical model for self-regulated learning. The model was presented in Chapter 6 as a representation of the teacher participants’ pedagogical approaches. Encompassed within the themes, 16 core pedagogies were synthesised from the data and supported by the literature to represent how the teacher participants provided opportunities for the students to regulate their own learning and for the teachers to reflect on their teaching.

To address this third research question, I aligned the core pedagogies from the model for self-regulated learning with the five learning needs of young adolescent students. This alignment was reported in Chapter 7 to confirm that the core pedagogies of self-regulated learning reciprocated the distinctive, significant needs of learners in the primary–secondary schooling transition years. This substantiated the suitability and rigour of the pedagogical model for self-regulated learning within the middle years of schooling. I then realigned the core pedagogies distilled under the headings of the customised transition principles that I adapted from the First Year Curriculum Principles (Duncan et al., 2009; Nelson & Kift, 2005). These research-informed principles are intended broadly to guide teachers to connect, facilitate, diversify and socialise students’ active learning through the design and management of classroom environments, learning experiences and assessments. The principles—design, engagement, capability for life, diversity, assessment, evaluation—framed 20 key elements to articulate how the teacher participants provided opportunities that

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were synergistic to meeting the needs of young adolescent students and potentiating their self-regulated learning in the primary–secondary schooling transition years. One of the key contributions of this study is the significance of the self-regulated learning pedagogy for primary–secondary schooling transition years, as is explained in the following section.

8.5 Contributions to Knowledge

As new knowledge enters the social consciousness of educators, it has the potential to impact on how teaching and learning are perceived and it presents new challenges as opportunities for research to build knowledge. This study presented knowledge that was interpreted from the socially constructed experiences of the researcher, with the teacher participants and within the context of their classrooms, to provide a knowledge of practice. This practice-based approach is highly valued in educational research and is specifically promoted for research about self-regulated learning. For example, Perry (2002) encouraged researchers to conduct studies within “naturalistic contexts using methods and measures that can be adapted by researchers and teachers to suit the unique characteristics of a particular teaching and learning environment” (p. 1). The findings of this study constitute contributions to theoretical, methodological, practical and policy knowledge.

8.5.1 Contributions to theoretical knowledge

Firstly, as a contribution to theoretical knowledge, the fundamentals of self-regulated learning were proposed to understand the processes involved when students act, think and feel motivated to varying degrees in different learning situations (Schunk, 2001b). To conceptualise the complex theory of self-regulated learning from a social cognitive perspective (Zimmerman, 1989b), I recognised that the fundamental processes for students to self-regulate their learning were the affordances of a *rationale for learning*, a *responsibility for learning* and a *capability for and from learning* within social learning environments.

Secondly, as a contribution to theoretical knowledge, the learning regulation ladder was envisaged, based on the self-determination continuum of motivation (Deci & Ryan, 1985; Ryan & Deci, 2002). The ladder signifies how the teacher participants provided the external learning enablers to motivate students from

compliant behaviour towards developing their own connection with and commitment to their learning. The natural process of the internalisation of learning occurs as students transform an external regulation reliance into more self-regulated behaviours (Deci et al., 1996; Schafer, 1968). To support students' internalisation of learning, I distilled the three external learning enablers—challenges, structures and options—that were drawn from a critique of the self-regulated learning literature and presented in Chapter 2. These are external sources that influence students' regulation of their learning and I argued that they should be integral to a self-regulated learning pedagogy.

8.5.2 Contributions to methodological knowledge

The dual case studies were appropriate in meeting the purpose of the study intended to provide a rigorous, ethical exploration within the contemporary classroom contexts of the teacher participants. My experiences with the teacher participants constructed an insightful view of their pedagogy that was interpreted through the lens of the multiple dimensions of self-regulated learning (Perry & Rahim, 2011). As a contribution to methodological knowledge, the distinctive method of thematic data analysis was influenced by four sets of prominent writers, who have contributed to the methodologically aligned literature (based on Braun & Clarke, 2006; Creswell, 2013; Merriam, 2009; Miles et al., 2014). The six stages of data collection and analysis were iterative in nature to provide the required flexibility, complexity and structure to scrutinise comprehensively and to interpret systematically from the qualitative data. Data were coded, reduced to code categories and woven into cohesive snapshots to interpret how the teacher participants intended to foster their students' effective learning in their Years 5 to 9 classrooms. Tables and data maps aided my data analysis as they illustrated relationships, common threads and contradictions. To extend the findings, I introduced the conceptual lens to inform the next stage of the analysis. I generated the themes inductively from the patterns in the data that were informed by sourcing existing knowledge.

8.5.3 Contributions to practical knowledge

In this sub-section, two contributions to practical knowledge are highlighted as outcomes of this research. Firstly, the pedagogical model for self-regulated learning

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can be implemented by teachers as a visual planning and reflection tool to negotiate and evaluate learning opportunities for students' self-regulated learning. Secondly, the self-regulated learning pedagogy framework for the primary–secondary schooling transition years is designed to inform and guide teachers' reflection for potentiating students' self-regulated learning.

Clearly, this study has provided a significant contribution to practical knowledge for teachers to make informed reflections on their practices. For example, the self-regulated learning pedagogical model has the potential to be transformed into a visual planning and reflection tool for teachers to identify, negotiate and evaluate learning opportunities for students' self-regulated learning. Teachers' positive personal beliefs in their abilities, competence and capacity to influence students' outcomes rely on their continuous reflection and professional learning (Pendergast, 2017a). High self-efficacy beliefs have been recognised as an attribute of effective middle school teachers (Bruce et al., 2010; Goddard et al., 2004; Pendergast, 2010). Table 8.1 presents an example of a practical application of the model to generate a decision making tool for planning and reflection that has the potential to impact positively on teachers' self-efficacy beliefs.

Table 8.1. *A visual planning and reflection tool for self-regulated learning (SRL)*

Am I providing opportunities for the SRL fundamentals?	Questions to reflect on the pedagogical approaches as core pedagogies included in the task/unit
<i>Rationale for learning:</i> What is the purpose of the learning? What do we want to achieve?	<i>Connect the learning:</i> What real-world transferable skills are the students learning? How does the students' prior knowledge link and offer purpose for what they are learning? What is of interest to the students about the topic? Can the students identify an understanding goal and a skill goal?
<i>Responsibility for learning:</i> What understanding and skills do we need to activate learning? How will we monitor our learning progress?	<i>Facilitate the learning:</i> Do the students know the expectations and the procedures to follow and understand the practices associated with the common class language? Have the strategies to perform the task been taught to the students and have they been provided with time for practice? What assistance has been provided to the students to scaffold their learning of the content and the skills? What questions can be asked to find out what the students know and to assist them to clarify their thinking? How can the students' learning progress be monitored?
<i>Capability for and from learning:</i> How will we ensure that we meet with success? How can we judge our learning outcomes?	<i>Diversify the learning:</i> How have the product expectations and learning processes been adjusted for the individual students? Is the task suited to the whole class, group work or individual seat work? What input have the students had in these arrangements or other decisions about their learning? What resource are available for the students to select? Do the resources that are provided support the students to judge their progress? How have the students' learning successes been celebrated? What part of the learning do the students find enjoyable?
<i>Social environment for learning:</i> Whom can we work with to assist our learning? How can we share our learning?	<i>Socialise the learning:</i> When were the students asked to collaborate with others to share their learning? How have the social skills for interacting with others been included in the task? When are the students asked to take control and be responsible for their learning? How have the teachers demonstrated their shared learning responsibilities with the students? What do the students' parents and caregivers know about the topic and the learning outcomes?
<i>Pedagogical reflections</i>	<i>Reflect on teaching:</i> Consider the answers to these questions to evaluate practices for providing opportunities for students' self-regulated learning.

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Using this visual planning and reflection tool, teachers could develop an awareness of the fundamentals of self-regulated learning and the relevance of the social learning environments. They could reflect on their teaching practice by responding to the questions in the self-assessment checklist. Teachers working in collaboration could also use the checklist to provide feedback to their colleagues or to promote professional conversations about their practices. Additionally, teachers could adapt the questions and ask their students for feedback that could prove to be a valuable source of information for reflection.

Extending this model, the self-regulated learning pedagogy for the primary–secondary schooling transition years contributes a practice-based framework specially designed for teaching young adolescent students. The framework informs the potentiating of students' self-regulated learning through the design and management of classroom environments, learning experiences and assessments (Nelson & Kift, 2005). Figure 8.1 is a visual representation of the practice based framework and Table 8.2 presents an example of a reflection tool developed from the framework.

