

**An Exploration of the Interaction between Christian School Contexts and
Sources of Teacher Self-Efficacy**

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ABSTRACT

The environment of the school has an influence on the development of teacher self-efficacy (Bandura, 1997). Little research has been conducted into the relationship between faith-based schooling contexts and teacher self-efficacy, or the sources of teacher self-efficacy in these contexts. This exploratory study assessed teacher self-efficacy in a sample of teachers ($n=9$) from three Christian Education National (CEN) schools in Sydney, Australia. An assessment of teacher self-efficacy was followed by semi-structured interviews ($n=7$) to explore the sources of self-efficacy in relation to the context of their CEN school. The sample reported a moderate level of teacher self-efficacy and identified mastery experiences and affective states as significant sources of self-efficacy information. These teachers identified enactive mastery experiences as a source of self-efficacy that arose from and interacted with their specific schooling context, in the form of guidance and expectations to implement Christian curriculum frameworks. Participants identified principal adherence to the faith-learning integrative principles of CEN as a requirement for positive experiences of social persuasive feedback. There was also some evidence to suggest that teachers' experiences of their affective states, as sources of self-efficacy, were influenced by the student-teacher relationships encouraged by their faith-based schooling context. However, these teachers also typically articulated their enactive mastery experiences of success and failure in the classroom and their vicarious experiences of role model teachers in terms of state-mandated syllabus requirements, rather than in the faith-based concerns of their schooling context. The results support further investigation of the concept of teacher self-efficacy, focusing on the role of specific schooling contexts and the ways that a faith-based school might influence their staff's sources of self-efficacy.

STATEMENT OF ORIGINALITY

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Michael Street

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To the Lord God Almighty, You are before all things and in You all things hold together.

CHAPTER 1: INTRODUCTION

The Australian Christian school presents a unique range of historical, social, and religious factors that shape this educational context for its teachers, students, and administrators. Protestant Christian school organisations in Australia arose in the wake of the Second World War and the immigration wave that followed (Dickens, 2013). These organisations were founded in the shifting contours of the post-war Australian education market and were united by theological and philosophical commonality. As one example, many of the early Anglican schools in Sydney, Australia, united to form the *Sydney Anglican Schools Corporation* in 1947, to provide education to middle class children whose parents sought an education founded on Sydney Anglican theology (Hughes, 2002). Another organisation of schools, *Christian Community Schools*, now known as *Christian Schools Australia* (CSA), was originally developed from 1976 to serve the church-based communities that had grown in rural Australia after the post-war immigration boom (CSA, 2018a). CSA placed an emphasis on parental control over school governance in the context of individual church communities (CSA, 2018b). Like CSA, *Christian Education National* (CEN), then known as *Christian Parent Controlled Schools*, was founded in 1966 with the intention of giving Christian parents authority over the education their children were receiving. The majority of CEN schools were founded by Dutch immigrants who wanted to replicate their “experience of Christian schools in Holland and were motivated by their conviction that their children should be educated within a biblical framework” (Dickens, 2013, p. 9). CEN schools have therefore grown out of a specific ethno-historical context, seeking to recreate the dialogical environment between school and home experienced by Dutch Christian immigrants when they lived in Holland. This parent controlled, biblical framework for education is espoused on CEN’s website:

Our member associations and schools are all closely connected and defined by strong partnerships between home, church, and school to promote a transforming and biblically authentic approach to education that: (1) Celebrates the lordship of Christ over all of life, (2) positions the Gospel rather than cultural forces as the primary shaper of how we think and live, (3) affirms the role of parents as having responsibility to ensure their children are educated with this understanding
(CEN, 2017).

CEN therefore exists to support a set of Christian educational ideals that are similar to but distinct from the other major Christian educational organisations developed in the Australian post-war climate.

In practice, CEN's vision of 'biblically authentic' education functions in concert with state mandated curricula. To achieve this, teachers are encouraged to use the scripture and themes of the Holy Bible as a lens to interpret state mandated curriculum (Dickens, 2013; Hanscamp et al., 2015; Justins, 2002, 2004; Prior, 2018, 2020; Thompson, 2003). In the research literature associated with Christian schooling, this amalgamation of scripture and state-mandated curriculum is called 'faith-learning integration' (Eckel, 2009; Wolfe, 1987). Edlin (2014) articulates the philosophically ideal relationship between these biblical themes and state mandated curriculum:

The permeative function of the Bible doesn't mean that Scripture is used as the formal textbook in each subject. It does not replace the chemistry text or the technical drawing table. Rather, what it does do is give us the perspective we need to understand and explore chemistry and industrial design and their relationship to cultural formation in a faithful, God-honoring manner. Unashamedly, the Bible is our guide..., it provides us with our core perspectives, our learning distinctives, and our outcome attitudes (p. 95).

However, there are indications that many teachers, despite having a strong commitment to integrating biblical themes into their teaching, struggle to operationalize the tenets of Christian education (Dickens, 2013; Fisher, 2012; Thompson, 2003). To solve this issue, many CEN schools use Christian curriculum frameworks, like *Transformation by Design* (Hanscamp et al., 2019; Hanscamp et al., 2015), which guide the professional learning and classroom practice of their teachers. In support of this goal, CEN provides workshops to its schools on *Transformation by Design*, giving guidance in its implementation (CEN, 2020). Vanden Hull (2016) has indicated, in a Canadian Christian educational context, that teachers may experience greater success operationalizing Christian educational tenets in their practice when using one of these frameworks. Similarly, Cooling and Green (2015), in a British context, have also demonstrated that Christian curriculum frameworks have the potential to transform the practice of teachers. However, due to a lack of literature and research in CEN schools, no research has been undertaken that suggests whether these results could be replicated in Australia. The integration of faith and state mandated curriculum in these schools poses an additional requirement on teachers, compared to their secular schooling counterparts. This makes faith-learning integration and the methods used to implement it, like Christian curriculum frameworks, an essential and unique contextual component of the Christian schooling environment.

In a meta-analysis of historical teacher self-efficacy (TSE) research, Zee and Koomen (2016) have demonstrated that the construct is a predictor of instructional consistency, instructional flexibility and innovation, job satisfaction and rates of burnout. Until recently, limited attention has been given to the sources of these self-efficacy beliefs and how they develop (Morris et al., 2017). Klassen et al. (2011) have argued that “A scientific understanding of teachers’ self- and collective efficacy can only be fostered if reliable and valid measurements of the sources of teacher efficacy—the very foundation of the construct—are designed” (p. 31-32). Research on the factors that influence the self-efficacy of teachers have clearly shown that the teaching context plays a significant role in the development of the sources of self-efficacy beliefs (Adams & Forsyth, 2006; Menon & Sadler, 2018; Milner & Hoy, 2003; Tschannen-Moran & Hoy, 2007).

As a severely under-researched teaching population, Christian Education National’s teachers have not been described in either the teacher self-efficacy literature or material associated with the sources of teacher self-efficacy. This exploratory research project was designed to examine teacher self-efficacy and its sources in relation to the unique historical, social, and religious context of CEN schools. This project will form the preliminary research base for understanding how teachers experience and understand their capacities in CEN schools and how they can be supported in the delivery of effective teaching practices.

CHAPTER 2: LITERATURE REVIEW

To explore the ways that Christian school contexts may interact with sources of teacher self-efficacy (TSE), it will be necessary to examine Bandura's (1986, 1997) social cognitive theory and self-efficacy theory. This literature review will begin with a discussion of the broad theoretical framework for self-efficacy developed by Bandura (1997), followed by the development and measurement of the specific teacher self-efficacy construct. Next, the measurement of teacher self-efficacy will also be examined, including the development of the seminal measures of teacher self-efficacy used today. The literature review will then focus on articulating the theoretical components of Bandura's (1997) four hypothesised sources of self-efficacy. The limited but more specific literature associated with TSE in Christian school contexts will also be reviewed. This will be followed by a discussion of the literature associated with the sources of teacher self-efficacy and the ways that the construct has been explored. Finally, the review will turn to the limited research that investigates the sources of teacher self-efficacy in Christian schooling contexts.

2.1 Self-Efficacy Theory

Self-efficacy theory is a central component of Bandura's (1986, 1989) social cognitive theory, which presents the person not as a behaviourist machine, but as an agentic subject at the centre of an ongoing system of triadic reciprocal causation. Triadic reciprocal causation refers to the ongoing interaction of cognitive, behavioural, and environmental factors, with reciprocal influences that ultimately shape human agency (Bandura, 1997). As a cognitive process, self-efficacy beliefs influence a person's behaviour and, through their actions and decisions, the environment in which they live. Bandura (1997) argued that self-efficacy beliefs refer to "beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments" (p. 3). Self-efficacy theory models the extent to which people feel capable when undertaking a particular task or executing a skill and is differentiated from other cognitive beliefs such as 'outcome expectancy' (Maddux, 2010). Self-efficacy is a task specific belief about the extent to which we can do those tasks well. For this reason, self-efficacy beliefs are relevant to a wide array of activities, including teaching (Zee & Koomen, 2016).

2.2 Teacher Self-Efficacy

Teacher self-efficacy (TSE) beliefs are personal beliefs about one's capacities to undertake tasks related to teaching. As a theoretical construct, TSE has been used to investigate a wide

variety of teacher competencies and experiences. In their critical review of TSE research, Zee and Koomen (2016) identified seven main TSE domains and their positive influences on various aspects of the classroom. These domains included the commonly examined domains of instructional support and classroom organisation (Tschannen-Moran & Hoy, 2001), along with emotional support, student achievement, student motivation, negative well-being for the teacher, and positive well-being for the teacher. Zee and Koomen (2016) argued that highly efficacious teachers tend to be more instructionally consistent, communicative, pedagogically constructivist and innovative than their less efficacious peers. In addition to these positive classroom related outcomes, high levels of teacher self-efficacy also contribute to higher rates of job satisfaction and lower levels of job burnout (Zee & Koomen, 2016). TSE does not have an equal level of effect on each of these teaching skills, but the positive correlation between high levels of TSE and high-quality evidence-based practice can be clearly observed.

Teacher self-efficacy has stimulated research into its relationship with teacher well-being and student achievement outcomes. The research literature clearly shows a correlation between low levels of TSE and high rates of teacher burnout in both traditional (Schwarzer & Hallum, 2008; Shoji et al., 2016; Skaalvik & Skaalvik, 2010) and online classrooms (Roberts et al., 2019), and conversely, a correlation between higher levels of TSE and positive teacher well-being (Egyed & Short, 2006; Hultell et al., 2013). The well-being of the teacher, as predicted by TSE, has also been shown to affect classroom climate. For example, teachers with a high sense of self-efficacy were more likely to construct classrooms with a positive climate of enthusiasm and teacher support (Guo et al., 2012). TSE is also a predictor of student achievement in a range of disciplines, from mathematics to language acquisition (Zee & Koomen, 2016). For example, once Hoy et al. (2008) demonstrated that academic optimism was an individual teacher characteristic made up of self-efficacy, trust, and academic emphasis, Chang (2011) used the construct to show that there is a positive relationship between academic optimism and student achievement. The predictive nature of TSE for a range of outcomes is evident in the literature, from teacher well-being through to student academic achievement.

