Investigating self-efficacy: Early childhood teachers’ understanding of self-efficacy

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Investigating Self-Efficacy: Early Childhood Teachers’ Understanding of Self-efficacy

This thesis is presented for the degree of

Master of Education

Dimity Franks

Edith Cowan University
School of Education
2021
Abstract

Students are experiencing an increased pressure to perform academically at a younger age with reports of the narrowing of curriculum and student disengagement. Current research literature suggests curricula should reflect the increased pressures students are facing. A focus on the social and emotional skills to support student learning is recommended to increase student engagement and enrichment and prepare students for their future. Self-efficacy is one element of social and emotional learning that demands attention. Self-efficacy is considered important for teachers to understand as it can predict how students approach their tasks as well as influence their levels of motivation and engagement for learning. Substantial research has established that self-efficacy and academic achievement are directly related, yet little is known about the strategies that facilitate the development of self-efficacy in the early years of school. This study examined teacher understandings of self-efficacy for students in Kindergarten to Year 2 in Western Australia. To describe their understanding about self-efficacy teachers provided accounts of their knowledge, where it originated, and detailed the strategies they used to facilitate the self-efficacy of their students. The study employed an Interpretivist line of enquiry as it investigated the interpretations of the participants to uncover what they understand about self-efficacy. It utilised a mixed method approach, initially collecting data from an online survey followed by semi-structured interviews with 10 participants from three different schools. The interview questions were informed by the survey data collected in the survey. Results from the study indicate that teachers do not have a strong theoretical understanding of self-efficacy but do have knowledge of elements of self-efficacy. Teachers could describe the characteristics of students with high levels of self-efficacy and provided a range of strategies they have found to be successful when facilitating self-efficacy in their students. Findings from this study will further develop teachers’ understandings of self-efficacy and highlight the importance of teaching strategies to facilitate self-efficacy in early childhood contexts.
Declaration

I certify that this thesis does not, to the best of my knowledge and belief:
incorporate without acknowledgement any material previously submitted for a degree or
diploma in any institution of higher education, contain any material previously published or
written by another person except where due reference is made in the text of this thesis, or
contain any defamatory material.

Candidate signature: 

Date: 15.03.2021
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To all those young learners who doubt their capabilities; I hope this makes a difference.
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<tbody>
<tr>
<td>AC</td>
<td>Australian Curriculum</td>
</tr>
<tr>
<td>ACECQA</td>
<td>Australian Children’s Education and Care Quality Authority</td>
</tr>
<tr>
<td>DEEWR</td>
<td>Department of Education, Employment and Workplace Relations</td>
</tr>
<tr>
<td>EC</td>
<td>Early childhood</td>
</tr>
<tr>
<td>EYLF</td>
<td>Early Years Learning Framework</td>
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<td>K</td>
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<td>NQF</td>
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<td>PP</td>
<td>Pre-primary</td>
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<td>SEL</td>
<td>Social and emotional learning</td>
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“Among the types of thoughts that affect action, none is more central or pervasive than people’s judgements of their capabilities to deal effectively with different realities” (Bandura, 1986, p. 21).

1.1 Introduction

This study investigated early childhood teachers’ understanding of the construct of self-efficacy. It revealed how teachers describe self-efficacy and the source of their self-efficacy knowledge. Adding to their understanding, teachers described how self-efficacy is being facilitated in students in Kindergarten (K) to Year 2 (to be referred to as K-2 hereafter) settings. This chapter details the background and rationale for the study as well as the significance of the study. The final section of this chapter outlines the organisation of the thesis.

1.2 Background/Rationale for the Study

It is salient to establish the rationale for focusing on the years K-2 in this study. Children enrolled in education and care programs before the age of three in Western Australia are generally not in school settings. Students begin Kindergarten usually in primary school in Western Australia the year they turn three by June 30 and are considered to be in the early childhood phase of learning until they are in Year 2 (approximately eight years old). This drove the decision to focus on teachers of students from three to eight years in this study (K-2). According to the World Health Organisation (WHO, 2020) early childhood development is centred around children from birth to eight years. Despite the WHO describing the development of ‘children’, much of the literature examined in this study used the term ‘students’. As the participants of the study also predominantly referred to ‘students’, this thesis will use the term ‘students’ to provide continuity. In some instances, however, the term the term ‘children’ will be used when referred to in literature or by participants.
CHAPTER ONE: Introduction

The Grattan Report suggested the rising number of disengaged students in schools demands attention be paid to the state of student engagement in Australian schools (Goss et al., 2017). Alarmingly, results from this report showed nearly 40% of students were disengaged in learning in any given year. The report also observed that being disengaged, and therefore unproductive, resulted in students lagging two to three years behind their peers in literacy and numeracy. To improve levels of engagement in schools, the report suggests explicitly teaching skills for learning with a focus on attitudes and behaviours. An increased focus on social, emotional and cognitive skills to assist learning benefit students to be better prepared for school, achieve better results and have increased prospects in life after school (Early Learning, 2019; HighScope, 2019).

The Alice Springs (Mparntwe) Education Declaration (Education Council, 2019) supports the Grattan Report (Goss et al., 2017) in highlighting the need for the Australian education system to have increased emphasis in promoting the social, emotional and cognitive skills that are known to contribute to the wellbeing and achievement of young students. The report suggests the promotion of skills and knowledge that lead to “a sense of self-worth, self-awareness and personal identity” (Education Council, 2019, p. 6). These qualities are more likely to produce successful, life-long learners who make valuable contributions to society as family and community members. The Alice Springs (Mparntwe) Education Declaration (Education Council, 2019) highlights the beginning of school as an important time to build support strategies for learning, suggesting this will give students the confidence to thrive.

The United Nations Children’s Fund (UNCF, 2019) reported on prioritising early childhood education, as it is the optimal time for children to learn skills to prepare them to become life-long learners. The report examined the benefits of early education before formal schooling commenced, for children aged three to six years. In Western Australia, children aged 3-6 years are typically enrolled in either a Kindergarten (K) program (aged 3½ - 5½ years) or a Pre-primary (PP) program (aged 4½- 6½ years). These years were described as being an irreplaceable window of opportunity (UNCF, 2019) to
set students up for success at school and beyond. Due to the malleable nature of children’s brains, the years prior to entering primary school are considered a key time to develop intelligences and capacities required for formal learning (Darling-Hammond, 2019; UNCF, 2019). The UNCF report contends “by the time a child enters grade one, the foundations for success are already in place” (UNCF, 2019, p. 4). This warrants greater attention from policymakers. It is essential for educators and policymakers to capitalise on this critical time of development to set children up for success at school and in the future by prioritising skills that support and enhance their learning and engagement.

The Mitchell Institute Report also recognised early childhood as a critical time for developing the skills and behaviours students require to succeed at school (O’Connell et al., 2016). This report called for more effective policies and support for early childhood educators to improve practice and outcomes in early childhood. It demanded a focus on developing the social and emotional skills students rely upon to become creative, capable and resilient learners (O’Connell et al., 2016). The teaching of these social and emotional skills would allow educators to better facilitate the self-efficacy of students, resulting in more effective learning and better long-term outcomes in life (UNCF, 2019).

Skills for learning were prioritised in Gonski’s report of the Review to Achieve Educational Excellence in Australian Schools (Gonski et al., 2018). In this report, Gonski issued a call to action to enable all Australian students to realise their learning potential. As a way of reversing Australia’s decline in student outcomes in past decades, the reforms outlined in the report reinforce the capacity of teachers to facilitate individual learning requirements of their students. In a review of literature of effective learning, Claxton (2007) observed that the study of expanding children’s capacity to learn had been gathering momentum. He asserted that having the tools to be an effective, powerful real-life learner is valuable and will assist students in building skills, knowledge and capacities required for 21st Century education. He noted the practical application of promoting students’ learning habits “has so far been disappointing” (p. 116).
Self-efficacy is one facet of the broader construct of social and emotional learning and has been strongly linked to learning habits that result in positive learning outcomes for students (Stajkovic et al., 2017). Self-efficacy is one of nine constructs identified in the ‘Key Skills for the 21st Century report’ (Lamb et al., 2017) as being essential when working and living in the 21st Century. Other constructs included: critical thinking, creativity, metacognition, problem solving, collaboration, motivation, conscientiousness and perseverance. These constructs comprise key social, emotional and cognitive strategies considered to advance learning. The report suggested that focusing on these constructs in schools, young Australians would have equal opportunity to acquire a skillset deemed relevant for the 21st Century.

For the purposes of this study, self-efficacy is defined as "the belief in one's capabilities to organise and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Self-efficacy does not relate to students’ abilities, but to their perception of their abilities to complete tasks. It is based on Bandura’s Social Cognitive Theory whereby reciprocal links are maintained between thinking, behaviour and environmental variables (Bandura, 1986). To further explain this theory, what we think affects how we behave, which influences responses from the environment (such as feedback from peers and teachers), affecting what we think (Schunk & Zimmerman, 2012). Students who display higher levels of self-efficacy toward the completion of a particular task, are more likely to attempt new tasks (Bandura, 1986). Furthermore, students with enhanced levels of self-efficacy are more likely to have higher levels of motivation, persist longer at tasks and be more likely to regulate their learning (Zimmerman, 2000). These skills are related to increased self-awareness and agency.

Self-efficacy is acknowledged as the foundation of human agency (Bandura, 2008). Agency as defined by Bandura is “the capacity to exercise control over one’s own thought processes, motivation and action” (1989, p. 1175). Teachers who facilitate a sense of agency in their students respect their ability to make choices so students feel their opinions and ideas are valued and they have the capacity to influence events in their lives (Australian Children’s Education and Care Quality Authority [ACECQA], 2012).
Agency leads to increased self-efficacy and an increased enjoyment of learning (Parker & Thomsen, 2019).

The frameworks used in Australian education and care have elements that point to the facilitation of self-efficacy. The National Quality Framework (NQF) (ACECQA, 2012) was established to guide the continuous improvement of education and care across Australia. Within this framework lies the National Quality Standard (NQS) (ACECQA, 2012), a quality improvement tool with assessment of seven quality areas regarded as pivotal to the provision of quality early education and care. Another component of the NQF is the Early Years Learning Framework (EYLF) (Department of Education, Employment and Workplace Relations [DEEWR], 2009). The EYLF is designed to assist teachers and educators to facilitate optimal learning for children in care and educational settings and in their transition to school. The EYLF comprises key principles, pedagogical practices and five learning outcomes. Outcome one recognises the need for children to have a strong sense of identity and to be part of learning environments that encourage “autonomy, inter-dependence, resilience, and sense of agency” (DEEWR, 2009, p. 22). Remaining outcomes encourage a range of learning dispositions and skills including confidence, persistence, problem solving and experimenting. Providing children with opportunities to experiment, investigate and inquire during learning in early childhood can lead to the increased sense of independence and confidence they require for lifelong learning (ACECQA, 2012).

The Australian Curriculum and Reporting Authority (ACARA, 2008) was also established as a result of changes to the learning landscape, with the purpose of creating the Australian Curriculum, the mandatory curriculum to be taught in Australian schools from Pre-primary (Foundation) to Year 10. ACARA suggest well developed social and emotional skills help students prepare for their roles beyond school in the community, the workforce and for potential family roles (Education Council, 2019). Although ACARA (2008) acknowledges the importance of teaching social and emotional skills, limited information is provided in the Australian Curriculum on how to support this learning in students.
Social and emotional skills are represented primarily in two areas of the AC (ACARA, 2012). Within the Health component of the Health and Physical Education learning area, there is a strand committed to personal, social and community health. This includes a focus on identity, resilience and self and social awareness. The Health and Physical Education learning area is allocated two hours per week by ACARA (2008) for students from their Foundation year (known as Pre-primary in Western Australia) to Year 2. This includes a required 60 minutes per week for Physical Education, with the remaining one hour per week allocated to meeting Health outcomes. Teachers can also find mention of personal and social skills in the General Capabilities section of the AC (ACARA, 2012) where the focus for students is on understanding themselves and their learning. This section highlights the importance of teaching skills for learning to prepare students for their future lives, yet to have the necessary knowledge to teach these skills, more detailed information is required. As these capabilities are not considered core curriculum content, it is up to individual teachers how and where they included them in their program, which leave them at risk of being overlooked for other curriculum areas that may be easier to measure. Unlike the EYLF (DEEWR, 2009) which describes pedagogical practices, pedagogical decision making is the responsibility of teachers and schools when using the AC (ACARA, 2012).

Learning environments where students are encouraged to use social and emotional skills to develop agency in their daily routines are more conducive to effective learning (Goss et al., 2017). Such skills appear in mandated curriculum frameworks in Australia, yet research suggests a growing number of teachers feel limitations in being able to deliver a curriculum rich in social and emotional learning (Barblett et al., 2016; Thompson & Harbaugh, 2012). These researchers attest that many of these limitations are due to the pressures teachers feel are placed on them to prepare their students to meet national standards in academic testing programs, such as the National Assessment Plan Literacy and Numeracy (NAPLAN) (ACARA, 2012). This pressure, real or perceived, places an overemphasis on easily quantifiable subjects, and in doing so narrows the scope of the curriculum.
CHAPTER ONE: Introduction

Learning programs that embrace standardised testing can lead to a reduced focus on teaching the skills students require for effective learning. In 2012, Thompson and Harbaugh conducted a survey of 759 teachers in Western Australia and South Australia seeking their perceptions of the impact NAPLAN has on the pedagogy and curriculum implementation of schools. The teachers stated they felt the time previously spent on enriching curriculum studies was now being consumed by teaching to the test. Teachers believe this leads to less emphasis being placed on subjects not easily measured by standardised tests, such as the social, emotional and cognitive skills students require to learn effectively (Thompson & Harbaugh, 2012). In some cases, this led to teachers adopting more didactic approaches in the classroom, resulting in lower rates of student engagement and motivation (Goss et al., 2017). Furthermore, Polesel et al. (2012) conducted a review of the literature surrounding the impact of high stakes testing, such as NAPLAN (ACARA, 2012), and the effect they have on the health and wellbeing of students and on their learning effectiveness. Their findings show that while there has been limited research conducted in Australia, data from the United Kingdom and the United States suggests the practice of standardised testing in Australia is likely to have a direct impact on student wellbeing and a further impact on students’ learning (Polesel et al., 2012).

This section has identified the construct of self-efficacy as key to learning at school and for life in the 21st Century. The early childhood years were recognised as a crucial time for developing self-efficacy as a tool to support positive transitions to school and beyond. Environments rich in social and emotional learning were established as the most effective means of promoting and supporting student self-efficacy. Policy documents articulated the value of social and emotional learning environments to develop the skills required for life-long learning. It was identified, however, that many early childhood teachers felt limitations in providing optimal learning environments for their students.
1.3 Significance

This research will make significant contributions to teacher knowledge about self-efficacy for teaching and learning in early childhood contexts. It will provide an insight into teacher understandings of the social and emotional skills that best facilitate self-efficacy to support and increase awareness in this area. Such insights may result in the building of a repertoire of strategies for facilitating students’ self-efficacy behaviour and beliefs, which will pave the way for discussion and development of effective learning strategies to be used in classrooms. Teacher knowledge of self-efficacy and how it is facilitated is important to ensure the best outcomes for students (Dignath et al., 2008). To ensure the best outcomes for students are attainable, further research needs to be conducted in this area (Allbright et al., 2019).

This research will lead to a heightened awareness of self-efficacy strategies for students in the early years of school to improve their levels of engagement, health and wellbeing. Inappropriate teaching strategies for young students can lead to feelings of stress, anxiety, lower self-esteem, and ultimately, disengagement in learning (Goss et al., 2017; Polesel et al., 2012; Thompson, 2016). As highlighted earlier, Goss et al. (2017) reported a disturbing number of students are disengaged in learning in the current school system in Australia, with achievement anxiety affecting levels of student engagement. As teachers feel pressure for their students to perform and reach benchmarks, they are placing more focus on the subject content, rather than on teaching the learning skills students need to be confident and successful learners (Barblett et al., 2016). With an increased focus on self-efficacy strategies, students may have increased levels of engagement and decreased levels of anxiety, stress, and depression (Bandura, 1997).

Increased calls for standardised testing of students in schools highlights the importance of this research to re-focus the attention of teachers, administrators, universities and policymakers on what is important for students enrolled in education programs prior to school and in the early years of primary school. This study will highlight the requirement to teach skills that support student learning in positive and age-appropriate ways.
CHAPTER ONE: Introduction

Information gathered in this study will provide a valuable contribution to the design of future teacher education courses as early childhood academics at universities consider the inclusion of strategies not only for pre-service teachers to develop knowledge of how to support student self-efficacy in their courses. Knowing what teachers understand about self-efficacy and the strategies used to facilitate it in Kindergarten, Pre-primary and in the early years of primary school will provide valuable information in developing professional learning programs for teachers. It will also assist to make further recommendations to improve the understanding and facilitation of self-efficacy to improve student learning and wellbeing. Students have a right to teachers who are skilled and competent in this area to best prepare them for the future (Frey & Osborne, 2017).

Finally, by increasing awareness of self-efficacy, this research will challenge teachers to focus on student self-efficacy practices to benefit the students they are teaching. The significance of this research is supported by mounting evidence to suggest teaching social and emotional skills used to support self-efficacy in early schooling is linked to better outcomes for life beyond school, in work and in family roles (Goss et al., 2017; Jones et al., 2015). Self-efficacy can affect life choices, levels of motivation, regulation of functioning and well-being, and to vulnerability to stress and depression (Bandura, 1997; Jones et al., 2015).

1.4 Organisation of the Thesis

This thesis consists of eight chapters. The first chapter considers the background and rationale for the study and considers the significance of the research. The second chapter provides a review of the literature relating to self-efficacy theory and associated topics. Chapter Three explores the conceptual framework used in the study. Chapter Four outlines the methodology and research design, providing detail of the participants, data collection and data analysis. Additionally, it contains information about validity, reliability and ethical considerations of the study. Chapters Five and Six present findings of the study from Phase One and Phase Two respectively. Data from the online survey
and the semi-structured interviews were analysed and interpreted and common themes established. The penultimate chapter discusses the findings in relation to the relevant literature. This discussion is organised by responding to each research question independently. The final chapter summarises the key findings, highlights the limitations of the study and considers the recommendations for future research.
CHAPTER TWO: Review of the Literature

2.1 Introduction

This literature review begins by examining the social and emotional construct of self-efficacy and how it differs from self-esteem and self-concept, followed by literature suggesting self-efficacy is essential for effective, life-long learning. It will be argued that a focus on social and emotional learning is the most influential means to facilitate self-efficacy. Studies that highlight relevant teaching strategies to develop student self-efficacy will be examined and research that has led to the formation of policies and current curriculum documents and their impact will be explored. Early childhood education is identified in the literature as a critical time to develop the learning behaviours students require in their transition to school and beyond (Alice Springs (Mparntwe) Declaration, Education Council, 2019). The final section of this literature review explores teacher understandings of self-efficacy. Specifically, it will focus on how teachers form their understanding of self-efficacy and the subsequent impact on their teaching and on student learning. Any gaps in the research on self-efficacy as a tool to enhance student learning are identified in this review of the literature.

2.2 Self-efficacy

Research into self-efficacy first began in the late 1970s as mounting evidence highlighted student achievement could not be fully explained by academic skill and ability alone. Research suggested other skills, such as self-efficacy, played a key role in learning (Schunk & Zimmerman, 2012). In 1977, Bandura proposed the Social Learning Theory, which highlighted that people learn through the observation of others. In 1986, Bandura expanded his theory, renaming it Social Cognitive Theory, to emphasise the important role cognition has in motivation and learning. This theory postulates that human achievement depends on the continuous interaction between environmental, behavioural and cognitive factors. The emphasis is on social influence and on external and internal social reinforcement (Schunk & Pajares, 2002). The Social Cognitive Theory
CHAPTER TWO: Review of the Literature

proposes students have a sense of personal agency with the ability to influence their own learning. At the heart of the theory is the construct of self-efficacy. Self-efficacy theory may answer questions about why some students demonstrate high levels of self-belief in their ability to complete tasks and others do not (Schunk & Pajares, 2009). Bandura (1997) considers it as one of the most important determinants of student motivation and achievement.

One of the best ways to clearly define self-efficacy is to distinguish it from related constructs (Maddux, 2001). Bandura’s (1986) theoretical framework noted self-efficacy as uniquely different from other associated ‘self’ constructs such as self-concept and self-esteem. Self-concept can be defined as “the set of attitudes a person holds towards himself” (Burns & Dobson, 1984, p. 473). Self-concept of ability relates to how individuals feel about past performances. In contrast, self-efficacy measures expectations about future attempts. Moreover, self-concept is concerned with general feelings, such as a student’s general performance at school, whereas self-efficacy relates to a student’s self-perceived ability to complete a specific task.

Self-esteem is defined by Rosenberg (1979) as the degree to which individuals feel positive or negative about themselves. Again, this concept is related to students’ feelings and whether they feel they are valuable, as opposed to self-efficacy which refers to students’ perceptions of attainment in specific tasks. In summary, self-concept and self-esteem pertain to student self-identity, and self-efficacy relates to what students believe they are capable of (Stets & Burke, 2000). A clear understanding of self-efficacy was paramount in determining the type of data collected in this study. Data was collected that targeted teacher understanding of student perceptions of their capabilities related to specific tasks, rather than students’ general feelings about their ability or acceptance.
2.3 Sources of Self-efficacy

Bandura’s research led him to understand the importance of self-efficacy and the ways in which it develops, and its influence on learning and behaviour. It is understood by Bandura that “self-efficacy beliefs are developed as students interpret information from four sources” (Bandura, 1986, as cited in Lau et al., 2018, p. 605). In the development of the Social Cognitive Theory, Bandura (1986) focused on four sources of efficacy beliefs, which were first identified in his earlier Social Learning Theory (Bandura, 1977a). The four sources he identified as being the most influential when developing self-efficacy are: mastery experience; vicarious experience; social persuasion; and physiological and emotional states (Bandura, 1977a) (see Figure 2.1).

Figure 2.1 Sources of self-efficacy (Bandura, 1986)

2.3.1 Mastery experience

Mastery experience relates to past accomplishments and involves making a judgement on the success or failure of personal experiences (Bandura, 1977a). This source purports if someone has been successful at completing a particular task, their perception will be that future attempts at that task will also be successful, raising levels of self-efficacy (Phan & Ngu, 2016). Conversely, previous failed attempts will lead to the perception they will not be successful in future performances and their self-efficacy will be undermined. A study of 442 third to sixth grade students at Baccalaureate schools in the
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United States revealed mastery experience accounted for a substantial amount of variance in students’ mathematics self-efficacy (Lau et al., 2018). The questionnaire pertaining to mathematics self-efficacy used in the study discovered mastery experience accounted for 70% of the variance in students’ mathematics self-efficacy. The questionnaire included the statement “I always do my best work in mathematics” (Lau et al., 2018 p. 608), which required students to consider their past performance in mathematics to measure their levels of self-efficacy in that subject area. Mastery experience is deemed by Bandura (1977a) as the most potent source of self-efficacy. Joet et al. (2011, p. 650) concurred with Bandura by affirming mastery experience was “a consistent and powerful predictor of self-efficacy across academic domains”.

2.3.2 Vicarious experience

The second most effective source as outlined by Bandura (1977a) is the vicarious experiences provided by social models. This concept identifies that behaviour is learned through social comparison and role modelling (Phan & Ngu, 2016). If people observe others who they perceive to have similar capabilities to themselves succeed, it convinces them they too could experience success. Conversely, self-efficacy levels can be lowered if a person observes others fail to succeed, despite high levels of effort. Modelling by others can raise levels of self-efficacy as it communicates to viewers they are capable of performing the task (Phan & Ngu, 2016). An Australian study conducted by Webb-Williams (2018) to investigate the self-efficacy levels of 182 primary school aged students in Science discovered vicarious experience was more influential as a source of self-efficacy for girls than it was for boys. Boys were more influenced by mastery experience while girls were more heavily influenced by social models, through both observation and social persuasion (Webb-Williams, 2018).

There is evidence to suggest the developmental stage of students can impact the level to which their self-efficacy beliefs are vicariously influenced by both adult and peer models (Lau et al., 2018). Bandura (1997) asserts that the self-efficacy levels of young students are more likely to be influenced by a peer, such as a classmate, rather than an
adult, such as a teacher. Specifically, role models of similar age, gender, ability levels and ethnicity are more likely to influence self-efficacy levels of young students as these models are seen to be most similar to themselves (Lau et al., 2018).

### 2.3.3 Social persuasion

Social persuasion (also known as verbal persuasion), by teachers or peers is considered by Bandura to be an influential source of self-efficacy. If an individual is socially persuaded that they have the ability to master a task, it will influence whether their attempt is successful. People who are persuaded they possess the capabilities to achieve success are more likely to apply sustained effort than if they maintain self-doubt (Bandura, 1997). Social persuasion was found to be effective when used by middle school teachers in Korea to raise the self-efficacy of their students. Students reported higher levels of self-efficacy when the social persuasion was delivered by a teacher who they deemed to be more credible than others (Won et al., 2017). This source is seen to be less effective than mastery or vicarious experience as the social persuasion from others must come from a trusted source and must lead to a successful attempt at the task for self-efficacy to be advanced.

Contradictory to the literature on the most influential source of self-efficacy, the Lau et al. (2018) study of third to sixth grade students at Baccalaureate schools in the United States found social persuasion to be the strongest predictor of self-efficacy. This was specifically relevant to the third, fourth and fifth grade students. In the questionnaire used by Lau and colleagues in this study to measure social persuasion as a predictor of self-efficacy toward mathematics, the students were asked to rate the statement “People often tell me that I am a good mathematics student” (Lau et al., 2018, p. 608). The authors suggest that findings to indicate social persuasion is the most powerful source of self-efficacy in mathematics for students in third, fourth and fifth grade are not surprising. This is considering that receiving feedback and guidance from teachers and peers are essential for mathematical problems and play a powerful role in self-efficacy and self-regulatory development of younger students. These findings differ from
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Bandura’s research (1977a) with older students suggesting mastery experience is the most powerful source of self-efficacy.

2.3.4 Physiological and emotional states

The final source of self-efficacy identified by Bandura (1977a) is the physiological and emotional states of students. This source claims student self-efficacy to derive from physiological states including mood as well as perceived levels of fatigue, anxiety, and stress (Lau et al., 2018). Students’ interpretation of their physiological and emotional states can have an impact on their perceptions of whether they will be successful at a particular task (Joet et al., 2011). This is particularly pertinent in the physical domain (Bandura, 1977a). Ultimately, improving students’ physical condition and their ability to combat stress and anxiety will allow more opportunity for self-efficacy to be strengthened. When students’ physiological state is neither too high nor too low, optimal functioning can occur and the development of self-efficacy more likely (Bandura 1997).

A study of 328 Year 6 students in Sydney, Australia collected data about the most influential sources of self-efficacy over a period of one year (Phan & Ngu, 2016). Despite previous research suggesting physiological and emotional states to be the least powerful indicator of self-efficacy (Joet et al., 2011; Pajaras, 2006), results of this study report physiological and emotional states to reliably affect self-efficacy beliefs. Phan and Ngu (2016) postulate physiological and emotional states may be more influential as a source of self-efficacy for elementary school students. They claim this to be a result of the cognitive maturity of students and the types of learning experiences they engage in. This study resulted in recommendations to encourage psychosocial sources of self-efficacy in elementary students, suggesting it may be “more accessible and feasible” in young students (Phan & Ngu, 2016, p. 560). At all stages of the data collection, the four sources of self-efficacy each had a positive impact on academic achievement (Phan & Ngu, 2016). In sum, there is empirical evidence to suggest the implementation of programs
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and pedagogical practices to emphasise the four sources of self-efficacy, should be encouraged to improve student learning behaviours and outcomes.

2.4 Learning Environments to Facilitate Self-efficacy Development

Learning environments rich in social and emotional learning have been identified in the literature as those most likely to raise the self-efficacy levels of students (Lamb et al., 2017). A study of the literature in this area has uncovered a lack of clarity around naming and defining social and emotional learning. In exchange for the term ‘social and emotional learning’ researchers have referred to ‘personal qualities’ (Duckworth & Yager, 2015), ‘mindsets, essential skills and habits’ (Gabrieli et al., 2015), ‘non-cognitive factors’ (Farrington et al., 2012) and ‘soft skills’ (Claxton, 2007). Regardless of the term used, social and emotional learning competencies such as self-efficacy, self-control and growth mindset are dominant predictors of academic and social outcomes (Allbright et al., 2019). The term ‘social and emotional learning’ will be used in this study to indicate the “beliefs, dispositions, attitudes, skills and behaviours that are distinct from academic learning” (Allbright et al., 2019, p. 37). Darling-Hammond et al. (2019) claim social and emotional learning environments to be safe and supportive and to provide students with opportunities to develop academic mindsets and learning strategies to support academic progress. Supportive environmental conditions can also assist students to build skills and knowledge to develop sustained, meaningful relationships, create emotional attachments and to develop a sense of identity and purpose (DEEWR, 2009). Examples of supportive environmental conditions to best facilitate self-efficacy have been investigated.

Recent investigations have found self-efficacy is best facilitated when social and emotional skills are taught in explicit and intentional ways (The Collaborative for Academic, Social and Emotional Learning [CASEL], 2019; Darling-Hammond et al., 2019). To allow self-efficacy, and other social and emotional constructs, to support students’ learning, the learning environment should be one that is: well sequenced to foster skill development; active, to allow students to master new skills and attitudes; focused on
developing personal and social skills; and explicit, targeting particular social and emotional skills (CASEL, 2019). These recent findings build on previous studies that examined the benefits of young learners attending pre-school programs and schools with learning environments rich in social and emotional learning. When students are placed in learning environments where they feel safe and supported, they are more likely to take risks and have deeper levels of engagement in the learning (Pascal & Bertram, 2018).

The Effective Provision of Pre-school Education project [EPPE] (Sylva et al., 2004) is a longitudinal study conducted in the United Kingdom between 1997 and 2004. The study investigated the pre-school provision of over 3000 children in a variety of settings between the ages of three and seven years. Results of the study favoured environments that promote social and emotional learning to assist with improved outcomes at school, as well as long term success in life. Further, Thompson (2016), suggested social and emotional skills develop most rapidly between the ages of three and five, indicating that as children enter school, their memory, thinking ability and potential to focus are starting to rapidly mature. Findings from the EPPE project (Sylva et al., 2004) demand a greater focus on the social, emotional and mental health requirements of children in early childhood and provided a series of recommendations to improve the outcomes for young children. One of these recommendations included a more comparable balance in teaching and learning between the social, emotional and cognitive development of all children.