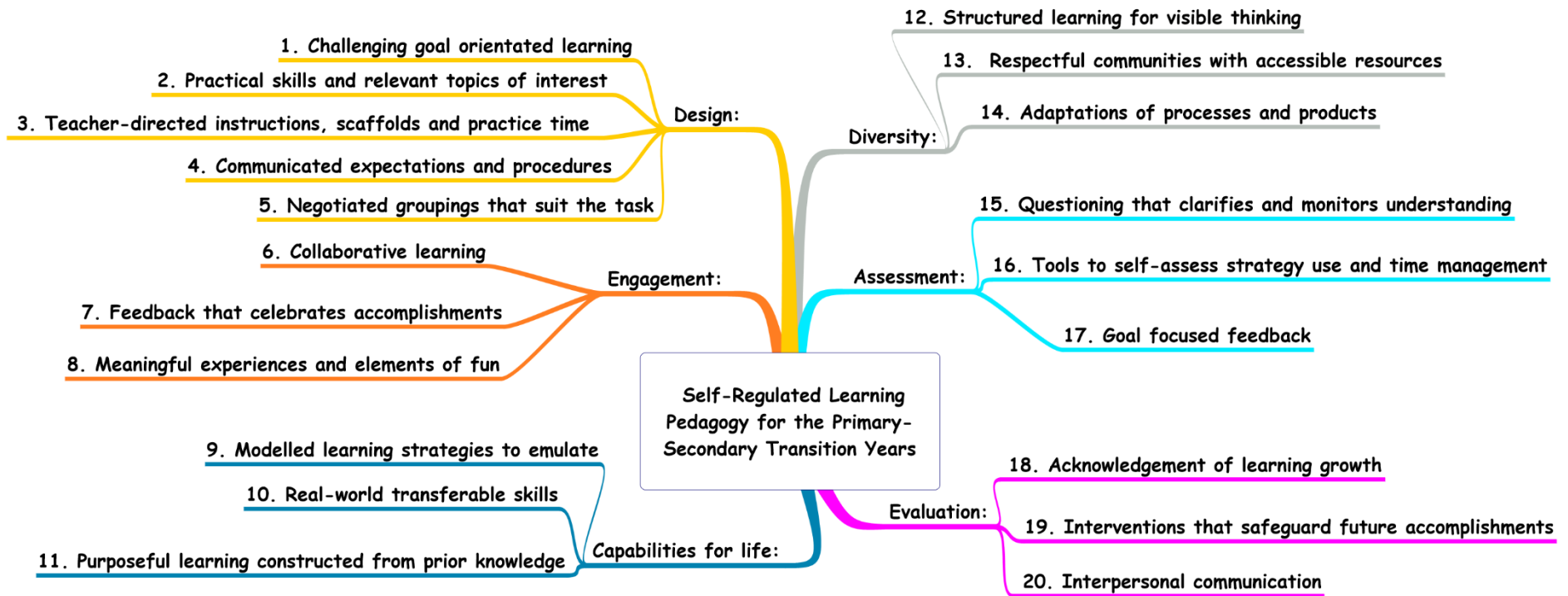


Figure 8.1. The self-regulated learning pedagogy for the primary–secondary schooling years

Table 8.2. *A reflection tool developed from the self-regulated learning pedagogy for the primary–secondary schooling transition years*

Principles for reflection	Providing opportunities for students to self-regulate their learning
<p>Design: Plan and deliver curriculum to activate learning.</p>	<ol style="list-style-type: none"> 1. Can the students identify an understanding goal and a skill goal that afford learning challenges? 2. What is of relevance and interest to the students about the topic and skills they are learning? 3. What teaching instructions are implemented to teach explicitly and scaffold the students’ learning of the content and the skills? Is there time provided for learning practice? 4. Do the students know the expectations and the procedures to follow? Do they understand the practices associated with the common class language? 5. Is the task suited to whole class, group work or individual seat work? What input do the students have in these arrangements or other decisions about their learning?
<p>Engagement: Target worthwhile, enjoyable and interactive learning.</p>	<ol style="list-style-type: none"> 6. When are the students asked to collaborate with others to share their learning? How are the social skills for interacting with their peers included in the task taught explicitly to the students? 7. What feedback is given to the students to celebrate their accomplishments? 8. What is meaningful about the learning that the students find enjoyable?
<p>Capabilities for life: Contribute to lifetime learning capabilities.</p>	<ol style="list-style-type: none"> 9. What learning strategies are modelled for the students to emulate? 10. What real-world transferable skills are the students learning? 11. How does the students’ prior knowledge link with and offer purpose for what they are learning?
<p>Diversity: Recognise and respond to learning differences.</p>	<ol style="list-style-type: none"> 12. What scaffolds make the what and the how of thinking visible? How do the students clarify the accuracy of their understanding? 13. What ethos underpins the class community culture for cooperative and shared learning? How are the accessible resources managed for the students to select and share? 14. How are the learning processes adapted for the individual students to participate in learning? How are the modes to present the final product varied for the individual students to demonstrate their learning?
<p>Assessment: Judge learning progress to provide feedback.</p>	<ol style="list-style-type: none"> 15. What questions are asked to monitor what is understood and what needs clarification? 16. What tool offers a set of criteria for the students to self-assess their strategy use and manage their time? 17. What learning goals frame the feedback for the students to judge their understanding and skill development?
<p>Evaluation: Communicate to generate timely learning interventions.</p>	<ol style="list-style-type: none"> 18. What do the students and their parents know about their personal learning growth progression? 19. What interventions are planned for future implementation to safeguard students’ learning accomplishments? 20. How does the teacher–student communication demonstrate a shared responsibility for and control of the learning?

The application of the practice-based framework, as a visual planning and reflection tool, demonstrates its capacity to assist teachers—experienced, early career and pre-service—to review their pedagogical practices and to identify alignments and suggestions. Teachers are integral to managing classroom environments for the “orchestration of learning” (Boyd, Davidson, Murdoch, & Frost, 2016, p. 4) and they have the potential to impact on the skills, behaviours and dispositions recognised as being constructive for students’ effective learning and for their active and informed citizenship. Therefore teachers’ implementation of the framework to potentiate students’ self-regulated learning can have a significant impact on young adolescent students, who are making the transition to young adulthood.

During the design phase of this study, education in Australia was moving towards a national approach to schooling. In 2011, the first Australian Curriculum became available to outline for teachers what should be taught and to indicate the achievement expectations (ACARA, 2017). Included within the Australian Curriculum framework (ACARA) are the seven General Capabilities that represent the skills, behaviours and dispositions recognised as being constructive for students’ successful learning and for their active and informed citizenship. These General Capabilities—literacy, numeracy, information communication technology (ICT) capability, critical and creative thinking, personal and social capability, ethical understanding and intercultural understanding—align with the capabilities of self-regulated learning.

The *personal and social capability* describes how students learn to understand themselves and others and how they manage their relationships, lives, work and learning more effectively (ACARA, 2017). Table 8.3 illustrates the alignment between the two interrelated elements of self-awareness and self-management from the personal and social capability and the capabilities of self-regulated learners, as was identified in the literature review of this study.

Table 8.3. *The alignment of the sub-elements from the personal and social capability (ACARA, 2017) with the capabilities associated with self-regulated learning*

Personal and social capability elements and sub-elements	Identified self-regulated learning capabilities
Self-Awareness:	
Understand themselves as learners	<ul style="list-style-type: none"> - Consider personal strengths and weaknesses (Schraw, 2001). - Apply learning to everyday lives (Hadwin, 2013).
Recognise personal qualities and achievements	<ul style="list-style-type: none"> - Learn from successes and failures (Nurmi et al., 2003). - Consolidate strengths (Pintrich, 2002).
Recognise emotions	<ul style="list-style-type: none"> - Interpret own emotional states, needs and perspectives (Germeroth & Day-Hess, 2013). - Address challenges (Schunk & Pajares, 2009).
Develop reflective practice	<ul style="list-style-type: none"> - Assess realistically own abilities (Schunk, 1990). - Reflect on and evaluate own learning (Bartolome & Steffens, 2011).
Self-Management:	
Develop self-discipline and set goals	<ul style="list-style-type: none"> - Set goals to monitor progress (Zimmerman & Martinez-Pons, 1986, 1990). - Organise and manage learning (Schraw et al., 2006).
Become confident, resilient and adaptable	<ul style="list-style-type: none"> - Show initiative and adaptability (Zimmerman & Martinez-Pons, 1986, 1990). - Develop organisational skills (Schraw et al., 2006). - Identify the resources needed to achieve goals (Zimmerman & Martinez-Pons, 1986, 1990). - Value independent thinking and initiating actions.
Work independently and show initiative	<ul style="list-style-type: none"> - Develop the skills to work independently (Schunk & Usher, 2013). - Know when and how to use particular strategies (Paris & Winograd, 2001).
Express emotions appropriately	<ul style="list-style-type: none"> - Delay gratification (Mischel, 1974). - Persevere in the face of setbacks and frustrations (Zimmerman, 2002b). - Acknowledge successes (Wigfield & Eccles, 2002).

In addition, the General Capability termed *critical and creative thinking* (ACARA, 2017) is recognised in the Australian Curriculum as being fundamental to students becoming successful learners at school and in their lives beyond school. The elements included in this capability detailed aspects of reflective thinking, problem solving and reasoning skills that aligned with the strategies employed by self-regulated learners (Zimmerman, 1998). Teachers in Australian schools are expected to “teach and assess the General Capabilities to the extent they are incorporated within each learning area” (ACARA, 2017, n.p.).