Teacher self-efficacy tends to change over the course of a teacher's career in accordance with their level of experience and the contextual supports that are in place. Research into the early years of teaching regularly finds that teachers in this phase of their career tend to begin with low levels of self-efficacy and then experience a steady increase over time (Chacón, 2005; Hoy & Spero, 2005; Klassen & Chiu, 2010; Van Arkkels, 2017; Wolters & Daugherty, 2007). For

example, Hoy and Spero (2005) showed that teachers experienced an increase in their self-efficacy while undertaking their practicum teaching placement, but experienced significant declines in their first year of teaching. Increased supports around the early career teacher were found to be significant factors in mitigating this decline (Hoy & Spero, 2005). While it is clear that there is a steady increase in teacher self-efficacy over the first five years of teaching, there are also strong indications that teachers experience a reduction in self-efficacy towards the end of their career. For example, in their study of 1430 participants, Klassen and Chiu (2010) demonstrated that TSE peaks at approximately 23 years of teaching experience and then begins to decline as experience continues to increase. Teacher support and teaching context were also found to be significant variables in the development of TSE over time.

Despite research in this space still being in an exploratory phase, there are indications that school context in the form of school type, school climate, and teacher supports, may have an influence on TSE. Research on the influence of school type on TSE is limited, primarily focusing on the differences between high school and primary school (Chong et al., 2010; Raudenbush et al., 1992), and mainstream schools and special needs schools (Chong & Ong, 2016). With a sample of 222 teachers, Chong et al. (2010) utilised the *Teacher Sense of Efficacy Scale* (TSES; Tschannen-Moran & Hoy, 2001), the *Teacher Collective Efficacy Scale* (Tschannen-Moran & Barr, 2004), and an Academic Climate scale (Sweetland & Hoy, 2000) to explore the relationship between school type, TSE, and academic climate. They found that there was a relationship between school type and TSE, mediated by the collective efficacy of the teaching body in a particular school (Chong et al., 2010). The research on school type and TSE also feeds into another contextual element of schools and its influence on TSE, school climate. School climate is “based on patterns of people’s experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organisational structures” (Thapa et al., 2013). Examining the relationship between school climate and TSE, Tsouloupas et al. (2014) found that the effect of school climate factors in a school, like support from the principal, on teacher self-efficacy for student behaviour management was mediated by professional development activities. This mediated influence between school contexts and TSE suggests that there may need to be a deeper investigation of the sources of TSE in these environments, to clarify the relationship.

2.3 Measuring Teacher Self-Efficacy

The history of creating instruments that measure self-efficacy has been fraught with difficulty. This has primarily been a consequence of the task specificity of self-efficacy beliefs and issues associated with content validity (Bandura, 2006). The task specific nature of self-efficacy beliefs means that scales that measure general self-efficacy domains tend to isolate these measures from the situations and circumstances that these beliefs rely on. In addition, self-efficacy is a set of beliefs about one's capacities similar to but distinct from parallel constructs like, confidence, outcome expectancy, self-esteem, and locus of control (Bandura, 2006). Creators of self-efficacy scales need to strike a balance between generalisability and task-specificity, while ensuring that other similar constructs are not conflated with self-efficacy. These issues are also present in the measurement of teacher self-efficacy. The first commonly used scales for the measurement of TSE, like Armor's (1976) 2-item efficacy scale, were either too general to make dimension specific conclusions or conflated self-efficacy beliefs with outcome expectancies (Bandura, 1986; Tschannen-Moran & Hoy, 2001). These problems were largely solved with Tschannen-Moran & Hoy's (2001) *Teacher Sense of Efficacy Scale* (TSES), measuring the self-efficacy of teachers with a 24-item scale which condenses the tasks of teachers to three areas: instructional strategies, classroom management and student engagement. The TSES has been found to be valid across five different countries with no significant variation in responses across cultures and geography (Klassen et al., 2009). As a consequence of its high levels of reliability and validity, the TSES has become the most frequently used instrument for measuring TSE across the literature (Zee & Koomen, 2016).

In recent years there has been a call to extend the information gathered by the TSES by employing qualitative data to interpret quantitative survey items with greater rigour (Klassen et al., 2011; Morris et al., 2017; Wyatt, 2014). This emphasis on qualitative methods in the interpretation of quantitative self-efficacy data is designed to enrich understandings around the operation of self-efficacy beliefs (Klassen et al., 2011; Tschannen-Moran et al., 1998). The inclusion of qualitative data in the analysis of quantitative instruments could also be useful when exploring the interaction of environments or schools and the self-efficacy of teachers. For example, Milner and Hoy (2003) employed a qualitative methodology and found that participants attributed self-efficacy influencing factors to their schooling environment. The additional emphasis on this qualitative data could also provide further validation of the bidirectionality and reciprocal causation built into Bandura's (1997) theory of triadic reciprocal causation. It is clear that, even though the TSES alone has produced a great deal of knowledge

about the interaction between TSE and classroom activity outcomes, its explanatory power could be improved further by triangulating TSES items with qualitative data (Wyatt, 2014).

2.4 Sources of Teacher Self-Efficacy

As teachers go about their work, they are constantly receiving self-efficacy information from the world around them, including feedback from colleagues and feedback from the self, in the form of reflections and appraisals of their work. This information they receive can either support their sense of capability with regard to particular tasks or undermine it. Bandura (1997) identified four sources of self-efficacy information, namely, enactive mastery experience, vicarious experience, social persuasions and physiological and affective states. Enactive mastery experiences are past achievements that individuals use as self-regulated feedback and are relied upon when considering their capability for future activities (Bandura, 1997). This is the most heavily researched source of TSE (Morris et al., 2017) and is believed to have the greatest effect size on self-efficacy beliefs (Usher & Pajares, 2008). Vicarious experiences are forms of modelling of skills or behaviours that are used to compare one's actions. For most activities, "there are no absolute measures of adequacy", requiring people to "appraise their capabilities in relation to the attainments of others" (Bandura, 1997, p. 86). The most common forms of vicarious experiences for teachers are found in lesson observations, when teachers watch other teachers work and are given an opportunity to compare their own practice with someone else. Social persuasions are any evaluative pieces of feedback given to individuals after performing a particular task. For example, high quality, structured feedback responses can potentially have very strong persuasive effects on achievement levels and self-efficacy (Bandura, 1997; Hattie, 2009; Hattie & Timperley, 2007). In contrast, non-constructive, negative feedback experiences, especially about failure, can undermine self-efficacy (Aloe et al., 2014). Bandura (1997) also claimed that physiological and affective states of individuals would have an effect on their self-efficacy for particular tasks. For example, depressive states and negative ideation serve as information that can potentially reinforce negative self-efficacy beliefs. These four sources identified by Bandura (1997) have been heavily researched and are commonly examined when researchers have sought to explore the sources of self-efficacy.

In the last decade, there has been steadily increasing focus placed on the sources of teacher self-efficacy (Klassen et al., 2011; Morris et al., 2017; Wyatt, 2014). Morris et al.'s (2017) examination of the literature associated with the sources of teacher self-efficacy revealed

methodological shortcomings and a need for further study in this space. They found that all four of Bandura's (1997) hypothesised sources of self-efficacy are well represented in the literature when applied to teachers. However, enactive mastery experiences are found to be the most affected by factors in the teaching environment. Here follows an exploration of the literature associated with teacher enactive mastery experiences and its interaction with schooling environments.

Enactive mastery experiences are considered to have the greatest effect size on the self-efficacy of teachers (Klassen et al., 2011; Morris et al., 2017; Tschannen-Moran & Hoy, 2007). In their investigation of Australian pre-service teachers' sense of self-efficacy, O'Neill and Stephenson (2012) found that enactive mastery experiences, supported by social persuasions, had a positive effect on teacher self-efficacy reports. This supports earlier research, which indicated a strong correlation between enactive mastery, social persuasions and higher levels of TSE (Palmer, 2011; Poulou, 2007; Usher & Pajares, 2008). In their quasi-experimental study of four professional development programmes, which emphasised each of the four hypothesised sources of teacher self-efficacy, Tschannen-Moran and McMaster (2009) found that the professional development programme that emphasised a multiplicity of enactive mastery experiences had the greatest positive effect on the self-efficacy of teachers. The programs that did not provide as many opportunities for enactive mastery experience had the least effect (Tschannen-Moran & McMaster, 2009). The research literature in this area suggests that enactive mastery experience, especially with regard to instructional strategies, may have the greatest effect on the development of teacher self-efficacy.

Some research findings suggest that enactive mastery experiences may be mediated by contextual factors. Milner and Hoy (2003), in their study of teacher self-efficacy in a racially complicated context, argued that their "research shows that context matters" (p. 274). They suggested that if racially discriminated teachers worked in a context that did not make them the racial minority, they would have possibly attained a higher level of self-efficacy than in their current context (Milner & Hoy, 2003). This emphasis on the influence of contextual factors on self-efficacy development was reinforced by Adams and Forsyth (2006), who argued that contextual factors influenced cognitive processes of perception and therefore would influence the cognitive processes involved in the development of self-efficacy beliefs. In their exploration of the sources of teacher self-efficacy for pre-service science teachers, Menon and Sadler (2018) argued that enactive mastery experiences had the greatest impact on levels of

teacher self-efficacy, but only when combined with contextual factors. These contextual factors were the climate in which social persuasions and vicarious experiences were delivered and enacted by teachers (Menon & Sadler, 2018). Complicating the role of the environment in mediating enactive mastery experiences, Tschannen-Moran and Hoy (2007) suggest that contextual factors play the most significant role in the early years of a teacher's career, before they have attained a critical mass of mastery experiences to reflect on. Once teachers attain enough mastery experiences to compare their current practice to, contextual factors become a less significant influence (Tschannen-Moran & Hoy, 2007). Despite the conflicting suggestions presented here, a great deal more research needs to be undertaken into the ways that contextual factors influence sources of teacher self-efficacy.

2.5 Measuring and Exploring Sources of Teacher Self-Efficacy

In the history of TSE measurement there has been “insufficient attention... paid to the sources of teachers’ self- and collective efficacy, and progress in teacher efficacy research has suffered as a result” (Klassen et al., 2011, p. 31). This gap in the literature has also frustrated and limited the explanatory outcomes of domain specific TSE instruments (Morris et al., 2017). Historically, TSE has been measured predominantly through exclusively quantitative means (Zee & Koomen, 2016). This quantitative paradigm has also been applied to the sources of teacher self-efficacy. Most notably, Poulou (2007) employed the *Teacher Efficacy Sources Inventory* (TESI) to quantitatively assess the sources of self-efficacy information that were having the greatest effect on the development of teacher self-efficacy beliefs. However, Poulou (2007) recognised that quantitative measures “may not fully delineate the factors contributing to student teachers’ efficacy beliefs” (p. 214). Despite some early exceptions of exclusively qualitative methods being used to explore the sources of teacher self-efficacy (Zeldin, 2000; Zeldin & Pajares, 2000), in recent years there has been a stronger call to use qualitative measures and sequential mixed methods approaches to explore the sources of teacher self-efficacy (Morris et al., 2017; Wyatt, 2014). This call has resulted in the development of mixed methods approaches that combine the TSES with qualitative interviews, allowing researchers to assess the levels of teacher self-efficacy amongst their sample and then inquire into the personal experiences and meanings of the sources of self-efficacy in their practice (Van Arkkels, 2017). However, the use of these approaches to investigate the interaction between schooling context and self-efficacy sources has been limited. With particular reference to the Christian schooling movement in Australia, there may be potential for mixed methods research

of the kind described above being used to examine the ways that the social, historical and religious context of CEN schools influence sources of teacher self-efficacy.