Another study highlighting the importance of receiving quality education in the early years for better long-term outcomes is the High Scope Perry Preschool program (Schweinhart et al., 1993). The study, an early intervention program for students from disadvantaged families in the United States in the 1960s, randomly divided 123 students, aged three and four years, into two groups. One group attended a two-year, high-quality pre-school program, which focused on supporting the social and emotional growth of the students, while the students in the comparison group did not attend pre-school at all. The program emphasised active learning where students were engaged in
problem solving and decision-making tasks. The subjects of the study were interviewed again after the initial study at ages 14, 15, 19, 27, 40 and most recently, at age 55 (Heckman & Karapakula, 2019). During each interview, data were collected on improved economic, criminal, family and educational outcomes for Perry Pre-school students as they have grown. Results found the teaching of social and emotional skills in pre-school resulted in higher rates of employment, earnings and other economic outcomes. It also resulted in significantly reduced rates of arrests and imprisonment. These results suggest that meeting the social and emotional requirements of students at an early age is central to long term effects on crime, education and employment. They provide a strong case for an increased focus on these skills in classrooms in Australia. One key skill that students develop as a result of learning environments rich in social and emotional learning is self-efficacy.

The social and emotional competencies identified in the literature as being most influential in the development of self-efficacy are explored in detail below. They are: self-regulation, motivation, resilience, cognitive skills and dispositions for learning.

2.4.1 Self-regulated learning

Self-regulation is generally considered to be a child’s ability to effectively deal with stressors and their subsequent return to a calm and focused state (Shanker, 2018). Self-efficacy is best developed when children are in a pleasant or neutral state, as this is more likely to arouse feelings of confidence (Maddux, 2001). In addition, Maddux posits that children with high levels of self-efficacy are more resistant to setbacks and difficulties caused by self-regulation disruptions. This results in increased perseverance, the achievement of desired results and to heightened self-efficacy (Maddux, 2001). Shanker (2018) considers self-regulation to be essential when stress is present, reporting that stress can occur in the following interconnected domains: biological, emotional, cognitive, social and pro-social. He contends that heightened stress in any of these domains leads to negative consequences. The benefits of investing time in teaching self-regulation skills to children from a young age is evident. Guiding them to develop
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effective self-regulation in the early years provides the foundation for successful social and emotional learning (SEL) over their whole lives (Shanker, 2012). Shanker contends that once the trajectories of young learners are set, they can be difficult to change in the future. Certain strategies used by teachers, however, have been found to be more effective than others in teaching self-regulation skills.

In their quest to analyse teachers’ direct and indirect promotion of self-regulation strategies in the classroom, Kistner et al. (2015) filmed 20 German mathematics teachers with a total of 538 Year 9 students. Results concluded that teaching certain strategies for learning, such as curiosity and memory attention, teamed with a supportive learning environment, strongly correlated with improvement in mathematical learning. Conclusions of the study highlighted the benefits of explicit strategy instruction in teaching self-regulation strategies but found the teaching of these skills to be rare in the classroom. This substantiates research conducted by Perry et al. (2008), which claims “most teachers agree with the concept of supporting their students to be self-regulated learners, however many report feeling unsure how to do that” (cited in Dignath-van Ewijk et al., 2013, p. 350). This lack of expertise in learning and instruction in schools is of concern as research suggests learner centred approaches are more likely to provide students with the self-regulation skills they require for life-long learning (Shanker, 2012). A second area identified as being influential in the development of self-efficacy is motivation.

2.4.2 Motivation

Motivation is often described as the incentive to engage in certain behaviour and is created by perception of self and of the current task to be performed (Lamb et. al, 2017). Research literature identifies self-efficacy, as well as a sense of agency, to underpin motivation (Bandura, 1997). When combined, self-efficacy and motivation have a significant influence on student learning (Bandura, 1997; Pascal & Bertram, 2018).
The learning environments teachers create have a significant impact on levels of student motivation. McCombs et al. (2008) conducted a study of over 2100 students from Kindergarten to Year 3, and their teachers, to identify the most effective teaching methods, or practices, for student motivation. Students reported increased levels of motivation when valued as a partner in the learning process. Being included in decision making and having teachers who encouraged and respected their individual developmental differences increased student motivation. Learning centred teaching practices are considered by McCombs et al. (2006) to contribute to the development of positive life-long skills and to result in students feeling more positive about their own abilities. Despite these findings, the McCombs et al. (2008) study identified a steady decline in both student motivation and self-perceived confidence by the end of Year 3. While this could be a result of students having more realistic goals and expectations, it may also be a leading cause of increased levels of disengagement in schools (Goss et al., 2017). This evidence supports a study conducted by the Early Child Care Research Network (NICHD) (2005) of over 13000 Year 3 students which revealed teaching practices appear low in quality, with teachers focusing on drill-like rather than engaging activities (NICHD, 2005). McCombs (2003) concluded “some teacher practices need to be changed dramatically based on sound theory and empirical evidence to enhance student learning and motivation” (cited in McCombs et al., 2008 p. 17).

A recent meta-analysis of motivation studies found the pedagogical practices of teachers and the learning environments they establish can affect students’ levels of motivation (Lazowski & Hulleman, 2016). Additionally, motivation interventions have confirmed motivation can be taught and learned and a range of strategies have proven to be successful in schools (Wigfield & Wentzel, 2007). In addition to self-regulation and motivation, resilience was identified as impacting on self-efficacy development.

### 2.4.3 Resilience

Early childhood is a key time to develop skills in resilience to assist students to better cope with traumatic or stressful situations (United Nations Children’s Fund [UNCF],...
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2019). Resilience has been defined as “the quality of being competent in spite of adversity and retaining positive expectations in the face of setbacks” (Mykkanen et al., 2013, p. 440). Resilience is considered a skill that will boost productivity in young workers and ultimately favour them in a competitive job market (UNCF, 2019).

Growing evidence suggests it is important for teachers to foster academic resilience in students (Cassidy, 2015; Mykkanen et al., 2013) as all students are likely to face challenges and setbacks at various points throughout their education as well as in their lives beyond school. Research reveals that academic resilience may be influenced by more than the classroom teacher. For example, Agasisti et al. (2018) researched the academic resilience of students from disadvantaged backgrounds from 70 school systems worldwide to discover two factors that created a better climate for students to learn. First, schools where teacher turnover is low, and second where school leaders adopted a transformation leadership style. They report that school leaders who motivate staff to support the school’s vision and goals are likely to create a positive school climate, resulting in increased levels of academic resilience. Sameroff (2013) proposes resilience is adaptive and is relevant to all students in their daily challenges, rather being limited to those students who have suffered extreme hardship.

Levels of student resilience were analysed in a study in Finland in 2013 where six and seven-year-old students were videotaped while completing a mathematical task (Mykkanen et al., 2013). Results of this study showed higher levels of concentration and perseverance amongst those students who sought assistance from adults and peers throughout the task, identifying good relationships are “the most robust source of resilience” (p. 449). Drawing from this insight, Mykkanen et al. (2013) conclude that promoting resilience in the context of school may be instrumental in enhancing students’ abilities to achieve success. Providing the right environmental conditions for students to develop resilience in schools is important (Education Council, 2019). The Alice Springs (Mparntwe) Education Declaration (Education Council, 2019) suggests schools use support strategies to ensure they are responsive to individual learning
requirements, creating a solid foundation for success. Some schools, however, are finding this challenging.

There is some doubt amongst teachers about how best to teach skills in resilience. An Australian study in resilience conducted by Archdall and Kilderry in 2016 asked educators of young students about the importance of resilience across the curriculum. A survey was followed with semi-structured interviews to investigate educator understandings about, and practice of teaching resilience. The 19 participants were diploma or teacher qualified educators from long day care settings in Melbourne, Australia. Despite participants having a good understanding of what resilience was, results showed most educators were unclear about, and unprepared for, how to support the development of resilience. In the same way, Lamb et al. (2017), raised concerns that while teachers have a lot of experience in teaching and assessing literacy and numeracy, there is a question as to whether they have a deep understanding of how to teach and assess areas such as resilience, despite this not being a new concept. Bandura (2008) highlighted the connection between self-efficacy and resilience by explaining that increased belief in their ability to respond positively to challenging situations can influence the outcome of an experience for students. Current research has identified that in addition to self-regulated learning, motivation and resilience, cognitive skills also facilitate self-efficacy development.

2.4.4 Cognitive skills

As identified by Bandura (1986), the cognitive skills students are taught to develop their thinking and learning are integral to the development of self-efficacy. Skills such as problem solving, critical thinking and metacognition allow students to process efficacy information arising from social, vicarious, mastery and emotive sources (Bandura, 1986). In a reciprocal manner, self-efficacy beliefs influence the cognitive ability students have, to think, learn and reflect. Self-efficacy, therefore, is largely a cognitive appraisal of one’s ability to complete future tasks successfully, based on past performances (Ayllon et al., 2019). Cognitive skills also encourage students to persist if they believe they are
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going to succeed, which is paramount when faced with new or complex learning (Pajares, 2008). Maddux and Kleiman (2016) argue that students with high levels of self-efficacy tend to use more complex cognitive strategies. This suggests self-efficacy is a precursor to both cognitive and non-cognitive skills. Also affecting their response to learning related challenges are student dispositions.

2.4.5 Dispositions for learning

Learning dispositions have been linked to self-efficacy in preparing students for positive life trajectories, both in and beyond school (Stajkovic et al., 2017). Dispositions for learning are described by Katz as “a pattern of behavior exhibited frequently ... in the absence of coercion ... constituting a habit of mind under some conscious and voluntary control ... intentional and oriented to broad goals” (1993, p. 16). While self-efficacy depends on the interaction between environmental, behavioural and cognitive factors (Bandura, 1986), dispositions for learning are described by Carr et al. (2010) as reciprocal relationships between the individual and the environment. Carr et al. suggest there are five distinct learning dispositions that result in more effective learning, including: taking an interest; being involved; being persistent; being responsible; and communicating with others. Carr has summarised these as “being ready, being willing and being able” (Carr, 2001, pp. 24-25).

In contrast, Pascal and Bertram (2018) have identified four main dispositions possessed by effective learners, including: independence, creativity, self-motivation and resilience. Their study highlights the important role of significant peers and teachers in early childhood environments, where learning dispositions can be supported or weakened by interactions with these significant people. Teachers, for example, have the ability to strengthen desirable dispositions such as curiosity and persistence and diminish undesirable ones such as selfishness and impatience. According to Pascal and Bertram teachers need to focus on wider outcomes to support the growth of young minds as they claim a focus on subject knowledge, such as language and mathematics is insufficient. Pascal and Bertram report dispositions to have long term effects on lifelong
learning. Concerns have been raised, however, that less time is being spent nurturing dispositions in the early years of school. Play experiences, for example, promote dispositions towards learning (DEEWR, 2009) but are being diminished from early childhood programs and replaced by formal instruction (Da Ros-Voseles & Fowler-Haughey, 2007). Reducing the amount of play at the expense of dispositions in early childhood settings could be limiting learning. In the case of literacy, teachers are sometimes employing inappropriate strategies that could result in higher scores on standardised tests yet decrease student eagerness and enjoyment for reading (Da Ros-Voseles and Fowler-Haughey (2007).

By fostering dispositions alongside other cognitive and non-cognitive skills, teachers will be developing positive approaches to learning in their students. Denton and West (2002) noted that students who use positive approaches to learning may acquire content knowledge and skills more rapidly. This is in addition to achieving higher levels of performance. The relationship between learning dispositions and self-efficacy was considered by Stajkovic et al. (2017) who stressed that when achieving learning goals, students require both the staying power of their learning dispositions and the self-belief in their capabilities to succeed. They also assert that despite their dispositions, some students may not elect to participate in activities due to poor self-efficacy.

Whilst this is not an exhaustive list of the environments identified in self-efficacy literature as being optimal for self-efficacy development, it provides some detail about those considered as most influential. Parker and Thomsen (2019) support additional research in this area to extend understandings about the contribution these environments could make to effective learning. In addition to the learning environments identified in self-efficacy literature, a range of teaching strategies found to be influential in self-efficacy development were uncovered.
2.5 Teaching Strategies to Increase Student Self-efficacy

The learning environment teachers create, and the strategies they use, have the power to influence levels of student self-efficacy. Recent studies (Hattie et al., 2016; Huang, 2016; Phan & Ngu, 2016) found the specific teaching practices teachers used in the classroom can capitalise on Bandura’s (1977a) sources of self-efficacy and improve student learning. Teaching strategies in this thesis are considered to be the practices and approaches used by teachers to facilitate student learning. Building on the learning environments discussed in the previous section, a range of strategies were found in the literature to successfully raise the self-efficacy levels of students. These include: collaborative learning, goal setting, teacher feedback, modelling, learning through play, explicit teaching of social skills and professional learning for teachers.

2.5.1 Collaborative learning

Collaborative learning interventions have proven to be successful in raising self-efficacy levels in schools. Burke and Williams (2012) in their study of 178 primary aged students in Scotland, found that students who worked in cooperative and collaborative learning styles had increased levels of self-efficacy compared to those students who worked individually. Cooperative and collaborative learning approaches are found to be more successful when the group sizes are small (six to eight members), the conditions of the group work have been explicitly explained and reinforced by teachers, and when the strategy is appropriate for the skills and knowledge being taught (Parker & Thomsen, 2019). Phan and Ngu (2016) maintain the physical organisation of the classroom can affect levels of student engagement. They encourage furniture to be organised into small groups to encourage cooperative learning and collective efficacy. The next teaching strategy found to have a positive impact on students’ self-efficacy levels is goal setting.
2.5.2 Goal setting

Setting goals for achievement typically come in two forms: performance goals and mastery goals. Performance goals relate to outperforming others and to displaying superior performance. Mastery goals involve the mastering of tasks with the aim of self-improvement and consider a long-term view to achieving the outcome (Ames, 1995). Performance goals and mastery goals represent different ideas about approaching and engaging in an activity and of levels of success and achievement. The focus of mastery goals is on the value of learning, rather than the immediate achievement of an outcome. Student self-efficacy is based on the belief their efforts will lead to success, or a sense of mastery (Phan & Ngu, 2016). The practice of teaching students to set mastery goals is recommended when considering their self-efficacy levels (Lamb et al., 2017).

Setting goals for learning has been identified as a successful strategy when raising the self-efficacy of students. Huang (2016) conducted a meta-analysis of 125 studies examining the relationship between self-efficacy and goal mastery. Results from the study report the association between self-efficacy and mastery goals to be moderate to strong. Bandura (1986) suggests that goals provide a standard for students to judge their success as well as having a significant impact on student self-efficacy and achievement. The practice of setting learning goals requires students to reflect on past performances to set realistic expectations for further achievements. Achieving the goals they have set, provides students with feelings of success, which in turn raises their self-efficacy for that task.

There is further evidence to suggest reciprocal links between mastery goals and achievement. King and McInerney (2016) in a study of over 8000 secondary students in Hong Kong, examined the reciprocal relationship between mastery goals, metacognitive use and academic achievement. They found that students who have high levels of goal mastery were more likely to transfer these skills in to solving problems, resulting in increased performance (Belenky & Nokes-Malach, 2013). When examining the relationship between self-efficacy and goal mastery, it is interesting to note the findings
of Ferla et al. (2010). They observed that if self-efficacy is not accompanied by goal mastery, self-perceived confidence can turn in to overconfidence, resulting in lower levels of persistence and poorer academic results. As well as collaborative learning and goal setting, positive academic results and increased self-efficacy, have been associated with the feedback students receive from their teachers.

### 2.5.3 Teacher feedback

Teacher feedback is effective in improving student self-efficacy in a range of ways. The provision of verbal feedback was found by Phan and Ngu (2016) to help “formulate and heighten students’ academic self-efficacy beliefs” (p. 561). Gonski et al. (2018) agree that by using frequent and immediate student feedback, teachers are working towards improving engagement and learning effectiveness. When considering teacher feedback as a source of self-efficacy, Hattie and Timperley (2007), identified three ways in which teacher feedback can be used effectively to increase student self-efficacy. They suggest when providing feedback to students, teachers should: focus on feedback about lack of effort rather than lack of ability when students perform poorly; highlight student ability when they succeed at difficult and meaningful tasks; and be careful about offering help to students without them asking for it, especially the low achievers. More recently, Fisher et al. (2016) have reinforced that student learning is strengthened when appropriate feedback is provided to students. They claim to be effective, feedback should be “timely, specific, understandable and actionable” (Fisher et al., 2016, p. 100). They attest that what teachers say to students and how they say it, contributes to their self-identity, sense of agency and their success. Lazowksi and Hulleman (2016) in their meta-analysis of 74 studies on motivation interventions in education, concluded the timing of feedback was not as potent as the type of feedback given. They support claims that feedback related to the effort students applied to their learning led to increased self-efficacy as well as to increased performance.

When used correctly, feedback can be a powerful tool (Hattie et al., 2016). Hattie et al. claim there is a strong connection between teacher-to-student feedback and good,
effective learning. For feedback to be effective they suggest students should initially understand what successful learning looks like. Teachers and students should have a shared understanding of what the criteria for success is and what the steps are to get there. This understanding will help students to deepen their content knowledge as well as to improve their self-regulatory habits such as reflecting on metacognitive processes. Hattie et al. (2016) also suggest promoting students’ listening skills so they reap the most benefit from the feedback offered. To improve listening skills, they suggest providing feedback regularly and to teach students to paraphrase the feedback by repeating it back in a summarised form to ensure the student understands and knows what to do next. This is used successfully by a Kindergarten teacher in France who explicitly models paraphrasing to his students (Bond & Wasik, 2009, as cited in Hattie et al., 2016). This skill is then practised by students as they provide critiques and feedback to each other. In addition to teacher feedback, the modelling of skills was also found to positively impact student self-efficacy development.

2.5.4 Modelling

Teachers modelling and demonstrating skills to students in early childhood contexts is a recommended strategy to extend their thinking and learning (DEEWR, 2009). In addition to effective modelling by teachers and educators, peer modelling and self-modelling have also been identified as strategies to support student learning and to raise the self-efficacy levels of fifth-grade students (Siegle & McCoach, 2007). The observation of others successfully completing tasks vicariously, leads to assumptions they too can complete that task successfully (Bandura, 1977a). Self-modelling involves students watching videotapes of themselves successfully achieving tasks. As students watch themselves achieving success, it confirms to them that they have progressed, enhancing their self-efficacy for the skill (Siegle & McCoach, 2007). Parker and Thomsen (2019) emphasise that teachers can facilitate successful modelling experiences by considering their own pedagogical practices. They suggest utilising small group approaches that allow students to talk aloud and observe peer models making errors, which can result in low achieving students perceiving the models as similar to themselves. Having peers
discuss coping behaviours in front of other students, can lead to higher self-efficacy and increased achievement (Pajares, 2008). Students are constantly exposed to other models, such as those in their family and community, who also influence student learning.

It is important not to undervalue the impact of parents, caregivers and communities when considering the modelling of behaviour to young children. Parker and Thomsen (2019) highlight the role that families and communities have in communicating values and beliefs. Parents have views on education that will either support or oppose their view on supporting their child in the home (Parker & Thomsen, 2019). This in turn could affect parent-teacher communication and relationships. Many of these values and beliefs that children acquire at home are also practised and communicated through play.

### 2.5.5 Learning through play

Play is a cornerstone of early childhood education and affords students a range of learning opportunities and benefits, including the development of self-efficacy. Play is considered by Parker and Thomsen (2019) to be a relevant and authentic experience in which students actively learn in an integrated and collaborative manner. The authors stress meaningful play experiences result in “increased learner engagement, motivation and self-efficacy” (p. 8). Engaging in play that is meaningful, socially interactive, actively engaging, iterative and joyful, students are more likely to experience enjoyment in learning as well as increased levels of self-efficacy (Parker & Thomsen, 2019). Furthermore, playful learning experiences develop skills in self-regulation, foster problem-solving skills and allow students to better understand social rules (Danniels & Pyle, 2018). All of which are skills that have been associated with effective learning and the development of self-efficacy (CASEL, 2019; Lamb et al., 2017). The value of play-based learning for Kindergarten and Pre-primary students was also identified in Focus 2019 (Department of Education Western Australia, 2019). In this document, schools are encouraged to use play-based learning programs and explore the role that play has in Kindergarten and Pre-primary teaching.
Despite plentiful research in the field of play, it has been identified in play literature that educators have a varied understanding of what constitutes play (Gasteiger, 2015). Play, according to Gasteiger’s research, is considered to take place outside the classroom (e.g. during recess) when children are free from adult influence and involvement. From a different perspective, Zosh et al. (2017) link play with learning and describe a continuum of play ranging from free play to more structured, guided play. They believe adults to have a key role in children’s play, including preparing the environment and asking questions to develop imagination and curiosity. Research suggests that areas such as literacy and numeracy can be promoted through well-planned, playful learning experiences, as long as the focus is on fun and enjoyment (Anning et al., 2005). Some teachers, however, understand play to be very distinct from learning. They consider learning to occur when using methods such as direct instruction (Nilsson et al., 2018).

The Focus 2019 document (Department of Education Western Australia, 2019) made recommendations that education services provide further examples to schools about what play is and the role of play-based learning in early childhood education to ensure educators were better informed about the types and benefits of play.

Play-based programs have found to be advantageous to students in early childhood settings. A study conducted by Vogt et al. (2018) in Europe compared two different pedagogical approaches when teaching mathematics to Kindergarten aged students. The study included 35 educators and 364 six-year-old students who were randomly assigned to either a play-based program, an explicit teaching program or a control group. The students took part in pre- and post-testing and participated in their assigned program for eight weeks. Results showed significantly higher learning outcomes for the students who took part in the play-based mathematics program compared to the traditional Kindergarten program in the control group. The explicit teaching program was found to be most beneficial to those students with low levels of competence, whereas the play-based program was of benefit to all students with a wide range of abilities. The educators in the study evaluated the play-based program to be the most fun and most engaging, which is likely to generate positive emotions from the students (Anders & Rossbach, 2015). Although play has been identified as a prime medium for students to
practise their social skills and advance their self-efficacy there is evidence to suggest benefit in explicitly teaching some social and emotional skills such as confidence, persistence, organisation, getting along and emotional resilience (Ashdown & Bernard, 2012).

2.5.6 Explicit teaching

When teaching social and emotional skills to young children, skills should be taught in intentional and explicit ways, rather than chancing it to teachable moments or assumptions that children will learn them naturally (Darling-Hammond et al., 2019; Goss et al., 2017; Parker & Thomsen, 2019). This research is referring specifically to the explicit teaching of social and emotional skills, such as developing skills in persistence, cooperation and resilience. It is not suggesting core curriculum content such as numeracy and literacy are taught primarily in this way. In addition to social and emotional skills, strategies for learning such as goal setting should be taught in explicit and intentional ways. Providing explicit instruction about learning strategies helps students to assume responsibility for their learning and grows their self-efficacy (Education Review Office, 2013). Having the knowledge to teach skills for learning, such as self-efficacy, can be acquired through professional learning programs for teachers.

2.6 Professional Learning for Teachers

By completing professional learning in effective facilitation of self-efficacy, teachers can improve the self-efficacy of their students. A study conducted by Siegle and McCoach in 2007 engaged mathematics teachers in professional learning about self-efficacy. Eight hundred and seventy-two fifth grade students from 40 classrooms in the United States were randomly assigned to either a treatment or control group. Students in both groups completed a student mathematics survey, to assess their self-efficacy levels related to their mathematics ability, and a mathematics achievement test, before and after a unit on measurement was taught. Teachers of the students in the treatment group received professional learning on the self-efficacy construct, and on strategies to use in their
classrooms, before implementing them during the four-week measurement program with their students.

The teachers assigned to the treatment group received professional learning on relevant teaching strategies in three specific areas. These were: goal setting, which alerted students to their past achievements; modelling, which involved students observing peers successfully completing tasks; and teacher feedback, which included complimenting students on their progress and effort (Siegle & McCoach, 2007). These three areas were selected by the researchers based on previous research of Bandura (1986) which reported that self-efficacy was most strongly influenced by mastery experiences, vicarious experiences, and social persuasion. The results of the study showed an increase in student self-efficacy towards mathematics for those students taught by teachers who had received professional learning in self-efficacy strategies. Findings of the study suggest that setting goals used to highlight students' skills and subsequent past performances (mastery experience) proved to be the most influential strategy. This study demonstrates that student self-efficacy can be increased by teachers modifying their teaching strategies with minimal change (Siegle & McCoach, 2007). Key to the effectiveness of the teaching strategies that teachers use to increase student self-efficacy is the environment in which they are taught. Environments where students feel as though they have more control over their learning have been found to have a positive impact on student self-efficacy levels.

2.7 Locus of Control

Locus of control and self-efficacy are often associated in the literature as they both refer to the degree of control one feels over the outcome of an activity (Lamb et al., 2017). While self-efficacy pertains to one's perceived ability to complete an activity, locus of control is the sense of belief that you are in control of the result of an activity (Lamb et al., 2017). Research in locus of control has established that both, emotion recognition and locus of control, are learned skills that can be influenced by the learning environment (Nowicki, 2016). As these skills develop, students move from having an
external locus of control to one that becomes more internal. Results of a study conducted on 178 students in England with a mean age of eight years, determined that students with a higher internal score perceive that outcomes are under their own control in contrast to students with an external locus who perceive that outcomes are controlled by factors outside their control (Nowicki et al., 2019). The concepts of self-efficacy and locus of control are placed together in the EYLF (DEEWR, 2009) considered as ‘agency’. In developing agency, students should actively make choices and decisions about events, including their learning. This requires students to have a positive outlook and approach new experiences with confidence (DEEWR, 2009). Self-efficacy and locus of control are often studied together in the literature and have both been positively associated with student outcomes.

2.8 Self-efficacy and Achievement

Reciprocal links have been established between self-efficacy and achievement. Since the development of Bandura’s Social Cognitive Theory (1986), a number of studies have been conducted that correlate the relationship between student self-efficacy and academic achievement (Pascal & Bertram, 2018; Stajkovic et al., 2017). One such study was a meta-analysis of studies conducted on the influence of self-efficacy on academic performance. The study examined 50 antecedents of academic performance and identified self-efficacy to have the strongest correlation of all 50 pre-cursors (Richardson et al., 2012). Although most of these studies were conducted with students in secondary schools, it provides a good case for the teaching of self-efficacy skills as a means to support student learning in other settings. In a similar but much larger study, Hattie (2009) conducted a meta-analysis of more than 50,000 studies, collecting data from more than 80 million students. He too found the relationship between self-efficacy and achievement to be reciprocal and concluded that students who saw themselves as poor readers were less likely to improve their reading. Limitations of such studies were noted by Usher and Pajares (2008) who conveyed that there are some students who are capable of higher achievement levels but who, as a result of demoralising experiences or
fixed mind-sets imposed at birth, have a great deal of difficulty believing they can reach achievement milestones.

Most of the research relating to self-efficacy and academic achievement has been conducted with students in secondary or tertiary settings. The focus for research in this area has been on the positive effect self-efficacy has on achievement standards (Pascal & Bertram, 2018; Stajkovic et al., 2017). The emphasis in this current study is on how educators use self-efficacy as a tool to help students in Years K-2 to regulate their learning to make it more effective, rather than focusing on their levels of academic achievement. High levels of student self-efficacy are highlighted in the literature as playing a pivotal role in effective learning and are best nurtured in environments with a rich focus on social and emotional skills (CASEL, 2019; Darling-Hammond et al., 2019).

Employing approaches conducive to learning, educators can make a pivotal contribution to the early school success of young learners (Pascal & Bertram, 2018). Learning is considered an active process in which the learner connects new experiences with existing knowledge and understanding (Watkins, 2009). For learning to be considered effective, students are required to monitor and review strategies for the particular goal and context, which requires students to be versatile, reflective and have a positive attitude to learning (Watkins, 2009). This definition of effective learning provides a more detailed analysis than the one from Melhuish et al. (2006) who claim effective learning takes place when students make greater progress than predicted, based on prior academic achievement and characteristics. Both definitions imply that effective learning is more than a passive process of knowledge attainment, with predictable and measurable outcomes.

In early childhood environments, the focus is on building the skills and capacities to teach students how to learn effectively, rather than measuring their academic outcomes (DEEWR, 2009). Instrumental to learning effectively in the early years, is the knowledge and understanding teachers have about how to best to support students in this area. It
CHAPTER TWO: Review of the Literature

is important therefore to explore how teachers’ understandings about self-efficacy are formed.

2.9 Teacher Understanding of Student Self-efficacy

Teacher levels of understanding of, and range of experience with, student self-efficacy have an impact upon the teaching strategies they use in the classroom. Teachers’ understandings are developed from a range of sources including: their previous education and experiences (Siegle & McCoach, 2007); the professional learning programs they are exposed to in their schools (Bernard, 2017); and their personal value and belief systems.

Personal values and belief systems are one source of teachers’ understanding about self-efficacy. Everyone holds a range of beliefs that influence the way they think, feel and behave. In education settings, teaching and learning practices are influenced by the educational beliefs carried by teachers and students. Educational beliefs are defined as “the statements teachers make about their ideas, thoughts and knowledge that are expressed as evaluations of what should be done and is preferable” (Basturkmen et al., 2004, cited in Tapia, 2013, p. 78). Barcelos and Kajala (2003) further analysed the nature of beliefs and assert that beliefs are constructed socially, are dynamic and change as we experience the world.

Limited research has been performed on professional learning programs for teachers in student self-efficacy development. Increased professional learning in this area could investigate teacher understanding of self-efficacy and whether their understanding impacts student levels of self-efficacy in early childhood contexts. One study (Siegle & McCoach, 2007) discussed earlier, identified that teachers can increase student self-efficacy by modifying their teaching practice with minimal effort. As a result, Siegle and McCoach, call for increased professional development opportunities that expose teachers to the theory of self-efficacy as well as the strategies that best facilitate it to support student learning. By having experience in using programs and strategies that
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advance student self-efficacy, in addition to the relevant professional learning that supports their implementation, educators can increase their understanding of self-efficacy and the important role it has in student learning.