However, I noted a limitation of the Australian Curriculum literature (ACARA, 2017), as there were inadequate pedagogical guidelines provided for teachers to identify and reflect on how to assist their students in developing these capabilities. Although the Australian Curriculum promotes the ideals of self-regulated learning, it does not profile a pedagogy for self-regulated learning and it does not elaborate teachers’ roles in providing the sources of influence that enable students to generate their internal capabilities for learning. It does suggest that the General Capabilities be embedded within the learning areas of the curriculum. As stated by Loughran (2016), “just setting a mandated curriculum does not necessarily lead to the desired learning outcomes” (p. 255). Similarly, Randi and Corno (2000) proposed that the promotion of self-regulated learning in schools be “developed harmoniously within the existing curriculum” (p. 652).

Additionally, the schools that provided the research settings for the dual case studies included in their vision and policy statements the ideal of fostering a passion for lifelong learning within supportive classroom environments. Strong correlations have been made between the qualities of lifelong learning and self-regulated learning (Pendergast et al., 2005; Schunk, 2005; Zimmerman, 2002b). The schools’ policy document, *A vision for learners and learning in Lutheran schools* (LEA, 2013), articulated core values that described a “journey of lifelong learning qualities” (p. 2). A framework was presented in the document as an overview of fundamental beliefs about and paradigms of learning that at the time of this study shaped Lutheran schooling. The Lifelong Qualities for Learners (LQL) were clear, although an obvious gap in the literature is explained in the lone paragraph intended to guide teachers pedagogically that refers to the Queensland School Reform Longitudinal Study’s Productive Pedagogies model (Luke, Ladwig, Lingard, Hayes, & Mills, 1998):

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LQL can be used by teachers and others to reflect on the effectiveness of their teaching by considering whether their pedagogies, assessment practices, reporting practices, learning experiences, [and] classroom climate contribute to the nurturing of LQL. When using or developing a school's pedagogical framework such as the productive pedagogy material (Luke et al., 1998) it is helpful to reflect on the attributes and abilities and how they can be nurtured by judicious selection of pedagogy. (LEA, 2013, p. 13)

The productive pedagogy material recommended to guide the implementation of these policies consists of four dimensions, of which students' self-regulation represented one of the 24 elements to guide teachers' critical reflections on their pedagogical practices (Lingard, Hayes, & Mills, 2003).

The findings from this research contribute directly to this agenda as they were specially designed to impact on students' self-regulated learning. The pedagogical model and the pedagogical framework for self-regulated learning in the primary–secondary schooling transition years offer guidelines for teachers to identify what they are doing and how they can adjust or adapt their practices to provide opportunities for students to develop their self-regulatory capabilities. The literature supported the significance of research that informs the reflective practices of teachers working with young adolescent students in the middle years of schooling (McCaslin et al., 2006).

The Australian Institute for Teaching and School Leadership (AITSL), which is the current national teacher body in Australia, has identified the important competencies that graduate, proficient, highly accomplished and lead teachers possess. The framework includes the standards that provide criteria for teachers to evaluate their levels of proficiency (AITSL, 2017) with the aim of developing their self-awareness for continual improvement. In the process of reviewing the key elements in the transition pedagogy framework for self-regulated learning and placing them within the Australian Professional Standards for Teachers (APST), alignment is evident within focus areas from: Standard 1 Know students and how they learn; Standard 2 Know the content and how to teach it; Standard 3 Plan and implement effective teaching and learning, Standard 4 Create and maintain supportive and safe learning environments; Standard 5 Assess, provide feedback and report on student learning; and Standard 6 Engage in professional learning. This research has been conducted in a way that could encourage pre-service teachers and

practising teachers to identify with the situations described and to consider the research implications in relation to their contexts and the APST.

What is presented in this research is not a recipe or a formula for success but instead it offers a model and a framework to act as a guiding philosophy for pedagogical reflection. Fundamentally, educational aims must cohere with the pedagogy adopted to achieve those aims (Slee, 1998). This research offers the potential for the understandings to be adapted, adjusted and adopted to suit different research and teaching contexts. Claxton (2007) described this transference of knowledge to build best practice as “a cloud of possible small changes that precipitates differently in different contexts” (p. 129). Current educational policy in Australia supports a pedagogical approach aimed at the development of students’ capabilities to self-regulate their learning.

8.5.4 Contributions to policy knowledge

The pedagogical model and the transition pedagogy framework for self-regulated learning contribute to the educational policy debate with respect to acknowledging the reciprocal nature of pedagogy and behaviour management (Fields, 2004) and by identifying practice-based knowledge to guide teachers’ pedagogical intentions. The findings from this study have the potential to support school professional development programs for practising teachers and initial teacher educational courses designed with an emphasis on preparing pre-service teachers for best practice. The application of evidence-based practices could create a shift in how classroom behaviour management is taught in initial teacher educational courses to enhance their understanding of self-regulated learning as a way of empowering the teacher and the students (Perry et al., 2008). Significantly, the Australian Institute for Teaching and School Leadership (AITSL, 2015) designated classroom management as a priority area for initial teacher educational programs, highlighting possibilities for this study’s contributions to contemporary education and for future research in the field.

Hence, this study offers a contribution to policy knowledge in relation to the theory of self-regulated learning in the field of classroom behaviour management. Policy decisions for classroom behaviour management should focus on a proactive pedagogical approach of shared control of and responsibility for learning and behaviour that “gives rise to student self-regulation” (Martin et al., 2016, p. 32). The

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articulation of a pedagogy for self-regulated learning, as presented in this thesis, informs educators and policy makers as it guides them through a paradigm shift, away from a school policy for classroom behaviour management that focuses on students' behavioural compliance, towards empowering teachers and students within a social learning environment. I suggest that teachers who implement effective pedagogy—engaging curriculum designs, instructional strategies and classroom management techniques (Marzano, 2007) that promote students as self-regulated learners—are more likely to demonstrate effective classroom behaviour management.

Students' behaviour in contemporary schools can be a contentious political issue for policy-makers and an area of concern for the public and for teachers, especially the prevalence of low-level disruptive behaviours that teachers can find difficult to manage (Lewis et al., 2013; Slee, 2016; Sullivan et al., 2014). Ineffective classroom behaviour management impacts on the quality of students' learning (Eisenman et al., 2015).

There is much literature devoted to understanding classroom management from a students' compliance paradigm despite the evidence that has shown that “control and quick fixes” (Egeberg et al., 2016, p. 12) more often exacerbate behavioural problems in schools. Maguire, Ball and Braun (2010) argued that perspectives on classroom behaviour management, as a method to control students' actions, continue to be significant aspects of educational policy that influence practices in schools. International research about students' behaviour in schools by Briesch and Briesch (2015) reported: “Although positive behavior change has been documented, a central limitation of teacher-directed interventions is that behavior remains externally managed” (p. 45). Accordingly, current classroom behaviour management policies, practices and strategies that focus on teachers use of preventative or corrective strategies to manage the behaviours of students are not necessarily effective (Bear, 2015).

Although students' compliance is anticipated for learning to occur within a social environment of diverse learners, when there is an emphasis on rewards and consequences, the motivation for appropriate behaviour is external in nature (Deci et al., 2001; Evans & Lester, 2010; Freiberg & Lamb, 2009). When teachers try to seek students' compliance by controlling their behaviour, the outcome is often a constricted pedagogy that does not provide opportunities for the students to regulate

their own learning. Hence, a vicious pedagogical cycle can be established and perpetuated through excessive teacher control, with the potential to compromise a conducive learning environment. For instance, it is possible that students' compliance reduces when opportunities to regulate their learning are not met, which in turn increases the likelihood that the teachers' quest for compliance will continue through implementing a controlling pedagogy or worse an arsenal of punishment for non-compliance. The punishment for the non-compliant students who resist the teachers' control can lead to detentions and exclusions from learning that begin a downward spiral of behaviour and teacher–student relationships (Landau, 2009).

Furthermore, Martin and Sass (2010) suggested that although many teachers might think about instruction as being teacher- and student-centred, they view classroom behaviour management through the teacher-centred lens. Research by Timor (2014) studied two aspects of classroom behaviour management—management behaviours and management of teaching—to find that “management of teaching agrees with the 21st century skills of teaching and learning more than with the management of discipline which bears more archaic features, such as the use of extrinsic reinforcements and sanctions” (p. 1).