2.6 Teacher Self-Efficacy in Christian School Contexts

A literature search related to teacher self-efficacy in Christian school contexts was undertaken to map the field of research in this space. Internet database searches were conducted in Proquest and Google Scholar. For the Proquest search, the ERIC thesaurus was used as an a priori guide for isolating self-efficacy research in Christian schools; terms used included “Self Efficacy”, “Religious Education”, and all related terms offered under those categories. This produced a small sample ($n=14$) of articles. The Google Scholar search used the phrases, “Self-efficacy”, and “Christian school”, to search for more articles on the topic. This search produced a sample of 112 articles. After both searches were completed, articles were only included if they related to the self-efficacy construct in Christian schooling contexts. This produced only a limited number of research projects ($n=12$), including dissertations and journal publications.

The limited research gave particular focus to two TSE relationships. One strand of the literature focused on the effect of personal religiosity and personal demographic factors on TSE (Egger, 2006; Grant, 2019; Greene, 2020; Kocabas et al., 2018; Leyser & Romi, 2009; Wright, 2010). The second strand focused on the relationship between the Christian schooling context and TSE levels (Anderson, 2016; Cason, 2018; Twinam, 2018). Both of these research foci will be discussed here. Not fitting into either strand, one journal article in particular uses the Australian Catholic schooling context to articulate a potential social cognitive framework for assessing self-efficacy in religious education teachers (Elliott, McCormick & Bhindi, 2018). In addition, one dissertation was found examining the sources of self-efficacy in Lutheran schools in the USA (Lavado, 2018). Both of these articles will be addressed later in the review when the sources of self-efficacy in Christian schooling contexts are discussed.

2.6.1 Religiosity and Teacher Self-Efficacy

The literature examining the relationship between religious belief and teacher self-efficacy has produced inconsistent results. These research studies have sought to examine a causal effect between religious beliefs and teacher self-efficacy. In their investigation of differences in teacher self-efficacy across 1145 training teachers from six religiously affiliated universities in Israel, Leyser and Romi (2009) argued that many of the teachers from particular religious

affiliations would score higher on teacher self-efficacy scales in certain domains. For example, they found that Arab Muslim teachers were more likely to have a higher sense of their self-efficacy for achieving student outcomes than both secular and religious Jews (Leyser & Romi, 2009). In addition, Leyser and Romi (2009) found that there was a positive correlation between particular religious orientations and TSE profiles. For example, Christian teachers scored highest for 'social relationships' with students, but did not do as well in 'instructional strategies' (Leyser & Romi, 2009). However, understanding the nature of this relationship is somewhat undermined by the sampling assumptions and controls used in the study. For example, the instrument for measuring religious belief was not fully explained and appears to assume that the religious belief of pre-service teachers is synonymous with the religious affiliation of the university in which they were trained (Leyser & Romi, 2009). Therefore, the TSE levels found in the study may be associated more with the particular pedagogical emphases in teacher education at individual universities than the religious beliefs of the participants. Leyser and Romi (2009) also acknowledge that, in Israel, religious affiliation is closely associated with the socio-cultural and socio-economic contexts of the region. Consequently, they were unable to completely control for the confounding effects of these variables in their analysis.

Wright (2010) examined the relationship between teacher self-efficacy and religiosity in public and private Christian schools in North Texas. Wright (2010) was particularly interested in extrinsic religiosity, a nominal association with the Christian faith, and intrinsic religiosity, a personal commitment and belief in the tenets of the Christian faith. They completed their research with a sample of 237 teachers and used a multiple regression analysis to compare the results of an *Age Universal I-E (Intrinsic-Extrinsic) scale* (Gorsuch & Venable, 1983) and the TSES (Tschannen-Moran & Hoy, 2001). The *Age Universal I-E scale* is designed to measure privately held beliefs, intrinsic religious beliefs, and enacted religious activities, extrinsic religious beliefs. Wright's (2010) study indicated that there was a strong positive relationship between extrinsic religiosity and TSE, but intrinsic religious orientation "acted as a suppressor variable in the study, having little predictive value by itself" (Wright, 2010, p. i). In contrast, Grant (2019) used the *Daily Spiritual Experience Scale*, the TSES, weekly observations, and interviews to assess the relationship between spirituality, teacher self-efficacy, and teaching practice in a sample of two practicing teachers and found there were "distinct connections between their personal teaching efficacy and spirituality" (p. xiii). Greene (2020) replicated the quantitative method of Grant's (2019) study with a sample of 79 teachers and indicated that

there was a statistically significant relationship between spirituality and teacher self-efficacy. These studies suggest that teachers who feel spiritually called to teaching were caused “to remain in the classroom and utilize their heightened instructional efficacy to make decisions related to students, academics, and even challenges associated with the occupation” (Grant, 2019, p. 165).

Noting the limitations of existing self-efficacy scales, Kocabas, Ozfidan & Burlbaw (2018) used religiosity in the development of a new scale to measure the self-efficacy of teachers who were teaching compulsory Kindergarten to Year 12 theology courses. The scale appears to be designed to measure self-efficacy for instructional strategies related to theological education, although this was not fully explained in the report. Kocabas et al. (2018) claimed to have created an instrument that is valid and reliable for measuring this aspect of teacher self-efficacy (Kocabas, Ozfidan & Burlbaw, 2018). However, the items included in the scale are not clearly expressed (e.g. “I am sure that my general background is quite well about the religion concept to effective teach” (Kocabas et al., 2018, p. 101)) and appear to conflate the self-efficacy construct with the quite separate construct of confidence (e.g. “I feel confident about my background about the religious sects” (Kocabas et al., 2018, p. 101)). Bandura (1997) has suggested that confidence differs from self-efficacy because “confidence is a nondescript term that refers to strength of belief but does not necessarily specify what the certainty is about... [while] perceived self-efficacy refers to belief in one's agentic capabilities, that one can produce given levels of attainment” (p. 382). As such, ‘confidence’ and self-efficacy should not be treated synonymously because ‘confidence’ lacks the theoretical specificity to address the self-perceived agentic capabilities that one would need to possess to complete particular tasks. These measurement concerns suggest that Kocabas, Ozfidan & Burlbaw’s (2018) scale may not meet content and construct validity as it fails to address the measurement requirements of Bandura’s (1997) self-efficacy theory.

Explorations of the relationship between religiosity/spirituality and teacher self-efficacy have proven useful in developing a priori assumptions about a relationship between religious orientation and TSE. However, there is very little in this set of literature that indicates how spirituality influences teacher self-efficacy and vice versa. This is an area that demands further study.

2.6.2 Christian schooling contexts and Teacher Self-efficacy

The literature exploring the relationship between Christian schooling context and TSE is limited. Research conducted by Cason (2018) and Egger (2006) have used Christian schooling as a context to conduct studies examining the relationship between the demography of teachers in these schools and their TSE. Egger (2006) found that perceptions of collective teacher self-efficacy explained variances in TSE, followed by number of years teaching and number of years in current school. Similarly, Cason (2018) sought to examine the relationship between teacher demographic information and TSE, finding that teacher perceptions of school status was a predictor of TSE. In both Egger (2006) and Cason's (2018) the Christian schooling context appeared to be secondary to the personal demography of participants. Therefore, while these dissertations met the literature search criteria specified in 2.6, they have contributed demographic information and provide little detail of the relationship between the schooling contexts and teacher self-efficacy.

There is limited, and equivocal information about the role of the Christian schooling context in developing teacher self-efficacy. Anderson's (2016) PhD study used a causal-comparative quantitative method using the TSES instrument to assess the differences in TSE between two Christian schooling models, namely a traditional Christian education model ($n=30$) and classical Christian education model ($n=57$). Anderson (2016) found that the TSE in both schools was moderate and the difference in TSE levels between teachers in the two different types of schools was statistically insignificant. This may indicate minimal interaction between the context of the Christian school and the self-efficacy of teachers employed there. The literature here indicates that there may be some correlations between some aspects of religious experience and training and context and TSE, but a great deal more research needs to be undertaken to explore these links with greater rigour.

Twinnam (2018) conducted a phenomenological study which examined the ways that teachers of students with autism spectrum disorder (ASD) in Christian schools articulated their self-efficacy. Twinnam (2018) used semi-structured interviews with a sample of 11 teachers and found a close relationship between a Christian school community and multi-level supports and a high sense of self-efficacy for instructing students with ASD. This finding indicates a relationship between the Christian schooling context and the self-efficacy of teachers. However, the application of these findings are limited by the phenomenological methodology utilised in the study, which constrains the generalisability of this research. Even so, the

communal and support elements of the Christian school context identified in this study provide a priori indication of the contextual factors that may be attributed to the Christian schooling context when seeking to assess teacher self-efficacy.

This small body of literature is indicative of a lack of research focusing on the levels of teacher self-efficacy in Christian schooling contexts. More focus will need to be given to the levels of teaching self-efficacy across a range of religious schooling systems, if the construct is to be thoroughly understood in this context.

2.7 The Environment of the Christian School as a Source of Self-Efficacy Information

Very little research has been undertaken into the relationship between Christian school contexts and the development of teacher self-efficacy. As outlined above, there have been a variety of studies examining the influence of schooling context on teacher self-efficacy, but these have predominantly focused on racial, socio-economic and poor achievement contexts (Menon & Sadler, 2018; Milner & Hoy, 2003; Ruble et al., 2011; Wang et al., 2017). However, very little research which has been conducted into the relationship between the Christian schooling context and teacher self-efficacy has considered the influence of that context on the hypothesised sources of self-efficacy (Anderson, 2016; Eckel, 2009; Leyser & Romi, 2009; Wright, 2010).

In an unpublished dissertation, Lavado (2018) used a phenomenological methodology to investigate a variety of influences on the sources of teacher self-efficacy in a case study Lutheran school. With a sample of 15 teachers, Lavado (2018) found that factors like professional development, teacher-teacher relationships, teacher-student relationships and the personal faith of participants were influencing variables on participant sources of self-efficacy. However, despite exploring a range of influencing variables on the sources of teacher self-efficacy, Lavado (2018) did not fully differentiate intrapersonal and school contextual influences, and did not explain the institutional effects of the Lutheran school context as separate from the personal historical influences (e.g. church experiences) that a teacher acquires outside of the school. An exploration of the Christian schooling context specifically and its relationship with the sources of self-efficacy may assist in understanding how teacher self-efficacy develops in Christian schools.