The professional learning pre-service teachers receive during their studies influences their understanding of areas that inform their pedagogy (Sjoberg, 2018). There have been numerous studies into the effect pre-service education has on teacher self-efficacy (Martins et al., 2015; Pendergast et al., 2011; Velthuis et al., 2014) but limited research on the effect pre-service education has on student self-efficacy. Findings from Barblett et al. (2016) suggest some teachers lack knowledge in the facilitation of experiences that develop social and emotional skills, such as play. Quality play experiences contribute to the social and emotional skills students require to develop self-efficacy behaviours that lead to learning (Sylva et al., 2004). The Barblett et al. study (2016) reports some participants blame “poor-quality pre-service teacher education for the teachers’ lack of knowledge” in some areas (p. 39). In addition, an examination of eight text books used to prepare pre-service teachers for their future careers in early childhood education, found there to be a lack of strategies and information on how to teach for learning (Hatch, 2010). When teachers consider what they understand about self-efficacy, it is important they reflect on research indicating the impact of factors such as the culture and gender of the student.

2.10 The Impact of Culture and Gender on Self-efficacy

Measuring student levels of self-efficacy can be problematic. Some researchers warn of considerations that need to be made when making accurate judgments about levels of student self-efficacy (Klassen, 2004; Ross et al., 2016). Two such considerations include the impact that students’ culture and gender can have on self-efficacy development and operation. Taking two of Bandura’s four sources of self-efficacy, researchers explored the impact of cultural difference on students’ self-efficacy development, and its use, in three countries (Ahn et al., 2016). This study of 2,893 middle school students in Korea, Philippines and the United States aimed to investigate whether the self-efficacy sources
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of vicarious experiences and social persuasion had a similar impact on student self-efficacy levels across different cultures. Results showed that students in the United States and Korea reported vicarious experiences from teachers, and verbal support from family and peers, to be equally effective sources of self-efficacy. Filipino students, however, found social persuasion to be the most effective source. Overall, students from the United States reported to have higher levels of self-efficacy than students from the other two nations (Ahn et al., 2016). These results support previous claims that self-efficacy operates differently in western cultures and non-western cultures with typically higher rates of self-efficacy identified in western students (Klassen, 2004). While students in western cultures work more independently, those in non-western cultures tend to work in a more collective manner. This collective identity results in non-western students reporting lower rates of self-efficacy, despite their performance being equivalent or higher than students in western cultures (Klassen, 2004).

According to Çelik, Cetin and Tutkun (2015) it is almost impossible not to consider the role of culture when accounting for relationships between certain predictors and their outcomes. They claim students’ culture to be an important ingredient in determining the complex relationship between personal factors and learning. Another mitigating influence on self-efficacy has shown to be the gender of students.

There is research to suggest the gender of students influences their levels of self-efficacy (Diseth et al., 2014; Ross et al., 2016). After investigating the factors affecting levels of self-efficacy in eighth grade students in Norway, Diseth et al. (2014) observed lower levels of self-efficacy among girls, despite higher levels of performance. Also, in Norway, Fallan and Opstad (2016) identified significantly lower levels of self-efficacy among female tertiary economics students than their male peers. The 798 students involved in this study undertook a Meyer-Briggs Type Indicator test to identify their personality type. This data was then used to determine how each student’s personality and temperament, in relation to their gender, affected their patterns of self-efficacy. It was established that lower levels of self-efficacy among female economic students was only present in some personality types. The female students who were strong in the areas of
intuition and feeling, and intuition and thinking, had lower self-efficacy than those females who were high in the areas of sensing and perception. Higher levels of self-efficacy for male students, compared to the females, was only identified in the male students who scored highly in the areas of intuition and thinking. This study indicates the need to look beyond gender when considering differences in student levels of self-efficacy. It also highlights the need to be cautious when drawing conclusions that self-efficacy is consistently affected by gender.

Differences in the self-efficacy levels of male and female students were uncovered in a study of 585 students in Australian universities (Ross et al., 2016). The study, which examined student levels of self-efficacy toward literacy, found a link between levels of self-efficacy and motivation. During their time at university, it was found that female students had higher levels of intrinsic academic motivation and compatible levels of self-efficacy. Male students experienced a considerable dip in motivation and self-efficacy in their second year of study. Other studies (Lau et al., 2018; Rajan et al., 2017) reported no significant difference in levels of self-efficacy among males and females.

2.11 Summary

This literature review identified self-efficacy as essential for effective, life-long learning. Bandura’s Social Cognitive Theory (1977a) was considered the framework from which the concept of self-efficacy was developed. The framework considers self-efficacy the most salient factor in student motivation and achievement. The four sources of self-efficacy as outlined by Bandura were examined and their effectiveness discussed. Learning environments with a culture of social and emotional learning were noted as those most responsive to the four sources of self-efficacy. Environments that encouraged self-regulation, motivation, resilience, dispositions for learning and had a focus on cognitive skills were linked to self-efficacy development. A number of relevant teaching strategies were discussed and their significance to self-efficacy explored. Some of these strategies were identified as being able to be implemented with minimal professional knowledge of the self-efficacy construct. Research found that despite
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literature recommending the use of strategies to develop self-efficacy from a young age, many teachers are uncertain how to, or find restrictions in, implementing these strategies in their daily programs. Connections between students’ locus of control, agency and sense of self-efficacy were explored along with the links between self-efficacy and effective learning. The source of teacher understandings about self-efficacy were discussed with previous classroom experiences being identified as key to their knowledge in this area. Finally, the impact of students’ culture and gender on their self-efficacy levels were considered. The following chapter will detail the conceptual framework used in this study.
CHAPTER THREE: Conceptual Framework

3.1 Conceptual Framework

This chapter considers the conceptual framework used in this study (see Figure 3.1). The framework in Figure 3.1 provides a visual frame used to clarify the most significant aspects of the phenomenon under investigation. It enabled the Researcher to clearly highlight each concept and the relationship between them based on theory and research identified in the literature review. This framework led to the formation of relevant research questions and assisted in determining the most appropriate methods of data collection (Maxwell, 2013). The construction of this conceptual framework provided clarity to the Researcher about what they planned to achieve and the process they will undertake to best achieve it. A review of self-efficacy literature exposed a dearth of research into self-efficacy development in students in Kindergarten, Pre-primary and in the early years of primary school.

The conceptual framework (see Figure 3.1) is informed by Bronfenbrenner’s ecological systems theory (1979) exhibiting radiating circles with reciprocity between each layer. This adaptation of Bronfenbrenner’ ecological model illustrates the complex systems, and interaction between those systems, that impact on a teacher’s understanding of, and ability to, facilitate self-efficacy in students. The policies, practices and priorities imposed on teachers, both to the school by systems (e.g. the Education Department) and by the school themselves, can affect the teaching focus in the classroom. Ultimately, this affects outcomes for students and determines whether skills for learning, such as self-efficacy, are taught.

The framework in Figure 3.1 uses Bandura’s Social Cognitive Theory (1986) as its foundation, with self-efficacy at its core. The framework expands to consider aspects from the literature such as how self-efficacy is taught effectively and includes reported factors that might impact a teacher’s ability to teach skills to support self-efficacy development. The diagram as shown in Figure 3.1 is described below.
CHAPTER THREE: Conceptual Framework

Figure 3.1 Conceptual Framework of self-efficacy development

At the centre of the conceptual framework is the student and their levels of self-efficacy. Individual self-efficacy is formed by the mutual influence of cognitive, behavioural and environmental variables on student self-efficacy levels (Bandura, 1986) as represented in the three boxes. The central circle also houses the four sources of self-efficacy as described by Bandura, which are: mastery experience, vicarious experience, social persuasion and physiological and emotional states. Mastery experience considers students’ previous attempt at a task and their evaluation of it. Vicarious experiences involve learning through social comparisons and modelling from others, including teachers and peers. Social persuasion includes the feedback students receive from teachers and peers and, finally, the physiological and emotional states of the student engages them to judge their capability and vulnerability toward the successful completion of a task. The four sources work to develop students’ self-efficacy by creating positive changes the environmental, cognitive and behavioural factors that drive a student’s learning. The conceptual framework (see Figure 3.1) highlights the
promotion of these four sources with students as they will have the greatest and most immediate impact on their self-efficacy levels.

Moving outwards from the centre circle in Figure 3.1 is a larger circle containing five competencies of social and emotional learning, which have been identified in the literature as key to supporting the four sources of self-efficacy development. The first competency is self-regulated learning. With effective self-regulation skills, it is more likely that students will remain in a calm physiological or emotional state, which allows self-efficacy development to occur (Shanker, 2012). Motivation is also considered to be important for self-efficacy development because it leads to the engagement levels that are required for mastery experience (National Scientific Council on the Developing Child, 2018). Self-efficacy is associated with levels of resilience in the literature. Bandura (2008) highlighted that students require healthy levels of self-efficacy to respond positively to challenging situations. Cognitive skills such as problem solving, critical thinking and metacognition are required for students to process and apply self-efficacy information (Lamb et al., 2017). Further, developing cognitive skills such as evaluating and reflecting will allow students to set goals for their learning, which is important when working with students to raise their levels of self-efficacy. The fifth and final competency is dispositions for learning. Dispositions such as curiosity, persistence and independence have been associated with increased levels of self-efficacy (Pascal & Bertram, 2018). The increased sense of control that comes with independence allows students to feel they have the capacity to influence their learning (ACECQA, 2012).

Outside the circle discussing the five competencies in Figure 3.1 is a circle labelled ‘classroom’. This circle reflects the impact the teacher and their teaching practices have on students’ self-efficacy development. It considers the knowledge teachers have about self-efficacy, the source of their knowledge and the teaching strategies and pedagogies they use to facilitate the self-efficacy of their students. Aspects such as teacher values and beliefs about self-efficacy, their previous teaching experience as well as professional learning opportunities and pre-service education will impact on whether they regard self-efficacy as being important for learning and include it in their practice. Decisions
teachers make about their practice will influence whether they prioritise the five competencies represented in Figure 3.1 to support the self-efficacy development of their students.

The outer circle in Figure 3.1 represents the school and system policies and programs that influence the curriculum and guidelines that teachers are governed by in their daily teaching. Teachers have less control over whole school decisions governed by systems, yet decisions such as policy and curriculum mandates influence what happens in the teaching and learning environment. Decisions made by school leaders, such as the use of school-wide social and emotional programs, and their style of leadership can also impact on the facilitation of self-efficacy throughout the school.

3.2 Summary

The conceptual framework in this study considers how teacher’s knowledge of self-efficacy, the teaching and learning environment and selection of appropriate strategies and pedagogies can influence student levels of self-efficacy. It also considers school and system wide policies that may impact on a teacher’s ability to facilitate the self-efficacy growth of their students. It explored the relationship between layers represented in Figure 3.1 starting with the central circle highlighting self-efficacy theory, including the four sources. The four self-efficacy sources as identified by Bandura (1977a): mastery experience, vicarious experience, social persuasion and physiological and emotional states and their relationship with cognitive, behavioural and environmental variables was established. The next layer considered the five key competencies identified in the literature to support the promotion of self-efficacy. These competencies were identified as: self-regulated learning, motivation, resilience, cognitive skills and learning dispositions. The final two layers indicated the factors that may impact on the effective facilitation of self-efficacy. The first of which indicated how the classroom environment and use of appropriate pedagogies and teaching strategies can support the facilitation of self-efficacy in K-2 students. The final layer represented the presence of influences beyond the classroom, including whole-school decisions, school leadership style and
mandated system policies and curricula. This framework led to the formation of two research questions and assisted in determining the most relevant methods of data collection. These will be discussed in the next chapter, Research Design.
CHAPTER FOUR: Research Design

4.1 Introduction

This chapter provides an overview of the research methodology and considers how this study was designed. It begins by outlining the research aims and the research questions followed by a description of the theoretical framework. The study consists of two phases, which utilised both quantitative and qualitative data collection methods. The chapter will provide a detailed account of the implementation of the study including, participant selection, data collection instruments and data collection and analysis procedures. The final section of this chapter provides details of validity and reliability along with the ethical considerations of the study.

4.2 Research Aims

The aim of this study is to explore the understandings early childhood teachers have about student self-efficacy, including how they describe self-efficacy, the source of their self-efficacy knowledge and the strategies they use to facilitate the self-efficacy of their students.

4.3 Research Questions

The following two research questions were used to gather data for the study:

1. How do early childhood teachers describe self-efficacy and what is the source of their knowledge?
2. How is self-efficacy being facilitated for students in Years K-2?
CHAPTER FOUR: Research Design

4.4 Research Design and Rationale

This study used an Interpretivist approach with a focus on individuals and their views on how the construct of self-efficacy is understood in the world around them (Cohen et al., 2011). Epistemologically, Interpretivists believe context to influence the phenomena of the study, and as such view the world as socially constructed (Denzin & Lincoln, 2011). The relationship the Researcher has with their research and with the participants is central to the reflexive practice of Interpretivists (Yanow, 2006). This study utilised a mixed method research methodology. Mixed method studies are enhanced when being framed by an Interpretivist approach (Creswell & Creswell, 2018).

The purpose of using a mixed method approach is to extend and strengthen a study’s conclusions and to contribute to answering the research questions (Schoonenboom & Johnson, 2017). As quantitative methods allow for a general overview of social processes it is preferable to include a qualitative method to generate an in-depth understanding of the phenomena (Rosenbaum & Rubin, 1983). Using a mixed method approach in this study enabled a greater consideration of the context of the participants and provided deeper insights into their understandings of self-efficacy and how it is understood and practiced.

The mixed method approach used in this study involved the collection and analysis of data from both the qualitative and quantitative paradigms to investigate the same underlying phenomenon (Creswell & Creswell, 2018). The data from the quantitative survey informed the interview questions in a complementary manner with the aim of producing “more complete knowledge ... to inform theory and practice” (Johnson & Onwuegbuzie, 2004, p. 21). Creswell and Creswell (2018) suggest that by using multiple data sources, a triangulation of data will occur, creating a more comprehensive understanding of the inquiry. This triangulation of the quantitative data and qualitative data collected in this study was helpful both in determining the quality of the data and in its analysis (Liamputtong, 2013).
CHAPTER FOUR: Research Design

The primary model used in this study is the explanatory sequential model (Creswell, 2014). In accordance with this model the study began by collecting quantitative data. After this data were analysed the results were used to plan the second, qualitative phase. The quantitative data alone did not allow a rich understanding of the participant’s individual experiences, hence the need for the data to be strengthened by the addition of qualitative information. For example, the survey data identified teacher’s workplaces to be influential in their ability to facilitate student self-efficacy. As this information was not presented in detail in the survey, a question was added to the interview schedule (see Appendix A) so this could be further investigated by the Researcher. The survey questions were designed to address both research questions. The survey questions allowed the Researcher to determine what teachers understood about self-efficacy and the strategies they used to promote self-efficacy with their students. The survey responses provided rich evidence to explore the connection between self-efficacy and the teacher’s ability to understand and facilitate it, leading to a deeper understanding of this topic.

The study of early childhood teachers’ understandings of self-efficacy considers the various viewpoints and multiple perspectives of the participants. It allowed the focus to be on understanding the phenomenon rather than just measuring it. It is acknowledged that in this type of study, the background and experiences of researchers shape their interpretation and position in the study. A largely inductive approach was used in this study with a focus on generating meaning from the data collected from participants (Creswell & Poth, 2018). This is evident in the interview stage of the study, as the dialogue provided insights into the interviewees’ perspectives of the research topic. According to Teddlie and Tashakkori’s (2009) ‘Qualitative to quantitative continuum’ of research, the current research sits in sector B, dominant in qualitative research but imbricates the mixed methods paradigm (see Figure 4.1).
The structure of the research design is represented in Figure 4.2. The figure presents the framework of the study and provides an overview of the two phases. The two research questions were addressed in both Phase One and Phase Two of the study.

Figure 4.2 Research framework
4.5 Participants

4.5.1 Online survey

A purposeful sampling technique was used to identify participants for Phase One of the study. Purposeful sampling allowed data to be collected from a group of individuals that were interested in the area of self-efficacy and who were willing and available to participate (Bernard, 2006). Participants invited to complete the survey were teachers from the Kindergarten to Year 2 (K-2) sector in Education Department, Catholic and Independent schools in a mixture of remote, rural and metropolitan settings in Western Australia (WA). All of these teachers were members of at least one of the Facebook groups: Teaching Kindy WA Australia, Teaching Pre-primary and ECE- WA Australia and Teaching Junior Primary WA. First, permission was sought by the administrator of each Facebook group to post the survey. A post was then made by the Researcher on each Facebook site providing some brief details about the survey as well a link to an information letter for further details (see Appendix B). Once teachers had read the information letter, they were invited to click to agree to the conditions of the survey. After clicking the ‘I agree’ button they were directed to the survey link. Each participant at the end of the survey was invited to participate in an interview with the Researcher either by phone or in person.

4.5.2 Semi-structured interviews

After the data from Phase One had been collected and analysed, it was decided by the Researcher that participants selected for Phase Two should be teachers working in schools with a strong focus in the social and emotional area. This purposeful sampling involved the deliberate selection of participants based on their potential to make a more valuable contribution to the research than other participants might achieve (Taherdoost, 2016). Three schools were identified and approached by the Researcher based on their ethos, philosophy and teaching and learning programs described on their school websites. Interviewing teachers with strong knowledge in this area has resulted in the
CHAPTER FOUR: Research Design

collection of more robust data. This increases the likelihood of a substantial contribution to the early childhood sector in this area.

Schools listed as School one (S1) and School two (S2) in (see Table 4.1) are single-sex Independent schools who cater for girls from Pre-Kindergarten (typically aged three years) to Year 12. The schools are both members of Association of Independent Schools of Western Australia (AISWA) and are affiliated with different Christian denominations. School three (S3), also a member of AISWA, is a co-educational community school that is non-denominational. School three caters for students from Pre-Kindergarten to Year 12 and has a nature playgroup for the youngest members of the school community. The three Independent schools selected for the study were chosen due to their use and knowledge of school-wide social and emotional programs and values that included a focus on student self-efficacy.

Table 4.1 Details of schools for Phase Two (semi-structured interviews)

<table>
<thead>
<tr>
<th></th>
<th>School 1 (S1)</th>
<th>School 2 (S2)</th>
<th>School 3 (S3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School type</td>
<td>Independent</td>
<td>Independent</td>
<td>Independent Community school</td>
</tr>
<tr>
<td>Students</td>
<td>Single-sex</td>
<td>Single-sex</td>
<td>Co-educational</td>
</tr>
<tr>
<td>Caters for</td>
<td>Pre K-Year 12</td>
<td>Pre K-Year 12</td>
<td>Pre K-Year 12</td>
</tr>
<tr>
<td>Number of students</td>
<td>1,008</td>
<td>1,221</td>
<td>174</td>
</tr>
</tbody>
</table>

The primary principal of each school was initially emailed by the Researcher to arrange a phone conversation about the possibility of the research being conducted with the teachers in their schools. Upon verbal agreement to participate in the research, school principals were emailed an information letter (see Appendix C) and a consent form (see Appendix D). Once consent had been provided by the school principal the Researcher was then able to contact the early childhood teachers in the school about their possible participation. The three schools that were initially selected for the study all provided principal consent and subsequently their teachers were interviewed as part of the research project. Before commencement of the interviews, teachers viewed the information letter (see Appendix E) and provided their written consent (see Appendix F).
Of the ten teacher participants, three were currently teaching in a sessional Kindergarten (K) class (with students typically aged four years) and three in full time Pre-primary (PP) class (with students typically aged 5 years). Two teachers from both Year 1 and Year 2 were interviewed, providing a range of samples across the years of K-2. A Kindergarten to Year 2 range was selected for this study as this is typical of Early Childhood teaching teams in most West Australian schools. In Western Australia, the National Quality Standard (ACECQA, 2012), and the principles and practices of the EYLF (DEEWR, 2009) are used from Kindergarten to Year 2. It was also considered that teachers of Kindergarten students might use different strategies from those in Year 2, creating richer data than if a smaller range was studied. Pseudonyms were used to protect the identity of the participants. An overview of the participants including their qualification, experience, current year level being taught and the pseudonym used for them in the study, is presented below in Table 4.2.

<table>
<thead>
<tr>
<th>Name (pseudonym)</th>
<th>School (S)</th>
<th>Qualification</th>
<th>Year currently teaching</th>
<th>Number of years’ experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deanna</td>
<td>S1</td>
<td>B. Ed (ECS))</td>
<td>Kindergarten</td>
<td>4 years</td>
</tr>
<tr>
<td>Janet</td>
<td>S1</td>
<td>B. Ed (Primary)</td>
<td>Pre-primary</td>
<td>26 years</td>
</tr>
<tr>
<td>Elissa</td>
<td>S1</td>
<td>B. Ed (ECS)</td>
<td>Pre-primary</td>
<td>10 years</td>
</tr>
<tr>
<td>Amanda</td>
<td>S1</td>
<td>B. Ed (Primary)</td>
<td>Year 1</td>
<td>12 years</td>
</tr>
<tr>
<td>Lara</td>
<td>S1</td>
<td>B. Ed (ECS)</td>
<td>Year 1</td>
<td>15 years</td>
</tr>
<tr>
<td>Rebecca</td>
<td>S1</td>
<td>B. Ed (ECS)</td>
<td>Year 2</td>
<td>6 years</td>
</tr>
<tr>
<td>Tamara</td>
<td>S2</td>
<td>B. Ed (ECS)</td>
<td>Year 2</td>
<td>29 years</td>
</tr>
<tr>
<td>Fiona</td>
<td>S3</td>
<td>B. Ed (Primary) G. Cert (ECS)</td>
<td>Kindergarten</td>
<td>14 years</td>
</tr>
<tr>
<td>Penny</td>
<td>S3</td>
<td>B. Ed (ECS)</td>
<td>Kindergarten</td>
<td>32 years</td>
</tr>
<tr>
<td>Emelie</td>
<td>S3</td>
<td>Bachelor of EC and Primary (K-7)</td>
<td>Pre-primary</td>
<td>12 years</td>
</tr>
</tbody>
</table>

Key
B. Ed = Bachelor of Education
ECS = Early Childhood Studies
G. Cert = Graduate Certificate

Interviews were conducted face-to-face over a three-week period between March and April, 2019. The Researcher visited S1 on two occasions to collect data, initially to interview teachers in years Kindergarten and Pre-Primary and the second time to
CHAPTER FOUR: Research Design

classrooms. On the first visit to S1 the interviews all took place in a Pre-primary classroom in the early childhood area of the school. The interviews were conducted during non-teaching time when only the teacher and Researcher were present. These private conversations, which allowed teachers to speak freely, provided a more comfortable environment where there was little danger of being overheard as recommended by King et al. (2019). The second round of interviews took place in a literacy extension classroom in the junior primary area of the school. All interviews were again conducted in private to allow participants to feel at ease and so they could express their experiences openly. The participant from S2 requested to meet at a café closer to her home as that location was more convenient on the day of the interview. This allowed a comfortable, conversational setting. School three participants were interviewed in their own classrooms during common Duties Other Than Teaching (DOTT) time. No students or other staff members were present at the time of the interviews. The interviews were audio recorded with participant permission and later transcribed. The interviews varied in length from 25 to 40 minutes. Participants read the information letter and signed the consent form before interviews commenced.

4.6 Data Collection Instruments

As identified in the Research Framework (see Figure 4.2) there were two instruments used to collect data in this study, the online survey (see Appendix G) used in Phase One and semi-structured interviews (see Appendix A) used in Phase Two.

4.6.1 Online survey

Online surveys are a popular method of collecting data as they are time and cost effective, convenient, and can reach a large population in a short time (Evans & Mathur, 2018). They also assist researchers to gain an understanding about the attitudes and beliefs of particular groups of people (Creswell & Hirose, 2019). In this study this
quantitative modality was employed to assist in gaining knowledge about early childhood educators’ understanding of self-efficacy.

Before the survey was employed, a pilot study was conducted with ten early childhood teachers, who were known to the Researcher, to seek feedback on the survey’s length, quality and relevance of questions. The pilot study allowed the Researcher to identify whether pertinent data had been obtained or whether changes needed to be made to refine the questions. Feedback from the pilot study resulted in changes to the survey to ensure greater consistency of language, more positive phrasing of some statements and uniformity in the number of options in the Likert scales responses. As a result of the pilot study it was also decided that a definition of self-efficacy should be provided to ensure all participants were clear about its meaning.

The survey consisted of two separate sections, initially asking participants to respond to a series of demographic questions. The demographic data was used to determine certain characteristics of the respondents including age, gender, location, qualification and years of experience. This information was useful by providing context to the sample. The second part of the survey involved a series of sixteen questions using a five-point Likert rating scale to determine participant understanding of self-efficacy. Likert scales are designed to uncover the strength of a feeling toward given statements and are considered useful when indicating rank order of agreement or disagreement (Bell, 2018). The survey questions related to participant understanding of the meaning of self-efficacy and its impact on learning. It also considered their beliefs about the influence of the four sources of self-efficacy, as well as other factors affecting self-efficacy development. A text response question was included to provide opportunity for participants to write about the use of strategies they found successful when raising the self-efficacy of their students.

Final surveys were made available to participants online via the previously named Facebook sites. Participants were granted a three-week period in which to complete the online survey. There were 74 completed surveys collected and analysed.
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4.6.2 Semi-structured interviews

Phase Two of the research involved individual, semi-structured interviews. Semi-structured interviews were selected as a way of using purposeful conversation to gain broader responses from the participants and to allow them to speak spontaneously and without restrictions (Bell, 2018). Interviews are considered by Brown and Danaher (2019) to provide versatility and flexibility and enable reciprocity between interviewer and participant. In this study, the semi-structured interviews allowed for rich and detailed information to emerge and considered the multiple perspectives of the participants.

The interview questions in Phase Two were designed to answer the two research questions and were created based on the analysed data collected in the online survey. The interview schedule (see Appendix A) shows four initial questions aimed to collect demographic information about each teacher to provide background context and to provide an opportunity for them to feel at ease by discussing familiar content (Ahlin, 2019). There were two areas in the Phase One survey that were identified as requiring deeper probing during the interview phase of the study and added to the interview schedule (see Appendix A). The workplace environment of the participants was one area that was further explored in the interviews to find out how their workplace impacted their ability to facilitate self-efficacy in their students. Based on the survey data the Researcher also included questions about why participants believe that some students have more self-efficacy than others. The emphasis on these two questions led to a deeper understanding of the topic of self-efficacy.

The remaining questions were aimed at establishing what each participant understood about self-efficacy and its relationship to learning as well as the strategies they had found to be successful with their students when raising their self-efficacy levels. These questions were clustered around the main themes identified in the literature as being relevant to self-efficacy including: the importance of promoting self-efficacy; the role self-efficacy has in learning; and the strategies used to facilitate it in the classroom.
CHAPTER FOUR: Research Design

When combined with the survey information obtained in Phase One, the interviews helped obtain rich data and validate research findings (Berg, 2007).

4.7 Data Analysis

4.7.1 Online survey

Both quantitative and qualitative data were collected during the Phase One survey. All data from the survey were collected through Qualtrics software (2015) and included both Likert style responses and open-ended responses. The Qualtrics program was selected as it is reliable, easy to navigate and allows for flexibility in design. The program allowed the Researcher to create reports based on the information collected to determine any developing trends. Once the data had been collected and collated much of the survey data were analysed by IMB Corp SPSS (2016) 24.0 predictive analysis software. The SPSS software was used to produce tables to identify frequency counts and percentages.

The open-ended responses were analysed by thematic analysis. Thematic analysis is a method for “identifying, organizing, and offering insight into patterns of meaning across a data set” (Braun & Clarke, 2012, p. 297). Initially responses were read by the Researcher and categorised as themes emerged. In this way, it was possible to identify common themes. Once the themes were established, QSR International’s 2019 NVivo 12 software was utilised to assign codes to each theme. The surveys were de-identified to maintain anonymity, with each assigned a code with P= Participant, ranging from P1 to P74. This allowed for easy coding and retrieval of participant responses.

4.7.2 Semi-structure interviews

Each interview was audio recorded and then transcribed with the permission of the participants. The transcripts from the interviews were analysed by the Researcher using NVivo 12 software (QSR International, 2019), which allowed for a coding framework to
be established. The coding frame allowed prominent themes to emerge and interpretation of the qualitative data (Schreier, 2014) to occur. This method of analysis allowed the Researcher to concentrate on the research questions and transcribe the detail that assisted in gaining a deeper understanding of the topic (Onwuegbuzie et al., 2009).

The interview was constructed in two sections. It collected data on the backgrounds of the participants and of their self-efficacy understanding. Four parent nodes were created to assist in the storage and analysis of the background data of each participant. Background data were collected from each participant at the beginning of each interview. This section had four questions: year level currently taught; qualification details; amount of teaching experience; and the type of professional learning in which they engaged. The four parent nodes created to house this information were given the same title as the questions. The responses of all participants were then stored in each node for easy reference during the analysis.

Moving to the main section of the survey, nine parent nodes were initially established to support the analysis of data. These nodes were named based on the main themes of the survey. Upon analysing the data, two extra themes emerged resulting in the addition of two new nodes. This is typical when using a semi-structured interview format because the Researcher was attuned to the discussion and further probed new topics that were pertinent to the topic (Ahlin, 2019). The first of the extra nodes was created for data collected from teachers who had taught across a range of year levels and had suggestions about how strategies to develop self-efficacy of students in Kindergarten may differ from those in Years one and two. The second additional node was created for information relating to whether the development of student self-efficacy was something the participants intentionally taught and planned for, or whether it was an unconscious practice. All eleven nodes are listed below with the two additional nodes in italics.

- Familiarity with self-efficacy
- Description of self-efficacy
4.8 Trustworthiness

In naturalistic studies, such as this, Lincoln and Guba (1985) advocate four key constructs to be applied when judging the soundness or ‘trustworthiness’ of the research. They propose; credibility, transferability, dependability and conformability as the rigour domains most responsive to studies that are more qualitative in nature. Credibility refers to the believability of the study and is an important factor in determining its trustworthiness. To establish credibility in this study, several considerations have been made. The survey questions were checked for construct reliability during the pilot study and credibility improved by seeking feedback from early childhood teachers to develop and refine questions. Sampling a wide range of participants across the state of Western Australian in a range of settings, in both metropolitan and rural schools, also contributed to the credibility of the findings. The online survey used in Phase One provided a forum for teachers in a range of different locations and contexts to participate. The triangulation of data collection from the survey and face to face interviews allowed for consistency among common themes and constructs, contributing to the overall credibility of the study (Teddli & Tashakkori, 2009).