The Australian Professional Standards for Teachers (APST) require teachers to plan lessons for effective student learning within supportive and safe learning environments (AITSL, 2017). Egeberg, McConney and Price (2016) reviewed the research about effective classroom management in relation to the expected teaching standards to establish:

It is evident from both the research and the standards that knowing and understanding young people, their needs and underlying motivations for their behaviours will help to inform a teacher's instructional and behavioural approach to classroom management and should therefore also inform initial teacher programs in their approaches to effectively teaching classroom management. (p. 14)

When teachers articulate a narrow view of pedagogy as simply being instructional strategies, they can lose sight of a pedagogical approach to classroom behaviour management and focus on using tools or tricks to control students' behaviour (Brophy, 2003; Eisenman et al., 2015). Moreover, research findings that suggest the enhancement of students' self-regulated learning as a conception of classroom

behaviour management (Alderman & MacDonald, 2015; Bear, 2015; Briesch & Briesch, 2015; Fields, 2004; Kohn, 1996; Martin et al., 2016; McCaslin et al., 2006; McCaslin & Good, 1998; McDonald, 2013) support a shift in school policy thinking.

8.6 Limitations as Possibilities for Future Research

In this section, possible future directions for research that were suggested by the findings of this study are outlined. Also, the possible limitations of the study are highlighted to recognise them as possibilities for future research endeavours. This research represented a small scale, qualitative study that was required to investigate the complex issue in depth. The aim of the study was not to conclude the research but rather to contribute to knowledge that develops ideas for further investigations.

Firstly, the exploratory nature of this research offers potential for further studies (Yin, 2014). The research showed that the teacher participants designed, instructed and managed teaching and learning in different ways to suit their pedagogical styles, their experiences, the contextualised conditions and the learning needs of the students in their classes. The teacher participants were not selected because of their proven teacher expertise but rather for their willingness to share their practices intended to foster students' effective learning. Therefore I recommend extending this research to explore the practices of other teachers and to broaden the investigation to other year levels of schooling. This future research could contribute to the advancement of the pedagogical model for self-regulated learning.

Secondly, to evaluate the research findings, it would be worthwhile to implement several of the recommendations from the transition pedagogy framework of self-regulated learning to investigate whether they can be adopted in practice or adapted to be effective in other primary and secondary classroom contexts. Rather than suggesting a standardised pedagogy, the pedagogical framework has utility for educators to explore conceptually in their specific contexts. Nuthall (2004) suggested that teachers "evaluate research by finding out if its recommendations can be effectively adapted to their own classrooms" (p. 274). Investigating the transferability of the findings could invite teachers as researchers of their own practice. Involvement in such reflections would highlight to them the significance of the teachers' roles in providing opportunities for students to self-regulate their learning. As a form of professional development, teachers who are engaged in

research gain confidence and motivation as they become more knowledgeable and have a better understanding of their students (Borg, 2015).

Thirdly, it was not the intention of this study to measure the impact of the teachers' pedagogical approaches on students' self-regulated learning or to investigate what the students thought about their learning experiences in the primary–secondary schooling classroom environments. However, these two suggestions provide scope for future research considerations. For example, research could be designed to focus on specific core pedagogies from the pedagogical model for self-regulated learning to examine the impact on students' learning in relation to one of the fundamentals or within the social environment for learning. Furthermore, the key elements embedded in the transition principles could be studied by asking the students to identify their perceptions of the opportunities that the teachers provided for them to self-regulate their learning. Students' perceptions of themselves as learners are a primary source of information (Määttä et al., 2016) that could be employed to assist in understanding the impact that this study's findings has on students' self-regulated learning.

Finally, there are diverse views about students' behaviour in schools within Australia (Sullivan, 2016) and additional research could explore teachers' perceptions of developing students' self-regulation as a perspective about classroom behaviour management. However, Postholm (2013) warned that there are many different ways in which students' behaviour can be regulated and that even the misconception of the term *regulation* in itself can “give the impression of behaviour controlled externally, and that behaviour management may thus be related to behavioural thinking where the consequences of the actions affect subsequent actions” (p. 398). How teachers perceive the needs of their students, the reasons for their behaviours and what influences their behaviours drives the teachers' subsequent actions and responses (Egeberg et al., 2016). A starting point for future research could be to examine the implications associated with teachers in the primary–secondary schooling transition years sharing the responsibility for and control of behaviour and learning with the students in their classrooms.

8.7 Review of the Chapter

This final chapter provides an overview of the research implications of the thesis. Thereby it is argued that self-regulated learning is a significant aim of education in the primary–secondary schooling transition years. In this thesis it is contended that, when a teacher provides young adolescent students with opportunities to set goals, monitor progress and reflect on their learning, the teacher’s approach to classroom behaviour management has moved away from thinking that the students are not capable of controlling their own behaviour. Accordingly, I proposed that an effective approach to classroom behaviour management invites educators to share the responsibility for the learning with the students to develop their self-regulatory capabilities within supportive social communities.

Pedagogy is a reflection of what is valued and of how understanding and skills are applied to achieve an aim. This thesis offers educators suggested pedagogical considerations that can be built upon and transformed to precipitate differently in different contexts. It represents a commitment to extend knowledge of how teachers can inspire young adolescent students, as self-regulated and lifelong learners, to connect with a learning desire.

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Appendices

Appendix A: Ethical Approval for this Study



University of Southern Queensland

TOOWOOMBA QUEENSLAND 4350
AUSTRALIA
TELEPHONE +61 7 4831 2300

CRICOS: QLD 00244B NSW 02225M

www.usq.edu.au

OFFICE OF RESEARCH AND HIGHER DEGREES
Ethics Committee Support Officer
PHONE (07) 4631 2690 | FAX (07) 4631 1995
EMAIL ethics@usq.edu.au

13 June 2013

Ms Karen Peel
Faculty of Education
University of Southern Queensland

Dear Karen

The USQ Fast Track Human Research Ethics Committee (FTHREC) assessed your application and agreed that your proposal meets the requirements of the *National Statement on Ethical Conduct in Human Research (2007)*. Your project has been endorsed and full ethics approval granted.

Project Title	Exploring teachers' practices that promote opportunities for self-regulated learning across the primary to secondary school transition years
Approval no.	H13REA137
Expiry date	8/11/2016
FTHREC Decision	<p>Approved with recommendations:</p> <ol style="list-style-type: none"> 1) The application is comprehensive and well written. Responses to each section of the application are clearly detailed. 2) Would like to suggest the research tidy the Participant Information Sheet – check the formatting and consistency so that it's easy to ready by participants, particularly the first page 3) Why did you only select two private schools? One private and one public school cold provide better results in this area. 4) Items 4.5 and 5.1: Consider how you might minimise the following potential risks? <ol style="list-style-type: none"> a. The teacher may feel embarrassed at your presence in the classroom. b. The teacher may feel you are taking his/her freedom in the classroom? c. Audio recording is a document, and the teacher may feel this may be used to assess his/her teaching and subsequently affect promotion or continuation processes if they continue with this school

Please note: the application is approved unconditionally; the recommendations have the status of informal advice which you are not obliged to take note of.

The standard conditions of this approval are:

- (a) conduct the project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments made to the proposal required by the HREC

- (b) advise (email: ethics@usq.edu.au) immediately of any complaints or other issues in relation to the project which may warrant review of the ethical approval of the project
- (c) make submission for approval of amendments to the approved project before implementing such changes
- (d) provide a 'progress report' for every year of approval
- (e) provide a 'final report' when the project is complete
- (f) advise in writing if the project has been discontinued.

For (c) to (e) forms are available on the USQ ethics website:
<http://www.usq.edu.au/research/ethicsbio/human>

Please note that failure to comply with the conditions of approval and the *National Statement (2007)* may result in withdrawal of approval for the project.

You may now commence your project. I wish you all the best for the conduct of the project.



Annmaree Jackson
Ethics Committee Support Officer
Office of Research and Higher Degrees



LUTHERAN EDUCATION QUEENSLAND

Phone: (07) 3511 4050
Fax: (07) 3511 4051
E-mail: reception@leq.lutheran.edu.au
Post: PO Box 1535 Milton QLD 4064
ABN: 93 527 332 340
ARBN: 051 602 996

18 June 2013

Ms Karen Peel
University of Southern Queensland (USQ)
West Street
TOOWOOMBA QLD 4350

Dear Karen,

Your application to conduct research titled "***Exploring Teachers' Practices that Promote Opportunities for Self-Regulated Learning across the Primary to Secondary School Transition Years***" within a Lutheran school has been approved in principle, subject to the individual school agreement.

Please contact the following to confirm their school's interest in being involved and then to arrange the logistics associated with the study.

- Ms Janelle Anderson, Principal, Faith Lutheran College Plainland, tel: 07 5466 9908;
- Mr Stephen McGrath, Acting Principal, Peace Lutheran Primary School, Gatton, tel: 07 5462 0713

I wish you well with your research and look forward to the summary of the findings at its completion.