The association between the Christian schooling context and sources of self-efficacy is supported by some Australian theoretical literature, which is yet to be subject to empirical research. In a preliminary discussion of a theoretical framework developed as part of a doctoral thesis, Elliott, McCormick and Bhindi (2018) have argued that “the beliefs and motivations of teachers in Catholic schools are largely undescribed in the field of psychology of religion” (p. 3). In their framework for assessing the self-efficacy of religious education (RE) teachers, Elliott et al. (2018) allude to the significant role of the historical, social and religious environment of Catholic schooling in Australia in mediating the sources of TSE for RE. Identified by Elliott et al. (2018) as “environmental properties”, these contextual features of the school function as the base of the framework, with bidirectional sources of self-efficacy information emerging from it. They suggest that, in the context of religious education, the four main sources of self-efficacy emerging from the context include; the collective efficacy of the teacher’s colleagues; the teacher’s implicit theory of student ability in RE; the teacher’s implicit theory of student faith; and the intrinsic spirituality of the RE teacher (Elliott et al., 2018, p. 9). At the base of this framework is the schooling environment, especially a religious schooling environment, and its interaction with theoretical sources of TSE. While these “environmental properties” are not fully conceptualised or operationalised in the framework, the categories of the historical, social and religious environment of religious schools can be deduced from Elliott et al.’s (2018) exploration of Catholic schooling in Australia as broad a priori conceptualisations of school context. As noted in the introduction, CEN’s approach to schooling encourages teachers to intentionally integrate biblical themes and their personal faith with the state mandated curriculum. This expectation is delineated through CEN’s vision and mission statement (CEN, 2017) and the implementation of Christian curriculum frameworks (CEN, 2020), like *Transformation by Design* (Hanscamp et al., 2019; Hanscamp et al., 2015). Under Elliott et al.’s (2018) framework, these added expectations would express themselves as environmental properties through the historical, social, and religious context of the school and interact with the sources of teacher self-efficacy. The ways that this is operationalised, with regard to its influence on the sources of teacher self-efficacy, is yet to be described in the research literature.

There is currently limited research exploring the ways that religious schooling or CEN’s historical, social and religious context interacts with the hypothesised sources of TSE. An exploratory study is therefore required, which will identify prevailing sources of teacher self-

efficacy in CEN schools and then attempt to explore the extent to which CEN's unique historical, social and religious context interacts with these sources.

2.8 Summary

The literature review has examined a range of literature related to the teacher self-efficacy construct, the sources of teacher self-efficacy, and the ways that they have been explored in Christian schooling. TSE has been found to be a predictor of a range of positive teacher outcomes related to teacher well-being and student achievement. The literature has also revealed that TSE is malleable, changing over the course of a teacher's career and may be influenced by schooling type and climate. It was also clear that all four of Bandura's (1997) hypothesised sources of self-efficacy have a demonstrated role in shaping teacher self-efficacy assessments. However, not all sources played an equal role, with enactive mastery experiences serving as the most significant source of self-efficacy information for teachers. The development of methodologies examining TSE were frequently quantitative in nature but shifted towards qualitative and mixed methods approaches when exploring the sources of teacher self-efficacy.

Research associated with TSE in Christian schooling was limited, giving an equivocal view of self-efficacy and its sources in these contexts. Despite an exploratory study examining the sources of teacher self-efficacy in a Christian school (Lavado, 2018), it provided limited information regarding the ways that the schooling context influences those sources. Elliott et al. (2018) provide an a priori framework representing the relationship between schooling contexts and sources of self-efficacy. This suggested that there was a theoretical relationship between the 'environmental properties' of religious schools and the sources of teacher self-efficacy. The literature review has identified three research areas in need of inquiry; the levels of teacher self-efficacy in Christian schools; the predominant sources of teacher self-efficacy in Christian schools, and the ways that the context of the Christian school influences the sources of teacher self-efficacy.

2.9 Focus of Study and Research Questions

Teacher self-efficacy in Christian schools is a deeply under-researched area; it is unclear if there is any relationship between Christian schooling contexts and sources of teacher self-efficacy. This study aims to employ quantitative measures to explore teacher self-efficacy in

CEN schools alongside a qualitative and interview-based study of the relationship between the experiences of teachers in CEN schooling contexts and the theorised sources of these teacher's self-efficacy. The following research questions reflect these aims:

Question 1: *What are the levels of teacher self-efficacy of teachers in Christian Education National schools?*

Question 2: *What are the predominant sources of teacher self-efficacy reported by teachers in Christian Education National schools?*

Question 3: *How and in what way, if at all, do teachers articulate a relationship between their reported sources of self-efficacy and the historical, social and religious context of their Christian Education National school?*

CHAPTER 3: METHODOLOGY

3.1 Research Design

A sequential explanatory mixed-method research design was employed to answer the research questions (Creswell, 2014). The study presented here was conducted in two phases; a quantitative phase followed by a qualitative phase. The purpose of an explanatory sequential mixed-methods approach is “to have the qualitative data help explain in more detail the initial quantitative results” (Creswell, 2014, p. 224). In phase one of this study, information about the self-efficacy of teachers was collected using an online quantitative survey instrument. The survey was concluded with a qualitative instrument, focusing on participant sources of self-efficacy. This qualitative instrument was designed to support and clarify the quantitative data in the development of second phase interview questions. In the second phase, interviews were conducted, focusing on participant experiences of Bandura’s (1997) four theorised sources of self-efficacy in the Christian schooling context. Unlike instruments which have been designed to quantitatively measure sources of teacher self-efficacy, a qualitative interview method was employed to ensure to “fully delineate the factors contributing to... teachers’ efficacy beliefs” (Poulou, 2007, p. 214). This is in line with the suggestions of Klassen et al. (2011) and Morris et al. (2017), who recommend the wider use of qualitative semi-structured interviews to better understand the relationships between a range of independent variables, sources of teacher self-efficacy and quantitatively generated teacher self-efficacy scores.

3.2 Context of the Study

This study was conducted among six Christian Education National schools in the greater Sydney region. According to the MySchool website (ACARA, 2019), three of these schools had a teaching population of less than 30 staff while three had a teaching population greater than 30. To ensure a larger response rate, the initial phase of recruitment only took place in these larger schools; this recruitment occurred late in the year 2019. This recruitment phase yielded six participants and thus a further recruitment phase was attempted in early 2020. The remaining three CEN schools were contacted and two agreed to participate resulting in a further three participants. By March 2020, the COVID-19 pandemic had closed many schools, forcing teachers to teach online from home. When attempting recruitment in this period, the teachers largely rejected the participation offer, citing stress and workload of adjusting to online teaching. Due to these extraneous factors and the time restrictions associated with this thesis, recruitment was abandoned in early April 2020.

Despite difficulties attaining a significant base of quantitative data, in the form of survey responses, the expansion of recruitment created a suitable source of qualitative data with clear common themes identified amongst the participating teachers. These qualitative interviews produced approximately 30,000 words of transcript data. The selected research method, explanatory sequential mixed methods design, places primacy on the qualitative phase of data analysis (Creswell, 2018). Therefore, despite a limited base of quantitative data, the researcher was able to confidently progress with the rich qualitative data to explore the question concerning the sources of teacher self-efficacy in the CEN schooling context.

3.3 Participants

Participants were full-time and part-time teachers from Christian Education National schools in the greater Sydney area. A total of nine teachers from three schools responded to the survey including six secondary school teachers, two primary (or elementary) school teachers and one teacher who taught across both settings. Teachers in the sample were predominantly female ($n=6$) with a mean age of 40.1 years. The teaching experience of participants in Christian schools ranged from 5 to 21 years, with an average of 13.1 years. The teaching experience of participants in their current Christian school ranged from 0.5 to 21 years, with an average of 7.6 years. There were seven subjects taught by the sample of secondary school teachers, including Design & Technology, English, Geography, History, Mathematics, Religious Studies, and Science. Primary (or elementary) school teachers in Australia are subject generalists and teach all key learning areas in a single classroom of students each school year.

All participants provided their details to be contacted for an interview resulting in seven teachers in the sample who were available to participate in interviews. See Table 1 for demographic details of the sample. Due to the small sample size, gender, subjects taught, and years working in current school have not been included in the table to protect the confidentiality of participant identities. Pseudonyms have been given to each participant in the sample.

Table 1: Demographics of the Sample

ID	Pseudonym	Age	Primary or Secondary School	Years working in Christian schooling
1	Ashley	26-30	Secondary	5-9
2	Jordan	26-30	Secondary	5-9
3	Alex	40+	Secondary	20-24
4	Reese	40+	Secondary	15-19
5	Avery	36-40	Secondary	10-14
6	Blake	40+	Primary	5-9
7	Hayden	36-40	Primary	5-9
8	Riley	40+	Primary and Secondary	20-24
9	Taylor	40+	Secondary	15-19

3.4 Teacher Self-Efficacy

Teacher self-efficacy was assessed using the *Teachers' Sense of Efficacy Scale* (TSES) (Tschannen-Moran & Hoy, 2001). The TSES is a 24-item scale designed to capture teacher assessments of their abilities across the majority of tasks they need to perform in the classroom (Tschannen-Moran & Hoy, 2001). The 24 items have been conceptualised as three dimensions of teacher self-efficacy: student engagement ($n=8$ items) (e.g. "How much can you do to help your students think critically?"), instructional strategies ($n=8$ items) (e.g. "How much can you gauge student comprehension of what you have taught?") and classroom management ($n=8$ items) (e.g. "To what extent can you make your expectations clear about student behavior?"). Each item is measured on a 9-point scale ranging from 1 (nothing) – 9 (a great deal). A scale total score and three subscale total scores can be reported from these items. Tschannen-Moran & Hoy (2001) have demonstrated the reliability of the items on the scale as a whole ($\alpha=0.94$) and the three TSE dimensions of student engagement ($\alpha= 0.87$), instructional strategies ($\alpha=0.91$) and classroom management ($\alpha=0.90$). Zee & Koomen (2016) and Klassen et al. (2009) have observed the wide usage of the TSES in the years since its creation and have attributed its use to its satisfactory levels of reliability and validity across many research contexts. Apart from its conversion into Qualtrics online survey (Appendix A) for this research study, all aspects of the 24-item TSES were preserved from Tschannen-Moran and Hoy's (2001) original survey design.

3.5 Sources of Teacher Self-Efficacy

Information about the sources of teacher self-efficacy was collected in two phases. The first instrument was positioned at the end of the quantitative survey and asked participants to reflect on the sources of self-efficacy information they drew upon while they were completing the TSES. The four questions were:

1. Have you received any feedback about your teaching that helped you make an informed decision about some of your scores?
2. How have any of your past experiences of teaching influenced the scores you gave?
3. Are there any models of teaching/education that helped you to make an informed decision about some of your scores?
4. Are there any personal factors that influenced some of your scores?

All participants ($n=9$) provided written responses to all of the questions in this phase. In the second phase of data collection, a semi-structured interview protocol based on Bandura's (1997) four theorised sources of self-efficacy was constructed, supplemented with insights taken from participant written responses. These interviews allowed the participants to clarify and elaborate on their sources of self-efficacy, as articulated in their initial qualitative responses. All participants who agreed to the interview ($n=7$) opted for a phone interview. The interview was designed to give greater insight and clarity to the relationship between the sources of information teachers used to assess their self-efficacy and their experiences of working in the context of a Christian Education National school. A semi-structured interview protocol (Appendix C), using Bandura's (1997) four theorised sources of self-efficacy, was developed with these four sources used as the basis of the following interview question topics. Questions therefore focused on:

- Social Persuasions: the origin, nature and usefulness of feedback to participant teaching practice in their CEN school (e.g. "Where does the majority of your feedback come from? Students, colleagues, parents, or your own self-evaluation?"),
- Enactive Mastery Experience: the ways that participants articulated their past successes and struggles in the CEN classroom and how those experiences informed their perspective on their capacities in a range of teaching situations (e.g. "How have your memories of past successes and failures influenced the way you work in the classroom now?")