To assist transferability, or external validity of the study, the Researcher used more than one method of data collection and sampled two different groups of participants. Phase
CHAPTER FOUR: Research Design

one included a diverse mix of participants, ensuring its representativeness of the population. The purposive sample used in Phase Two (interviews) was limited to ten participants due to the time-consuming nature of the interview process. The three schools used in Phase Two represented one part of the education sector, reducing the transferability to other school types. Judgements in Phase Two were well considered and the criteria was clearly established to reduce the risk of subjectivity (Brown et al., 2019).

Using different phases of data collection and a range of methods assisted to achieve credibility in this study. In addition, each phase of the study and analysis has been explicitly documented (Lincoln & Guba, 1985). Using a range of methods in the study has resulted in the triangulation of data, which has also increased the dependability of the research (Liamputtong, 2013).

Miles and Huberman (1994) claim confirmability to be the “relative neutrality and reasonable freedom from unacknowledged researcher biases—at the minimum, explicitness about the inevitable biases that exist” (p. 278). The Researcher acknowledged the need to be aware of potential values, biases and assumptions that may have been brought to the study. The practices were critically analysed at each stage to ensure the best processes were being employed. The Researcher understands the need for the conclusions drawn to depend more on the participants’ ideas rather than the Researcher’s background and preferences that may have influenced the findings (Creswell & Poth, 2018).

4.9 Ethical Considerations

Prior to the recruitment of participants, ethical approval was received from Edith Cowan University Human Research Ethics Committee-Project Number: 19574 (see Appendix H). Information letters were supplied to each participant and consent sought for their participation (see Appendix F). All participation was voluntary, and participants were informed that they could withdraw from the study at any time without penalty. Names
of the teachers and their schools were kept confidential with only the Researcher having access to this information. The participants’ names were replaced with pseudonyms throughout the study to protect their identity. All data and transcripts were securely stored in locked filing cabinets at Edith Cowan University or on the Researcher’s password protected computer to ensure confidentiality.

Once ethics approval had been granted by Edith Cowan University, the survey in Phase One was constructed and distributed via Facebook to Facebook groups designed for early childhood teachers. As ethical approval from the Department of Education was not sought due wait times of 8-12 months for confirmation, survey participants whose email address identified them as working for the Department of Education had their responses removed from the survey. Twenty-one responses were removed, reducing the number of survey participants from 95 to 74. A selection of schools from both publicly funded government schools, and Independent AISWA schools were considered for the interview phase of this study. However, as time constraints precluded teachers from the Department of Education WA, it was decided to approach Independent schools directly, to avoid any delays.

4.10 Summary

This chapter detailed the methodology and research design used to justify the use of an Interpretivist theoretical framework in this study. The use of an Interpretivist framework was used to complement the mixed method design and to acquire a better understanding of the phenomenon of self-efficacy from the perspective of the participants. A mixed method design was utilised in this study, consisting of an online survey in Phase One and semi-structured interviews in Phase Two. The survey data collected in Phase One produced emerging themes which were then further probed during the interviews in Phase Two. Each of these phases were described in this chapter in relation to the participant selection, data collection and data analysis. A purposeful sampling technique was used in both phases of the study with the aim of recruiting participants who could provide in-depth information about self-efficacy. A range of
CHAPTER FOUR: Research Design

software was used to collect, store and interpret data including Qualtrics software (Qualtrics, 2017), SPSS predictive analysis software (IMB Corp, 2016) and Nvio 12 software (QRS International, 2019). The final section provided details of validity and reliability along with the ethical considerations. The findings of the study are presented in the next two chapters.
CHAPTER FIVE: Phase One Findings

5.1 Introduction

This study aimed to investigate early childhood teachers’ understandings of student self-efficacy in the early years of school (K-2). This chapter examines the findings of Phase One (online survey). The data were analysed to inform the following two research questions:

1. How do early childhood teachers describe self-efficacy and what is the source of their knowledge?
2. How is self-efficacy being facilitated for students in Years K-2?

5.2 Phase One Findings – Online Survey

The anonymous online survey used in Phase One provided a broad overview of how early childhood teachers describe the concept of self-efficacy as well as the strategies and programs they found to be most effective in facilitating student self-efficacy. This section of the chapter that describes the survey data will be organised into three sections: demographic information, self-efficacy understanding and teaching strategies.

5.2.1 Demographic information

To gain valuable information about the background and context of the participants, the first section of the online survey asked a range of questions about their qualifications and teaching experience. The collection of this information allowed the Researcher to identify any patterns emerging in the data that was of significance to the study. This information is detailed below under the appropriate sub-headings.
CHAPTER FIVE: Phase One Findings

**Participant location**
All of the participants were currently teaching in Western Australian schools with 73% (n = 54) located in the Perth metropolitan area, 24% (n = 18) located in regional Western Australia and 3% (n = 2) in remote Western Australia.

**Participant qualification**
All participants had Western Australian teacher regulatory authority recognised teaching qualifications, such as a Bachelor Education, and were currently teaching in an early childhood environment in year levels between Kindergarten (K) and Year 2. Most participants, 70% (n = 52) held a Bachelor degree followed by those with a Graduate Diploma, 16% (n = 12). Eleven percent of participants (n = 15) held either a Graduate Certificate in education, 6% (n = 4) or a Master degree, 5% (n = 3). Three participants listed their qualification as ‘other’ but did not provide details of their qualification type.

Participants were also asked to best describe their teaching qualification in relation to area of specialisation or whether they held an alternative teaching qualification. Sixty-one percent of participants (n = 45) held an Early Childhood qualification while 30% (n = 22) held a degree in Primary education. The remaining 9% (n = 7) of participants held a degree in K-7 as can be seen in Figure 5.1.

![Figure 5.1 Teaching qualification held by survey participants](image)

Figure 5.1 Teaching qualification held by survey participants
CHAPTER FIVE: Phase One Findings

Setting

Of the 74 participants surveyed, 62% (n = 46) indicated that they were currently working in a K or PP setting while 27% (n = 20) of participants were working directly with children in Years one and two. The remaining teachers taught in composite classrooms 8% (n = 6) for example a PP/1 class, or else they were teaching in special education centres 3% (n = 2).

Table 5.1 Year level currently being taught by participants

<table>
<thead>
<tr>
<th>Category</th>
<th>Option</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year level taught</td>
<td>K or PP</td>
<td>46</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Yr 1 or 2</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Composite</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Special Ed</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Participants were asked to indicate the type of school in which they were currently teaching. Seventy eight percent (n = 58) of participants were working at government schools while 16% (n = 12) of participants worked at either Independent or Catholic schools. The remaining 6% (n = 4) worked at community run Kindergartens or special education centres. Of note is that no participants indicated they were teaching in a child-care centre-based Kindergarten program, despite the Facebook groups being open to all early childhood teachers.

Table 5.2 Type of school

<table>
<thead>
<tr>
<th>Category</th>
<th>Option</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School type</td>
<td>Government</td>
<td>58</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Independent</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Catholic</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Community</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Kindergarten</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Special Ed Centre</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
**Teaching experience**

Various levels of teaching experience were represented in the survey. Participants who had been teaching ten years or less accounted for 44% (n = 32) of the overall response, as seen in Table 5.3. Those with 0-4 years and 5-10 years of teaching experience each accounted for 22%. The remaining four brackets were less represented: 11-15 years, 16% (n = 12), 16-20 years, 9% (n = 7), 21-25 years, 15% (n = 7) and 26 years+ 13% (n = 10). Compared to the middle and end of career teachers, this distribution does slightly favour the teachers at the beginning of their career with 44% (n = 32) of participants having ten or less years teaching experience. This could be a result of beginning teachers turning to social media sites, such as Facebook, for ideas and support that experienced teachers may not seek. Details of these findings are presented in Table 5.3.

Table 5.3 Participants’ teaching experience

<table>
<thead>
<tr>
<th>Category</th>
<th>Option</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years teaching</td>
<td>0-4</td>
<td>16</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>5-10</td>
<td>16</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>11-15</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>16-20</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>21-25</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>26+</td>
<td>10</td>
<td>13</td>
</tr>
</tbody>
</table>

**5.2.2 Self-efficacy understanding**

The second section of the survey reported on findings pertaining to the understanding participants had about self-efficacy. These are reported below as: knowledge and perceptions of self-efficacy; the relationship between self-efficacy and learning; factors affecting learning; factors affecting self-efficacy development; the sources of self-efficacy; and the impact of culture and gender on self-efficacy development.

**Knowledge and perceptions of self-efficacy**

Of the 74 participants who completed the survey, 85% (n = 63) indicated they had heard of the term ‘self-efficacy’. Eight percent (n = 6) of participants had not heard of the term
CHAPTER FIVE: Phase One Findings

‘self-efficacy’ and 7% (n = 5) were unsure whether they had heard the term or not. Interestingly 97% (n = 72) of participants claimed to facilitate self-efficacy in their students. The majority of participants, 93% (n = 69), indicated that levels of self-efficacy are not pre-determined and can be altered. Almost all participants, 99% (n = 73) reported self-efficacy can be increased by teachers using relevant strategies in the classroom.

Relationship to learning
After participants had provided details of their familiarity with the term ‘self-efficacy’, an explanation was provided so that participants could then respond using the same common understanding of the topic. The explanation, that was not visible until this stage, was that self-efficacy is ‘having self-belief in their own ability’. One hundred percent of participants agreed that self-efficacy is important to learning. Participants were asked more specifically about the factors affecting learning.

Factors affecting learning
A list of factors relating to those that have been described in the literature as influencing learning was presented and participants were asked to what extent these factors affected student success in learning. Participants rated these across five points from ‘strongly agree’ to ‘strongly disagree’. Overwhelmingly, 87% (n = 64) of participants strongly agreed that the quality of the teaching was the most influential factor affecting student learning. Eighty one percent of participants (n = 60) also indicated they strongly agreed that explicitly teaching social and emotional learning skills to children and 80% (n = 59) specifically teaching strategies to develop self-confidence had a considerable impact on student learning. Sixty six percent of participants (n = 49) strongly agreed that parent support and engagement was a factor affecting student learning. The role that cognitive skills play in learning was also surveyed, with 41% (n = 30) of participants strongly agreeing that cognitive skills played a role in learning. The three factors that participants strongly agree were least likely to affect student success in learning were professional learning for teachers 39% (n = 29), school leadership 35% (n = 26) and family demographic 20% (n = 15) as seen in Figure 5.2.
**CHAPTER FIVE: Phase One Findings**

![Bar chart showing factors affecting student learning]

Figure 5.2 Factors that teachers strongly agree affects student success in learning

**Factors affecting self-efficacy development**

Specifically, participants were presented with a list of items and asked about the association between those items and the development of student self-belief in learning. The term self-belief was used in the question instead of the term self-efficacy, as ‘self-belief’ was used in the explanation of self-efficacy provided to the participants in the previous section. The individualised feedback teachers provide to students about their learning had the highest amount of support with 100% (n = 74) of participants either strongly agreeing or agreeing that teacher feedback was directly associated with student development of self-belief in their ability when learning. Student resilience, student mindset, student self-regulation and levels of motivation were also rated as having a strong association to the development of student self-belief. In comparison to the above factors, it is noted that 11% of participants indicated a neutral response when considering whether student goal setting (n = 8) and peer modelling (n = 8) affect student self-belief in their abilities. Bandura (1986) claims goal setting and peer modelling to be two of the most influential avenues of self-efficacy development. Similarly, 9% of participants indicated that peer friendships (n = 7) and student
behaviour 8% (n = 6) had a weaker association with student belief in their own ability. Details of these findings are presented in Table 5.4.

### Table 5.4 Factors affecting self-efficacy development

<table>
<thead>
<tr>
<th>Source</th>
<th>Strongly agree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student motivation</td>
<td>49</td>
<td>66</td>
<td>24</td>
<td>32</td>
<td>1</td>
</tr>
<tr>
<td>Peer friendships</td>
<td>22</td>
<td>30</td>
<td>45</td>
<td>61</td>
<td>7</td>
</tr>
<tr>
<td>Student resilience</td>
<td>56</td>
<td>76</td>
<td>18</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Student goal setting</td>
<td>23</td>
<td>31</td>
<td>42</td>
<td>57</td>
<td>8</td>
</tr>
<tr>
<td>Teacher feedback</td>
<td>59</td>
<td>80</td>
<td>15</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Peer modelling</td>
<td>22</td>
<td>30</td>
<td>44</td>
<td>59</td>
<td>8</td>
</tr>
<tr>
<td>Student behaviour</td>
<td>30</td>
<td>41</td>
<td>38</td>
<td>51</td>
<td>6</td>
</tr>
<tr>
<td>Student self-regulation</td>
<td>52</td>
<td>70</td>
<td>22</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Student mindset</td>
<td>58</td>
<td>78</td>
<td>16</td>
<td>22</td>
<td>1</td>
</tr>
</tbody>
</table>

**Sources of self-efficacy**

Participants were presented with Bandura’s (1986) four sources of self-efficacy and were asked to rate them from one to four (1-4) according to what they understood to be most influential. One (1) represented the most influential source to four (4), the least influential on student learning. Bandura considers the four sources of self-efficacy to be; students’ previous success at completing that task (mastery experience), others persuading them that they will be successful (social persuasion), the observation of others successfully completing the task (vicarious experiences) and students’ physiological and emotional states. The results can be seen in Table 5.5.
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Table 5.5 Most influential sources of self-efficacy as rated by participants

<table>
<thead>
<tr>
<th>Bandura’s four sources of self-efficacy</th>
<th>Most influential source</th>
<th>Second most influential source</th>
<th>Third most influential source</th>
<th>Least influential source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Mastery Experience</td>
<td>19</td>
<td>26</td>
<td>26</td>
<td>35</td>
</tr>
<tr>
<td>Social persuasion</td>
<td>13</td>
<td>18</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td>Observation of others</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>Physiological and emotional state</td>
<td>42</td>
<td>57</td>
<td>14</td>
<td>19</td>
</tr>
</tbody>
</table>

Table 5.5 describes what the participants believe to be the most influential source of self-efficacy. The first column highlights that 57% (n = 42), more than half of the participants, understand students’ physiological and emotional states to be the most influential source of self-efficacy. Less than one third of participants, 26% (n = 19), rated students’ prior experience at completing a task (mastery experience) as the most powerful source of self-efficacy while 18% (n = 13) of the participants rated social persuasion as having the most influence in self-efficacy development. No participants indicated that students observing other people successfully achieve tasks was the most influential source of self-efficacy development. Table 5.5 also reported on the sources of self-efficacy that participants ranked as the second, third and fourth most influential. The findings are discussed in more detail below.

**Physiological and emotional states**

Of the participant cohort, 57% (n = 42) considered students’ physiological and emotional states to be the most influential source of self-efficacy. Nineteen percent (n = 14) of participants rated this to be the second most influential source, while 15% (n = 11) rated it the third most influential factor in self-efficacy development. Nine percent (n = 7) of participants considered students’ physiological and emotional states to be the least influential source. The rating of physiological and emotional states as the most influential source of self-efficacy by the survey participants, requires further investigation.
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*Mastery experience*
Responses that previous experience in completing a task (mastery experience) was a significant source of self-efficacy were on a sliding scale. Twenty-six percent (n = 19) of participants ranked students’ previous experience as the most influential factor when developing student self-efficacy. When considering mastery experience as a source of self-efficacy, 35% (n = 26) considered it to be the second most influential source, while 24% (n = 18) of participants ranked it as the third most influential source. Fifteen percent (n = 11) of participants considered mastery experience as the least influential source of self-efficacy. This was highlighted as a topic needing further investigation in the interview phase of the study due to the discrepancy between what the literature and the participants reported about the influence of mastery experience on student learning. In contrast, participant feedback on the source of social persuasion was more in line with literature on this topic.

*Social persuasion*
Of the four self-efficacy sources ranked by the participants, social persuasion showed the most even distribution across the first to fourth rankings. There was variance of 11% (n = 7) between participants who ranked social persuasion as the first and second most influential source. Between the second and third ranking there was 4% (n = 3) variance and 9% (n = 7) difference between those that ranked social persuasion as third and fourth most influential source of self-efficacy (see Table 5.5). When ranking social persuasion as a source of self-efficacy, 32% (n = 24) of participants rated it as the least influential of all four sources. This is the highest percentage across all four rankings, most to least influential. The final source of self-efficacy to be ranked by participants was students’ observations of others (vicarious experience).

*Vicarious experience*
None of the participants in the survey ranked the observation of others as being the most influential source of self-efficacy. Indeed, the vicarious observation of others was ranked as the least influential source by 46% (n = 34) of participants. This is noteworthy considering the nature of learning in early childhood settings, which typically involves
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modelling and other opportunities for observation that are more likely to facilitate self-efficacy. This is also not in line with what literature reports about the benefits of vicarious experiences when promoting student self-efficacy and was further explored in the interview phase of the study. Teachers were also asked to report on other factors to impact student self-efficacy. Two factors they were asked to report on specifically were student gender and student culture.

**Impact of gender and culture**
The survey questions pertaining to the possible influence of student gender and culture were included to assist in answering the first research question. This data provided further insight into what participants understand about their students’ sense of self-efficacy. This question provided participants with five possible responses, ranging from strongly agree to strongly disagree. When combining the totals of those that selected agree and strongly agree, 26% (n = 19) of participants agreed that gender did have an influence on student self-efficacy. Students’ culture, however, was indicated in the survey findings to be more relevant to student self-efficacy levels. Eighty-one percent (n = 60) of participants indicated they either agreed or strongly agreed that culture was influential in students’ development of self-efficacy. More than a third of the participants, 35% (n = 26) disagreed or strongly disagreed that gender had an impact on self-efficacy levels, while 7 % (n = 5) disagreed that students’ culture impacted their self-efficacy.

The section above has considered various elements of self-efficacy that contribute to teachers’ understandings about the self-efficacy construct. Another element of this study is to identify the strategies teachers use with their students to facilitate self-efficacy growth. The following section of the Phase One findings will consider the strategies that teachers report as being effective when raising self-efficacy levels of their students.
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5.3 Teaching Strategies

To assist in answering the second research question about how self-efficacy is being facilitated in K-2, participants were asked about their classroom practices. A list of teaching practices was derived from the literature and presented during the survey. Participants could then select the practices that they engaged in in the classroom and nominate how often they used them. Participants selected either: Often, Occasionally or Never to indicate their regularity of use. Results in Table 5.6 show the feedback provided to students that focused on effort rather than ability was a practice often used in classrooms, used by 92% (n = 68) of participants. Nearly all, 95% (n = 70) of participants indicated they often promoted learning dispositions such as persistence, creativity and curiosity in their students. Teaching students to be resilient was highlighted by 92% (n = 68) of participants as a practice that teachers often engaged in. Despite research suggesting student goal setting and peer modelling were effective classroom practices only 51% (n = 38) of participants indicated that they regularly use each of these strategies with their students. Details of these findings are presented in Table 5.6.

Table 5.6 Rate of participant engagement in specified classroom practices

<table>
<thead>
<tr>
<th>Classroom Practices</th>
<th>Often</th>
<th></th>
<th></th>
<th>Occasionally</th>
<th></th>
<th></th>
<th>Never</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide feedback to students that focuses on their effort rather than ability</td>
<td>68 92</td>
<td>6 8</td>
<td>0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage students to set goals in their learning</td>
<td>38 51</td>
<td>33 44</td>
<td>3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage students to try new strategies when they are struggling</td>
<td>66 89</td>
<td>8 11</td>
<td>0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use peer modelling as a learning strategy</td>
<td>38 51</td>
<td>36 49</td>
<td>0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Praise students for their intelligence</td>
<td>22 28</td>
<td>37 50</td>
<td>15 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell students that not everyone is good at a particular subject</td>
<td>18 24</td>
<td>27 37</td>
<td>29 39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote learning dispositions such as persistence, creativity and curiosity</td>
<td>70 95</td>
<td>4 5</td>
<td>0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teach students to be resilient</td>
<td>68 92</td>
<td>6 8</td>
<td>0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER FIVE: Phase One Findings

5.3.1  Intervals of use of teaching strategies to strengthen student self-efficacy

To further address the second research question about their use of teaching strategies, participants were asked to indicate how often they used teaching strategies to strengthen student self-efficacy. Possible responses to this question included Often, Occasionally and Never. Eighty percent of participants (n = 60) indicated they often use strategies to strengthen student self-efficacy while 18% (n = 13) of participants reported to use strategies occasionally. One participant (P32) claimed not to use strategies to develop the self-efficacy of their students.

5.4  Type of Strategies used to Strengthen Student Self-efficacy

In the final section of the survey, participants were asked to name and describe the strategies they used to strengthen student self-efficacy in the classroom in a written response style question. Ninety four percent (n = 70) of participants responded to this question. Their responses were sorted into categories and from this, twelve main strategies emerged. The nine strategies with the most responses are discussed below. The headings begin with the strategy that was reported as being used most often by the participants to increase student self-efficacy levels, through to the one listed as being used least.

5.4.1  Explicit teaching

Explicit teaching was the strategy that yielded the highest number of responses in this question 24 % (n = 18). Teachers described how they used the explicit teaching of social and emotional skills to increase the self-efficacy levels of their students. One participant (P19) indicated the use of an “I do, we do, you do” strategy. Another participant (P45) described how she “explicitly plans play-based learning opportunities that foster challenge and success”. Seven percent of participants (n = 5) spoke about using small group or whole class role-play as a way of explicitly teaching skills to develop self-belief.
5.4.2 Focus on growth and effort over success

Eighteen percent of participants (n = 13) indicated that they emphasised students’ growth or effort rather than focusing on the outcome of their attempts when learning. Four participants spoke specifically about the importance of celebrating student successes “no matter how small” (P63) while two participants noted the importance of observation and student relationships. The first stated “It is important to notice when students have improved in an area and to bring it their attention” (P27) and the second highlighting the need to “provide a warm and caring environment where all effort is recognised as valuable” (P11). Another participant (P48) provided an example of how effort, rather than outcomes, is celebrated in their classroom, stating that “the reward system is based on effort, not achievement”. Other participants agreed, affirming “we praise and encourage when we see children putting in their best effort (effort over final product)” (P31) and “praise effort over the right answer” (P39). One strategy discussed in the literature as being effective when considering student improvement and providing encouragement is the use of feedback.

5.4.3 Use of feedback

The previous section indicated the use of praise as a strategy used by teachers. However, some participants have noted the difference between the use of praise and feedback and have highlighted the need to provide students with genuine, quality feedback to develop their self-efficacy. One participant (P45) defined genuine feedback as being “feedback that is directly related to what they are doing” and another as “constructive and reflective” (P54). Another participant indicated to have an impact on their self-efficacy the feedback needs to be timely, suggesting that they need “constant, immediate feedback” (P43). In addition to the use of teacher feedback, three participants listed peer feedback as being an effective strategy in building the self-efficacy of their fellow students. Guided peer tutoring where teachers suggest peer pairings (P72) and using students as “experts” in group activities (P45) were two
strategies suggested by participants. Overall, 16% (n = 12) of participants made a comment about the use of feedback as a strategy to develop student self-efficacy.

5.4.4 Use of specific programs

One strategy that also elicited support to strengthen student self-efficacy in the classroom was the use of specific social and emotional programs. Of the 14% (n = 11) of participants who spoke about the benefits of using a specific social and emotional program in their classrooms, seven listed the ‘You Can Do It!’ program (Bernard, 2017) as their preferred program. Of the remaining four participants, one utilised the ‘Highway Heroes’ program (P29) (BEST program 4 kids, 2018) another the ‘PATHS’ (Promoting Alternative Thinking Strategies) program (P52) (Kuche & Greenberg, 1994). The same participant who indicated the use of the PATHS program also listed the ‘Challenges and Choices’ program (School Drug Education and Road Aware [SDERA] 2020) as one used to develop social and emotional skills in students. One participant (P67) used mindfulness as part of the ‘MindUp’ program (Maloney et al., 2016) to empower her students. The final participant was not specific in which program was preferred but did stipulate that using a whole-class approach was beneficial in unifying students to ensure consistency and sense of “togetherness” (P12).

5.4.5 Scaffolding learning

Fifteen percent of participants (n = 11) recognised the significance of scaffolding student learning when developing self-belief in their ability. One of these participants indicated teachers should be “available to scaffold and provide feedback designed to strengthen student self-efficacy” (P17). Two percent of participants (n = 3) stressed the importance of breaking tasks down in to smaller, more manageable tasks. One percent of participants (n = 2) specified the need to target learning to the students’ zone of proximal development so the tasks were achievable and more likely to result in success. In relation to student success, one participant commented about the use of a “gradual release” of information strategy (P23).
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5.4.6 Modelling

The modelling process was indicated by 13% of participants \((n = 10)\) as being a strategy they use specifically to raise the self-efficacy levels of their students. One participant (P34) indicated an effective way to use modelling is to “model how we learn and demonstrate how making mistakes and errors can be a positive tool to help us learn”. Another participant (P59) explained their strategy as, “modelling strategies and verbalising them”. This was referred to as “teacher self-talk” (P23) which highlights positive thoughts in modelling the process of an activity.

5.4.7 Dispositions for learning

Twelve percent of participants \((n = 9)\) included examples of the types of social and emotional skills they target with the students in their classrooms. Examples focused on strategies to develop key areas including resilience \(4\%\) \((n = 3)\), self-regulation \(3\%\) \((n = 2)\) and learning dispositions \(8\%\) \((n = 6)\). The dispositions mentioned were perseverance, persistence, patience and curiosity, which all contribute to self-efficacy development. One participant described these as being “life skills” (P4). It was suggested by one participant that children with a higher level of need in this area should receive “extra small group attention” (P56) and another suggested the use of the “have-a-go” strategy to encourage students to “try again, even when it is hard, to develop persistence” (P31).

5.4.8 Goal setting

Ten percent of participants \((n = 8)\) suggested in their comments that goal setting was a strategy they used to develop student self-efficacy. Half of the eight participants, \(5\%\) \((n = 4)\) specified that goals needed to be achievable for self-efficacy to progress. One participant suggested to set “achievable short, medium- and long-term goals both as individuals and as a group” (P34). Three participants made a connection between goal setting and student growth in their learning, indicating that growth can come from making mistakes or not reaching goals. One of those participants highlighted that
“making mistakes is a normal part of the learning process” (P50) and that “the important aspect is for children to learn from their mistakes and to teach them how this information can help them in achieving their goals”. One participant indicated that goal setting should be a visual process where teachers assist students to set goals based on feedback and reflection (P44).

### 5.4.9 Mindset

The written comment section included participant remarks about the importance of student mindset when developing self-efficacy beliefs. Of the 10% of participants (n = 8) who mentioned mindset, seven of them spoke specifically about the effect a growth mindset can have on students’ self-belief. One participant claimed facilitating discussions and learning about their mindset increased students’ self-belief in their own ability and that a having a growth mindset encouraged students to attempt new tasks more readily (P49). Another participant stated “I utilise growth mindset strategies and sayings in my classroom. Children are encouraged to focus on their ability to improve and to believe that they can always improve rather than being told they are smart or clever” (P59). Another indicated the use of growth mindset picture books (P30) while another used modelling as a strategy to demonstrate what a person with a growth mindset would say (P8).

### 5.4.10 Other strategies

Finally, other strategies suggested by participants to strengthen student self-efficacy include: to teach in familiar interest areas of students (P72), use short engaging activities (P22), and to differentiate for all learners so each student’s achievements can be valued by themselves, regardless of what others achieve in same learning environment (P64). Also highlighted by 5% (n = 4) of participants was the need for student self-reflection in order to analyse and celebrate their growth and the need to provide plenty of opportunities for success. One participant mentioned the importance of offering opportunities for children to practise and consolidate skills through play and
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investigation (P19). Others highlighted the benefits of building positive relationships (P12) and creating a safe environment where students felt supported when taking risks (P18, P27). Seven participants commented about the effectiveness of ‘self-talk’ and one of the importance of promoting positive language in the classroom (P56). A focus on techniques such as brain gym, mindfulness, fitness training and yoga were also listed as strategies to develop student self-efficacy in the classroom. The strategies participants used to facilitate the self-efficacy of their students are listed in Table 5.7.

Table 5.7 Participant use of strategies to develop student self-efficacy

<table>
<thead>
<tr>
<th>Strategies used</th>
<th>Number of participants</th>
<th>Percentage of participants (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit teaching of social/ emotional skills</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>Focus on growth rather than success</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Teacher/peer feedback</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Use of specific Programs</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Scaffolding learning/break tasks down</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Modelling</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Teaching social/ emotional skills - Dispositions for learning e.g. resilience</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Mindset</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Positive self-talk</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Positive reinforcement/encouragement</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Reflection</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5.5 Summary

In summary, the analysis of the data collected in the online survey in Phase One identified teachers’ understandings of self-efficacy including the ways in which they facilitate the self-efficacy of their K-2 students. It was found that teachers describe self-efficacy in a range of ways and have varied experiences with strategies they deem to be
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effective. Teachers were united, however, in their belief that self-efficacy has a strong influence over students’ learning. Teachers considered several factors, including the provision of individualised feedback along with levels of motivation and resilience to impact on self-efficacy development. Strategies used most often by teachers to increase student self-efficacy include: the explicit teaching of social and emotional skills; a focus on growth rather than achievement; the provision of relevant and timely feedback; and using specific social and emotional programs. Teachers’ knowledge of the sources of student self-efficacy was explored. They highlighted students’ physiological and emotional states as the most influential source of self-efficacy, contradicting the literature on self-efficacy sources for older students. The semi-structured interviews in Phase Two allowed for a deeper exploration of these topics, particularly those that did not align with the literature previously discussed in the Literature Review (see Chapter Two). The interviews also provided opportunity to introduce new questions on the topic to allow for a broader understanding of the self-efficacy construct.
CHAPTER SIX: Phase Two Findings

6.1 Phase Two Findings – Semi-structured Interviews

The semi-structured interviews used to collect data in Phase Two allowed the Researcher to further explore the concept of self-efficacy and answer both research questions at a deeper level. Ten early childhood teachers from three Independent metropolitan schools in Perth, Western Australia were interviewed as part of Phase Two. The purpose of the interviews was to determine how teachers described self-efficacy, the source of their self-efficacy knowledge, and to identify strategies they found to be successful in facilitating the self-efficacy levels of their students. The interview data also added rich description to the data already gathered in Phase One. In addition, the survey findings exposed some areas that needed further exploration during the interviews. The survey revealed teachers did not have a shared understanding about self-efficacy. As such, questions were added to the interview schedule (see Appendix A) that centred around the source of teachers’ self-efficacy knowledge and of the characteristics and behaviours of students with high levels of self-efficacy. The teachers interviewed during Phase Two of the study taught a range of year levels from K-2 and had a varied amounts of teaching experience (see Table 4.2). This chapter is organised in two sections. Section 6.2 considers teacher description of the self-efficacy construct. This comprises their description, source of knowledge, characteristics of self-efficacy and the variation of self-efficacy levels between students. The remainder of the chapter considers how self-efficacy is facilitated in Years K-2. This includes the strategies teachers are using, the impact of their workplace, their access to programs and professional learning about self-efficacy and its representation in curriculum documents.