Kind regards

Susan A Kloeden
Executive Director
Lutheran Education Queensland

cc:

Ms Janelle Anderson, Principal, Faith Lutheran College Plainland
Mr Stephen McGrath, Acting Principal, Peace Lutheran Primary School



LEQ is a department of the Lutheran Church of Australia Queensland District and works in partnership with Lutheran Education Australia



Appendix B: The Participant Information Sheet and Consent Form



University of Southern Queensland

Participant Information Sheet

HREC Approval Number: H13REA137

Project Title:

Exploring Transition Pedagogy for Self-Regulated Learning across the Upper Primary to Junior Secondary School Years

Researcher:	Supervisors:	
Mrs Karen Peel Faculty of Education University of Southern Queensland (USQ) karen.peel@usq.edu.au 0409 546591 07 4631 5439	Professor Patrick Danaher Faculty of Education University of Southern Queensland (USQ) patrick.danaher@usq.edu.au 07 4631 1190	Associate Professor Robyn Henderson Faculty of Education University of Southern Queensland (USQ) robyn.henderson@usq.edu.au 07 4631 2692

I request your participation in this doctoral research project.

Procedures

The middle years of schooling have been identified as a critical stage of development in young adolescents' lives for effective lifelong learning. There is an increasing interest in understanding how to help students to take responsibility for their learning in order to meet the challenges of academic learning during the primary—secondary school transition years, five to nine. Teachers are recognised as significant and influential role models who create classroom environments that foster students' self-regulated learning.

The purpose of this study is to investigate what can be learned through identifying what teachers say they do and their enacted pedagogical approaches to support self-regulated learning in the primary—secondary school transition years. This involves asking teachers to reflect on their personal pedagogy and requires observations within their classrooms. Research based on exploring effective pedagogical approaches that foster self-regulated learning provides direct application to teachers and students in classrooms. The findings from this study may potentially inform teachers, schools and education policy makers how opportunities for self-regulated learning can be promoted in these primary—secondary school transition years.

Participation in this project will involve –

This doctoral study involves me, as the researcher, interviewing eight teachers (four from years 5 to 7 in the primary school and four from years 8 to 9 in the secondary school) to find out what pedagogical approaches they say support effective student learning and reflect on their personal pedagogy through classroom observations at times which will be convenient to them. During these observations, pedagogical approaches promoting students' proactively engaging and take responsibility for learning will be noted. A clarification interview with teachers follows the observations to confirm and explore further what has been said in the initial interview and to inform observations.

Risks from participating in this study are low and minimised, as the study builds upon teachers' effective pedagogical approaches. All schools' and participants' names will be de-identified and referred to using pseudonyms. Teachers will be asked to commit time as a resource to participating in the two interviews and afford opportunities for classroom observations.

This study aims to provide --

- Opportunities for teachers to reflect on their personal pedagogy being mindful of students as lifelong learners and to see what teachers do in the classroom to promote self-regulated learning. The focus of these discussions and observations is exploring effective pedagogical approaches in transition classrooms (years 5 to 9).
- Data analysis of the findings that will inform the writing of the dissertation and post-doctoral research.
- A feedback report that will be accessible to the teachers and school principals about the research findings.

How will this study be conducted?

- Four teachers from each school are invited to participate (from years 5 to 7 in the primary school and years 8 to 9 in the secondary school).
- Participation is completely voluntary.
- Semi-structured interviews are conducted with teachers. The first one hour interview will be followed up with a clarifying one hour interview.
- Classroom observations of teaching episodes throughout the data collection period of 20 weeks.

When is it anticipated to begin the study?

- Primary school data collection in terms 3 and 4, 2013
- Secondary school data collection in terms 1 and 2, 2014
- Possible follow-up contact in 2015

Voluntary Participation

Participation is entirely voluntary. **If you do not wish to take part you are not obliged to do so.** If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Any information already obtained from you will be destroyed. Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with the University of Southern Queensland (USQ). ***Please notify the researcher if you decide to withdraw from this project.***

This study has been cleared by USQ Human Research Ethics in accordance with the National Statement on Ethical Conduct in Human Research. Should you wish to discuss any concerns about this study with the principal researcher or the research supervisors, contact information is located at the start of this information sheet.

Your involvement in this project is highly valued,
Regards

Karen PEEL
(PhD Researcher)

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details.

***Ethics and Research Integrity Officer
Office of Research and Higher Degrees
University of Southern Queensland
West Street, Toowoomba 4350
Ph: +61 7 4631 2690***

Consent Form

HREC Approval Number: **H13REA137**

TO: _____

Full Project Title:

Exploring Transition Pedagogy for Self-Regulated Learning across the Upper Primary to Junior Secondary School Years

Student Researcher: Karen Peel

Participant Consent:

- I have read the Participant Information Sheet and the nature and purpose of the research project have been explained to me. I understand and agree to take part.
- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.
- I confirm that I am over 18 years of age.
- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
- I understand that I will be audio recorded during the study.
- I understand that the audio files will be stored as password protected files on the USQ network under the user name of Karen Peel.

Name of participant.....

Signed.....**Date**.....

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant, please feel free to contact the University of Southern Queensland Ethics Officer.

*Ethics and Research Integrity Officer
Office of Research and Higher Degrees
University of Southern Queensland
West Street, Toowoomba 4350
Ph: +61 7 4631 2690 Email: ethics@usq.edu.au*

**Consent from School Principal
Permission to Conduct Research**

I _____, the Principal of _____, have read the information about the above study and have had an opportunity to discuss this with the principal researcher. I give my permission to conduct the study at the above school.

Name of Principal _____

Signature of Principal _____ Date _____

Appendix C: The Interview Protocol

Interview protocol

Brief introduction to the study

- Introduce myself
 - o I am a PhD student from USQ and have just completed my confirmation to undertake this research project.
 - o I am also currently working with pre-service teachers at USQ.
- Define my interest
 - o I became interested in the topic of the study when I was an upper primary teacher. I recognised that for successful transition to secondary school students needed to gradually take more responsibility for their learning.
- Research design
 - o This PhD research is designed as a dual case study to collect data through interviews and observations.
 - o The diagram represents the two cases with eight units of analysis.
 - o My intention is to ask the teachers working in the transition years to talk about what they do in their classrooms.
- Propose the purpose of the study
 - o I wish to explore how teachers support students to learn effectively and develop lifelong learning skills in the primary to junior—secondary transition years (5 to 9).
- Describe the data collection procedure
 - o I am asking teachers to reflect on their personal pedagogy as a way of exploring their values and beliefs that guide their teaching and understanding of how students learn.
 - o I am not looking for any particular answers so there are no rights answers that I am expecting to hear. I am interested in what you have to say about the topics that are raised in the discussion
 - o The format of the semi-structured interview sets up an informal conversation that will last for approximately one hour.
- Request participant's permission
 - o The participant's information sheet contains all the necessary information and I am seeking your signature of approval to participate.
 - o I request your agreement to audio-record this interview.
- Any questions?

Time and date of interview:

Place:

Participant:

Teaching Position:

Guiding questions:

From your experience... Recount...

Visualise what ... is like and describe it to me.

Tell me what's it like to

Leading questions into personal life history up to the present and to the future:

Think about a great day at school. What make that a great day?

Tell me the story about how you came to be a teacher.

What areas have you taught in? Which did you particularly enjoy and why?

Think about a great day at school. What makes a teaching day a satisfying day for you?

What makes your job interesting?

Where do you see yourself in 5 years from now?

What do you see as the varied roles you play as a teacher?

Contemporary professional experience questions:

What is your work?

What is it like for you about your work?

What does it mean to do the work?

Pedagogical questions:

What does the term *pedagogy* mean to you?

Management Technique:

How do you get to know your students at the start of the years?

How do the first couple of weeks evolve and change?

What structures and routines do you set up to supports learning?

How do students know what is expected of them?

How do you redirect/reward students' behaviours?

Curriculum Design:

How do you align planning for you subject with other learning experiences?

How do you cater for student interest in your planning?

When are students assessed on their learning? How is this done?

Where is their flexibility to offer students with a choice in their learning?

Teaching Strategies:

Recount the daily events of a lesson. Why do things occur at a particular time of the lesson?

What activities are students keen to be involved in? Why are they so keen to participate?

During what types of activities are students most likely to take responsibility for their learning?

When a student is absorbed in their learning, from your experience what does that look like?

How do you group students during the day for different activities?

What sorts of strategies do you use to assist students to manage their learning?

What resources are used often in the classroom by students and yourself?

Student as a learner questions:

Visualise a student who you consider to be an effective learner and describe that student.

What difference do you see in their behaviour that helps them be a better learner?

When students talk about how they have learnt something and how they can improve are there particular moments that bring out that reflection?

What things do students say about their work when you are in close discussion?

What do you find supports students to be aware of the way they learn?

Final Question: When students transition to secondary school they are often anxious and/or excited. What makes a successful learner in the primary–secondary schooling transition years?

Express appreciation and reiterate the confidentiality of the interview and recording.

Plan classroom observation procedure and time.