- Vicarious Experience: other teachers in the participants CEN school whose teaching practice informed their own practices (“Are there particular teachers in your school that teach in a fashion that influences the way you teach?”)
- Physiological and Affective States: the extent to which personal and affective states influenced participant sense of efficacy in the CEN classroom (e.g. “To what extent does your mood affect your teaching ability on a day-to-day basis?”)

A question also focused on the models of education found in CEN schools to elicit more information about the unique curriculum experiences of CEN schooling (see the introduction and 2.1) and its relationship to the sources of self-efficacy (e.g. “Discuss some of the models of education you have encountered”).

When developing the personalised interview for each participant, the interviewer was informed by information drawn from first phase of quantitative data and brief written responses. For example, Ashley’s TSES results in the TSE dimension of student engagement produced an average score of 4.63, which indicates a low sense of self-efficacy. In their brief response about their past experiences, Ashley articulated their attitude to student engagement, “we can have more control over behaviour than motivations... once students are engaged, it’s possible to influence creativity, critical thinking etc. but only once they’re engaged”. This personalised information was used to inform the semi-structured interview protocol for each participant (Semi-structured interview protocol can be found Appendix C). This approach to question development led to a deeper exploration of the sources of teacher self-efficacy in the sample than could have been possible with a structured interview protocol.

The intended analytical coding structure also informed the question stems in the interview protocol. Unlike earlier qualitative studies analysing the sources of teacher self-efficacy (Palmer, 2011; Van Arkkels, 2017), which used Bandura’s (1997) four theorised sources of self-efficacy as the coding frame, an open coding system was used, informed by an inductive analytic approach. This coding system was employed so that the historical, social and theological context of the participant’s school could be effectively captured in relation to their sources of self-efficacy. The intended coding system also allowed the researcher to develop a question protocol which focused on experiences of self-efficacy sources, while accounting for issues associated with participants conflating self-efficacy sources when asked directly and explicitly about them. Morris et al. (2017) and Phan and Locke (2015) have demonstrated that,

when participants were asked specifically about how they developed their sense of self-efficacy, a construct validity problem arose; many participants conflated their self-efficacy sources or confused the relationship between their sense of self-efficacy and another source. By asking questions framed by Bandura's (1997) four theorised sources of self-efficacy and informed by a future inductive analytic approach, participants in this study were able to focus on a particular source of self-efficacy while also having the freedom to explore and articulate how the Christian schooling context interacted with a range of self-efficacy sources (Appendix C).

3.6 Procedure

Each school principal in selected Sydney CEN schools were contacted by phone to gain permission to conduct research with their teaching staff. Each principal was then sent an email containing detailed information about the study and a URL to the digital consent form and survey (Appendix D). The principal was asked to forward this email to staff. All part-time and full-time teaching staff, from kindergarten to Year 12 in each school (n =approximately 210 teachers in total), were forwarded the email and subsequently invited to participate in the study. As detailed in section 3.2, the first phase of recruitment returned a small sample and was followed by a further phase of recruitment that was curtailed by the COVID-19 shutdown of schools in NSW.

The online survey first presented participants with an information and consent form and a check box which had to be selected to indicate consent for the study. Participants then proceeded to the survey; first, participants gave demographic details, followed by completion of the TSES, and finally answered open-ended questions. Within one week of completing the online survey, the researcher contacted the participants to arrange interviews. All interviews were completed on the phone and were digitally recorded. Interviews ranged from 30 minutes to 45 minutes.

3.7 Ethical Considerations

The project was approved by the Macquarie University Human Ethics Committee (see Appendix F). Throughout the data collection process, consent and the voluntary nature of the study were explained. During recruitment, principals were advised that a condition of this approval was that the principal was not to reveal the identity of participating teachers and that the participation of staff was confidential and not known by the principal or other staff. These

details were reiterated in the Participation Information and Consent Form (Appendix E). The Participation Information and Consent Form was presented to participants using the Qualtrics survey tool (Appendix E) and reminded them that the research study was voluntary and then requested that they consent to complete the online survey and to be contacted for an interview. When contacted by the researcher, participants were reminded that their involvement in the interview phase of data collection was entirely voluntary and all data produced would remain confidential. Before beginning each interview, verbal consent to record the interview with a voice recorder was requested. Consent was given in all cases. All recordings, transcripts, survey data and analytical material were stored and will continue to be stored in accordance with the *National Statement on Ethical Conduct in Human Research* (2007) .

CHAPTER 4: RESULTS

The results presented here are structured according to the research questions. The first and second sections explore quantitative data relevant to the levels of teacher self-efficacy and predominant sources of teacher self-efficacy, as expressed in the online survey. The third section of the results report qualitative data emerging from the interviews about the relationship between their sources of teacher self-efficacy and the unique contextual factors found in Christian Education National schools.

4.1 Teacher self-efficacy levels in Christian Education National schools

Teacher self-efficacy levels were assessed using the teacher sense of efficacy scale (Tschannen-Moran & Hoy, 2001). Averages have been reported for the total sample ($n=9$) for the overall self-efficacy level and each of the sub-domains (see Table 2). Teachers in the sample reported a moderate but slightly lower overall level of self-efficacy in the TSES compared to ($M=7.1$, $SD=0.94$) the average score reported by Tschannen-Moran and Hoy (2001) in the report of their instrument. The sample produced results in all of the efficacy sub-domains that were within a single standard deviation of Tschannen-Moran and Hoy's (2001) averages.

The self-efficacy sub-domain with the highest score in the sample was in classroom management ($M=7.36$), with the lowest standard deviation ($SD=0.62$). This indicates a consistently high level of self-efficacy for teachers in the sample, with regard to their classroom management. Within this sub-domain, results indicated that teachers had an especially high level of self-efficacy ($M=8.56$) when making their expectations clear to their students. However, this was tempered with lower scores associated with stopping "problem students from ruining an entire lesson" ($M=6.56$). Even though the classroom management self-efficacy sub-domain produced the highest scores, especially when these teachers were communicating expectations, it is also clear that teachers in the sample did not feel as sure about their efficacy when dealing with resistant students. This bore itself out in the lowest scoring efficacy sub-domain, efficacy in student engagement ($M=6.40$). The areas where teachers felt least sure about their abilities in this sub-domain were related to getting "through to the most difficult students" ($M=6.00$) and "motivating students who show low interest in school" ($M=6.00$). The lowest average score produced by a single item was related to the self-efficacy in instructional strategies sub-domain ($M=5.89$), where teachers felt unsure about their ability to adjust

“lessons to the proper level for individual students”. These low scores across the self-efficacy sub-domains suggest that teachers in the sample are less sure about their ability to deal with obstacles to achieving their teaching goals, whether it be resistant students or a class with diverse needs, than with setting the expectations and classroom management contexts which facilitate those goals.

Table 2: TSES mean and standard deviation for teachers in Christian Education National Schools

ID	Self-efficacy in student engagement (M=6.40, SD=1.27)	Self-efficacy in instructional strategies (M=7.01, SD=0.84)	Self-efficacy in classroom management (M=7.36, SD=0.62)	Overall Teacher Self-Efficacy (M=6.92, SD=0.85)
Ashley	4.63	5.63	7.13	5.79
Jordan	5.88	6.75	6.75	6.45
Alex	4.50	6.25	7.13	5.96
Reese	7.00	7.75	7.5	7.42
Avery	6.63	6.63	7.75	7.00
Blake	6.13	7.25	6.75	6.71
Hayden	8.88	8.75	8.88	8.83
Riley	7.25	6.88	7.38	7.17
Taylor	6.75	7.25	7	6.92
Overall	6.40	7.01	7.36	6.92

4.2 Sources of Teacher Self-Efficacy

At the conclusion of the TSES, as outlined in 3.4, participants were asked to respond to 4 questions linked to each of Bandura's (1997) four hypothesised source of self-efficacy. Content analysis was undertaken to identify the sources of self-efficacy used to respond to the TSES. Content analysis indicated that all of Bandura's (1997) hypothesised sources of self-efficacy were used by participants to reflect on their teacher self-efficacy. The sources of self-efficacy, as represented in the survey, are discussed below.

4.2.1 Enactive Mastery Experience

All participants claimed that their past teaching experiences had informed the scores they gave in the TSES. Two themes arose in the responses; 1) negative experiences of classroom management and teaching strategies; 2) positive relationships with students and engagement. Both of these themes will be discussed below.

Classroom management and teaching strategies: Three Participants, Blake, Hayden, and Jordan, connected their negative experiences of classroom management and teaching strategies with assessments of teacher self-efficacy. Blake had a low to moderate level of self-efficacy for classroom management (M=6.75) and claimed to be “*rebuilding [their] confidence... after some difficult and stressful years and experiences*”. Jordan reported a low overall TSES score (M=6.45) and an even lower average for self-efficacy in student engagement (M= 5.88) and also cited the example of “*very difficult and low ability students*”. In contrast, Hayden produced the highest TSES score in the sample (M=8.83), and also cited “*large groups of disengaged or disruptive students*”, had influenced this self-efficacy score. As such similar sources did not necessarily influence teacher self-efficacy in the same way. These divergences in the relationship between enactive mastery experiences and TSES scores across the sample may indicate wider contextual variables, influencing teacher experiences and self-assessments. These individualised enactive mastery experiences, in the context of their CEN school, were explored in greater detail during the latter interview phase.

Teacher-student relationships and student engagement: Two teachers specifically referred to the quality of teacher-student relationships and student engagement as sources of their self-efficacy scores in the survey. Ashley reported the lowest overall self-efficacy (M= 5.79) in the sample and wrote: “*It's pointless to invest emotionally in students to get them to change their*

motivations. Knowing them well helps to change that, but that involves smart conversations not angst. Once students are engaged, it's possible to influence creativity, critical thinking etc but only once they are engaged." It appears that Ashley is claiming that self-efficacy for motivating and engaging students is contingent on the student to be first engaged before this teacher feels effective enough to influence the student's creativity or critical thinking. In Ashley's view, if a student is not motivated to learn, it is *"pointless to invest emotionally"*, but this teacher does acknowledge the role of teacher-student relationships in *"knowing them well"* and having *"smart conversations"* with students. It is also notable that Ashley reported the lowest average score for self-efficacy in student engagement ($M = 4.62$) in this sample. Reese also made an argument for the significance of having personal, relational knowledge of students to ensure that teaching is effective: *"Many years of experience and having adult children... have given me more nuance and depth to my understanding of what students can achieve and what they might be going through that reflects achievement... I don't think anything takes the place of being present, being knowledgeable, and being purposeful based on the individual needs of those in front of you."* While Ashley and Reese both articulate their ability to motivate and engage students through the lens of relationships and personal knowledge of students Reese frames this in a positive discourse about students, while Ashley frames this somewhat negatively through the frame of emotional investment.