6.2 Teacher Description of Self-efficacy

The teachers who were interviewed in Phase Two of the study all worked in schools that advertised on their school website they offered strong focus on social and emotional learning. It was anticipated they may have sound knowledge of the construct of self-
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efficacy. Results show teachers were familiar with the term ‘self-efficacy’ but rarely used it. Some teachers had difficulty defining it, but most could describe elements of self-efficacy, such as the variation of self-efficacy levels within their students. It was found that teachers did not have a strong understanding of the theoretical construct of self-efficacy as they were not familiar with related theorists or of important aspects of self-efficacy theory such as the four reported sources (Bandura, 1986). Despite teachers having a range of knowledge about self-efficacy they were united in their belief about the important role self-efficacy has in learning. This section includes findings about how teachers describe and define self-efficacy, the source of their self-efficacy knowledge and the characteristics of students with high levels of self-efficacy.

6.2.1 How teachers describe and define self-efficacy

Four out of ten participants indicated they understood the meaning of the term ‘self-efficacy’ and went on to define it with some aspects in common with Bandura’s (1986) definition. Amanda from school one (S1), Emelie from school three (S3), Elissa (S1) and Deanna (S1) each had different, yet accurate, explanations. Amanda explained self-efficacy as “a belief in oneself or ability to believe in oneself” while Emelie described it as “a child’s belief in whether they can do something or achieve something ... It’s whether they believe they can do it”. Elissa highlighted the intrinsic nature of self-efficacy by suggesting “It’s that intrinsic motivation to do something, or to have that intrinsic belief in yourself and being positive and persistent and setting goals for yourself”. Finally, Deanna provided an example to explain her understanding. She stated, “So when they [the students] say they can’t do it ... I like to say, you don’t think you can, but you might be able to, let’s try”.

Six participants displayed less certainty about the meaning of self-efficacy, two of whom explained it in relation to their own experiences. Tamara, from school two (S2), described it as “the ability to use strategies or skills to deal with different situations, what you draw on, how you go about finding solutions to whether it’s emotional problems or problems in general”. Janet (S1) saw it as “setting goals for yourself and
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having realistic learning achievements”. Of the six participants who did not claim to know the meaning of self-efficacy, three indicated they researched the meaning before the interview, while the fourth participant (S3) said “I know nothing”.

Nine of the ten participants had heard of the term ‘self-efficacy’, but several claimed not to use the term in their daily practice or in conversation with parents or colleagues. Emelie (S3) indicated that she had heard the term in her professional reading and in her undergraduate studies but exchanged the term for self-belief when she was speaking with the parents of her students as it was more easily understood. In addition, Tamara (S2) commented “the word [self-efficacy] in itself is not used, so I would say that I do not have a deep understanding of that word”. She related her understanding of the term ‘self-efficacy’ with her previous experience working with children with both high and low levels of self-belief in their ability. In discussing her definition of self-efficacy, Tamara made a link between self-efficacy and resilience, commenting that resilience was spoken about a lot, but many people did not consider where that comes from. She attributed high levels of resilience and other attributes students require to be successful to self-efficacy.

It was evident that all participants had different understandings of the meaning of self-efficacy, after individually describing their own understanding, or variation of it. After this question had been answered, Bandura’s definition (1986) was given to all participants to ensure they had a shared understanding of the definition. As the interviews continued, it became evident that all ten participants had a good understanding of what self-efficacy was and how to facilitate it in their students, but it was the terminology, definition and theoretical understanding that they were less familiar with. Once the topic had been clearly established, participants were asked from where they thought their understanding of self-efficacy came.
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6.2.2 Source of self-efficacy knowledge

Four participants reported their knowledge of self-efficacy to have stemmed from their own personal experience in the classroom. Tamara (S2), for example, discussed observations she made of children entering her class from other schools where social and emotional development was not embedded in daily teaching and learning. She used strategies to develop the self-efficacy of those students who “have had negative experiences at home or school”. In addition, Rebecca (S1), highlighted that in her experience, developing students’ self-efficacy is a continuous focus:

They might feel they can achieve this task today because of certain reasons – they’ve had a good night’s sleep, a good breakfast, they were built up in their confidence on the way to school and tomorrow they haven’t had all of Maslow’s hierarchy and it’s gone to pot and they just decided they can’t do it.

Previous teaching experience also allowed Deanna (S1) and Lara (S1) to elaborate on observations of children during their teaching careers. Lara described how she has been required to intervene and teach social and emotional skills more in recent times, noting that “children require that a lot more these days than even 15 years ago”. Elissa (S1) considered changes she had observed in students more recently, stressing “there’s a lot of anxiety in students at the moment ... and you just think, it’s something that has to be done from a young age”. This has led Elisa, Deanna and Lara to seek professional learning in the area of anxiety and social and emotional learning. Professional learning and school programs were also cited as sources of self-efficacy knowledge for other participants.

Three participants stated that their understanding of self-efficacy was formed by their professional learning experiences and of specific school programs with a focus on student wellbeing. The ‘You Can Do It!’ program (Bernard, 2017) has a focus on self-belief and resilience. It was a program three teachers mentioned as assisting them to facilitate the self-efficacy of their students. Amanda (S1) credits the use of the ‘You Can Do It!’ program at her school for her knowledge around self-efficacy. Janet (S1) also credited the ‘You Can Do It!’ program for her understanding of the topic and referred to a professional learning session run by a school psychologist at her school. The
psychologist spoke about the importance of students feeling as though they belong to the class team, suggesting this to be paramount in their ability to attempt tasks they may perceive as challenging. In support, Janet stated, “if everyone feels like one, and you, on a regular basis in the class, make them feel like a team and you do lots of things together like team building, positive thoughts will develop”. The importance of the implementation of a ‘team culture’ approach was a similar finding across all three schools.

Having a school culture of social and emotional learning, including a focus on self-efficacy, emerged as another important source of understanding for some participants. Fiona (S3) described developing self-efficacy in students as being an important part of the school culture and therefore was a construct with which she was familiar:

It’s very much embodied by the philosophy of our school. So even whilst I might not have particularly regarded self-efficacy from its definition as being in my practice, just the practice I’ve inherited and grown with in the school has a respect for that being part of a child’s education.

The source of knowledge of self-efficacy was described as being part of a value set or a concept that teachers had developed over time but could not attribute a beginning. Amanda (S1) believed her understanding of self-efficacy is partly a reflection of her upbringing and “the value set” instilled in her by parents and other family members. Two other participants were less sure about the origin of their knowledge saying “I don’t really know where it comes from. I guess it’s just my own personality … my own feelings on it” (Elissa, S1) and “I think it’s from my own self” (Lara, S1). In building a comprehensive overview of what teachers understand about self-efficacy, the topic of self-belief was explored by the participants.

**Self-belief and learning**

An aim of this research was to describe teachers’ understandings of self-efficacy and identify what teachers regard as important when facilitating the self-efficacy of their students. One major theme that emerged in the interviews was the importance of students’ self-belief in their ability to learn. All participants concurred that students’ belief in their own ability had a major impact on their learning. Each participant
expressed their own thoughts about why and how this is important. Lara (S1) concluded that “self-belief is definitely the number one thing that a child needs to have to learn and feel valued in the classroom. I think once they have that self-belief and that value, they will flourish”. Penny (S3) concurred with Lara’s thoughts about the importance of self-belief in relation to learning by suggesting “it is everything”.

Looking more specifically at the benefits of self-belief to teaching and learning, Tamara (S2) and Janet (S1) elaborated on this point. Tamara had recently returned to the classroom after working in a school leadership position and considered student self-belief from an administrator’s lens by noting:

Going back into the classroom after being in leadership, I don’t think anything is more important than how they perceive themselves as a learner and as a person. I guess the big one with me is if they don’t have those skills or beliefs then you really can’t teach effectively.

Janet stressed the importance of self-belief, however she specifically linked self-belief with learning outcomes by suggesting “self-belief is so important because at the bottom of that is if you feel good about yourself and you believe in your ability then you are going to actually have, I believe, a more positive learning experience”. There are times when educators are required to be particularly mindful of individual student’s circumstances according to Penny (S3). She noted that parent work and lifestyle choices can influence the child’s level of self-belief, citing the example of parents who work away on fly in, fly out rosters. Penny commented that she has observed children struggle with their self-belief when their emotional states are affected by family work and lifestyle choices. She suggested that these individuals benefit from strong teacher-student relationships and a positive learning environment.

The role of relationships and learning was emphasised as being important to student self-belief levels (Penny, S3). Penny stressed the importance of positive teacher-student relationships by suggesting “the stronger the relationship you have with the child and the more they trust you, the more willing they are going to be to stretch themselves to try something new”. In addition to taking risks to trying something new, Amanda (S1) suggested that other valuable social and emotional skills are linked to acquiring self-
belief. She described self-belief as a process in which children develop valuable life qualities, such as persistence. Resilience and persistence are two skills identified by the participants associated with self-efficacy that are important to teach when considering the nature of the classroom, which is not static and can vary from day to day and moment to moment.

The notion that self-belief is fluid and can change rapidly was identified by Rebecca (S1). She discussed the fluidity of self-belief and highlighted the importance of the culture created within the classroom to support children when experiencing fluctuating levels of self-belief in their own ability, suggesting:

> It’s something that can be improved upon and is definitely fluctuating all the time so it can be there one day and it can be missing the next, even the strongest learner, so it’s not always consistent but I suppose your environment and the way you interact with your students really says a lot about that as well.

The way her students feel throughout the day and the impact their feelings have on their self-efficacy levels was considered by Janet (S1). She expressed the importance of teachers acknowledging that students have feelings and to teach them they are in control of their feelings. Janet claims self-regulation to be an integral aspect of learning and development in the early childhood years, suggesting “when children are not in control of their emotions it is hard for them to think positively”. Janet believes it is her role to provide optimal learning environments for her students to aid their development of self-regulation skills. She shares positive thoughts with her students and provides them with compliments to put them in a positive frame to learn.

Along with the positive impact high levels of self-belief have on student experience, the negative effects of not having sufficient levels of self-belief were also considered by the participants. Emelie (S3) and Deanna (S1) highlighted the negative impacts of children who do not demonstrate high levels of self-belief. Emelie pointed out that “if they don’t have that self-belief in the first place, even attempting a task is going to be a challenge”. Deanna echoed these comments:

> I’ve seen students who definitely don’t have that self-belief and it impacts in all areas because if they don’t believe they can do something it straightaway
triggers their “oh no I just can’t do it”. So, it’s not just that not willing to have a try, they don’t even want to have a go, especially in Kindergarten.

The implications of students in their early childhood years not having adequate levels of self-efficacy were discussed in the interviews. Participants also discussed their thoughts on whether there is a relationship between self-efficacy development in the early childhood years and outcomes for children and adults in the future.

**Longevity of self-efficacy**

All participants saw value in teaching students the social and emotional skills that support self-efficacy development in the early childhood years. Early childhood was identified as “the prime time to teach it” (Elissa, S1). Elissa explained that “if you can establish that foundation when they’re younger, then when they come across a challenge later in life when they leave school, they will be able to deal with it better”. She expressed that having belief in yourself to challenge something you do not agree with or knowing when to persist is really important and that people underestimate the importance of it. Lara (S1) also supported the teaching of self-efficacy skills in early childhood stating, “If any child has that self-belief that they can achieve what they want to, they will continue to have it in the future, if given those skills”.

One participant took the suggestion of teaching self-efficacy skills at an early age further, arguing that if these behaviours and skills are not instilled in children by Year 2 it is much more challenging and possibly even too late. Tamara asserted:

Looking at kids over time that I’ve felt success with, whether as a leader or as a teacher, I do see that that Year 2 level, particularly as an Early Childhood Head K-2, if you can get it right by the end of that Year 2 you really do see them sail through the rest of it, but if you don’t there’s not really time or energy put in for those late bloomers. It’s almost like it’s too late.

Tamara questioned whether teachers of students in Years 3 - 6 valued skills for learning, such as self-efficacy, as much as teachers of early childhood students do and considered whether they did not see these skills as having a major impact on learning. She also questioned whether students are immersed in the same dialogue used to develop self-efficacy once they move into the middle and upper primary years.
When considering the relationship between self-efficacy development in early childhood and in future years, participants considered the forming of positive attitudes and habits of mind to be underestimated. The focus for Fiona (S3) and Emelie (S3) was on the benefits that these attitudes to learning, when developed early, will bring to students in future years. Fiona elaborated:

So, it’s not necessarily the curriculum that matters often, it’s the attitude to which you approach the curriculum. If that’s taught to children, then when they’re ready, it may not be in school years, but it could be in university years, they can find from their attitude the willingness to find the curriculum. So, it’s that core sense of the habits of mind that form the learner. If they’re well developed, then it’s a resilience to be a lifelong learner. It doesn’t just come from high academic performance; it comes from just knowing you had the ability of focus and the ability to believe in yourself.

It is important for students to develop positive habits and behaviours for learning when they are young. Emelie described the reasoning for this:

What I feel is important is that I get these skills done and taught now because as their brains begin to solidify ideas. You know if they hear over and over in their head “I can’t do it, I can’t do it, I can’t do it” it becomes a pattern. So, I need to get them thinking “yes I can do this, I can challenge myself, anything is possible if I try”. So that positive thinking, that positive framework to learning is developed now and the longer they have a negative thought process, the harder it is to break it.

Continuing this positive framework in to the teenage years was a topic raised by Janet (S1) who provided an example of how self-efficacy can be important in teenage years, “social media is becoming an epidemic where kids have a lot of problems thinking about not liking themselves or thinking that they are not good enough”. She emphasised the importance of students having the strength to believe in themselves and that it is okay be different from others. Janet suggested that providing students with a toolkit of strategies for self-efficacy when they are younger, will provide them with an advantage when they get older.

While some participants considered ‘future years’ to mean beyond school, Rebecca (S1) shared her observations of the variation in the way students think between Pre-primary and Year 2. She shared concerns that “self-belief goes down as they [children] get
older”. She proposed that as children get older, they “are more risk aware ... they want to stick to the norm and get everything right. They’re more aware of the teacher’s approval”. She discussed that the formalisation of learning, as well as the maturity of children, are what changes the self-efficacy levels of children as they get older. Rebecca used the activity of painting a picture of a horse as an example. She explained:

In Pre-primary it’s a painting and they celebrate it; they love what they’re doing. But in Year 2 they’ve probably analysed it a bit more and thought “is that really what a horse looks like? I don’t think that my drawing is the best drawing that could ever be drawn of a horse” and they have that constant need to think “oh yeah it has to look like the image in the book”.

Increased expectations from students in their own ability as they get older has been highlighted by Rebecca as something she has observed during her teaching career. She has considered both maturity and the formalisation of learning as possible reasons. Rebecca, along with two other participants, discussed the possibility that self-efficacy strategies taught in early childhood may not have lasting effects.

Three participants displayed uncertainty as to whether the teaching of self-efficacy strategies in early childhood had long-term benefits to students in the future. Rebecca (S1) stressed that she would like to think they continue to have an impact as children get older “but then, with the statistics you see in the real world, I don’t know how much of it is sticking ... When you get out into the real world and you’re faced with a crisis.” Likewise, Penny (S3) noted that it can depend on the circumstances of the children whether these skills will be beneficial to learning in the future. Penny suggested that children who have faced negative experiences or trauma, such as the loss of a parent, may never develop strong self-efficacy. She observed that parent work and lifestyle choices also influence the child’s level of self-efficacy.

The lasting effects of self-efficacy skills when taught in early childhood were also considered by Deanna (S1), who reported being “hopeful” the self-efficacy skills taught to students in early childhood would be retained as they got older. When considering whether the development of a culture of self-efficacy when young will have lasting effects Deanna expressed:
I’d like to think so. I don’t know. I know there’s still research coming along out with that but I’ve watched the Life At series, the longitudinal study of Australia and they say that there is, talking about the things that happen when they’re birth to five years, it really shapes them as a person, so I’d really like to think that what we do does impact and I think, especially socially and emotionally...

Fiona (S3) reiterated Deanna’s comment by suggesting “having a sense of yourself as a learner and being capable in different situations is so important”. She concluded that these skills “do not ever leave you, so to have this understanding of loving learning and being capable to take on learning when you’re ready” is imperative to gain when students are young. Developing these skills in the context of social and emotional learning was considered by the participants.

**Self-efficacy and social and emotional development**

To better understand self-efficacy and its relationship to social and emotional learning, the participants were asked to explain how the two related. All participants agreed that there was a connection between self-efficacy and social and emotional development. Penny (S3) suggested that “one feeds the other,” while Emelie (S3) argued that “the two areas are so inextricably linked that you can’t really separate them”. Emelie further explained the connection:

> If you don’t have that self-desire to learn or you don’t believe you can learn, then the cognition is going to drop, you’re not going to learn. If you can’t work well with others and you’re in a social collaborative environment like we’re in, then suddenly you’re not going to be able to learn and probably your self-belief in your ability to learn is also going to drop because your learning has decreased.

Deanna (S1) agreed with Emelie that the relationship between self-efficacy and social and emotional development is strong, suggesting “having a strong sense of self-belief helps you to become a socially emotionally balanced person”.

Some participants described self-efficacy as the foundation for more than social and emotional development. Fiona (S3) proposed it is linked to many other areas including physical and cognitive development, suggesting the link was strong “across the board”. To support her statement, she provided an example of a student who declined to have an attempt at the monkey bars. She highlighted that by doubting her capabilities in the
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playground, the student could then continue to doubt her ability to successfully complete tasks such as reading or writing in the classroom. Fiona elaborated on her example, asserting if self-efficacy was not well developed, it could affect learning in many areas:

So, where a child is definitely saying no, it is a huge area to focus on as a teacher ... to see what support you can offer and how you can help them not say no to that, if it’s an opportunity for learning in any domain.

To further probe this point, participants were asked why they believe it is important to focus on social and emotional learning with their students. In her response Elissa (S1) discussed this learning as being relevant to the whole child, rather than only academic type learning:

It’s just as important for when they go outside of the classroom, so what they’re doing at lunch and at recess and at home and how they’re treating people in the community, to me that’s just as important as coming to school and learning your numbers to 20.

In describing the relationship between self-efficacy and social and emotional learning, the link between home and school was raised by two participants as being particularly relevant. Deanna (S1) commented that there are a lot of parents “trying to fix all the problems for their children” emphasising “it’s so important to teach children problem solving strategies and teach them that it’s okay to sit with those feelings that they have”. She added that with well-developed social and emotional skills “you will achieve what you need to in life”. Janet (S1) claimed that social and emotional skills were transferred from home to school and used across all parts of the child’s day. She used the example “if children were having some challenges at home, they could use their strategies that we’ve been teaching them at school to work through it”.

Participants were asked to add to their understanding of self-efficacy by describing what self-efficacy looked like in their students and how it varied from student to student. These questions allowed for further insight into how participants describe self-efficacy to assist in answering the first research question.
6.2.3 Characteristics of self-efficacy

Specifically, participants were asked to describe the characteristics of students with high levels of self-efficacy and to provide insight into why some children may have higher levels of self-efficacy than others. Some themes to emerge from teacher’s responses include, students who: display high levels of confidence, persist at tasks, demonstrate independence, and use positive language.

Confidence

Three participants reported self-efficacy to be related to confidence. Fiona (S1), Penny (S3) and Lara (S1) found commonalities between students with high levels of self-efficacy and those with high levels of confidence. They considered these students to be the ones who are most likely to attempt a task at the first opportunity. Fiona observed:

There are some children that just get started even when they’re not so sure and they’re confident to ask for help and they trust that help will be there and then there are other children that protest from the go-get-“I can’t do this, I can’t”.

Fiona concluded that there are three types of students. There are those who will jump in and give things a go straight away, those who will attempt a task with a little bit of encouragement and support, and those who “just say ‘I can’t’ and then just stand there – they don’t try”. Penny highlighted the importance of making sure students have the confidence to put up their hand to ask the teacher to re-explain a task if they are unsure. Once this has been achieved, she says it is important to focus on their body language as this gives an insight in to how they are going to approach the task. She added that students with high levels of confidence are easy to spot as they will jump in fast to do something, whatever the request. Lara concluded it is “the ones with the most confidence that go for it ... I think that shows if they have self-efficacy or not”. Rebecca (S1) warned some students have false confidence. She explained false confidence as students initiating a task, finding it difficult and subsequently giving up. The true indicator of self-efficacy according to Rebecca, is when students believe in themselves enough to come across an obstacle and get over it.
**Persistence**

Participants were asked to give examples where their students exhibited more self-efficacy than others and to highlight the characteristics and behaviours of those students. The learning disposition of ‘persistence’ was identified by two participants as being a characteristic. Amanda (S1) commented that students who have an ability to persist, are most likely to have increased levels of self-efficacy:

> I think that they can see mistakes as part of the learning process, and they understand that we’re not going to succeed straightaway all the time. That failing is important as well and it doesn’t mean that we can’t do it, so it’s that ability to persist and not give up.

Similarly, Elissa’s (S1) observations tell her “It’s the kids that push through when there’s a challenge so they’re able to persist, whereas some kids give up quite easily … There’s that ability to brush the little things off and to know that challenges are good”. Elissa highlighted children with high levels of self-efficacy know it is normal to make mistakes and learning happens when mistakes are made.

**Independence**

The students’ sense of independence was also found to be a characteristic of students with high levels of self-efficacy. Emelie (S3) shared observations about those students who had the ability to toilet and dress themselves independently, highlighting those students were usually the ones who initiated activities without consistently seeking permission to do so. She identified students who were constantly seeking reassurance as those with lower self-efficacy. Emelie described a situation with one student who asked each day if he could play with the blocks, despite the blocks being freely available for the past three years. This student, Emelie explained displays low self-efficacy and minimal levels of independence.

**Language**

The language students use in relation to their ability to believe in themselves was considered by Tamara (S2) as a way of judging self-efficacy levels. She commented that for students who are able to articulate how they are feeling and use positive language
“slowly the trust or the belief grows”. She added this language is then shared with parents and friends and becomes part of the student’s vocabulary and then schema. An example was provided by Tamara highlighting the language used by the class can be changed very quickly if used regularly and consistently. She observed changes in the language used by students who were new to her Year 2 class, over one school term. Tamara also claimed to observe these students attempting tasks they previously did not attempt.

**6.2.4 The variation of self-efficacy levels between students**

Participants were asked why some students had higher levels of self-efficacy than other students in their class. As many of the students referred to in the interviews were in their first years of school and have been largely surrounded by family to this point the participants considered family influences and parenting styles as well as student’s prior experiences to be the most influential factors.

**Parents and family**

Parents and family were identified by six participants as influential in the development of student self-efficacy in the early years. Deanna (S1) indicated parents as the primary influence of her students having high levels of belief in their abilities. She reported as noticing that children see and hear a lot from their parents and observe their behaviours and interactions with others. She commented that children’s self-efficacy is “because of their home life ... the positive belief system that they’re fed at home”. She summarised her thoughts by suggesting the belief system established at home, whether positive or negative, can impact the child’s emotional state and therefore their likelihood to attempt tasks with a positive mind frame. Deanna concluded the way parents interact with their child in her Kindergarten setting provides her with insight about the impact the interactions have on their child. She explained, “It’s all the things the children hear [from their parents] and if the parents have low self-esteem, you can see how this impacts the child”. The notion of self-efficacy levels of students in early childhood
stemming from home was also supported by Emelie (S3) with an example from her Pre-
primary class. She concurs that the self-efficacy levels of her students are influenced by
parenting style and their prior experiences before reaching school:

Sometimes parents, even though their non-verbal cues are showing “I believe
you can do this yourself” display actions that are telling them otherwise. So, for
example, if a parent puts on their child’s shoes for them that’s saying to the child
“you can’t do this, I need to do this for you” whereas if you give a child their
shoes and say “you need to put your shoes on” it tells a child “I believe you know
how to put your shoes on”. So even something that small is a huge message to a
child.

Parents providing encouragement to their children at home was also reported as being
an indicator of increased self-efficacy by Fiona (S3), Rebecca (S1) and Elissa (S1). Elissa
added, variations in students’ levels of self-efficacy relate to how they are encouraged to
learn at home, as well as at school. She maintained the communication between home
and school is key to developing a student’s self-efficacy. Closely connected to family and
parents are the prior experiences students have been afforded before they get to
school.

**Prior experiences**

Prior experiences were considered by the participants as being from both home and
school. The influence of past experiences on student self-efficacy levels were discussed
by Penny (S3) who reiterated differing levels in self-efficacy among children “is going to
boil down a lot to experience, what they’ve had the opportunity to try. What the home
messages are? That has already hit them before they get to us”. Fiona, also a
Kindergarten teacher from S3, made comment about opportunities students had in the
past impacting on their self-efficacy development. She surmised that these experiences
and opportunities shape children and when assessing their mind frame and attitudes
“you’d assume it came from the home environment”.

It was interesting to note who teachers viewed as most influential in the self-efficacy
development of their students. Previously, parents were discussed as having an impact,
however Tamara (S2) focused on the important role teachers have in student self-
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efficacy development. She discussed the way in which questions and requests are phrased to students can account for varying degrees of self-efficacy:

For some children the minute you give them, say mathematics or a particular concrete problem ... I find that whatever’s happened before will determine “I can’t do that”, “I don’t know how to do that” so they’ll come straightaway whereas when it’s something that’s more open ended, they say “I can do that” so it definitely is very related to the task or their perception of the task. Is it right, is it wrong? Whereas when it’s more open ended there’s a difference.

The consideration of using open-ended questions to facilitate self-efficacy paves the way for the next section of this chapter, the strategies teachers identified as being successful when raising the self-efficacy of their students.

6.3 Facilitation of Self-efficacy in Years K-2

To answer research question two, participants were asked about strategies they have found to be effective in building student self-efficacy in the classroom. A wide range of strategies were discussed as being effective. The most effective strategies included; encouragement and feedback, teacher modelling and setting small, achievable goals. Those participants who indicated they had previously taught a range of year levels from K-2 were asked to consider whether the same strategies were effective for each age group, or whether they varied according to the age and maturity of the students.

6.3.1 Encouragement and feedback

The findings from the Phase Two interviews indicated six participants used encouragement and feedback as a strategy with their students to build their self-efficacy. Fiona (S3) shared concerns her students were sometimes critical of their drawings and paintings. In response to this, Fiona described her facilitation of group circle times to discuss the fact people are not born knowing how to do things and learning is a process. She claimed to always encourages children to have a go and not be held back by the possibility their work may not be perfect. Similarly, Rebecca (S1) explained she also uses a lot of encouragement and positive praise with her students.
and emphasised this is always accompanied with feedback that is meaningful. Two participants highlighted positive self-talk as a strategy they use with their students to develop their self-efficacy. Janet (S1) and Deanna (S1) stated they encourage their students to talk to themselves in positive ways in times they feel it will be helpful. Deanna also discussed the importance of promoting a lot of positive talk in the classroom from the teacher and suggested when they succeed, to provide children with lots of “praise and positive reinforcement to really build them up”.

6.3.2 Modelling

In addition to encouragement and feedback, six participants during the interviews highlighted the power of modelling as a strategy to build self-efficacy. There was variation in what participants classed as modelling. Participants detailed three examples of role-play being used effectively, and two examples of teachers using own examples of mistakes to provide opportunities to model how it might be handled in a positive way. Elissa (S1) referred to an incident when the smart board was not working and decided to use this teachable moment to model what to do when challenges arise. She guided the students thinking by saying “I’m not going to sit and cry, am I? I’m going to problem solve”. Similarly, Fiona (S3) discussed how she and her education assistant set up situations in their Kindergarten where they deliberately make mistakes as a teaching opportunity for problem solving. She provided an example, “we’re modelling how to use some paints and we might perform or act out between us a sense of disappointment [when we make a mistake] and have the children workshop what this mistake means or how they might handle it”. In addition to modelling by teachers, Fiona (S3) added in terms of strategies to develop self-efficacy “peer modelling is really powerful”. Fiona was the only participant to discuss this during the interviews. Fiona also spoke during the interviews about the importance of breaking tasks down, so they were more easily achieved by students.
6.3.3 Breaking tasks down

The strategy of breaking each task down into small, achievable steps was indicated by five participants as a strategy they use successfully to raise the self-efficacy of their students. Emelie (S3) provided an example of a student stuck up a tree and described how she would encourage the student to get down by themselves by offering them suggestions of what they could try. These included: “Do you remember how you got up?; maybe you could do that in reverse?”; “What do you think you need to do first?; and “What are you going to do next?”. She claimed by posing those questions in a way that broke the task down into smaller steps, the student would be more likely to attempt the task independently. Amanda (S1) claimed first you need to look at what individual students can do. She argued by looking at the strengths of each student, teachers can set goals broken down to “small manageable parts that are more achievable”. This helps students to see the goal and a clear pathway to achieving it. Three participants, all from S3, mentioned goal setting as an important part of this process. Penny explained this by explaining if tasks are broken down into smaller, more realistic goals then it is easier for students to see and to achieve the end goal. Fiona added by stating it is also important to celebrate any achievements and progress the student makes toward their goals, big or small. A key factor in helping students to achieve their goals is getting to know them and how they best learn.

6.3.4 Knowing students

Two participants agreed knowing students and their strengths is integral in supporting their social and emotional development. Janet (S1) commented about completing weekly interviews with each student in her Pre-primary class to get to know them better. The interviews included a wide range of questions about what the student likes to do and what they do not like to do, who they like to play with and if is there anything bothering them or upsetting them. She claims the interviews to be powerful in identifying and tackling issues before they negatively affect student self-efficacy. As the leader of the early childhood team at her school, Janet encourages the teachers to make
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observations about who her class members are playing with in the playground and about their levels of socialisation. Being tuned in to students in everything they do, Janet suggested, allows teachers to get to know and understand each individual at a much deeper level. This in-depth knowledge of each student can assist in supporting their social and emotional requirements and can be used to prevent poor emotional health. The strategy of getting to know students well was reiterated by Rebecca (S1). She elaborated, observing that one-on-one conversations with students helps to build positive relationships and allows teachers to encourage them to attempt things that may be out of their comfort zone, or that they have previously not been successful. While Janet and Rebecca prefer one-on-one conversations with students, some participants believe self-efficacy should be developed as a whole class through team approaches.