Appendix D: Codes and Code Descriptions

Codes	Code descriptions	Code tags	Code categories
past experiences' influence on learning	Teachers recognising students bring with them both positive and negative learning experiences.	PE	Design meaningful learning
curiosity for learning	Teachers using student curiosity for internal motivation for learning.	CI	Design meaningful learning
desire to learn	Teachers valuing student's desire to learn.	DL	Design meaningful learning
engagement to learn	Teachers understanding that students must firstly engage in an activity to learn from their experiences.	EL	Design meaningful learning
desire to improve	Teachers acknowledging that students need a desire to want to learn and improve.	DI	Design meaningful learning
students' values	Teachers considering what students consider as being important, interesting and motivating.	SV	Design meaningful learning
task identification	Teachers valuing students identifying with the task to increase learning internalisation.	TI	Design meaningful learning
value learning	Teachers valuing the importance of knowledge for empowerment and learning for life situations.	VL	Design meaningful learning
enjoy learning	Teachers using and valuing humour and fun in their instruction for learning.	EN	Design meaningful learning
acknowledging curriculum	Teachers recognising the depth and breadth of the curriculum and their responsibility for covering the learning outcomes.	AC	Design meaningful learning
connecting curriculum	Teachers recognising the curriculum as having potential to connect understanding and skills among learning areas and beyond school through authentic resources.	CC	Design meaningful learning
distinct subject	Teachers valuing the nuances of a learning area.	DS	Design meaningful learning
inquiry learning	Teachers valuing students constructing learning through topic investigations.	IL	Design meaningful learning

Codes	Code descriptions	Code tags	Code categories
learning goals	Teachers specifying learning goals and the learning process strategies to achieve them.	LG	Design meaningful learning
learning post-school	Teachers perceiving school as being a stepping stone to lifelong learning.	LPS	Design meaningful learning
linked learning	Teachers explaining why a learning task is chosen and how it connects with students' other learning and life.	LL	Design meaningful learning
purposeful learning	Teachers recognising that students need to see a reason for learning something.	PL	Design meaningful learning
skills, knowledge and understanding	Teachers clarifying learning as skills, knowledge and understanding.	SU	Design meaningful learning
assigned roles	Teachers involving students in the organisation and procedures of managing the learning environment.	AR	Manage learning
behavioural influences	Teachers recognising that student behaviour is influenced by the behaviour of teachers and other students in the learning community.	BI	Manage learning
class grouping structure	Teachers structuring classes to enhance teaching and learning opportunities for students.	CG	Manage learning
collaborative responsibility	Teachers guiding students to make collaborative decisions about classroom procedures/events.	CR	Manage learning
control for safety	Teachers exercising authority to maintain a safe learning environment.	SAF	Manage learning
procedures for organisation	Teachers establishing routines and procedures for students to follow that enable their learning proactively.	CM	Manage learning
safe learning	Teachers valuing students feeling non-threatened and comfortable in the learning environment.	SF	Manage learning
seating and working arrangements	Teachers: empowering students to make choices about where they sit and move to in the classroom.	SA	Manage learning

Codes	Code descriptions	Code tags	Code categories
social literacy	Teachers establishing expectations through the language of socially acceptable norms to create a learning discourse.	SL	Manage learning
behavioural accommodation	Teachers supporting students to adjust their behaviour to suit the learning environment and task.	BA	Manage learning
communicated expectations	Teachers reminding students by reinforcing appropriate behaviour and learning standards and norms.	CE	Manage learning
guidance techniques	Teachers using techniques of correcting and redirecting to guide students towards appropriate behaviours for learning.	GT	Manage learning
model behavioural expectations	Teachers modelling behavioural expectations to students.	MB	Manage learning
ownership of behaviour	Teachers valuing students taking responsibility for behaviour by considering choices.	RB	Manage learning
personal organisation	Teachers establishing opportunities for students to develop procedures that help them to manage their learning resources.	PO	Manage learning
time management	Teachers recognising the significance of student awareness of organising and managing available time proactively.	TM	Manage learning
adapt to change	Teachers recognising the structural changes in transition to assist students' adjustments.	AD	Manage learning
emotional state for learning	Teachers recognising that students need to be ready emotionally for learning.	ES	Manage learning
plan curriculum lessons	Teachers planning units of work that allow flexibility with what is taught in lessons.	CP	Scaffold learning
visible teaching plans	Teachers making visible the learning process by outlining their learning objectives and teaching strategies.	VT	Scaffold learning
transference of learning	Teachers providing opportunities for students to demonstrate learning in a new situation.	TL	Scaffold learning
clarify tasks	Teachers focusing on whether the students understand the strategies required to engage in the task.	CT	Scaffold learning

Codes	Code descriptions	Code tags	Code categories
cognitive organisation	Teachers assisting students to process thoughts and ideas during the learning process.	CO	Scaffold learning
concrete to abstract	Teachers designing learning to link students' concrete understanding to abstract knowledge.	CA	Scaffold learning
learning area content	Teachers valuing a depth of content knowledge, skills and understanding in a learning area.	LA	Scaffold learning
realise learning process	Teachers valuing students' metacognition in learning.	RL	Scaffold learning
think alouds	Teachers representing their own thinking processes to students.	TA	Scaffold learning
active participation	Teachers valuing student participation in the learning process to include experiential, hands-on and movement activities.	AP	Scaffold learning
analogies in communication	Teachers explaining using analogies for students to create images for learning.	AN	Scaffold learning
higher order thinking	Teachers designing opportunities for students to develop thinking skills of knowing, comprehending, analysing and utilising.	HT	Scaffold learning
learning cues	Teachers providing scaffolds to help students to direct their learning.	LC	Scaffold learning
learning habits	Teachers valuing learning habits that are established through practice in the learning process.	LH	Scaffold learning
learning process	Teachers identifying student learning as being a process of linking and transferring to demonstrate understanding.	LP	Scaffold learning
learning styles	Teachers accommodating the visual, auditory and kinesthetic styles of learning.	LS	Scaffold learning
learning tools	Teachers providing learning support frameworks that remove the barriers and enable students' learning to occur.	LT	Scaffold learning

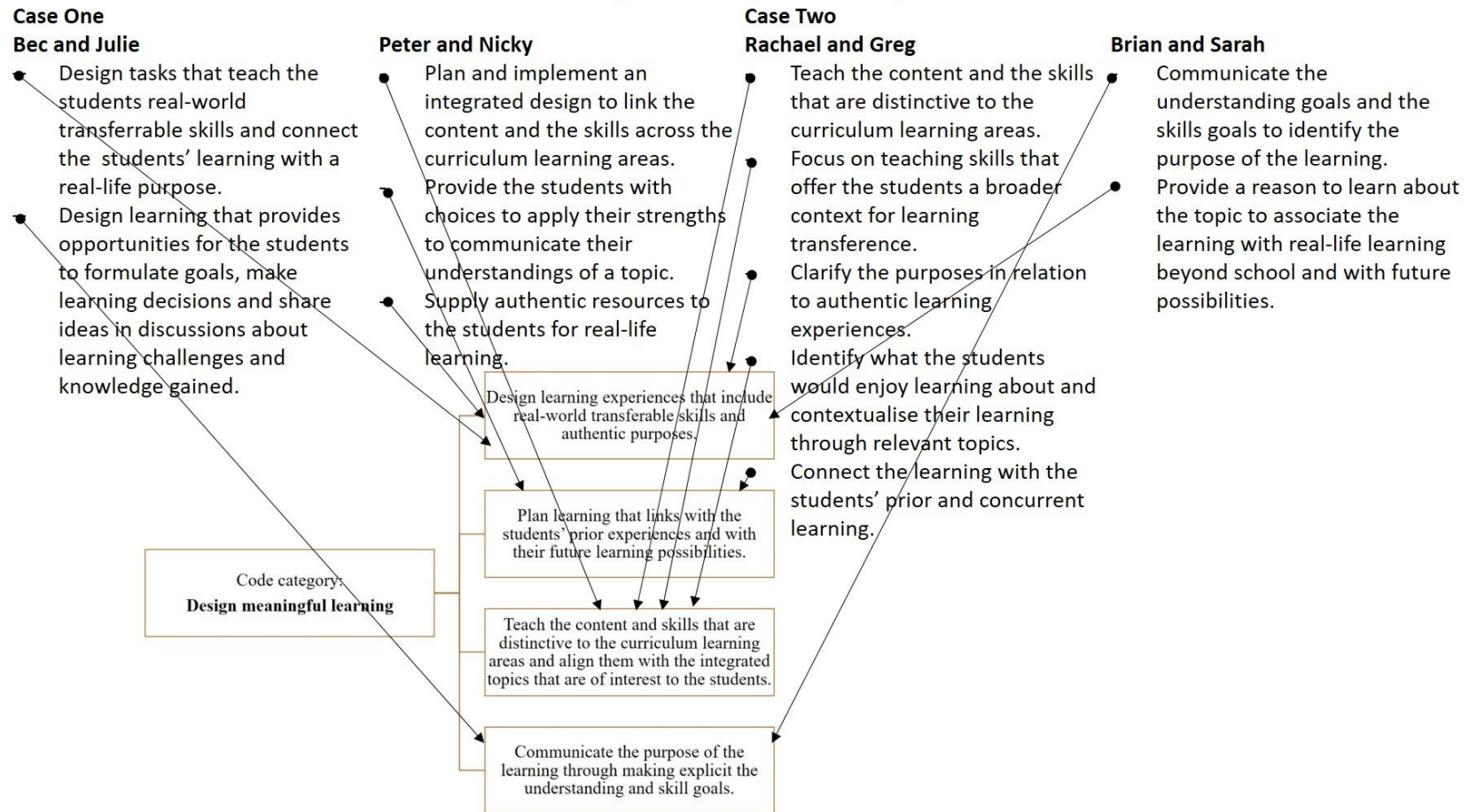
Codes	Code descriptions	Code tags	Code categories
model process and product	Teachers demonstrating their expectations of tasks.	RM	Scaffold learning
value discussion	Teachers appreciating putting experiences into language for meaning making in the learning processes i.e., Vygotsky.	VD	Scaffold learning
value ICTs (technology)	Teachers embedding ICT tools in teaching and learning.	VICT	Scaffold learning
value questioning	Teachers pursuing knowledge and understanding from students through asking open and closed questions.	VQ	Scaffold learning
value self-directed learning	Teachers providing opportunities for students to direct and maintain a learning process.	SD	Scaffold learning
literacy and numeracy for learning	Teachers recognising the impact that literacy and numeracy skills have on student learning.	LN	Adjust learning support
choices in learning	Teachers providing choices in learning.	SC	Adjust learning support
cater for diversity	Teachers recognising that students require different types and levels of support.	CD	Adjust learning support
challenges when learning	Teachers appreciating the value of students experiencing learning demands and persisting when facing challenges.	CHAL	Adjust learning support
competition in learning	Teachers recognising that students want to do and be their best.	COMP	Adjust learning support
confident learner	Teachers acknowledging the impact on students' learning when they feel that there is a pathway to succeed.	CF	Adjust learning support
high expectations	Teachers knowing that all students have the capacity to achieve their potential in suitable learning environments.	HE	Adjust learning support
respond to needs	Teachers adjusting procedures in response to students' learning needs.	RN	Adjust learning support
success leads to success	Teachers using competency to motivate future learning.	SS	Adjust learning support