4.2.2 Physiological and Affective States

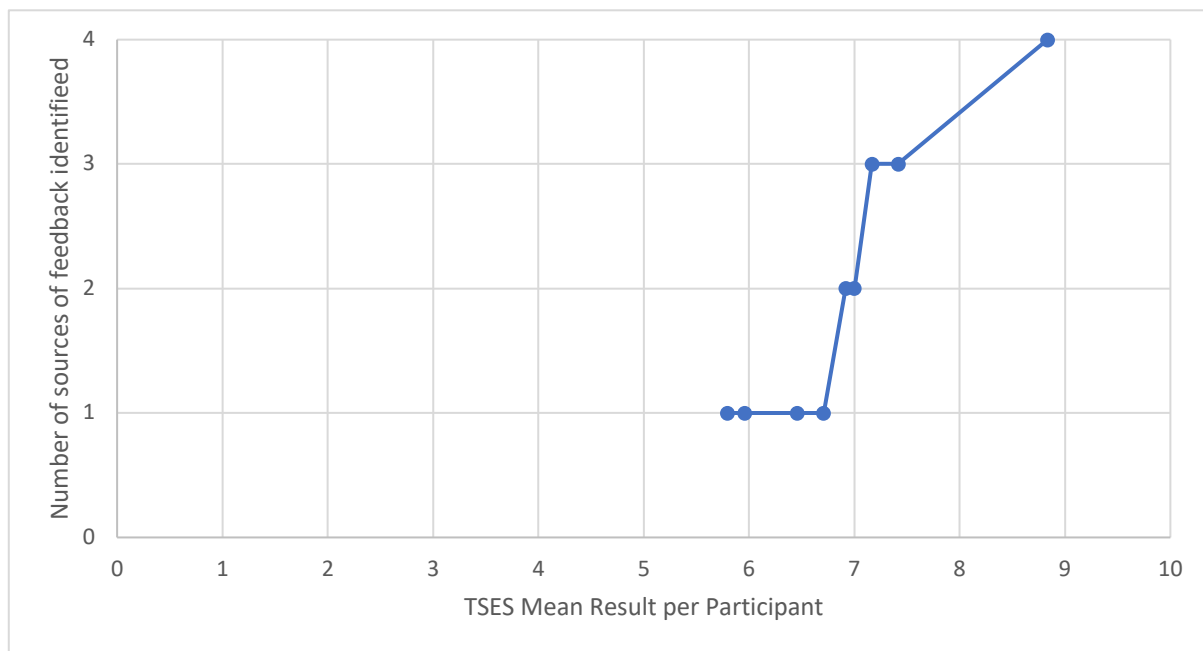
Eight participants in the sample claimed that 'personal factors' influenced their self-efficacy scores. Four participants identified factors in their schools which affected them, while the other four participants identified intrapersonal factors. It is notable that the participants who identified school factors, framed these factors negatively, while those whom identified intrapersonal factors, framed them positively. With regard to school-based factors, Jordan felt *"like [they] don't have the time to prepare engaging or routine-filled lessons"*. Reese discussed their frustrations with leadership whom have committed *"awful bullying of staff"*, encouraging them to grow *"increasingly cynical about the big picture directions and increasingly recognis[e] the importance of individual teachers in individual classrooms"*. Ashley identified her school's culture of encouraging teachers to change the *"hearts and minds"* of students as a stressful personal factor, leading this teacher to claim that *"you do change some students but if you put your heart and soul into it then you'll burn out and lose yourself"*. With regard to intrapersonal factors, traits like Riley's *"emotional strength"*, Blake's *"passionate interest"* in

their subject area, and Alex's "*experience and teaching style*" were perceived as personal factors which influenced their scores. However, there did not appear to be an identifiable relationship between whether participants focused on negative school-based or positive intrapersonal factors and their TSES scores.

4.2.3 Social Persuasions

All participants in the sample ($n=9$) indicated that feedback played a role in the scores they gave in the TSES. Four predominant sources of feedback were identified in the sample; students, colleagues, parents, and self-assessment. All participants identified at least one of these sources of feedback. As can be observed in Figure 1, participants with higher results in the TSES tended to report a greater number of sources of feedback in their written responses. This may be indicative of teachers with a high level of TSE seeking out a wide variety of feedback, or it may indicate the presence of a context which encourages feedback and, by extension, a raised TSE. However, the direction of this relationship was not clearly articulated by participants. For example, Hayden, whom scored the highest TSES mean result said that they had been "*observed several times and been given positive feedback. Also, parents and students have commented on my abilities.*" In contrast, Reese, whom scored the second highest TSES mean result, claimed that their self-assessments were the most valuable source of feedback, finding "*classroom visits by other teachers or executive staff to be quite artificial*". This indicates that, despite a lack of unity around the value of particular sources of feedback, participants who produced relatively high TSES mean results in this sample were able to rely on multiple sources of feedback to assess their self-efficacy. This finding is reinforced by the low TSES results of participants who articulated one source of feedback in their response. It is also notable that the participants who recorded the three lowest TSES results and sources of feedback all worked in the same school. These three participants made up three of the four participants sampled from their school. This may suggest a relationship between the schooling environment and the number of sources of feedback that teachers experience.

Figure 1: TSES mean results and number of sources of feedback



4.2.4 Vicarious Experiences

Respondents did not write any specific comments on the survey that pointed to vicarious sources or to any role models of teaching as vicarious experiences. However, the presence of teaching role models as vicarious experiences is explored in greater detail in the interview phase of data collection.

4.3 The Relationship between Christian Schooling Contexts and the Sources of Teacher Self-Efficacy

Interviews were conducted with seven participants whom consented to phone interviews at the end of the first phase of data collection. These interviews were completed in two rounds of data collection. Four participants were interviewed in the final quarter of 2019, while three participants were interviewed in the first quarter of 2020. These interviews were designed to explore how participants understood their sources of teacher self-efficacy in the context of a CEN school. Interview questions focused on Bandura's (1997) four hypothesised sources of self-efficacy. When analysing the data, due to the lack of research on sources of teacher self-efficacy in Christian schools, the broad "environmental properties" of Catholic schools alluded to by Elliot, McCormack and Bhindi (2018) (see p. 39 of the literature review) were used to support the coding process; themes related to the historical, social, and religious aspects of participant schools which arose in transcripts were sought out by the researcher. In answering

the questions, participants articulated their sources of self-efficacy, but coding was targeted at the immediate context and potential influencing effects of the “environmental properties” of the participants’ schools. For example, many participants discussed receiving feedback from their Principals when asked about their experience of social persuasions. The three broad categories outlined above were utilised to frame the data and then an open coding approach was used to identify subthemes. As part of the exploration of the unique environmental property of CEN schools, as discussed in the literature review and the procedure sections, an interview question was developed which focused on the implementation of teaching models and frameworks in the school. This was designed to enrich participant discussions about their enactive mastery experiences and a unique part of the CEN teaching context, that of curriculum frameworks and the expectation to integrate biblical themes and state-mandated curriculum.

Five themes were identified in the interview sample and each is outlined in the following section. Participants frequently articulated a relationship between their experiences of their sources of teacher self-efficacy and their immediate schooling context. All four of Bandura’s (1997) hypothesised sources of self-efficacy were accounted for in these articulated relationships.

4.3.1 Theme 1: Christian curriculum models and enactive mastery experiences

All participants articulated a relationship between the way respective CEN schools implemented a range of teaching models and the source of self-efficacy associated with enactive mastery experience. These teaching models appeared to tap into the social and religious properties of the CEN schooling context.

A variety of teaching models were discussed by participants, including explicit instruction, project-based learning, and Bloom’s taxonomy. A model of teaching discussed by all participants was the *Transformation by Design* (Hanscamp et al., 2015) curriculum framework, “a framework for understanding how to interact with [the] ‘prescribed’ curriculum and a possible model that ensures God’s rule is the foremost shaper and driver of that curriculum” (p. 3). Ashley suggested that *Transformation by Design* was a teaching model they would “define as actual Christian education”. Alex claimed that the framework was “actually really quite helpful”. In contrast, Avery, who scored an above average result in the TSES (M=7.00), focused on explicit teaching as an important source of self-efficacy information:

“I think it's something that I've been able to look at and go, ‘Okay, I get that.’ And I think that's definitely going to be used in my class. I think there's probably elements that I've already used a lot without necessarily using that title, explicit teaching.”

Hayden, who achieved the highest overall TSES result (M=8.83), also pointed to explicit teaching as an influential model for their own practice.

Participants who used *Transformation by Design* as a source of self-efficacy information pointed to a discrepancy between their own teaching practises and the ideals of the framework. Ashley argued that *Transformation by Design* affected them to “*a smaller extent than it should, because at our school, we don't have a really good practice of actually going back to the program*”. Later in the interview Ashley reiterated that their school doesn’t “*have a great practice of actually going back to the syllabus and back to the programs, [Transformation by Design] affects me less than it should.*” Alex also saw value in the framework, but was “*really challenged too, because I don't think we ever reach it or we got a formula that's going to work*”. Alex then complicated their experience of the framework by suggesting that the framework could be reduced to “*programming pages that you fill up and start up a program*”. Likewise, Ashley suggested that the influence of the framework was primarily at the planning stage of teaching. Reiterating these views, Avery claimed that there was “*little training for its implementation in the classroom*” and so felt more comfortable, as indicated above, using explicit teaching as a more significant source of enactive mastery experience. Despite Avery’s reservations about receiving little training to use the framework in the classroom, the informal or seemingly relaxed way that their school implemented the framework also meant that Avery did not necessarily see it as an essential source of self-efficacy information:

“there was no push to say, ‘listen, we want to see your program, and how this has impacted that.’ There was no, in a staff meeting we're all going to write an assessment task to get everybody's perspective and then we're going to roll that out. That said, our programs, the expectation is that we're implementing that view of Christian teaching in our programs”.

These experiences indicate that the Christian curriculum framework is not implemented the same way across CEN schools, which therefore influences the extent to which its implementation is included as an enactive mastery experience by participants. However, this evidence also suggests that poor implementation of the framework may lead to negative experiences which may undermine a sense of mastery.

4.3.2 Theme 2: Enactive mastery experiences of success and failure in a CEN classroom

Participants in the sample did not typically articulate a relationship between their enactive mastery experiences of success and failure in the classroom with the context of their CEN school. Rather, participants identified enactive mastery experiences in the context of syllabus outcome achievements and formative expressions of understanding from students. As such, there was little explicit evidence to suggest that enactive mastery experiences of success and failure in the classroom were associated with the CEN schooling context specifically.

The success of a lesson for many participants often centred around their ability to engage students in learning and achieve state mandated syllabus outcomes. Speaking about success in their classroom, Avery stated that

“there's an element to which, ‘have they achieved any outcome?’ ... For me, I think if students are engaged, that to me is a big sign of success. If they are finding the content interesting and they're able to do the task that I've set for them, that's definitely part of that as well... And so, in terms of a lesson, if each student has been able to achieve according to their ability or their buy-in, that would be definitely one way I'd measure success.”

Similarly, Riley framed their experiences of success in terms of engagement; *“I would describe success as, I guess me engaging students... And so when they get that buzz and they're asking questions and they leave the classroom excited about the next thing or the next step, that to me has been a successful lesson.”* Ashley gave a similar assessment of success in the classroom; *“I'm using my resources thoroughly, I'm achieving the aims of the content in the syllabus, if that makes sense.”* All participants in the sample gauged their successes in the classroom by discussing either their achievement of syllabus outcomes, engagement in the classroom, or both. For the majority of participants ($n=5$), the CEN schooling context played no specified role in their expression of positive enactive mastery experiences in the classroom.