6.3.5 Teamwork

Working together as a team to develop a sense of belonging in the classroom was a strategy discussed by two participants during the interviews. Deanna (S1), in her Kindergarten class, celebrated the team relationship to build knowledge about kindness to support each other in their learning. She developed class mottos like “you just have to try”. Students chant back “you always have to give it a try” and “we work as a team,” so if they find something difficult, they can work as a team and their friends can help them. Penny (S3) also provided an example of how chants support self-efficacy in her Kindergarten class, “At our school, each class has a tribe name. Ours is the ‘Good Vibe Tribe’ and our chant is ‘keep on trying, that’s our way’. That has become part of our collective language as we sing it every day”. Whether teachers use individual or whole class strategies to develop the self-efficacy of their students, the teaching and learning environment was described as influential in implementing these strategies.
6.3.6 Learning environments

Creating learning environments conducive to self-efficacy development was considered an effective strategy by some participants. Fiona (S3) highlighted the need for tasks and materials in the classroom to be well considered to allow students to experience success with them. She referenced the Montessori philosophy of learning in which students are trained to perform many tasks traditionally carried out by adults, such as cleaning. By having child-sized brooms for sweeping, students are able to complete tasks independently, providing them with a sense of achievement and pride. Fiona claims by having the right size materials and the right level of shelving, students can make choices for themselves, resulting in them “feeling more connected to the space and more empowered to achieve more challenging tasks”. She elaborated by saying it is important that educators do not dictate what the learning environment looks like and instead it should be a reflection of the students in the room.

Providing a learning environment that encourages choice was discussed by Tamara (S2). Tamara claimed that allowing students to choose activities they find interesting will result in higher levels of motivation and increased rates of success. She stated by being familiar with the activity, students are more likely to “know what they are learning, what the outcomes should be and what it should look like”. Increased familiarity with the task and increased success will lead to more positive levels of self-efficacy, which will result in the student being likely to want to perform the task again. As well as the consideration of the learning environment to support self-efficacy development, the need for the explicit teaching of skills was also discussed by participants.

6.3.7 Explicit teaching

One participant (Rebecca, S1) commented on the importance of explicit teaching and detailed the process for her each time she introduced a new skill, such as persistence, organisation or confidence. She explained “we build that up through actual explicit teaching of what those things are and then using that language continuously is one way
as an overarching strategy to get everybody to recognise it and start using them [the new skills]. The need to be clear and explicit in instructions and dialogue was discussed by two participants as being effective to raise student self-efficacy. Another participant (Tamara, S2) commented about the need to make the learning intentions very clear to the students through the use of explicit dialogue. She provided an example of what she may say to her Year 2 class, “We were learning about X and you have learnt that because you’ve shown me X at the end of it. And if they haven’t managed to get this part tomorrow we’re going to practice this part”. In addition to explicit teaching and use of explicit dialogue, the need for differentiation of learning was considered by Tamara.

### 6.3.8 Differentiation

During the interviews, Tamara (S2), was the only participant to discuss the importance of differentiating learning as a strategy to develop student self-efficacy. She explained she does not ask students to do anything she does not think that they can do and added she sometimes manipulates the task, so they experience success. This, she claims, is a strategy she uses mostly in first term to get the students to attempt and succeed at tasks they may not have tried before. She referred to Vygotsky’s Zone of Proximal Development (Vygotsky, 1978) highlighting the importance of students trying things that may be at a level just above what they can currently achieve alone. Tamara stressed to have the support of educators to scaffold student learning, allowed increased opportunities for success. Another strategy to build successful learners, according to two participants is having high expectations of the students and of their abilities.

### 6.3.9 High expectations

Having high expectations was reported by two participants as an effective strategy in raising the self-efficacy levels of their students. Fiona (S3) expressed during the interview that always having high expectations of students is key but it is also important to have “an understanding that it may not be achieved at that moment or that day, so
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understanding they’re on a journey”. Rebecca (S1) echoed Fiona’s thoughts and provided an example of how she supports student learning, while still having high expectations: “well I know you can count to 100 but we’re going to try to count to 200 today and it might be tricky, but I know you can do it”. Fiona continued in the next section of the interview by discussing the importance of communication in developing student self-efficacy.

6.3.10 Communication

Using examples, Fiona (S3) expressed her belief about the importance of communicating to the parents of her students to build the student’s self-efficacy. The purpose of the communication she noted was to inform parents about what their children are learning and how parents can support them with their learning. She gave self-care and self-management skills, such as teaching children to fill their own water bottles and getting dressed independently, as examples. Fiona suggested in her Kindergarten class they inform the parents of what the current focus is and what learning is involved. In this way she said, “it teaches parents what we really value and that their child could really gain experience at home”. She commented she raised topics like this at her parent meetings which she said, “comes as a surprise to some parents sometimes when they think what is in the Kindy program”. Janet (S1) has also encountered parents who are surprised by certain aspects of the curriculum in her Pre-primary class. She believed the teaching of social and emotional and self-management skills begins in the home but added “you may have parents that feel as though it is our role to do that”. Fiona and Janet both indicated that self-management skills were an important indicator of student self-efficacy levels. To develop student’s self-management skills during the early childhood program, teachers are required to make choices about how much time they prioritise to this aspect of the curriculum.

The strategies indicated as being effective for raising the self-efficacy of the students were discussed by the participants in the context of their current class. Data was also collected during the interviews that allowed for a comparison of strategies used across
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year levels K-2. This data examined whether the strategies that were found to be effective with students in Kindergarten were the same strategies reported as being successful with students in PP - Year 2.

6.3.11 Variety in strategies K-2

Participants who indicated they had taught a range of different year levels were asked whether they found a difference in the effectiveness of strategies for students between Kindergarten and Year 2. Emelie (S3) was currently teaching in Pre-primary but had in the past taught a Year 1/2 composite class. She explained how the arrangement of her classroom and learning program meant there was little difference in the strategies she used: “I set up my Year 1/2 room very much like a Pre-primary room, so my room in Year 1/2 would look very similar to this because it should still be play based”. She raised concerns during the interview about a reduction in the mediums through which social and emotional and creative skills are taught in primary school classrooms at other schools. She suggested in Year 1 and Year 2 classrooms at other schools:

You’ll see less art. You won’t see an art space, yet these skills are so fundamentally important. I can’t understand why suddenly children are expected to sit at desks just because they’re in Year 1 and I think teachers are bowing to the pressures of the Australian Curriculum, but they’re still little people that need time to move, play and be social and I’m going to support them exactly the same.

Like Emelie, Fiona, also at S3, stressed the importance of continuing to provide time for the students in Years one and two to enjoy play-based learning. She admitted with the pressures of the curriculum she did find it hard to find time to include play but understood “it was so necessary to have time and space to help them [the students] thrive as learners and as people”. She found ways to integrate the play, stating “first we go outside and explore nature and the play would be cubby house play which would often lead to shops in the cubby houses so you could integrate learning at some point”. Fiona stated the Arts was another place to include play in the learning, suggesting the curriculum often emerged through interactions with different art forms.
One difference in the strategies used with the students in Kindergarten and Year 2 according to Fiona, was the use of technology. Fiona, who is currently teaching in a Kindergarten class, shared her experiences after previously working with students in a Year 2/3 class. She highlighted that those children who required extension and were at risk of “feeling misunderstood” used technology as a tool to further challenge their thinking. She felt that this enabled them to feel successful as learners, thus raising their self-efficacy.

One participant, Tamara (S2), advocated for an emphasis on strategies to build self-efficacy to be taught in the younger years for fear they are not taught in schools past Year 2. In her interview, she reported having taught a wide range of students from Kindergarten to Year 6 and believed in relation to self-efficacy “You have to get it right by the end of Year 2, if you do, you see them sail through the rest of it, but I’ve found that there is no time or energy put in for those late bloomers”. Tamara provided an example of a project she undertook in her previous role as head of Primary:

> I decided I would teach an inquiry approach across all years using the same content to see whether or not it developed those skills that we’re talking about that we’re seriously lacking in the [Year] 3-6s and I think I got to the end of that three year period and was totally persuaded that if you used early childhood practices with those children you would see that shift, so whilst we can say by the end of Year 2 it’s all over, if you have somebody who has that strong ability to teach that way, then you will see a difference.

Some of the strategies discussed by teachers in this section, such as the time available to them to develop children’s self-management skills and the time available to access to play spaces were as a result of their workplace environment. Teachers were asked to reflect on their workplace and to consider any aspects that impacted on their ability to facilitate the self-efficacy of their students.

### 6.4 Impact of the Workplace

To better understand how the participants facilitate the self-efficacy of their students they were asked what workplace factors they felt were most influential in this
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endeavour. Themes that emerged included: the culture of the school; parents and families; school support staff; class sizes; as well as time and space.

6.4.1 School culture

Five participants explained how the culture of their school had impacted on their ability to facilitate the self-efficacy of their students. The teachers from S3 reflected on how the freedom their school afforded them influenced their teaching. The ability to be autonomous in her teaching was considered by Emilie to contribute to her personal self-efficacy. Emelie described how her own self-efficacy benefits her students by suggesting, “being given agency as a teacher and knowing the benefits, you want to pass that on to your students”. Her school allows teachers to have choice over how their teaching time is spent, resulting in freedom to spend time developing the social and emotional skills her students require. Emelie explained:

We have freedom of planning, so we don’t have to plan a whole year out in advance. I plan week to week, sometimes day to day, depending on the needs of the children in my class. So, if I see that something is a struggle for three or four students ... that’s what we’re doing first thing tomorrow morning. So, the freedom and the licence that we get from higher up allows us so much more scope to attend the needs, whether it’s self-efficacy, building those social skills ... we can have the time to do that and I think we need to build those before we can add curriculum.

Like Emelie, Penny (S3) reported to value the freedom to have a flexible program allowing her to make decisions about individual students. She claimed to appreciate that her Kindergarten students have the opportunity to go for a run at any stage of the day. Fiona applauded the freedom and flexibility she was afforded and commented that teachers at her school “are never afraid of a mess and never afraid of it not looking perfect”. In addition to the freedom, having a collaborative school culture and positive relationships was noted as being advantageous in raising the self-efficacy levels of their students.

Maintaining positive working relationships with colleagues was considered to be beneficial when promoting the self-efficacy of their students (Lara, S1, Emelie, S3). Lara
claimed to work in a good team that bond well together and have similar ideals. Emelie commented on the fact teachers at her school collaborate across a lot of classes. She referred to sharing knowledge gained at professional development session and noted “If one person does a PD that they find really effective, they’ll share what they’ve learnt”. Similarly, Janet (S1), as the leader of early childhood learning at her school, explained that “regularly when I speak with the girls it [self-efficacy] is something that I bring up so it’s almost like training them to think that way, having others on the same page as you”. In the same way teachers value collaboration with colleagues to support their students, some teachers report open communication with parents to be beneficial to student self-efficacy.

Having parents as partners in the students’ learning and the opportunity to educate them on the school’s philosophy was observed by Fiona (S3) as being beneficial to student self-efficacy. She particularly values “the publications that parents read before they even come to the school, to let them know that ... we value risk taking ... responsible risk taking and see value in failure”. She celebrated during her interview that parents at her school were informed that a product will not necessarily be coming home every day. She explained:

It’s not about a display, we wouldn’t put up displays where everyone’s got the same item and proving that they can do a circle because inevitably that just sets some people up for failure doesn’t it? And so, we’re very conscious of intentional display or sharing of work in a way that supports the idea of individual learning journeys and this idea of group too. Our school teaches parents that it is all about the moment. So, I think it’s definitely the education around the school of the philosophy and the dialogue we have with the parents and class communities.

As well as being considered a positive influence on student self-efficacy, parents were also discussed as potentially inhibiting self-efficacy development. One teacher mentioned a lack of knowledge and understanding about the importance of self-efficacy by the parents of her students. Lara (S1) discussed the requirement for parents to have a better understanding of the importance of this area, commenting that “their lack of knowledge probably hinders it a bit”. She suggested that the main restriction with this is “what they [the students] hear at home and what they hear at school are different”.

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Fiona (S3) provided an example of what she observed in her setting, which support Lara’s comments. Fiona explained her school has a focus on nature play where children are encouraged to experiment and play in the mud, dirt and rain. Despite their awareness of the school’s philosophy, Fiona has witnessed some parents becoming frustrated with their children for being dirty at the end of the day. This, Fiona explained, provides mixed messages to her students and is counter-productive to efforts to raise their self-efficacy.

Similarly, Fiona (S3), emphasised the restrictions cultural factors have on facilitating student self-efficacy. In particular, she noted skills such as independence and self-management to be those most likely impacted by culture. Despite having clear learning intentions in this area, Fiona provided an example where cultural appreciation is put before learning in her class. She stated that “we would not change a beautiful Romanian grandmother who insists on carrying her Kindy child in and out [of the classroom]”. Despite not wanting to change the cultural practices, Fiona reported what she believed was a causal relationship between the actions of the child’s family members and his self-efficacy, stating that “he is the first to say, I can’t do that”. In another situation Fiona describes a “lovely Chinese grandma” who is uncomfortable when children are wet and muddy at the end of the day. She commented that “we are very sympathetic to the fact that culturally she is finding it quite confronting”. An additional impact on student self-efficacy development, as reported by participants, is the level of human resources available to them in their schools.

6.4.2 Support staff

Four participants reflected on the extra support they have available to them in the form of human resources. Emelie (S3) and Penny (S3) articulated the benefits of having two teachers in each room:

Because we have two teachers in every room most of our learning is done through small groups. So, I can tailor the learning to my different range of learners within the room so that they’re not feeling that they’re different from their peers while still experiencing that collaborative learning environment, learning from their peers.
Similarly, in her classroom, Tamara (S2) also reported receiving extra support. She commented that she receives “support a couple of days a week with a learning support teacher who will come in and take on any specific things that we feel is required”. She identified her classroom as “very rich, it’s a very rich learning environment”.

At S1, Rebecca highlighted access to the school psychologist as being beneficial to the students when considering their self-efficacy development. She provided examples of the support available at her school:

> We also have a number of staff that support us, which makes a big difference. So we’re not just single teachers alone in a classroom, we’ve got a team, we’ve got the Year 1/2 team, plus we’ve got a learning enhancement team and our deputy’s involved in a lot of what the decision making of the classroom is so that definitely helps to support ‘cos if we identify a child that’s struggling we can all do something about it.

Amanda (S1) dedicated her school’s success in this area to its leaders and believed having a whole school approach is important because “as staff, I guess we’re taught the importance of believing in our self as well so it’s that whole school sort of approach” to raising self-efficacy. As well as having supportive staff and school leaders, class sizes were also discussed as being influential on the self-efficacy levels of the students.

### 6.4.3 Class sizes

Having small class sizes were observed as being advantageous to the development of student self-efficacy by two participants, Tamara (S2) and Penny (S3). Tamara described the benefit of small class sizes at her school:

> I teach 16 girls so by the end of the year we have a very strong relationship, you have enough time to work one on one with every girl every day. I really value that relationship side of being able to almost come up with, I guess, individual learning needs on the spot because you have the time and also behaviourally they allow that to happen ‘cos they’re very on task and even the kids who have significant needs because the rest of them don’t, you can teach in a beautiful environment.
Having small class sizes, as mentioned by Tamara, can result in extra time available to focus on the individual requirements of students.

### 6.4.4 Time and space

The time teachers had available to spend with their students was reported by Penny (S3) as being very beneficial to student learning. Penny discussed the advantage of having time available to support the students in her Kindergarten class:

> There is processing time - we are not all sitting here at desks and we are not all trying to do the same thing at the very same time. So, there is time. We have lots of time for the children- processing time, completion time, we do large group work for sure as well as our whole class meetings to give people the opportunity for children to learn from each other of course but then there is also lots of small groups where children are grouped together in similar ability levels.

Fiona (S3) reinforced the advantages in not being locked into strict timetables and school bells, resulting in freedom to spend time with her students when they require it. She discussed how she utilises the time she has available to develop her students’ self-management skills, which leads to increased self-efficacy:

> We have a big afternoon in the wild space and all of that time I could just stand with one person and talk them through each step of putting their clothes away or doing their own zip up on their lunchbox.

Similar to the time Penny and Fiona reported as being available to them to focus on their students, Penny also highlighted the use of space and freedom she could offer her students as a positive feature of her working environment:

> There is space- some children prefer to work quietly in a quiet space and that is something you will get to learn about them, and I’ll give them that option. I tell them that I trust you until I can’t trust you. I give them responsibility and if they let me know that they need five minutes outside to have some quiet time then as long as they are appropriate out there, I give them that time.

Space was also considered by Emelie (S3) during her interview as being a benefit to the students at her school, however her focus was on the physical space. She focused on the flexible use of space in her Pre-primary classroom, highlighting that the classroom did not have a chair and table for every student. Emelie added “the same goes for our
Year 1/2 rooms. Not everyone will learn sitting at a chair and table, we make everything a multi-sensory experience, especially for maths and literacy”.

Working in classes with high numbers of students, and where there was reduced learning time due to a high number of distractions, were also considered potential barriers to increasing student self-efficacy. Having a number of high students in her class requiring learning adjustments was cited as a limitation by Emelie (S3) who explained that “those few [students] can take up a lot of one educator’s time and that can be to the detriment to the learning of others. It can limit what you do in the classroom”. Elissa (S1) suggested although time can be a restriction, teachers need to be better at integrating social and emotional learning into the timetable, commenting that, “it doesn't necessarily have to be separate; I don’t know why people see subjects and I don’t know why it’s [social and emotional learning] separate”. Also concerned about the limitations on her teaching time was Tamara (S2) who suggested her school had a lot of distractions that detracted from the learning program:

There’s a lot of external fundraising and dress up days and there’s always something, which I think heightens the girls’ levels so that they’re a little bit hysterical sometimes. I don’t think there’s the need for that, but they see that as how they’re different to other schools, so there’s a lot of extra-curricular which doesn’t give them anything extra.

Deanna (S1) concurred, stating at her school “there are a lot of school initiatives, a lot of initiatives that pile up and up and sometimes it’s just a bit too much”.

Another factor that impacts on the self-efficacy development of their students is the social and emotional programs schools choose to implement and the professional learning experiences they provide to their teachers.

### 6.5 Programs and Professional Learning on Self-efficacy

Participants were asked to describe any school programs or professional learning they had been involved in with a focus on self-efficacy, or other areas supporting self-efficacy development. The school programs deemed to be effective in promoting social and
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emotional skills include: the Kimochi social and emotional learning curriculum (McInnes et al., 2020), ‘Zones of Regulation’ (Kuypers, 2011) and the ‘You Can Do It!’ program (Bernard, 2017). The six participants at school one (S1) all described the use of the ‘You Can Do It!’ program (Bernard, 2017) as the primary program used at their school to focus on developing the social and emotional wellbeing for their students. The program was explained by Rebecca as having a focus on five keys to strengthen student success and wellbeing. The five keys of; Confidence, Persistence, Organisation, Getting Along and Resilience are “used in all our classes but look different in each classroom, because every teacher and every class is unique”. As the leader of the Early Learning centre at S1, Janet reflected on why the school chose to implement the ‘You Can Do It!’ program:

The research from the ‘You Can Do It!’ program was showing where that program has been used over the years it found that there has been an increase in kids being a lot happier and perhaps being able to deal with problems a lot better.

Elissa explained the program had been running at the school one for a number of years in all year levels, Kindergarten to Year 6, and is modified for each year level. As a Pre-primary teacher, she explained how the program works with the students in Kindergarten and Pre-primary:

In the Early Learning Centre we have puppets, because the kids do … they learn through doing or they learn through seeing and so if you have the puppets you can really explain what resilience means otherwise it’s a bit abstract to them so they actually really … only in the last eight weeks we’ve seen quite a difference in them saying “oh we’ve got to be Ricky Resilient” or “Penny Persistent” even doing work we don’t like at times you know to push through and have that self-belief in yourself. Yeah, it’s a really good program.

In Year 1 the program is used to support their behaviour guidance system, as explained by Amanda:

Our actual behaviour … one of our positive incentives for behaviour management is to have a key keeper and the key keeper is someone whose demonstrating either one of the five keys or some of the keys in their daily life within school and we decide the person that’s going to be … I guess it’s like a little star of the week, but we do also bring those keys into our positive reward system too.
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As a teacher in Year 2, Rebecca also uses the five keys of success from the ‘You Can Do It!’ program (Bernard, 2017) and explained how she integrates the use of compliments to facilitate self-efficacy in her students:

Instead of a key keeper like in Year 1, I have a star helper and at the end of the week. The girls will observe something about them, in relation to the five keys, and they’ll give them compliments and then they get to be a star on my wall. So, it really promotes that celebration of self-belief because when someone else picks up something that you did well you start to believe “well actually I can do that” and it might not be something you recognise that you are good at or that you could have done. So that compliment, which is just an identity of Year 2, really works well.

At S1, it was explained by Lara they use another program alongside the ‘You Can Do It!’ program in the Early Childhood centre. The program called ‘Kimochis’ (McInnes et al., 2020), is a self-care program, based around emotions. It supports the concept of self-efficacy by addressing the self-belief of the students as Lara explained:

It’s more about the feelings, like the feelings of … each character has a feeling and how they might be good at something but not good at other things, and how it affects their self-belief. So, at the moment we’re using this character called Cloud and one face is the smiley face and on the other’s a frown and how’s Cloud feeling, why is he feeling like that etc.

In addition to the ‘You Can Do It!’ program (Bernard, 2017), which has a focus on the five keys, and the ‘Kimochis’ (McInnes et al., 2020), with a focus on self-care and emotions, the teachers at S1 highlighted the use of a third program called the ‘Essential Fluencies’ program by Lee Watanabe Crockett (2018). In particular, teachers discussed the ‘Solution Fluency’ aspect of the program, targeting problem solving, critical thinking and visualising possibilities. Elissa described the program as one that:

Encourages the kids to problem solve … and he looks at children solving real world problems so not just like little problems day to day. He helps them to look outside of themselves which I really like so that problem solving again is where it’s encouraging the kids to have a go at something, to try something and if they fail it’s a process, a problem-solving processing, which is really good.

The ‘Solution Fluency’ program was also described as one that “gives the students initiative, giving … ownership back to the students for their own learning” (Deanna, S1). Janet (S1) explained the background of the program:
He [Lee Watanabe Crockett] believes in collaboration and children actually owning their learning. And he thinks that there are a lot of things that are going on around the world that kids are really concerned about and they really want to do something about it. So, he gets them to look at older kids and someone who might not be feeling happy or having any kindness in their lives.

According to Janet, this program teaches students they have the power to change things and to influence the world. In this way, it assists teachers to look beyond teaching a concept and explore learning at a deeper level. Janet explained how her students identified the elderly as people who may need more joy in their lives. She used this example to demonstrate the power of the program as it expanded student’s thinking and learning. As a result, Janet’s students investigated what would make elderly people happy. They learnt jokes, songs and dances and visited an aged care home a couple of times in the year to spread joy. Janet concluded that, “as the students generated all the ideas for the visits it provided more purpose to their learning and allowed for more discussions about having influence over their own learning”.

The participants at S3 expressed that their school has a strong focus on the social and emotional health of their students. Emelie described two programs running in her Pre-primary class, the ‘Zones of Regulation’ program (Kuypers, 2011), which focuses on emotional and sensory management and the ‘Keeping Safe’ curriculum (Association of Independent Schools of Western Australia [AISWA], n.d), on protective behaviours. Fiona, also at S3, described the Dutch program ‘Rock and Water’ (Ykema, 2002). This program used with her Kindergarten students combines social, emotional and physical skills to work on developing positive attitudes and growth mindset. Fiona explained:

It’s lovely, it’s this idea of you can be a rock, very fixed about your plan of action or you could be water and very fluid ... Just talking about children’s attitudes to obstacles as they come up so they could take an attitude of being a rock or being water or maybe a bit of both is needed. I think that helps with the children that have a very negative view of a particular task. We try to give time and repetition, repeated opportunity.

The teaching of social and emotional skills at S3 is not always based around a particular program or model as Emelie explained. She explained that each class in her school establishes classroom agreements to develop student responsibility:
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At the beginning of every year every classroom will come up with their own community agreements. So rather than saying to the children “these are the rules of the classroom, you must obey them” if they come up with what they feel is acceptable behaviour for the classroom, they’re more likely to follow it and hold their peers accountable. Peer influence is so weighty at this age.

Penny did not name any particular programs used in her Kindergarten class at S3 to develop student self-efficacy. Instead she highlighted the important role educators themselves have in developing the self-efficacy of their students:

The way we teach the kids with the social constructivist learning is actually the way we, the staff body, work so it is not just role modelled, it is actually lived. That makes it a lot easier as far as self-belief is concerned.

This comment relates to others suggesting the teachers at S3 share the same philosophy, which they believe is important when increasing student self-efficacy.

The types of learning environment students are exposed to impacts on their self-efficacy levels according to Tamara (S2). She noted higher levels of self-efficacy in students taught in play-based environments as opposed to those in a didactic type program where teachers “follow scripts instead of actually being open to what’s happening in the classroom and dealing with situations as they happen – “oh no we’re actually still only on page 22 so we can’t deal with that yet”. Tamara used this discussion as an opportunity to compare the learning programs offered at some schools in Australia to programs she witnessed on a previous study tour to Scotland and Norway:

Their children are superior beings because of what they can achieve at such a young age and the freedom that they get to explore. By the time they do go into direct instruction, which is nearly seven and eight they are so prepared that they believe that they can accomplish anything, and they do. So, physically and emotionally they are amazing. Seeing those kinds of open-ended programs operating with such great results, I just cry when I see what we offer.

Providing open ended programs for students in early childhood settings was discussed by teachers at S2 and S3 as being important when raising the self-efficacy of their students. It was suggested by Tamara that teachers should offer students choice and opportunity for exploration before formal learning commences. If students have had more time to practise something, it is more likely they will experience success at
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achieving it. This in turn raises their self-efficacy for that task and increases the likelihood of them attempting it in the future.

Teachers claim the reporting of student progress in social and emotional learning skills to be another opportunity to facilitate student development in this area. Emelie (S3) explained at her school, reporting to parents was based around the ‘Habits of Mind’ (Costa & Kallick, 2008) as opposed to learning areas. Using the Habits of Mind model allows teachers to report on aspects of learning such as taking responsible risks, applying past knowledge to new situations and metacognition. Emelie commented:

As part of our reporting we use the Habits of Mind. So, we’ll actually look at that and come up with personal goals for the children and as you get into the older years, the children will be looking at this document themselves and coming up with their own goals.

Reporting on student progress based on the Habits of Mind model rather than traditional report formats, is considered by Emelie to provide increased focus on social, emotional and learning skills, such as self-efficacy. She claims that it provides opportunities for teachers, students and parents to focus on goals for the student, and on their progress toward meeting each goal. This creates a shared experience and is more likely to result in success for the student.

In addition to reporting to parents about the progress of their children in the social and emotional domain, teachers are required to plan for this learning using curriculum documents. Participants were asked whether self-efficacy is well represented in curriculum documents including the Australian Curriculum (ACARA, 2012), the EYLF (DEEWR, 2009), or Kindergarten Curriculum Guidelines (School Curriculum and Standards Authority [SCSA], 2014).
6.6 Self-efficacy and Curriculum

None of the participants could recall the word self-efficacy in curriculum documents but most did suggest that the EYLF (DEEWR, 2009), was the document that best captured the essence of it. Fiona (S3) commented that “it’s embedded in the whole document,” suggesting that the EYLF teaches children to “understand how to be in a group and this idea of having a go, of being supported to try new things and step out of the family and out of the comfort zone”. Tamara (S2) voiced concern that while the concept of self-efficacy was present in the EYLF it may not be articulated well enough for some teachers. She added, the curricula talk a lot about resilience but not about where that comes from as “the two areas [of resilience and self-efficacy] drive each other”. She suggested “self-efficacy is articulated to some extent, but I don’t see it being demonstrated”. Elissa (S1) also indicated the concept of self-efficacy was embedded in the EYLF, suggesting while it is there, it is not very explicit. She said, “You’ve got to think creatively ... some of the documents can be quite vague and I think people struggle with that in early childhood and you just have to be creative with it”.

All participants indicated there was a focus on social and emotional skills in the EYLF (DEEWR, 2009), but it was less of a focus in the Australian Curriculum (ACARA, 2012). This topic was raised by Deanna (S1) who argued social and emotional skills were promoted in the EYLF “but not really as you go up above year 2”. In relation to social and emotional skills and the Australian Curriculum (ACARA, 2012), Emelie (S3) was concerned that “it’s not stated anywhere. I do see it in the EYLF, and then it seems to drop”. She elaborated:

That’s where I think the Australian Curriculum really falls down. They’re heavy on the knowledge but when it comes to skillsets and the skills that the children of this generation need, it has fallen down. It’s lacking totally which is why we have this and report on it as well and that is in the front of our reporting to show that we put more weight on the Habits of Mind than we do on the Australian Curriculum because this is what children need first of all.

Rebecca too was concerned that while the EYLF (DEEWR, 2009), underpins social and emotional learning “it is more so in early childhood and then it stops”. After considering
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the Australian Curriculum (ACARA, 2012), in relation to its content, Lara (S1) suggested it was more “outcomes based” and therefore not as focused on social and emotional learning. Elissa (S1) agreed and questioned why this was the case, “there’s not a strong focus there and you think why not, why isn’t there? Why is that less important than reading?” Four participants suggested where self-efficacy may be found in the Australia Curriculum. Amanda (S1) in Year 1 and Tamara (S2) in Year 2 commented it may be found in the Health Learning Area while Fiona (S3) in K and Rebecca (S1) in Year 2 suggested that it may be housed within the General Capabilities section. Neither Fiona or Rebecca could remember the name of the ‘General Capabilities’ and needed prompting. No participants mentioned the Kindergarten Curriculum Guidelines (School Curriculum and Standards Authority [SCSA], 2014).