Codes	Code descriptions	Code tags	Code categories
support for low achievers	Teachers supporting low achievers by changing learning processes to meet foundational skill objectives.	SP	Adjust learning support
external incentives	Teachers providing rewards or future rewards to motivate students' immediate task engagement.	EI	Adjust learning support
level of expectation	Teachers varying external sources of incentives appropriate to the situation for learning.	LE	Adjust learning support
assessment alignment	Teachers considering how assessment tasks are used to monitor student learning.	AA	Adjust learning support
help seeking	Teachers valuing students monitoring their performance to seek learning assistance when required.	HS	Adjust learning support
instantaneous learning	Teachers accepting the desires of students to receive immediate feedback about their answers to questions.	IL	Adjust learning support
monitored learning	Teachers providing feedback to students or opportunities for students to self-assess to clarify their learning progress.	ML	Adjust learning support
collaboration in learning	Teachers catering for students learning together and from one another in various groupings.	CL	Build relationships for learning
care about students	Teachers feeling the responsibility for students' learning progress and wellbeing.	CS	Build relationships for learning
teacher presence	Teachers acting and speaking with respected authority of a topic or issue and are respected.	TP	Build relationships for learning
build relationships	Teachers developing a rapport with students through conversations and interactions.	BR	Build relationships for learning
joint responsibility	Teachers communicating to students that they are working with them together in the learning process.	JR	Build relationships for learning
value leadership	Teachers utilising leadership skills of students to assist in classroom organisation and to model behavioural regulation.	L	Build relationships for learning

Codes	Code descriptions	Code tags	Code categories
parent communication	Teachers establishing relationships with parents so that they understand the classroom teaching and learning.	PC	Build relationships for learning
professional development	Teachers learning through professional development that is grounded in research and theories of teaching and learning.	PD	Expand practices
adolescent growth	Teachers considering adolescence as a stage of physical and emotional changes.	AG	Expand practices
critical middle years	Teachers recognising the middle years as a significant developmental phase for students.	CMY	Expand practices
parental and cultural influences	Teachers considering the ways that outside-school influences impact on a student's disposition and learning motivation.	PI	Expand practices
school-wide system	Teachers valuing the strength of a school-wide collaborative approach to teaching and learning.	SW	Expand practices
time restriction	Teachers realising the constraint of time available for teaching and learning.	TR	Expand practices
experiential influence	Teachers believing that the skills of a teacher are developed and refined through experiences.	EI	Expand practices
learning for teaching incentive	Teachers feeling an enthusiasm to teach that is activated by students' potential learning.	LI	Expand practices
pedagogy	Teachers understanding pedagogy as an art and a science.	PED	Expand practices
personal professional goals	Teachers establishing professional goals to strive for continual personal pedagogical development.	PG	Expand practices
links to primary years	Teachers linking primary years learning skills and tasks with what students do in secondary school years.	PY	Expand practices
reflective teaching	Teachers evaluating the effectiveness of their teaching.	RT	Expand practices
successful learner	Teachers describing the qualities of a successful learner.	SUC	Expand practices
teaching beliefs	Teachers expressing a personal teaching philosophy.	TB	Expand practices
theory and research	Teachers practising methods grounded in research and theories of teaching and learning.	TH	Expand practices

Appendix E: Graphic Representations of the Cross-Case Data Analysis

Examples of teachers' pedagogical practices for fostering effective student learning from the code category: design meaningful learning.



Examples of teachers' pedagogical practices for fostering effective student learning from the code category: manage learning.

Case One

Bec and Julie

- Guide and redirect the students to make decisions about where they sit in the classroom.
- Teach the students to reflect on and to take responsibility for their behaviour choices.
- Create visible lists of students' names to promote accountability for their learning.
- Establish a class language to represent the procedures and the expected responses.

Peter and Nicky

- Establish the procedures that enable the students to organise their materials and seating arrangements.
- Embed the procedures that offer responsibility to the students for the collective operationalisation of the classroom.
- Promote the behavioural expectations using redirection techniques to remind the students about their appropriate behaviours for learning.