Two participants, in addition to articulating success in terms of syllabus outcomes and student engagement, discussed success in the context of their intrapersonal experience of faith and their desire for their students to understand lesson material from a Christian perspective. Reese began their explanation of success with a verbal re-enactment of their lesson and then an assessment:

“‘God is sovereign. He's king, he's creator of the universe. We owe him certain things and he reciprocates by his care and his provision, his mercy and grace towards us. So,

let's have a look in the text we're reading, whatever it might be Sandringham poems, it might be having a look at colonial island around the time of the struggles.' You see kids when they have that aha moment where they suddenly go, 'Oh, so there were problems there because of sin, because people are in leadership and they're responsible and because the people underneath couldn't show allegiance.' So I guess it's those aha moments, I think I really cherish and value."

This "aha moment" functioned as a goal achieved for Reese, who articulated it as a positive enactive mastery experience, with a faith-based learning outcome at the forefront of this explanation. Similar to Reese, Jordan suggested that a vital part of their success in the classroom was the development of a Christian culture, claiming that *"I think the other [measure of success] is sometimes the aim of the lesson is less teaching content and more building Christian culture, because I actually think that helps the classmates mesh together better."* Both participants related these enactive mastery experiences of teaching to their own desires for a Christian or religious outcome in the classroom. This finding may be linked to the fact that these teachers work in a CEN school, but neither participant specifically explored the role of the school as a source or shaper of these sources of enactive mastery experiences.

The failure of a lesson for participants focused on issues of student understanding, classroom management, and difficulty engaging their students; participants did not relate their experience of this facet of their enactive mastery experience to the schooling context, but their own capabilities. Taylor suggested that *"it would look like none or the majority of the students not understanding stuff."* Similarly, Riley claimed that *"it's like they may not have even been there. They might not have been present. They might've been distracted with something else. Yeah. Or they just leave having, yeah, just gone through the motions."* Jordan suggested that *"a big part of it's going to be to do with classroom management. Like if there are a couple of students who are trying to actually run the lesson off the rails and if they've been successful in doing that. In terms of distracting other people in the class or, making me lose my composure or whatever."* However, Jordan also saw these difficult lessons and failure of classroom management as opportunities to model Christian behaviour,

"At times I don't feel patient but model patience... Essentially what Christian behaviour should look like to students in the face of antagonism and those sorts of things. So even then like a lesson where I would feel like I've actually failed to convince those students of something that I think is true and important. But I've shown other students in the class how to do a disagreement."

Despite Jordan's focus on a faith-based outcome compensating for a negative mastery experience in the classroom, this experience was expressed as a moment of personal control in the context of their faith as a Christian and was not considered in the context of their CEN school. The opportunity to explicitly express a faith-based goal or activity may be contingent upon the presence of the CEN schooling context, but Jordan expressed a personal faith and desire to achieve a faith-based outcome as a product of intrapersonal processes and independent of the schooling context.

4.3.3 Theme 3: The practices of colleagues as vicarious experiences

All interviewed participants identified teachers they wished to emulate in their school, whom they also treated as sources of self-efficacy information, in the form of vicarious experiences. Participants did not typically discuss these teachers in the context of historical, religious or social aspects of their CEN school. The majority of teachers were selected for their teaching excellence, rather than the extent to which they represented the value, vision, and mission of their CEN school. However, some participants chose teachers for their ability to utilise a "*Christian perspective*" (Ashley) in their teaching. While participants did not articulate these skills in the context of their CEN school, due to the emphasis placed on faith-learning integration in CEN schools, a relationship to the schooling context may be plausible.

Model teachers were commonly selected for the ease with which they created positive affirming relationships with their students and their pedagogical excellence. Discussing a teacher they encountered early on in their career, Riley reported:

"a colleague of mine in middle school, who was just very laid back and relational with the kids... And I remember thinking, he's everything that at first I thought a good teacher isn't in terms of just disorganized and so at home in the classroom. And yet when it comes to the relational, tapping into where students are at. Yeah. I just learned a lot from watching that. And so I feel that I've, I guess, shifted and become a far more relational teacher and recognize the whole person of the student rather than just who they are in my subject. Yeah. That was really influential in my early career."

Similarly, Avery observed relation building in other teachers, understood their own limitations and sought to change: "*The way in which [the teacher] engages with students is, I find very encouraging and very challenging in a good way. And I definitely try to emulate that.*" In reference to an older teacher, Avery also suggested that "*watching his manner with kids, just*

the way in which he was able to be firm but also casual, was very encouraging. And I found that to be something that I've learned from and grown from." With regard to the academic excellence of their chosen teacher role-model, Taylor identified a teacher's knowledge of educational research and assessment practices as valuable traits: *"their approach to assessment particularly was so thorough and actually research based. That was really good and that really helped me to rethink the way that I was doing things."* In a similar vein, Taylor identified a teacher because the way they *"pushed students to work towards excellence was really helpful for me in understanding how to push the more capable students in my classes."*

Two participants selected model teachers as a source of self-efficacy due to their ability to integrate *"Christian perspectives"* into their teaching. Ashley selected a teacher because they were *"really good at building in a Christian perspective in ways that I hadn't seen in a really authentic way."* In addition to this, Ashley articulated a model for a teacher they would not see as a model to aspire to: *"I find what doesn't draw me to teachers are teachers that are either too friendly with the students, are lazy in the way that they approach the content or the Christian perspective or the discipline."* Similarly, Jordan selected a teacher

"because I see the way that he interacts with students... I also have conversations where we talk about what a biblical classroom is like, and he is really clear that the syllabus is there to help us and to guide us, but also we are very much the captains of our classroom and can go off formula if we think that's appropriate. And that's, that's really freeing."

Jordan, like Ashley, treats the faith-learning integration abilities of their selected teacher as a significant source of self-efficacy information. It is notable that Ashley (M=5.79) and Jordan (M=6.49) had lower self-efficacy scores in the sample and work in the same school. This may indicate a relationship between the context of the participant CEN schooling context and their vicarious experiences.

4.3.4 Theme 4: Principals as sources of self-efficacy in the CEN school

Participants in the sample utilised feedback from principals as social persuasions. However, this result was contingent upon the principal reflecting the social and religious ideals of CEN. Riley discussed receiving feedback from their previous principal. The previous principal *"just never grasped Christian education"* and after seeking to explore how a policy could be reformed to reflect the values of CEN, *"instead of, 'Thanks for your thoughts or ideas,' it was,*

‘Who gave you permission to review this policy?’” Riley went on to explain the effect it had on them and the school, *“And so, yeah, I think we just entered a period of people being scared to speak up. People just head down, keeping at working, a really stifling of creativity. Yeah, and distrust... I think it made it on some days difficult to focus in the classroom.”* In Riley’s view, the principal’s dysfunctional actions, directly linked to their lack of understanding around faith-learning integration, which then affected their abilities and capacities in the classroom. However, with a new principal at Riley’s school, whom they perceive as being consistent with the social and religious aspects of CEN, they described them as “extremely positive and inspiring”. Reese also described difficulties with leadership whom they perceived as being incongruent with the social and religious aspects of CEN: *“I’ve seen a lot of very punitive meetings and micromanaging”* and a lack of attention given to *“deepen[ing] your understanding of theology and scripture and let’s make you an amazing teacher through inspiring you and equipping you in that way”*. Reese went on to explain that, in this context, *“when one of these people wants to critique me, without actually seeking to understand how God fits into it, I’m just thinking, ‘no’”*. Reese has articulated a clear desire for faith-learning integration in their school and a lack of leadership supporting it. The leadership body’s negative relationship to the social and religious aspects of their CEN school has therefore led to negative experiences of social persuasions, as a source of self-efficacy. These results indicate that the feedback about teaching in these schools is less likely to be accepted if leaders in these schools do not adhere to the social and religious ideals of CEN.

4.3.5 Theme 5: Physiological, affective states and “grace”

Three teachers in the interviewed sample suggested that negative affective states influenced their self-efficacy but could rely on their students to support them by appealing to “grace”. Ashley explores a negative experience of affective states and the privilege of working in a school where students issue “grace” to their teachers:

“If I have a really bad headache or something, sometimes I’ll tell them and I’ll ask to give me grace... Just that would mean that if I gave them a task and they were chatting, they would be maybe quieter than they would otherwise be and they wouldn’t yell or something like that, without me having to say it so much. I wouldn’t let them be out of control anyway. I’m having to work less on the discipline.”

Jordan discussed the relationship between negative affective states and the ways the schooling context interacts with it:

“I know there are people who have gone through some really rough stuff this year, just really hard family tragedies, and sometimes they get to school and it's all they can do just to show up and so they can walk in there and be an asset to [the school]. I think we're really privileged. The kids are pretty nice and so you can actually say to them, ‘I just don't have much more to give today guys, can you please just get your work done?’ And generally, if you're not overusing that, they're pretty nice. They will just do their work.”

Jordan corroborates Ashley's experience of students, in relation to their negative affective states. However, Ashley is unique in using the explicitly Christian word, “grace”, to describe the actions of students. Both Ashley and Jordan have articulated a relationship between their experience of the school and their affective states. These results suggest that the schooling context's interaction with this source of self-efficacy appears to be evoked through the social and cultural norms of the students.

4.4 Summary of Results

Analysis of transcripts have revealed the expected interaction between the historical, social, and religious context of CEN schools and sources of teacher self-efficacy. Teachers in schools that had committed to Christian curriculum frameworks, were more likely to view their implementation of the framework as an enactive mastery experience. However, participants largely presented their enactive mastery experiences of success and failure in the classroom independently of the context of their school. When participants referred to colleagues as sources of vicarious experience they did not allude specifically to the CEN school context. Rather this reference was on the basis of their pedagogical excellence and their ability to create positive teacher-student relationships. In contrast, when participants referred to the principal as a source of feedback, it was the principal's adherence to the principles of Christian education, as constructed by CEN, that played a fundamental role in the way their feedback was used as a source of self-efficacy information. Lastly, negative affective states among staff appeared to be influenced by the “grace” (Ashley) of students, indicating a strong relationship between the schooling context and their experiences of those negative affective states.

CHAPTER 5: DISCUSSION

This exploratory study was designed to examine the potential relationship between the context of Christian Education National schools and the sources of teacher self-efficacy. Both teacher self-efficacy and Bandura's (1997) hypothesised sources of self-efficacy in the Australian Christian schooling context are underexplored in the research literature. This apparent lack of research gave both impetus and value to the study. Nine teachers provided evidence for the quantitative case analysis of the TSES survey responses and qualitative analysis of the sources of their self-efficacy scores. Seven of these teachers provided the interview data that explored the potential relationship between CEN teaching contexts and their sources of self-efficacy that enriched and explained this quantitative case data. Surveys on teacher self-efficacy were analysed in terms of their descriptive statistical properties. The written sources of self-efficacy information were analysed using *a priori* assumptions about the four theorised sources of self-efficacy (Bandura, 1997). The interview data was analysed using *a priori* assumptions about the historical, social and religious context, which were suggested by the theoretical framework developed by Elliott et al. (2018). This interview data was analysed to assess the extent to which participants articulated a relationship between their sources of self-efficacy and these *a priori* features of their CEN school.