6.7 Summary

Three schools who advertised a strong focus on social and emotional learning were invited to participate in Phase Two of the study. From three schools, a total of ten teachers were interviewed in a semi-structured interview format. Teachers described self-efficacy in a range of ways, displaying a lack of shared understanding. Despite not often using the term ‘self-efficacy’ or having a strong understanding of the theoretical construct they were able to describe some aspects of self-efficacy including the characteristics of students with high self-efficacy levels. Teachers reflected on the source of their understanding about self-efficacy. Some teachers considered how their previous classroom experience led them to seek out professional learning as a source of self-efficacy knowledge. Others considered sources to include whole school professional learning and programs in areas associated with self-efficacy, such as social and emotional learning. The philosophy of the school, school culture and leadership style were also discussed as sources of self-efficacy knowledge. Teachers described characteristics of students with high levels of self-efficacy, considering students to exhibit confidence, persistence, independence and to use positive language. The experiences students had before reaching school, and their parents and families, were deemed by teachers to be influential in the self-efficacy levels of their students.
Teachers were united in their belief that learning environments and the use of relevant strategies and pedagogies were pivotal to the self-efficacy development of their K-2 students, citing a range of successful strategies. These included: providing encouragement and feedback, teacher and peer modelling, breaking tasks down and developing positive relationships with students and their families. The factors impacting teachers’ facilitation of self-efficacy were discussed and included the school culture and the amount of support they received. Several school programs based on learning skills or on social and emotional learning were discussed by teachers as operating within their schools. Teachers shared concerns that self-efficacy was underrepresented in curriculum documents and noted that self-efficacy skills became less prevalent in students as they moved up into the junior primary grades. The results from Phase One and Phase Two are discussed in Chapter Seven: Discussion. This chapter will explore the themes emerging from the data in relation to the research questions and relevant literature.
CHAPTER SEVEN: Discussion

7.1 Introduction

The discussion chapter summarises the findings from the study in relation to the research questions and associated literature. This research study uncovered how early childhood teachers describe self-efficacy and the source of their self-efficacy knowledge. It also revealed how they facilitate self-efficacy development in their students. The discussion considers data collected from both phases of the study and is organised under each of the research questions.

7.2 How do Early Childhood Teachers Describe Self-efficacy and what is the Source of their Knowledge?

The teachers in this study were found to describe self-efficacy in a variety of ways. Some teachers were able to provide a definition and regularly used self-efficacy strategies in their classroom. Other teachers could not define self-efficacy but could describe characteristics of students with high levels of self-efficacy. Teachers described students with increased levels of self-efficacy as those who displayed high levels of self-regulation, motivation and resilience. Heightened self-efficacy was also reported by some teachers to be the result of dispositions for learning such as independence and persistence. Many of the characteristics discussed by the participants are considered core SEL competencies by CASEL (2017) (see Chapter 2) and are considered as key skills required for learning and working in the 21st Century (Lamb et al., 2017).

The multiple descriptions of self-efficacy highlighted a range of understandings amongst teachers about the construct of self-efficacy. Supporting self-efficacy in the classroom is hindered by a lack of cohesive understanding about self-efficacy. Rose-Krasnor (1997) cautioned the risks involved in not having a shared understanding of terms and gives the example of social competence. Shared understandings of terms are important as this influences the development of strategies and interventions. Having a shared
understanding of self-efficacy underscores the ability to develop appropriate supportive strategies. Teachers should not only have a good understanding of what to teach but also have knowledge of the most effective ways in which to teach it (Loughran, 2006). High quality teaching relies on teachers’ understanding of what they are teaching. For teachers to have a shared understanding and possibly re-shape their knowledge of self-efficacy, it is important to have a strong theoretical understanding of the self-efficacy construct. One important theoretical understanding is the sources of self-efficacy.

The teachers in this study described the sources of self-efficacy for their students to be different from that in the literature. Bandura’s research (1977a) considered the four sources of self-efficacy to be: mastery experience, social persuasion, vicarious experience and physiological and emotional states. Mastery experience has been long identified as the most powerful source of self-efficacy across a range of educational settings including tertiary, secondary and primary school settings (Bandura, 1986; Phan & Ngu, 2016). In stark contrast to the literature, only 26% (n = 19) of participants in this study rated mastery experience as the most influential source of self-efficacy in their K-2 students. The most influential source of self-efficacy as described by the participants in this study was the physiological and emotional states of the students.

Over half of the participants, 57% (n = 42) in this study indicated the physiological and emotional states of their students to have the biggest influence on self-efficacy levels. This is despite suggestions that physiological and emotional states are considered by Bandura as “a lesser important source” (cited in Phan & Ngu, 2016, p. 549). Previous studies found mastery experience to be the most potent source of self-efficacy with older students, however, self-efficacy is an area not often researched in early childhood. It has been established by Phan and Ngu (2016) that sources of self-efficacy may vary according to educational levels and experiences of the learners. Teachers in this study understand the learning requirements of their students differ from older students and strongly believe this alters the way their self-efficacy is developed. They claimed students in the early childhood years are still working towards self-regulation and often experience heightened emotions throughout the day. This results in students’
physiological and emotional states to be a major influence in the way their self-efficacy is developed.

Identifying physiological and emotional states as a major source of self-efficacy in students in K-2 could have large implications for raising the self-efficacy levels of early childhood students in K-2 in the future. It highlighted the importance of teachers having knowledge of self-efficacy sources appropriate to the social and emotional developmental level of their students. This finding advises early childhood teachers to consider the physiological and emotional states of their students as a source of self-efficacy when planning teaching experiences. For some teachers, it will require change to their pedagogical practices. Pedagogical change requires teachers to experiment with new methods and ideas (Maskit & Firstater, 2016) with the aim of making a meaningful difference to student outcomes (Janssen et al., 2013). In this case, early childhood teachers should consider capitalising on students’ perceptions of their current physical and emotional states to strengthen their self-efficacy. For change to occur it is essential pedagogical leaders and teachers consider the source of their self-efficacy knowledge.

### 7.2.1 Teacher source of self-efficacy knowledge

Reflecting on their various teaching experiences, participants were able to identify the source of their self-efficacy knowledge. The school philosophy was a source of self-efficacy knowledge for some participants. Teachers observed increased self-efficacy in their students due to the alignment between the school philosophy and teaching practices throughout the school. This cohesive thinking resulted in a sense of collective efficacy being established, which positively influenced student outcomes (Donohoo, 2017). Having a school philosophy encouraging collective efficacy guides the actions and behaviour of all school members. In this way, student self-efficacy becomes the responsibility of everyone in the school community, rather than just the classroom teacher. Bandura (2008) purports that having a shared belief to achieve desired results is a key ingredient in success.
CHAPTER SEVEN: Discussion

The use of whole-school SEL programs was the source of self-efficacy knowledge for some teachers. Teachers highlighted three different programs currently used in their schools. These programs taught a range of social, emotional and cognitive strategies used to support student self-efficacy. School-based social and emotional learning programs were examined by Taylor et al. (2017) in a meta-analysis of 82 interventions for students from Kindergarten to secondary school internationally. Results found the use of SEL programs to significantly improve students’ social and emotional skills, attitudes to learning and their well-being.

Professional learning was considered a source of self-efficacy knowledge by some teachers. The reasons for teachers seeking professional learning in this area varied. Some teachers reported the need for additional knowledge in this area due experiencing an increase in the number of students with poor self-efficacy in their classes. They suggest this has brought self-efficacy to their attention as they are required to implement new strategies to support the additional self-efficacy requirements of their students. Teachers consider these changes and need for additional learning to be a source of their self-efficacy knowledge. They suggested that reduced self-efficacy in students was a result of changes to society and to increased curriculum expectations. Recent societal changes have resulted in early childhood teachers reporting increased rates of student stress and trauma (Thompson, 2014). This highlights the importance of teaching self-efficacy and resulted in an increased focus on social and emotional programs in some schools (Allbright, 2019). Reports of societal changes aligns with Shanker’s (2012) claims that children of today are facing increased stressors that are causing worrying trends. Additionally, the Grattan Report (Goss et al., 2017), suggests an alarming increase in student disengagement in recent years. In view of changing student needs, teachers are becoming more aware of the importance of teaching social skills along with the skills students require to learn effectively to better prepare them for the future (Pascoe & Brennan, 2017).

Another reason teachers were required to seek professional learning in this area was due to students arriving in their classes with low levels of self-efficacy. Teachers
reported students who had come from schools where academic learning was a focus had less self-efficacy than those who had come from schools with a play-based background. Play experiences are known to provide opportunities for students to develop independence, creativity, self-motivation, and resilience, all of which are associated with increased self-efficacy (Pascal & Bertram, 2018). Furthermore, play experiences allow students the freedom to make choices, fostering active student engagement and leading to increased autonomy and agency (Parker & Thomsen, 2019). The choices children make during play are based on what they can do, or believe they can do, thus raising their levels of self-efficacy (Zimmerman, 2000). This is an important consideration for policymakers, school leaders and teachers who make decisions about the types of learning programs and pedagogy implemented in early childhood learning environments.

Teachers identified a recent increase in more formal school-like practices in early childhood settings. In addition to a reduction in play-based learning, teachers in early childhood settings have reported a concerning increase in the amount of assessment and data collection (Bradbury, 2019). There are concerns that more formalised learning programs have reduced the amount of time teachers have available to focus on teaching social and emotional skills students require to learn effectively. As a result, educators are urged to capitalise on the critical window of learning in early childhood years to focus on the skills and dispositions required to set students up as successful learners both now and into the future (Education Council, 2019; UNCF, 2019). This includes programs where play is encouraged so students can develop skills for learning in a social and non-threatening environment.

Teachers from one school did not consider professional learning as a possible source of self-efficacy understanding; this is despite the Gonski report (Gonski et al., 2018, p. 82) suggesting teachers engage in effective professional learning “to expand practices that maximise the learning growth of every student every year”. It is concerning that early childhood teachers may not be seeking professional learning in this area, particularly in light of the knowledge that self-efficacy, along with growth mindset, are two key
strategies to grow student learning (Dweck, 1999; Pajares, 1996). It is also the responsibility of school leaders to offer professional learning opportunities that promote growth in students’ learning (Gonski et al., 2018).

Pre-service teacher education was another possible source of understanding about self-efficacy. As only one participant mentioned this as a source of their knowledge, it has to be questioned whether the importance of self-efficacy is emphasised in teacher education courses. A lack of emphasis was highlighted in a report by Barblett et al. (2016) in which teachers suggested their dearth of knowledge in the area of social and emotional development was due to poor quality pre-service education. This is in addition to research indicating the textbooks used by pre-service education students had a lack of strategies for teaching children how to learn (Hatch, 2010). Noting the importance of self-efficacy in learning could be an area of focus for universities when designing teacher education courses, particularly in early childhood education. How self-efficacy is being facilitated in the Years K-2 is considered in the next section.

7.3 How is Self-efficacy Being Facilitated for Students in Years K-2?

Teachers in this study were found to facilitate self-efficacy development in a variety of ways. The facilitation of self-efficacy was a result of their knowledge of teaching self-efficacy, their use of strategies as well as their use of school-wide and class-based social and emotional programs. Teachers also considered factors that impacted on their facilitation of student self-efficacy.

7.3.1 Knowledge about how to teach self-efficacy

Despite having varied understandings about self-efficacy, teachers agreed it is an important skill for students to develop in early childhood. Teachers, therefore, should have good knowledge about how to teach it. One shared concern from teachers in this study was that current curriculum documents did not reflect the importance of teaching self-efficacy. Links between self-efficacy and the AC (ACARA, 2012), were difficult for
teachers to establish. Unlike the EYLF (DEEWR, 2009), the AC has a focus on learning area content and leaves matters of pedagogy to teachers. Several teachers were alarmed that although the concept of self-efficacy is represented in the EYLF, the emphasis seems to diminish as the children get older, noting a reduced presence of skills to facilitate self-efficacy in the AC. This aligns with findings of Gonski et al. (2018), who confirm that some important domains of learning are not always explicit in the AC. They consider areas such as personal and social capabilities to be essential to learning and maintain they should be regarded as integral rather than extra. Despite the importance of the general capabilities area, Gonski et al. considered teachers and schools to lack the required amount of support and knowledge to teach and assess them. These findings are consistent with teachers in this study who displayed a limited understanding of the general capabilities area of the AC, claiming the focus of the AC to be on learning area content.

The challenge in assessing skills such as self-efficacy was also discussed by the participants. Lamb et al. (2017) suggested by having a national curriculum that embeds general capabilities across subject areas, there is no prescribed content or assessment standards that can be measured. Teachers, therefore, are required to be intentional in their planning to include strategies and mindsets for learning, along with other social and emotional skills to support self-efficacy development. Policymakers should be reminded about the importance of emphasising skills for learning, such as self-efficacy, in the national curriculum to better reflect the requirements of learners for the 21st Century.

### 7.3.2 Use of strategies to facilitate self-efficacy development

Teachers discussed a range of strategies they have found to be successful in facilitating the self-efficacy of their students in K-2. These strategies include the use of encouragement and feedback, the explicit teaching of social and emotional skills, goal setting and creating positive relationships.
Encouragement and feedback

Teachers reported the provision of encouragement and feedback to students as a successful strategy to support their self-efficacy development. It was noted that when providing encouragement, it should be in the form of feedback that is meaningful. Providing feedback that is meaningful (Hattie et al., 2016) and timely (Parker & Thomsen, 2019) is considered effective in impacting the beliefs that students have about themselves. This is supported by Deans for Impact (2019) who encourage teachers to avoid using generic phrases that do not describe the behaviour of the student. Instead, providing helpful and meaningful feedback that describes what they are doing well or what they could do to improve future attempts will impact their learning in the future. Detailed feedback is recommended to facilitate self-efficacy growth.

Explicit teaching of social and emotional skills

The explicit teaching of social and emotional skills to advance student self-efficacy is another strategy reported as being effective. Specifically, teachers suggested that the learning intentions and explicit language for each activity should be clearly defined and explicitly taught. The explicit teaching of social and emotional skills is recommended by CASEL (2019) and Darling-Hammond et al. (2019) who identify self-belief (self-efficacy) as one of four learning skills that benefit students when taught explicitly. Other skills include persistence, resilience and goal setting. The explicit teaching of social skills related to self-efficacy help students to better communicate, collaborate and cooperate (Parker & Thomson, 2019). In short, the teaching of social and emotional skills to advance student self-efficacy should be done in explicit and intentional ways.

Goal setting

Setting specific goals for learning to raise self-efficacy was a strategy identified by a high number of participants during the interviews but was seen to have less impact by those who completed the survey, 31% (n = 23). Siegle and McCoach (2007) claim goal setting
to be the most influential factor in the development of self-efficacy amongst fifth grade students. As teachers in this study work with students in Years K-2 it is possible they consider their students as not yet capable of setting goals for learning. Studies have indicated, however, that students in Kindergarten successfully use goal setting as a strategy for learning mathematical concepts (Codding et al., 2011). Regardless of age, setting goals for their learning encourages students to look to the future and to visualise themselves achieving their goal, hence increasing their perceived competence to achieve that goal (Bandura, 1986). The teachers who completed the interviews all worked in schools with a focus on self-efficacy and value the use of goal setting as a strategy to increase student self-efficacy. Goal setting should be considered by teachers and curriculum designers as important in early childhood education.

*Creating positive relationships*

Teachers emphasised the importance of positive relationships to maximise student learning. They highlighted that knowing individual students and their strengths resulted in increased learning opportunities for each student. Positive relationships are seen as a tenet of early childhood education and as such are highlighted in the EYLF (DEEWR, 2009). Furthermore, Pascoe and Brennan (2017, p. 65) suggest “close, ongoing relationships between educators and children underpin social and emotional learning” and allow teachers to respond to individuals. Having positive relationships with parents was also identified by the participants as being integral to advancing the self-efficacy of the students in their class. Regular parent meetings, informal conversations and providing extensive literature about the school’s programs and philosophy were suggested as strategies to facilitate self-efficacy by the participants. This is supported by Darling-Hammond et al. (2019) who advocate respectful partnerships with parents and carers to advance the social, emotional and cognitive development of students.
CHAPTER SEVEN: Discussion

Providing choice

Teachers considered the importance of providing students with choices in their learning to advance their self-efficacy. They suggested providing choice about the learning spaces such as quiet zones and indoor/outdoor settings throughout the day encouraged students to feel more able and confident in their learning (Parker & Thomsen, 2019). Allowing students to make choices about their learning increases their agency, empowering them to make informed decisions about events that affect them (EYLF, 2009). Providing students with choice in their learning is considered by Patall et al. (2008) to increase their locus of control and their perceived competence (self-efficacy). In addition to teaching strategies, teachers also considered the use of social and emotional programs to be beneficial in the facilitation of student self-efficacy.

7.4 Use of Social and Emotional Programs

Specific social and emotional programs to facilitate self-efficacy were considered by the participants. The program that was identified most often in relation to raising the self-efficacy of their students was the ‘You Can Do It!’ program (Bernard, 2017). This program is designed to strengthen the personal, social and performance capabilities of students and provides teachers with a range of tools to reduce levels of stress and to promote optimal levels of wellbeing. Other programs teachers report as being effective include the ‘Essential Fluencies’ program (Watanabe Crockett, 2018), and the ‘Kimochis curriculum’ (McInnes et al., 2020). Specifically, the teachers interviewed at one school described using ‘Solution Fluency’, one of six elements of the Essential Fluencies program, which offers students opportunities to begin to understand the potential they have to influence their own learning. The Kimochis curriculum (McInnes et al., 2020), focuses on emotions and self-care. It is linked to self-efficacy through characters that are good at some things but not at others, which becomes a topic of discussion and learning for the students. Social and emotional programs in schools have been reported to bring many long-term benefits to students including increased skills and academic
CHAPTER SEVEN: Discussion

achievement, improved social skills and attitudes and a reduction in stress (Durlak & Mahoney, 2019).

Despite the availability of SEL programs and an increased interest in the implementation of these programs in recent years, research indicates many schools are struggling to integrate SEL programs into their daily practice (Taylor et al., 2017). Schools are uncertain about what constitutes a quality SEL program due to guidelines that are elusive and vague (Berkowitz et al., 2017). Jones and Bouffard (2012) maintain that for SEL programs to be effective they need to be “meaningful, sustained and embedded” (p. 79). The purpose and quality of social and emotional programs are integral to their effectiveness, which needs to be considered by teachers and school leaders. Whole school-programs should reflect the skills and knowledge students require now and into the future (Education Council, 2019). Teachers who work in schools where school-wide social and emotional programs are not used, may consider this a factor impacting their ability to facilitate the self-efficacy of their students. Teachers discussed a range of factors impacting on their capacity to extend the self-efficacy of their students.

7.5 Factors Impacting Teacher’s Facilitation of Self-efficacy

There were a number of factors teachers considered influential in their ability to facilitate the self-efficacy development of their students. Participants highlighted school leadership as being integral to this endeavour. The quality of the partnerships the school has with their community were also considered to impact on the facilitation on student self-efficacy. Also favourable was their ability to deliver age appropriate pedagogies to their students. Other factors discussed as influential were structural factors including: school support staff, class sizes and the time and space teachers had available.

7.5.1 Leadership

School leaders were identified as being influential in the development of student and teacher self-efficacy. Self-efficacy was discussed by participants as being an important
skill for teachers, as well as students. Teachers noted the importance of being given the tools to believe in themselves, before expecting it of students. Teacher self-efficacy leads to increased student and teacher outcomes (Huber et al., 2016). To increase teachers’ self-efficacy, effective leaders provided opportunity for extra roles and responsibilities, freedom and flexibility in programming and professional learning opportunities to extend learning in areas of interest and need. It is important for principals and school leaders to consider the self-efficacy of their teachers as “teacher self-efficacy ... directly influences outcomes in the classroom” (Pendergast et al., 2011, p. 47). Principals and other school leaders are considered by the Alice Springs (Mparntwe) Declaration (Education Council, 2019), as having a critical role in supporting and promoting teachers to create quality teaching and learning environments.

While school principals and deputy principals are considered influential in schools, there are other leaders within early learning environments who have significant impact on children’s learning. Pedagogical leaders have been identified as the leaders to have the most substantial influence on student outcomes (Robinson et al., 2009). This occurs when the early childhood team have a clear collective vision and leaders help others to work toward achieving it (Barblett & Kirk, 2018). This notion of collective leadership in early childhood settings describes the responsibility of leadership not being shouldered by one person alone. Instead, teamwork is considered the best way to achieve common goals through a system of distributed leadership. This is further supported by ACECQA (2019) who suggest that promoting positive outcomes for students is a joint endeavour involving reflection and ongoing professional learning. Teachers in this study considered positive school leadership as fundamental in their ability to facilitate student self-efficacy.

### 7.5.2 School culture and community partnerships

Teachers emphasised the importance of having a collaborative school culture to improve student self-efficacy. Partnerships with parents were seen as key to this process. For
CHAPTER SEVEN: Discussion

schools to successfully form partnerships with parents, a positive school climate is required (Gavidia-Payne et al., 2015). Evidence suggests that learner outcomes, including academic achievement and wellbeing, improve when parents engage in student learning and with schools (Castro et al., 2015). By parents and key educators forming respectful and collaborative partnerships with each other they are more likely to be working toward a common goal to benefit the student. Teachers engage parents by developing positive relationships with their child, communicating regularly, including about the child’s academic development, and by being approachable (Gavidia-Payne et al., 2015).

Teachers claimed school leaders have a key role in creating collaborative partnerships and in shaping the school climate. They suggested effective leaders value respectful partnerships and involve staff and families in decision making processes. Darling-Hammond et al. (2019) recommended positive school cultures that nurture parent-staff relationships and have leaders who develop relational trust among staff members. These positive school cultures contribute to staff stability, increase teaching effectiveness and improve student outcomes (Darling-Hammond et al., 2019). Gonski et al. (2018) acknowledged the role of school leaders in leading changes to support foundational learning skills and to strengthen school-community engagement.

Developing collaborative partnerships with the wider school community results in a cooperative approach to increasing student self-efficacy and is not the sole responsibility of the classroom teacher.

7.5.3 Delivering age appropriate pedagogies

Teachers in this study valued the use of age and developmentally appropriate pedagogies to advance student self-efficacy in their schools. These pedagogies were described by teachers on a continuum from pretend play through to direct teaching and contained three important elements. Each pedagogy was learner centred, involved scaffolding and actively engaged students in the learning process (Fluckiger et al., 2016). Pedagogies are described as “both the act of teaching and the ideas, values, knowledge
and evidence that shape and justify it” (Alexander, 2015, p. 4). To deliver effective, age appropriate pedagogies the focus should be on more than the teacher’s role in facilitating learning. A more personalised model is recommended where teachers engage with their students about the learning process (Hargreaves & Shirley, 2009). By giving students an active voice in the learning process their diverse skills and abilities are recognised (Ang, 2014) and teachers can acknowledge the unique capabilities of all learners.

In this study, teachers showed concern that students who arrived in their class from other schools may not have come from learning environments that were developmentally appropriate. In considering pedagogies that are age appropriate for students in the early childhood years, the following characteristics have been identified by Fluckiger et al. (2016). Pedagogies should be active with a focus on moving, interacting and doing. They should also be agentic to ensure students have voice in their learning, and collaborative to allow for learning to be social and co-constructed. They suggest pedagogies should encourage creativity in learners to allow for new possibilities and ways of thinking and be playful, to encourage imagination and innovation. Finally, early childhood pedagogies should be responsive to student needs and be well scaffolded by teachers and other students to support new learning. Considering age-appropriate pedagogies will lead to students developing an internal locus of control and to the understanding they are in charge of their thoughts and behaviours, thus developing their self-efficacy.

The early childhood teachers in this study suggest using pedagogies such as free play and play-based learning that promote social and emotional skills. Engaging in play has many social, emotional and cognitive benefits for young learners (Parker & Thomsen, 2019). Lillard et al. (2013) claim hands-on, child-driven learning to be the most positive means to support the learning and development of young children. This is supported by the EYLF (DEEWR, 2009), which has a focus on play-based learning. It suggests play provides a safe environment for children to learn, in which they can take risks and test out ideas. Play also encourages critical thinking and a desire to learn, resulting in
positive dispositions for learning. Teachers are encouraged in the EYLF to plan and implement learning through play.

### 7.5.4 Structural factors

Teachers discussed factors involving staffing, timetabling and resourcing as impacting on the way they facilitated self-efficacy in their students. Teachers at schools that had support staff, including a school psychologist and a learning enhancement team described them as valuable in facilitating student self-efficacy. Additional human resources were seen as beneficial to the students as teachers could tailor learning to individuals in small group work. Small group work can lead to increased self-efficacy (Burke & Williams, 2012; Parker & Thomsen, 2019) and is a recommended practice to allow the four sources of self-efficacy to become influential in student learning (Bandura, 1986).

Teachers also highlighted the size of the class, and the time and the space they had available to them as factors influencing their ability to facilitate the self-efficacy of their students. Coelho and Sousa (2018) attest that students in smaller classes are better able demonstrate self-control skills, such as their ability to manage their own emotions and behaviours. Coelho and Sousa (2018) also reported, however, that larger classes provide students with increased opportunity to develop skills in social awareness, such as empathy and compassion, and in developing and maintaining positive relationships. Teachers also discussed the advantage in a timetable that allow for collaborative planning time with their teaching team and support staff to allow for the development of effective learning experiences. Ultimately, leaders in the school should allocate resources that support collaboration and allow flexibility in the teacher’s schedules to support student learning (Gonski et al., 2018).
CHAPTER SEVEN: Discussion

7.6 Summary

This study has shown there is a mixed understanding about self-efficacy among the early childhood teachers who participated. A more cohesive understanding of self-efficacy is recommended among teachers to ensure more positive outcomes for students. The participants’ understandings about self-efficacy are predominantly formed from the school philosophy, the use of whole-school social and emotional programs and professional learning in areas that support self-efficacy development. It was established that participant understanding of the sources of self-efficacy for students largely differed from that reported in the literature. Of greatest interest was that physiological and emotional states emerged as a potent source of self-efficacy in Years K-2 by teachers in this study. This is contradictory to research with older children that suggests mastery experience as the most influential source of self-efficacy (Bandura, 1986; Phan & Ngu, 2016).

Teachers have a varied understanding of how self-efficacy is best facilitated in Years K-2 but agree that it is an important skill to teach in the early years. Teachers report a lack of content related to self-efficacy in the AC and believe it should be defined and described to highlight its importance. Teachers believe skills to advance self-efficacy in early childhood should be explicitly taught and advocate the use of specific programs to support self-efficacy development. Positive leadership was discussed as a key factor in establishing collaborative partnerships within the school community and in driving a school culture that supports self-efficacy in students and staff. Leadership styles that facilitated the self-efficacy of teachers were considered to result in teachers having the tools and freedom to use appropriate pedagogies and strategies to support the self-efficacy of their students. Teachers also discussed structural factors within the schools that impacted on their ability to facilitate student self-efficacy. The concluding chapter, Chapter Eight, will summarise the key findings from the study, discuss the limitations, make recommendations, and present implications for further research.
CHAPTER EIGHT: Conclusion

8.1 Introduction

This study was designed to investigate how early childhood teachers describe self-efficacy, the source of their self-efficacy knowledge and how self-efficacy is being facilitated for students in K-2 settings. This chapter will include an overview of the study and will provide a summary of the key findings. The limitations of the study will be considered, followed by the recommendations and implications for future research. Concluding remarks will end the chapter.

8.2 Overview of the Thesis

This thesis contains eight chapters, including this final chapter. Chapter One introduced the topic of self-efficacy and provided a rationale for the study. Chapter Two provided a review of the literature relating to self-efficacy theory and its influence on student learning. Chapter Three explored the conceptual framework used in this study. Specifically, the chapter examined the understandings early childhood teachers have about student self-efficacy and how those understandings influence the development of self-efficacy in students. The fourth chapter discussed the methodology used in this study including details about the selection of participants, the methods and instruments used to collect data, and the analysis of the data. Chapter Five and Chapter six detailed the findings of the study, from Phase One and Phase Two respectively, and discussed the central themes identified during their analysis. The seventh chapter discussed the findings in relation to the research questions and to current literature. This concluding chapter, Chapter Eight, will summarise the key findings of the study, discuss the limitations and present the recommendations and implications for future research.
8.3 Key Findings of the Study

Four key findings were identified as a result of this study. These were: teachers do not have a shared understanding about self-efficacy, physiological and emotional states should be considered as a major source of self-efficacy in early childhood students, self-efficacy should be defined and described in curriculum documents, and self-efficacy flourishes with effective leadership and when it is a school focus. These findings are presented below.

8.3.1 Teachers do not have a shared understanding about self-efficacy

This study found teachers describe self-efficacy in different ways showing varied understanding. Teachers’ knowledge of self-efficacy was found to have originated from a range of sources, impacting on their varying levels of understanding about the construct. The strategies teachers found to be successful when facilitating the self-efficacy of their students were also varied. Self-efficacy is an important skill in learning so a thorough understanding of self-efficacy would benefit teachers in their work. Although many teachers could not define self-efficacy, they were able to describe aspects of self-efficacy. The term self-efficacy is not used in curriculum documents or featured in teachers’ recollections of their pre-service courses. Yet the aspects of self-efficacy they described such as independence, resilience and motivation are known to be characteristics of effective learners. Teachers were united in their belief about the importance of self-efficacy to effective learning.

8.3.2 Physiological and emotional states should be considered as a major source of self-efficacy in early childhood students

Early childhood teachers claim the physiological and emotional states of their students to be a major source of self-efficacy development. This is in direct contrast to research with older students (Bandura, 1986; Phan & Ngu, 2016) which identifies mastery experience as the most influential source of self-efficacy. Over fifty percent of survey
participants in this study reported the physiological and emotional states of their K-2 students to be the most influential source of self-efficacy. Teachers attribute this to the emotions associated with the self-regulation of students in the early childhood years. As the source of self-efficacy for students in Years K-2 has not been well researched, reports concluding the physiological and emotional states to be the most influential source, is considered a key finding.

As children in Years K-2 are learning to regulate their behaviour, it is paramount for early childhood teachers to have a strong understanding of how to create safe, secure learning environments. It is in such environments that self-efficacy will flourish. Early childhood students require a good grounding in social and emotional concepts such as self-identity and self-control to begin to understand the influence over their emotions and their learning. Schools can take an increased role to ensure their teachers are well prepared to cater to the social and emotional demands of their students. This may include the provision of professional learning in this area and the distribution of knowledge within teaching teams to ensure a shared understanding.