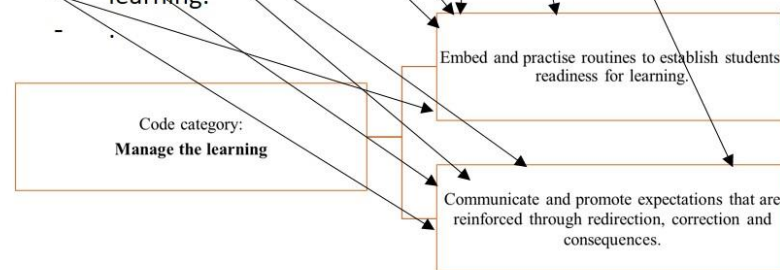
Case Two

Rachael and Greg

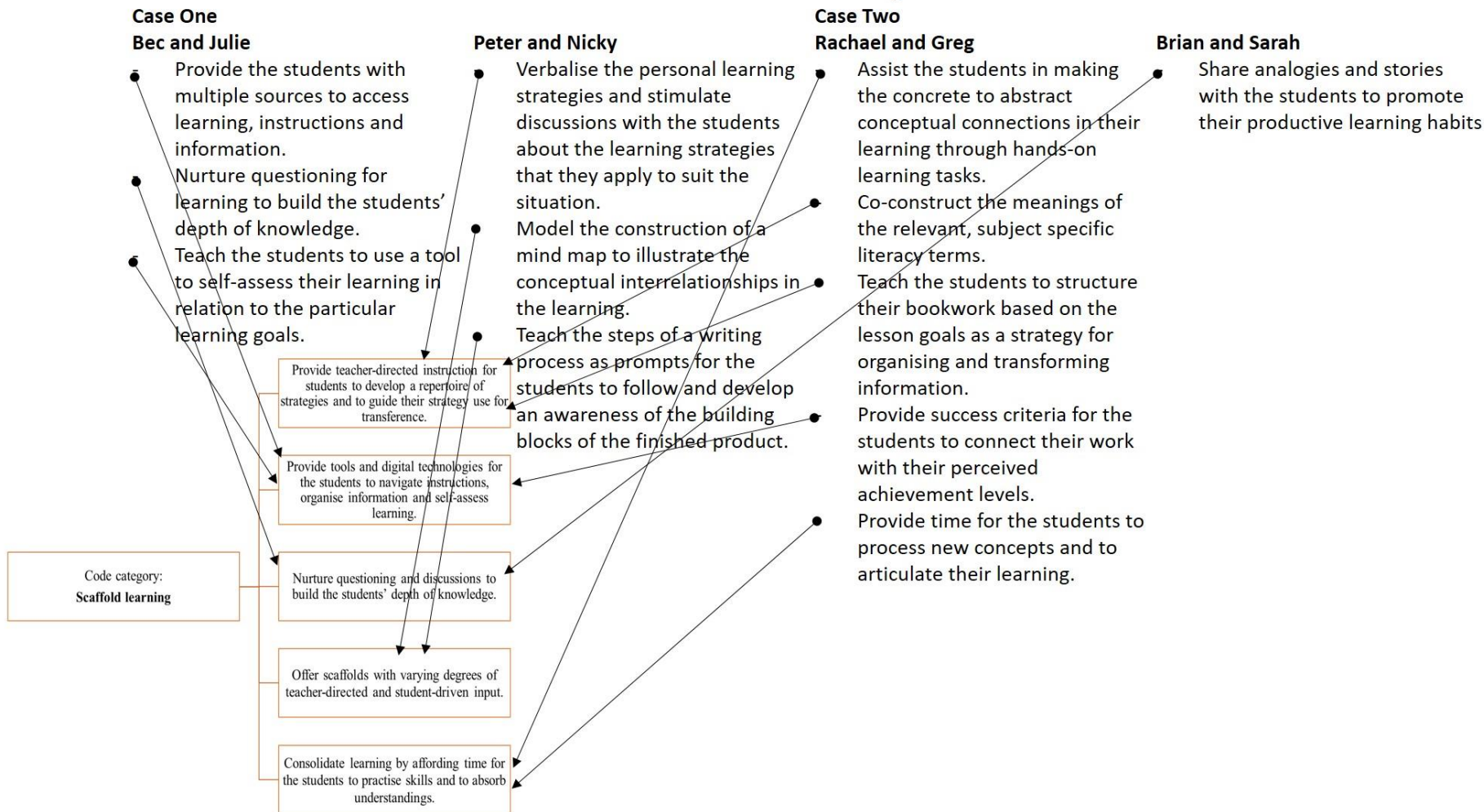
- Set the procedures and apply these consistently as the routines and the everyday practices.
- Guide the students' decisions about where they are to sit in the classroom.
- Reinforce the availability of the students' personal learning materials to enable their learning.

Brian and Sarah

- Set the expectations that create a safe environment for all the students to feel comfortable to participate in learning.
- Teach the students to prepare their state of readiness for learning.



Examples of teachers' pedagogical practices for fostering effective student learning from the code category: scaffold learning.



Examples of teachers' pedagogical practices for fostering effective student learning from the code category: adjust learning support.

Case One Bec and Julie

- Support the students by adjusting the task product levels of challenge, whilst maintaining high expectations for all students.

Peter and Nicky

- Support the students to reflect on their learning to experience a sense of achievement and success.

Case Two Rachael and Greg

- Know the students' capabilities to support them to experience success in their learning.
- Adjust the level of the learning experiences for the students to work within their zone of proximal development.
- Encourage the students to enjoy learning and to feel internal success.
- Acknowledge the students' learning efforts and progress with simple verbal and non-verbal gestures.

Brian and Sarah

- Collaborate with the students to negotiate the learning arrangements and to adjust the tasks and the provision of resources.
- Provide visuals and texts suited to the students' literacy capabilities.

Code category:
Adjust learning support

Know the students' capabilities to adjust the types of support and the product expectations.

Negotiate with the students, the task adjustments, the resources for support and the learning arrangements to provide individual and group learning situations.

Acknowledge the students' learning efforts and progress that lead to their feelings of success.

Support the students to experience learning for enjoyment and for accomplishment.

Examples of teachers' pedagogical practices for fostering effective student learning from the code category: build relationships for learning.

Case One

Bec and Julie

- Promote teamwork skills, student–student collaboration and communication as learning tools to construct knowledge socially.
- Communicate with the students' parents and caregivers to inform them about the class events and the proposed learning.

Peter and Nicky

- Incorporate opportunities to connect with the students through the everyday classroom events to learn more about their interests and needs.
- Unite the students in the class as a community of learners through a progression of group development activities.

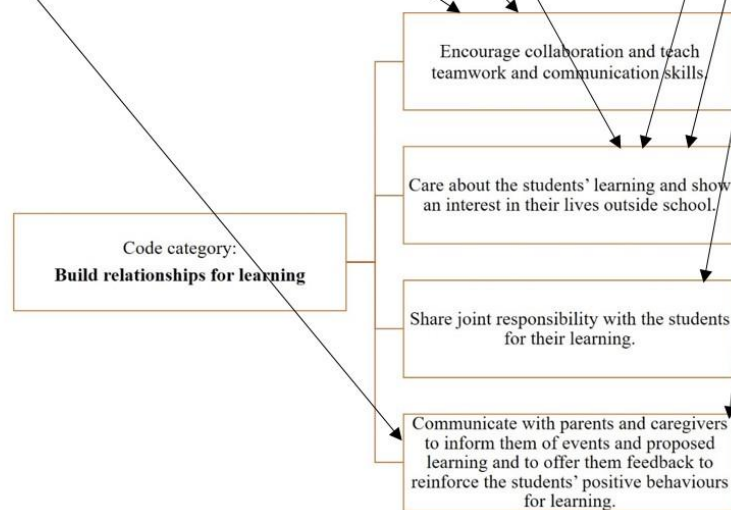
Case Two

Rachael and Greg

- Take the time to learn about the students' interests and their outside-school lives.
- Care about the students and their learning.
- Ensure that the students feel that their teachers accept joint responsibility for their learning.
- Establish parent–teacher relationships through providing the parents and caregivers with an awareness about their children's learning.

Brian and Sarah

- Contact the students' parents and caregivers with positive feedback to reinforce their children's constructive behaviours for learning.



Examples of teachers' pedagogical practices for fostering effective student learning from the code category: expand practices.

Case One

Bec and Julie

- Learn from other teachers and with the students.
- Advocate a school-wide approach to implementing practices.

Peter and Nicky

- Reflect on personal and professional experiences to inform teaching.

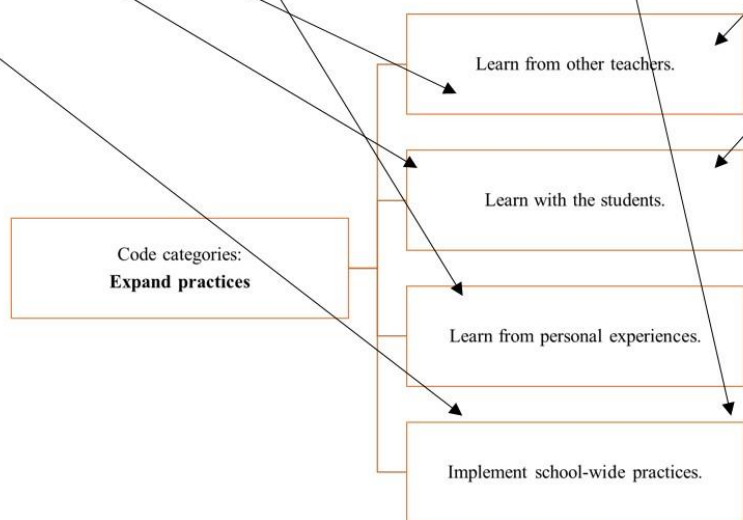
Case Two

Rachael and Greg

- Implement school-wide learning frameworks in response to the staff professional development experiences.

Brian and Sarah

- Communicate with the other teachers to work together as a team.
- Learn with the students.



Appendix F: The Timetable of the Study

Years	2013												2014												2015												2016												2017														
Task/Months	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D			
Read the associated literature	■	■	■																																																												
Draft the proposal				■	■																																																										
Prepare the ethics application					■	■																																																									
Review the proposal						■	■																																																								
Present the proposal for confirmation of candidature							■	■																																																							
Prepare the proposal revisions								■	■																																																						
Gain access to the sites & participants									■	■																																																					
Prepare for Phase One of the data collection										■	■																																																				
Conduct Phase One interviews & observations for Case One											■	■																																																			
Transcribe & organise the data												■																																																			
Conduct the preliminary data analysis for Case One												■																																																			
Write the preliminary interpretations for Case One												■																																																			
Revise the literature review												■																																																			
Prepare for Phase Two of the data collection												■																																																			
Conduct Phase Two interviews & observations for Case Two												■																																																			
Transcribe & organise the data												■																																																			
Conduct the preliminary data analysis for Case Two												■																																																			
Write the preliminary interpretations for Case Two												■																																																			
Examine the data for further data collection requirement												■																																																			
Conduct the focused data analysis												■																																																			
Revise the literature review												■																																																			
Review the methodology												■																																																			
Outline the thesis chapters, sections & sub-sections												■																																																			
Draft the thesis data chapters												■																																																			
Draft the thesis introduction chapter												■																																																			
Review the thesis data analysis, literature review & methodology chapters												■																																																			
Draft the thesis implications & conclusion chapter												■																																																			
Collate and format the draft thesis												■																																																			
Discuss/Review/Edit thesis												■																																																			
Submit the thesis												■																																																			

Six months approved leave of absence