Using effective early childhood pedagogy is key to enabling the physiological and emotional states of students to emerge as a source of self-efficacy. Pedagogy with a strong focus on play-based learning to encourage student choice and agency is age appropriate for students in the early childhood years. A focus on skill mastery in Kindergarten, Pre-primary and in the first years of primary school may not encourage self-efficacy to develop in positive or age appropriate ways. How teachers facilitate student learning, for example, the decisions they make about cooperative learning versus individual learning, can impact student engagement and enjoyment (Phan & Ngu, 2016). Teachers should consider appropriate pedagogical practices in relation to the sources of self-efficacy relevant to their students, their age or developmental level.
CHAPTER EIGHT: Conclusion

8.3.3 Self-efficacy should be defined and described in curriculum documents

Teachers in this study believed self-efficacy and related constructs should have a stronger emphasis in curriculum documents. Teachers were unfamiliar with the general capabilities section of the AC (ACARA, 2012) claiming to only focus on the curriculum area content. The EYLF (DEEWR, 2009) encompasses the essence of self-efficacy but does not name it. To raise awareness to self-efficacy and ensure it is taught, self-efficacy should be defined and described in curriculum documents. The AC was identified by teachers as lacking a focus on the personal and social capabilities that provide students with the skills, dispositions and mindsets to learn effectively, specifically self-efficacy. It is important students gain skills that will better prepare them for success in the future (Goss et al., 2017) and that teachers feel better prepared in teaching these skills (Barblett, et al., 2016).

Teachers claimed self-efficacy to be a focus with students in younger year levels as a result of the EYLF (DEEWR, 2009) but claimed the emphasis was reduced as students got older. They attributed this to a lack of definition and description of self-efficacy in the AC (ACARA, 2012). Teachers displayed a general lack of knowledge about the general capabilities section of the AC and were not able to identify this as the section most likely to house information about self-efficacy. By having a stronger focus in the AC on personal and social capabilities, including learning skills, teachers would include appropriate learning experiences for students to increase their self-efficacy. By teachers prioritising agency, autonomy, inter-dependence (DEEWR, 2009) and other skills for learning, they are providing opportunities for their students to increase their self-efficacy. Increased knowledge of self-efficacy gained from curriculum documents is likely to impact teacher’s praxis and result in improved student self-efficacy.

8.3.4 Self-efficacy flourishes with effective leadership and when it is a school focus

The findings from this study revealed teachers working in schools with a strong culture of self-efficacy amongst its staff and students had increased knowledge in this area.
CHAPTER EIGHT: Conclusion

School leaders were found to be instrumental in promoting student self-efficacy by prioritising the agency and autonomy of teachers. Encouraging staff to have autonomy in their decision making was found to promote high self-efficacy levels among teachers. Leaders who prioritised self-efficacy were also likely to include school-wide social and emotional programs that were meaningful and embedded to facilitate self-efficacy development. Subsequently, teachers who worked in schools where self-efficacy was prioritised were found to use effective self-efficacy strategies with their students. Leaders in schools where self-efficacy was promoted, valued collaborative partnerships and believed self-efficacy development to be a shared responsibility. Effective leadership was described as key to the facilitation of self-efficacy development in the school community.

Self-efficacy should be featured in educational leadership training courses. As the chain of self-efficacy development in schools starts with school leaders, it is imperative they have a good understanding of the self-efficacy construct and of the influence they have over the self-efficacy development of their staff and students. This is best done through a distributed leadership model so all school leaders have the knowledge and skills to positively influence the self-efficacy of those within the school community, creating a positive culture of self-efficacy.

8.4 Limitations of the Study

While all efforts were made to ensure a robust study, there were limitations to this study. One limitation was not being able to consider the views of students, due to the scope and time frame of the study, the focus remained only with their teachers. Secondly, the study involved a relatively small sample size. In total, 74 surveys were collected and analysed in Phase One and ten teachers were interviewed in Phase Two. In addition, the data were collected only in Western Australia, meaning this study cannot be generalised across all early childhood settings in Australia.
CHAPTER EIGHT: Conclusion

Another limitation is the narrow selection of schools from which teachers were chosen to be interviewed. All three schools were situated in areas with high socio-economic status and stipulated on their websites they had a focus on social and emotional learning. This limitation was mitigated slightly by the participants in Phase One, who represented a variety of teaching contexts. The findings though, may not be applicable to all school in all contexts.

Finally, all interview participants had been provided with the interview questions in advance. This may have impacted on their responses during the interview. As participation in the interviews was optional, it is also possible the participants had a prior interest in this topic, which may have influenced their responses.

8.5 Recommendations

Findings of the research indicate four recommendations to improve the understanding and facilitation of student self-efficacy.

**Recommendation 1:** Teachers develop a shared understanding of self-efficacy

A professional learning program focusing on self-efficacy should be developed for teachers. Professional learning in self-efficacy will provide teachers with a shared understanding of the term self-efficacy. Furthermore, the theoretical foundations of self-efficacy and the sources that influence students’ development should be highlighted. This cohesive theoretical understanding may lead to the use of effective strategies to best facilitate self-efficacy development. Teachers should understand the benefits of implementing self-efficacy strategies in environments rich in social and emotional learning, with a focus on self-regulation, motivation, resilience, cognitive skills and dispositions for learning.

The professional learning program should contain information about the four sources of self-efficacy so teachers have an increased and shared understanding of the sources so
they can best select strategies that facilitate each student’s development. The self-efficacy professional learning program should be supported by mandatory documents which clearly define and describe the construct of self-efficacy. This will assist teachers to not only have a better shared understanding of self-efficacy but also to plan for and teach it using a range of appropriate strategies. Before teachers gain this new knowledge, appropriate professional learning programs need to be developed. Change is required at a system level before schools and other organisations can deliver relevant professional learning to teachers. Teachers can then share and use their new knowledge to positively impact student learning. The change required at many different levels demonstrates how systems influence each other and can be seen in the Conceptual Framework for this study (Figure 3.1).

**Recommendation 2:** The physiological and emotional states of students in K-2 should be considered as a major source of self-efficacy

Teachers in this study reported the physiological and emotional states of their K-2 students as being the most influential source of self-efficacy. This differs from past research on the sources of self-efficacy (Bandura, 1986; Lau et al., 2018) that focused on older students and identified their emotions to have little impact on their self-efficacy development. The participants in this study have reported self-regulation to be fundamental to their students’ development. It is paramount early childhood teachers have a good understanding of age appropriate social and emotional development and consider the unique requirements of their young students. This understanding will impact the pedagogical choices teachers make. For teachers to increase the self-efficacy of their students they should provide opportunities for students to develop agency. This is best facilitated through encouraging choice and decision making, to promote ownership over their learning.

The research on effective early childhood pedagogy focusses on the centrality of positive relationships. Positive relationships are key to student development in the early childhood years. Close, ongoing relationships between teachers and their students are
vital to effective learning as they allow teachers to respond to individual student requirements to maximise learning opportunities. Pedagogy that values connections between students and teachers will be more attuned to the physiological and emotional requirements of students. Positive relationships between teachers and parents are also considered as beneficial to student self-efficacy by teachers in this study.

It is essential for school leaders and teachers to consider the unique requirements of young students when deciding upon strategies and programs used to raise their self-efficacy. How self-efficacy is developed could vary depending on the age and stage of development. It is recommended early childhood teachers consider the source of self-efficacy of their students and are aware it may differ from that identified in self-efficacy literature. This may result in changes to teacher’s pedagogical practices and to their teaching and learning environments as they adjust them to best facilitate the self-efficacy growth of their students. Developing the physiological and emotional states of children is the shared responsibility of families, communities, teachers and school leaders. Positive interactions between children and all of groups listed above may assist children with self-regulation and lead to increased self-efficacy.

Despite a whole school culture of self-efficacy identified as optimal in student self-efficacy development, some teachers have found merit in using social and emotional programs. It is recommended that such programs be reviewed by policymakers and relevant departments and the review made available to schools, to reflect their value. School leaders and teachers can then make informed decisions about information and programs that best suit the requirements of their learners. Increased professional learning on the benefits and facilitation of social and emotional skills is also recommended for teachers.

**Recommendation 3:** Self-efficacy should be named and described in the Australian Curriculum
CHAPTER EIGHT: Conclusion

It is recommended that AC (ACARA, 2012) researchers and writers include a stronger focus on self-efficacy to provide students with the skills, dispositions and mindsets to learn effectively. A stronger emphasis in this area will highlight its importance to teachers, which may increase the quality of student learning. The recommendation is for the ‘social and personal capabilities’ section to include a definition and description of self-efficacy and for this section to have increased representation in the AC. An emphasis in the AC on self-efficacy, which students require to learn effectively, will create heightened awareness of such skills and will increase teachers’ focus on teaching them. It may encourage school leaders and teachers to prioritise professional learning in social and emotional learning and lead to the development of a shared understanding across the school.

In addition, it is recommended ACARA (2012) create a range of self-efficacy resources for schools and teachers to access. By auditing the quality of a wide range of social and emotional learning programs, ACARA could identify the most effective elements of programs pertaining to self-efficacy and create a bank of easy to access online resources. These resources could be shared by teachers assisting to create a shared understanding of self-efficacy, including age appropriate strategies to support its facilitation.

Finally, it is recommended that EYLF (DEEWR, 2009) policymakers mandate the EYLF for teachers up to Year 2 in all states and territories in Australia. In Western Australia, the principles and practices of the EYLF are used in all systems up until the end of Year 2, whereas in other states only until students first enter the formal school system. The AC (ACARA, 2012) and the EYLF (DEEWR, 2009) have different priorities. While the AC (ACARA, 2012) prioritise learning area content, the EYLF (DEEWR, 2009) focusses on a range of outcomes including the social and emotional skills students require to learn effectively. As students in the early years of primary school are still developing important social and emotional skills it is recommended the principles and practices of the EYLF be mandated until the end of the early childhood phase of schooling (Year 2) Australia-wide so students do not miss out on developing these key skills.
Recommendation 4: Promote school leaders’ capabilities to develop a culture of self-efficacy

This study identified school leadership had a notable influence on teachers’ understanding of self-efficacy and their consequent knowledge of how best to support student self-efficacy. A distributed leadership model is recommended in schools to create a culture of self-efficacy. Distributed leadership will utilise the skills of those within the school and create a shared goal to drive the capacity for change and improvement, ultimately improving outcomes for students. For this shift in culture to occur, transformational change is required. In this way, new mindsets and behaviours can be developed at a whole-school level and information can be shared among the whole school community, developing a shared culture of self-efficacy. Leaders should empower teachers to make changes that are relevant within the context of the school and its learners. This will result in a more authentic and relevant shared understanding between all members of the school community.

Effective school leaders value teacher self-knowledge and ensure teachers have the knowledge they require to do their job effectively, in all areas, including self-efficacy. It is the role of school leaders to ensure teachers have the relevant professional learning experiences and knowledge to create the most effective learning environments and pedagogies. Ensuring all teachers have relevant knowledge of self-efficacy will assist in creating a shared language among staff and students, resulting a positive school culture.

The decisions school leaders make about school policies, priorities and professional learning, as well as other decisions affecting curriculum and pedagogy, can impact the culture of the school. Teachers, for example, feel more supported in their endeavour to facilitate the self-efficacy of their students when school leaders consider structural factors including staffing, timetabling and resourcing. School leaders should use a distributed leadership frame and promote partnerships that facilitate strong relationships within the school and wider school community. Valuing the wellbeing of
families and the school community, will assist to develop a culture of self-efficacy in the school. It is also recommended that courses in leadership contain information about self-efficacy and how to model it to students.

8.6 Implications for Future Research

The study uncovered a need for further research to be conducted in this area. Although this topic has previously been addressed with older students, little research has been conducted in self-efficacy with teachers of students in the early childhood years. Despite this, early childhood is identified as the most critical time for students to develop learning behaviours that will benefit them into the future. To continue the work from this study, it would be beneficial to conduct research on the strategies and sources of self-efficacy that best facilitate self-efficacy development with this age group. Asking K-2 students about self-efficacy should be considered in future research on this topic. Students could make a significant contribution to better understanding self-efficacy, if their opinions were collected in meaningful and age appropriate ways.

Involving parents and families in the research is also a path for future research in this area. Developing school partnership frameworks to involve parents, teachers and students in self-efficacy development would also be beneficial.

This study highlighted a demand for a shared understanding of self-efficacy. Future research could consider the development of a professional learning package for teachers. This would assist in creating a more cohesive understanding of the self-efficacy construct and would provide a common understanding about the strategies that best facilitate self-efficacy development in Years K-2. Teachers who had completed professional learning in this area, and who had adjusted their teaching practices and use of strategies, could then take part in research to determine the effectiveness of the professional learning. This would determine the effectiveness of professional learning to improve self-efficacy knowledge and create a shared understanding of the self-efficacy construct. Student levels of self-efficacy would be tested before and after the professional learning occurred.
Finally, university courses in early childhood education could be studied to ascertain the level of content about self-efficacy and its importance to learning. If it were determined self-efficacy was not well represented in early childhood education courses in Australian Universities, it would be prudent to establish learning modules to assist with the facilitation of such knowledge. This would ensure future educators had the knowledge, skills and understandings they required to facilitate the self-efficacy of their students.

### 8.7 Concluding Remarks

Students should be equipped with the skills, knowledge and mindsets they require for effective learning. Self-efficacy as a skill for learning is under-represented in curriculum documents and in teaching practices. Increased self-efficacy provides students with the self-belief in their ability to complete tasks and is a critical skill for students in the 21st Century. The challenge is to create a greater understanding amongst teachers, school leaders and policymakers of the important role self-efficacy has in learning during early childhood. The requirement for increased knowledge and professional learning in this area was established during this study as early childhood teachers highlighted that they were underprepared to teach self-efficacy. The capacity to have belief in their ability is a skill that supports student learning and wellbeing not just in the early childhood years, but into the future in their work, family and life roles.
References


References


References


References


References


161
References


162
References


163
References


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https://doi.org/10.1111/cdev.12864
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APPENDIX A: Semi-structured Interview Schedule

Part A: Background Questions

1. What year level do you currently teach?
2. What other year levels have you taught?
3. What is your education qualification level?
4. What sort of professional learning do you look for?

Part 2: Survey Questions

1. In your experience, have you found that a student’s self-belief in their ability is important to their learning? What are the reasons for your thinking?
2. Are you familiar with the term self-efficacy? Is it a term that you use? What do you know about it?
3. Where do you believe your understandings about self-efficacy have come from?
4. Thinking about students in your class, do you think some children have more self-efficacy than others?
5. If yes, why do you think that is so?
6. If you think of a particular child, what can they do, or have got, that makes you think they have more self-efficacy than another child?
7. What kind of strategies do you find are effective in building students’ self-efficacy?

8. What type of things do you do in the classroom to build student self-efficacy?

9. If you had a student in your class who was reluctant to give a task a go, what do you do to support them?

10. When thinking of your workplace environment what factors help/support you to develop student self-efficacy?

11. Are there factors that limit/inhibit your use of strategies to develop student self-efficacy? Can you further explain these?

12. How do you manage these limitations?

13. Have you been to any professional learning or had school programs that consider student self-belief? Describe them.

14. Is self-efficacy something you have come across in curriculum documents eg Australian Curriculum, EYLF or Kindergarten Curriculum Guidelines.

15. Do you think that self-efficacy is linked to social emotional development? Describe how.

16. Do you think there is a relationship between self-efficacy in early childhood and learning/development in future years? Please explain.

17. Is there anything else that you know about this topic or want to tell me?
APPENDIX B: Participant Information Letter for Survey

Investigating Self-Efficacy: Early Childhood Teachers’ Understanding of Self-efficacy

Facebook invitation to participants

Dear Teacher,

I would like to invite you to participate in a short survey about student self-efficacy in the years K-2. There is not a lot of research about student self-belief (self-efficacy) and how teachers believe it impacts student learning in the early years. This survey hopes to gather information about this. After you have completed this survey, I am hoping you will forward this message on to other nominated early childhood teachers so I can gather many views. Early Childhood teacher is defined in this study as a teacher who is currently teaching in Kindergarten, Pre-primary, Year 1 or Year 2 and the possible splits within these year levels.

Once you have read the information below, by clicking on the link you will be taken to the survey. Your completion of the survey implies consent to participate in the research. The survey is short and should take 10-15 minutes. Your participation is entirely voluntary, and you do not have to take part. The survey will require you to give your name. This data will be coded so that you are not identifiable. However, should you wish to no longer participate, the data can be re-identified to allow its removal. Submission of the survey will be finalised once you have clicked on the submit button at the end of the survey. Participants who indicate that they are willing to participate in a follow up interview will be contacted about this and will be provided with a summarised report of the results of the study. This is also entirely voluntary, and you do not have to take part.
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The Human Research Ethics Committee at Edith Cowan University has approved the project. This is considered a low risk project and it is not expected there be any significant risk to the participants. Confidentiality has been considered and all data will be coded so that no participant can be identified by anyone other than the researcher. All hard copy and electronic data will be stored in secure locations at Edith Cowan University that only the researcher will have access to. Participants may be slightly inconvenienced by the time spent completing the survey and/or by being interviewed. By taking part in the research, participants will be provided with an opportunity to reflect on their own teaching practices. This may increase their knowledge about what skills students need to become effective learners and lead to changes in their beliefs and teaching practice in this area.

If you would like to discuss any aspect of this study, please contact me using the details provided below. If you wish to speak with an independent person about the conduct of the project, please contact the ECU Research Ethics Officer, on (08) 6304 2170.

Thank you very much for your assistance.

Kind regards,

Student Researcher
Dimity Franks
School of Education
Edith Cowan University

Email: djfranks@our.ecu.edu.au
APPENDIX C: Information Letter to Principals

Investigating Self-efficacy: Early Childhood Teachers’ Understanding of Self-efficacy

My name is Dimity Franks and I am a postgraduate student completing a Master by Research degree at Edith Cowan University. I am conducting a research project as part of the requirements of my degree. This research aims to explore the understandings that teachers have about student self-efficacy and the strategies they use in the classroom to support this. It is expected that the results will provide insight into the ways teachers support the development of self-efficacy in their students, which will contribute to knowledge about effective learning strategies. This may inform future directions for research, policy and practice regarding the promotion, development and support of student self-efficacy, with a view to improving student outcomes, and better supporting teachers.

I would like to invite early childhood teachers at your school to take part in the project because I believe that practicing teachers can offer valuable insights into their own practice.

I seek access to any willing general classroom teacher who is currently teaching in K-2 classrooms. The teachers will each be invited to participate in one 30-45-minute interview, at a time and location convenient to both the teacher and researcher. A copy of the interview schedule is attached to this letter for your information. This schedule will be used as a guide to structure interviews. Interviews will be audio recorded and transcribed for the purposes of this research.

The participant’s identity will be kept anonymous and protected. Neither the participant nor the school will be identified in any way. Withdrawing from the study at any time will
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be respected, with no impact on the relationship between the participant and ECU. The study has been approved by the Human Research Ethics Committee at Edith Cowan University. I have included the teacher’s information letter and the consent form that I will be asking them to sign for your perusal.

If you have any questions about the research or require further information you may contact the following:

Student Researcher  
Dimity Franks  
School of Education  
Edith Cowan University

Supervisor  
Dr Lennie Barblett

Supervisor  
Dr Gillian Kirk

Supervisor  
Edith Cowan University

Telephone:  
Email: djfranks@our.ecu.edu.au

Telephone:  
Email: l.barblett@ecu.edu.au

Telephone:  
Email: g.kirk@ecu.edu.au

If you have any concerns or complaints and wish to contact an independent person about this research, you may contact the Research Ethics Officer at Edith Cowan University on (+61 8) 6304 2170 or research.ethics@ecu.edu.au.

If you have had all questions about the project answered to your satisfaction, and are willing for the school to participate, please complete the attached Consent Form at your earliest convenience and return it to the researcher via email.

Thank you for your support and participation.

Yours sincerely,

Dimity Franks

Master of Education Research Candidate

School of Education

Edith Cowan University
APPENDIX D: Principal Consent Form

Investigating Self-efficacy: Early Childhood Teachers’ Understanding of Self-efficacy

I have read the information letter and understand the aims, procedures, and risks of this project.

For any questions I may have had, I have taken up the invitation to ask those questions, and I am satisfied with the answers I received.

I am willing for K-2 teachers to become involved in the research project which comprises one interview of approximately 30-45 minutes.

I understand that the teacher’s participation in the project is entirely voluntary.

I understand that the teacher is free to withdraw their participation at any time, without affecting the relationship with the research team or Edith Cowan University.

Data can be withdrawn from the study up to the point of publication.

I understand that this research may be published in a journal/book, reported to relevant stakeholders and disseminated at conference presentations and agree to this, provided that neither the participants nor the school are identified in any way.

Name of Principal (printed):

Signature of Principal: Date: / / Contact Telephone:
APPENDIX E: Participant Information Letter for Interviews

Project title: Investigating Self-Efficacy: Early Childhood Teachers’ Understanding of Self-efficacy

Approval Number: 19574

Dear Teacher,

I am a researcher from Edith Cowan University completing a Master of Education. I would like to invite you to be part of a study that is exploring early years teachers’ (K-2) understanding of self-efficacy in learning and the strategies currently used to teach it. There have been numerous studies conducted about teacher levels of self-efficacy and studies in the upper primary and adolescent years, however, few studies have sought to understand it in the early years’ context.

How will it benefit myself and other educators?
This project will assist to develop educators’ understandings of self-efficacy in an early childhood context and how this can be used to support children’s learning.

What does participating in the interview involve?
You will be asked to take part in an interview with the Researcher, which will take approximately 30-45 minutes. I will be conducting the interviews on a one on one basis in a semi-structured format. The questions will ask you to further describe the teaching of social and emotional skills and attitudes to learning in your classroom.
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Where will the interviews take place?
The interviews will take place at a time and location convenient to all participants.

What will the information be used for?
The information from you will be used to establish the current understandings early years educators have of self-efficacy and the current strategies being used to facilitate it in student learning.

Do I have to take part?
No, you do not have to take part. Participating in this research project is entirely voluntary for you. This decision should always be made completely freely. Once a decision is made to participate, you can change your mind at any time. All decisions made, will be respected by members of the research team without question.

What if I wanted to change my initial decision?
If you decide to participate and then later change your mind, you are able to withdraw your participation at any time. Please notify the researcher via email or phone and all contributions you have made to the research will be destroyed after the intent to withdraw has been indicated.

If the project has already been published at the time a participant decides to withdraw, your contribution that was used in reporting the project cannot be removed from the publication.

Will I be inconvenienced at all?
It is expected that the only inconvenience caused to participants is the time dedicated to take part in the interview.

Is there any risk to me by participating in the interview?
This is considered a low risk project. Confidentiality will be maintained at all times. Information that identifies anyone will be removed from the data collected. You will
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NOT be identifiable. Data will be stored securely in a lockable cabinet in the office of the researcher at ECU and will only be accessed by the researcher working on the project. The data will be stored for a minimum period of 5 years, after which it will be destroyed. This will be achieved by shredding hard copy data and erasing electronic data.

This research may be published in a journal/book, reported to relevant stakeholders and disseminated at conference presentations. The participants and schools will not be identified in any way.

Is this research approved?
The Human Research Ethics Committee at Edith Cowan University has approved the research.

How do I become involved?
If you have had all questions about the project answered to your satisfaction and are willing to participate, please fill in the consent form on the following page.

How do I access results?
The project is expected to be completed by December 2020. If you would like a summarised report of the research results, please contact the Researcher.

Who do I contact if I wish to discuss the project further or have a question?
If you would like to discuss any aspect of this study, please use the details provided below.
Appendices

If you wish to speak with an independent person about the conduct of the project, please contact:

Research Ethics Officer
Edith Cowan University
270 Joondalup Drive
Joondalup, WA 6027
Phone: [redacted]
Email: research.ethics@ecu.edu.au

Yours sincerely,

Student Researcher
Dimity Franks
School of Education
Edith Cowan University
Phone: [redacted]
Email: djfranks@our.ecu.edu.au

Supervisor
Dr Lennie Barblett
School of Education
Edith Cowan University
Phone: [redacted]
Email: l.barblett@ecu.edu.au

Supervisor
Dr Gillian Kirk
School of Education
Edith Cowan University
Phone: [redacted]
Email: g.kirk@ecu.edu.au
APPENDIX F: Participant Consent Form: Early Childhood Teachers

Title of Project: Investigating Self-Efficacy: Early Childhood Teachers’ Understanding of Self-efficacy

- I have been provided with a copy of the Information Letter
- I have read and understand the information provided
- I have been given the opportunity to ask questions and have had any questions answered to my satisfaction
- I am aware that if I have any further questions, I can contact the research team
- I understand part of the project involves participants being interviewed using a digital audio recorder
- I understand that the data obtained from the interviews will be transferred onto an external hard drive as soon as possible and stored in a locked filing cabinet at Edith Cowan University for five years. Data will be destroyed after 5 years by deletion of digital files
- I understand that the information provided will be kept confidential and that the identity of participants will not be disclosed without consent
- I understand that participation in this research is voluntary and that I can withdraw from the project at any time without any consequences, with no further data collected.
- I understand that data already collected will remain part of the research project.
- I freely agree to participate in the project

Participant Name: ..............................................................
Participant Signature: ...........................................................
Date: .........................
APPENDIX G: Qualtrics Survey

Background Information

Q 1 What year level do you currently teach?
   Kindergarten
   Pre-primary
   Year 1
   Year 2
   Kindergarten/Pre-primary
   Pre-primary/Year 1
   Year 1/Year 2
   Other

Q 2 What type of school do you currently teach in?
   Public
   Independent Public
   Independent
   Catholic
   Other

Q 3 Where do you currently teach?
   Perth
   Rural WA
   Remote WA
   Other
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Q4 How long have you been teaching?
0-4 years
5-10 years
11-15 years
16-20 years
21-25 years
26 years +

Q5 What is your highest qualification in education?
PhD
Masters
Bachelor
Graduate Diploma
Graduate Certificate
Other

Q6 Would you describe your qualification as:
Early Childhood
Primary
Kindergarten- Year 7
Other

Self-efficacy Questions

Q7 Have you ever heard of the term ‘self-efficacy’?
Yes
No
Unsure
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Q8 Self-efficacy is student self-belief in their ability to do well in particular task. Is this something you try to promote in your students?
Yes
No
Unsure

Q9 To what extent do you agree or disagree with the following statement. A student’s self-belief is important to their learning.
Strongly agree
Agree
Neutral
Disagree
Strongly disagree

Q10 To what extent do you agree or disagree that the following factors affect student success in learning?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neutral</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
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<tbody>
<tr>
<td>Teaching quality</td>
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<tr>
<td>School leadership</td>
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<tr>
<td>Student disposition for learning</td>
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<tr>
<td>Teaching cognitive skills</td>
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<tr>
<td>Social and emotional learning</td>
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<td>Parental support and engagement</td>
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<tr>
<td>Teaching strategies to develop student self-confidence</td>
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<td>Family demographic</td>
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<td>Professional learning for teachers</td>
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</table>

Are there other factors not already listed in the previous question that have an impact on student success in learning? If yes, please state here.

________________________________________________________________
Appendices

Q11 To what extent do you agree or disagree that the following are associated with students developing self-efficacy/self-belief in learning?

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neutral</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student motivation</td>
<td></td>
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<tr>
<td>Peer friendships</td>
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<td>Student resilience</td>
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<td>Student goal setting</td>
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<td>Teacher feedback</td>
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<td>Peer modelling</td>
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<tr>
<td>Student behaviour</td>
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<td>Student self-regulation</td>
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<td>Student mindset</td>
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</tbody>
</table>

Q12 When students are completing a learning task at school, what do you believe has the biggest influence on their levels of self-belief? Rate items below by placing a number in the box next to each statement.

1= most influence
4= least influence

______ Their emotional state
______ Their previous success at completing that task
______ Teachers and other students persuading them that they will be successful
______ Observing others complete the task successfully

Are there other factors that impact student levels of self-belief in their own ability to complete tasks?
Please state here.

________________________________________________________________
Appendices

Q13 How often do you engage in the following practices in your classroom?

<table>
<thead>
<tr>
<th>Practice</th>
<th>Often</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide feedback to students that focuses on their effort rather than ability</td>
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<tr>
<td>Encourage students to set goals in their learning</td>
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<tr>
<td>Encourage students to try new strategies when they are struggling</td>
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<tr>
<td>Use peer modelling as a learning strategy</td>
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<tr>
<td>Praise students for their intelligence</td>
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<tr>
<td>Tell students that not everyone is good at a given subject</td>
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<tr>
<td>Promote learning dispositions such as persistence, creativity and curiosity</td>
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<tr>
<td>Teach students to be resilient</td>
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</tbody>
</table>

Q14 How often would you say you include teaching strategies to strengthen student self-belief in their learning?

- Often
- Occasionally
- Never

Q15 There are a number of statements below that relate to self-efficacy. Please indicate to what extent you agree or disagree with these statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels of self-efficacy are predetermined and cannot be altered</td>
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<tr>
<td>By using relevant teaching strategies, student self-efficacy can be increased</td>
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<tr>
<td>Students’ culture can affect their self-efficacy development</td>
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<tr>
<td>Q16 Name and describe the strategies you use with students to strengthen their self-efficacy.</td>
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</tr>
<tr>
<td>Self-efficacy levels can impact learning.</td>
<td><strong>Strongly Agree</strong></td>
<td><strong>Agree</strong></td>
<td><strong>Neutral</strong></td>
<td><strong>Disagree</strong></td>
<td><strong>Strongly Disagree</strong></td>
</tr>
<tr>
<td>Increased self-efficacy levels positively impact students beyond school.</td>
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<tr>
<td>A student's gender can affect their self-efficacy development.</td>
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</tbody>
</table>

Appendices
Dear Dimity

Project Number: 19574 FRANKS

Project Name: Investigating Self-efficacy: Early Childhood Teachers' Understanding of Self-efficacy

Student Number: 903228

The ECU Human Research Ethics Committee (HREC) has reviewed your application and has granted ethics approval for your research project. In granting approval, the HREC has determined that the research project meets the requirements of the National Statement on Ethical Conduct in Human Research.

The approval period is from 26 April 2018 to 30 December 2020.

The Research Assessments Team has been informed and they will issue formal confirmation of candidature (providing research proposal has been approved). Please note that the submission and approval of your research proposal is a separate process to obtaining ethics approval and that no recruitment of participants and/or data collection can commence until formal notification of both ethics approval and approval of your research proposal has been received.

All research projects are approved subject to general conditions of approval. Please see the attached document for details of these conditions, which include monitoring requirements, changes to the project and extension of ethics approval.
Appendices

Sue McDonald, Research Ethics Support Officer, 34.341, Office of Research & Innovation, Edith Cowan University, 270 Joondalup Drive, Joondalup, WA 6027
Email: susan.mcdonald@ecu.edu.au  Tel: +