Overall, teachers in the sample ($n=9$) reported similar self-efficacy scores to the validated means given by Tschannen-Moran and Hoy (2001). When reporting the sources of these self-efficacy scores, participants cited all but one of Bandura's (1997) hypothesised sources of self-efficacy in the context of their teaching, that of vicarious experiences. Analysis of interview data indicated that teachers identified their enactive mastery experiences and social persuasions as sources of self-efficacy which arose from and interacted with their CEN schooling context. There was limited evidence of teachers' vicarious experiences interacting the CEN schooling context, but this was primarily articulated in relation to participant beliefs about faith-learning integration, which may or may not be directly relevant to the schooling context. There was some evidence to suggest that teachers' experiences of their affective states, as sources of self-efficacy, were influenced by the student-teacher relationships encouraged by their Christian schooling context. However, these teachers also typically articulated their enactive mastery experiences of success and failure in the classroom in terms of state-mandated syllabus requirements, rather than in the faith-based concerns of their schooling context.

5.1 The Levels of Teacher Self-Efficacy in CEN Schools

Overall self-efficacy scores were similar ($M=6.92$) to the validated means given by Tschannen-Moran and Hoy (2001) ($M=7.10$). When assessing the sub-scales of the TSES, teachers in the sample produced a higher mean score for classroom management ($M=7.36$) than reported by Tschannen-Moran and Hoy (2001). In contrast, their self-efficacy for student engagement ($M=6.40$, $SD=0.98$) was substantially lower than report by Tschannen-Moran and Hoy (2001) ($M=7.30$, $SD=1.1$). This finding will contribute to the beginning of a research base in CEN schools regarding the self-efficacy levels of its teachers. The higher levels of self-efficacy for classroom management ($M=7.36$, $SD=0.66$), when compared to Tschannen-Moran and Hoy's (2001) mean for the TSE domain ($M=6.7$, $SD=1.1$), across the sample raises questions regarding the antecedents for such a phenomenon. The higher level of TSE in this domain may be attributed to the positive teacher-student relationships present in these schools. The results of this study showed that teachers valued their positive relationships with students. Lavado (2018) also affirmed the significance of teacher-student and teacher-teacher relationships as sources of self-efficacy in the Lutheran school. The literature associated with this TSE domain suggest that higher levels of TSE tend to have closer relationships with students and produce less conflict (Mashburn et al., 2006; Mashburn et al., 2008). However, Roorda et al. (2011) have demonstrated that these positive teacher-student relationships tend to lead to greater student engagement. In contrast, this study found that, even though teacher-student relationships appeared to be positive, it did not have a flow on effect to teachers feeling as capable in student engagement, which was the lowest scoring TSE domain in the sample. This finding does require replication in a more representative sample but could stimulate an investigation into the reasons why there is not as strong a correlation between TSE for classroom management and TSE for student engagement in the Christian schooling environment.

5.2 The Sources of Teacher Self-Efficacy in CEN Schools

In an analysis of survey responses regarding the sources of teacher self-efficacy, teachers more readily discussed their enactive mastery experiences and affective states. The emphasis on enactive mastery experiences is consistent with the literature, which commonly finds that enactive mastery experience plays the greatest role in teacher self-efficacy assessments (Britner & Pajares, 2006; Usher & Pajares, 2008; Zee & Koomen, 2016). The low presentation of social persuasions and vicarious experiences as sources of self-efficacy in the sample was also

consistent with the findings of Usher and Pajares (2008). Exploring the social persuasions of participants in relation to their TSES means elicited a positive relationship between the number of sources of feedback participants referred to and their TSES results. This suggested that TSE of the sample was increased by the presence of more sources of feedback, or that teachers with a higher TSE were more likely to seek out a diverse set of feedback sources. Due to the limitations of the study, the causative direction of this relationship could not be adequately explored.

When dealing with sources of teacher self-efficacy in the context of a Christian school, Lavado (2018), found that personal faith, inter-collegial and teacher-student relationships, student achievement, collaboration, and professional development functioned as sources of teacher self-efficacy. However, Lavado (2018) tended not to differentiate the intrapersonal or environmental nature of these sources. For example, Lavado (2018) treated personal faith and the schooling context as synonymous in the Lutheran schooling context. Whereas this study found little evidence of the schooling context affecting the personal faith of the participants beyond a potential, and as yet underexplored, mediating effect when teachers attempted to express their faith in the classroom. Participants in this study across the written responses and the interviews discussed their personal faith, inter-collegial relationships in the form of vicarious experiences, principal feedback in the form of social persuasions, teacher-student relationships in the context of their affective states, and student achievement and Christian curriculum frameworks in the form of enactive mastery experiences. Identifying the sources of self-efficacy in this sample contributes to a new base of knowledge that focuses on the information CEN teachers use to assess their own capacities, in the context of the self-efficacy construct.

5.3 The relationship between the CEN schooling context and sources of Teacher Self-Efficacy

Participants in the sample articulated a relationship between their CEN schooling context and some of their sources of self-efficacy. Focusing on the historical, social, and religious context of schools, content analysis of the interviews showed that participants frequently articulated a relationship between the social and religious context of CEN schools and their sources of self-efficacy. The historical context of the school was less frequently mentioned, and this may suggest that, considering that there are no CEN schools over 50 years old in the sample, there were few historical factors for teachers to draw on. Teachers certainly did not articulate the

history of their school or CEN as a significant ‘environmental property’. The social and religious context of CEN schooling appeared to have the greatest role in influencing sources of self-efficacy when participants conceptualised the various parts of their teaching as distinctively “Christian”. As expected, participants in the sample frequently referred to their enactive mastery experiences, especially in the context of Christian curriculum frameworks. This conforms to Zee & Koomen’s (2016) findings which demonstrate that enactive mastery experiences have the strongest effect size on TSE in quantitative studies. However, there was limited evidence connecting their mastery experiences of success and failure in the classroom with their schooling context. In addition, the results associated with vicarious experiences, supported the literature, suggesting that it had the lowest influence on self-efficacy (Usher & Pajares, 2008) and, by extension, had little relationship with the CEN schooling context.

This research suggests that there may be a relationship between a school’s implementation of Christian curriculum frameworks and their enactive mastery experiences. Teachers from one school in the sample frequently discussed their enactive mastery experiences of *Transformation by Design*, a Christian curriculum framework. Both teachers from that school proposed contradictory positions about the value and practice of the curriculum framework; they claimed that it was synonymous with Christian educational practice, but also indicated that the framework was not an essential part of their teaching life. Both of these teachers had lower self-efficacy scores in the sample. This finding suggests that schools can influence the enactive mastery experiences of their staff by encouraging the use of Christian curriculum frameworks but can undermine the self-efficacy of these same staff by failing to fully implement it in the teaching life of the school. While not focusing on the construct of self-efficacy, Cooling and Green (2015) have shown that a similar Christian curriculum framework implemented in the United Kingdom, *What If Learning*, “can and does influence the reframing of pedagogic practice in schools with a Christian ethos” (p. 106). However, they also added the caveat that this particularly happens “when this is supported by a wider conversation about the aims for teaching and learning within a school community” (p. 106). Cooling and Green’s (2015) findings and the results of this study suggest that Christian curriculum models like *Transformation by Design* need to be implemented beyond “programming pages that you fill up and start up a program” (Alex) if teachers are to have a high sense of self-efficacy for faith-learning integrative practices. This exploratory finding may warrant a closer investigation of the relationship between the implementation of Christian curriculum frameworks and the effect on the self-efficacy of teachers in faith-based schools.

The context of the CEN school appeared to have very little interaction with teacher mastery experiences of success and failure in the classroom and their vicarious models of teaching found in their colleagues. Teachers in this sample either did not articulate a relationship between the context of their CEN school and their enactive mastery experiences of success and failure, or only articulated it in an implicit fashion. This lack of relationship may speak to the dual curriculum function of CEN schools; they must teach state-mandated curriculum, but they are defined by teaching it from a Christian perspective (Dickens, 2013; Hanscamp et al., 2015; Justins, 2002, 2004; Prior, 2018, 2020; Thompson, 2003). Despite the large number of Christian educational philosophical texts espousing equal integration between state-mandated curricula and Christian perspectives (Beech, 2015; Edlin, 2014; Graham, 2009; Stronks & Blomberg, 1993; Van Brummelen, 2002; Van Dyk, 1997, 2000), as alluded to in the previous paragraph, teachers may not actually feel equipped to undertake this venture (Fisher, 2012). Therefore, there may simply be a greater number of mastery experiences associated with the execution of state-mandated curriculum than the Christian educational philosophies espoused by CEN. However, it must be noted that some mastery experiences were linked to the personal faith of the participants, whose practices are contingent upon the CEN schooling context, which sanctions such experiences in the classroom. These personal faith-influenced mastery experiences may suggest that the religious context of the school, which encourages teachers to undertake faith-learning integration in their classrooms, is mediated by the intrapersonal faith processes in teachers before it interacts with the teachers experiences of success and failure. Similar to teacher reports of success and failure in the classroom, teachers chose their role models in teaching, apart from limited examples, based on their ability to teach well and develop strong teacher-student relationships, rather than in the context of their CEN school. There may be a connection between teacher-student relationships and the CEN schooling context, but it was not articulated in relation to vicarious experiences. Rather, there was a stronger tendency for participants to discuss teacher-student relationships in the CEN context when considering their physiological and affective states (discussed below). These findings raise questions regarding the development of enactive mastery experiences and vicarious experiences in Christian schooling contexts, and how these same contexts influence the selection of teacher role models.

The context of the CEN school appeared to influence the ways that participants accepted feedback from their principals and executive group of the school. The acceptance of social

persuasions from principals in some cases was contingent upon the principal's adherence to the school's vision and mission. Participants reported, when a divergence occurred between the views of the principal and the vision and mission of the CEN school, this encouraged negative social persuasions and undermined the self-efficacy of the teachers in the school. Bandura (1997) claims that "the impact of persuasory opinions on efficacy beliefs is apt to be only as strong as the recipient's confidence in the person who issues them. This confidence is mediated through the perceived credibility and expertness of persuaders" (p. 105). In this context it is clear that the leadership role of a school principal does place them in a powerful persuasive position and thus the reports of teachers in this study may point to an issue of relational trust between principals and their staff. Relational trust is the extent to which groups of people understand their own and other group's expectations and obligations (Cranston, 2011). As explained by Marks and McCulla (2016) teachers in Australia "agreed that leaders should be 'knowledgeable about effective teaching practices and contemporary learning theories'", but that the "demands of the leadership role may well take the leader away from teaching/learning and much more towards management which would appear to be impacting negatively upon relational trust" (p. 61). As such relational trust may play a role in the development of social persuasive sources of self-efficacy. This application of the concept of relational trust between principals and teachers in the current study is tentative and worthy of further exploration in future research.

Participants articulated a relationship between their experiences of affective states and the CEN schooling context in the form of school climate and student-teacher relationships. Negative physiological and affective states are regularly found in the literature to have a negative effect on the self-efficacy results of teachers (Morris et al., 2017). The results of this project indicate that when teachers in CEN schools are experiencing a negative physiological or affective state, they can rely on the goodwill of their students to mitigate many of the negative self-efficacy effects that may arise from such a state. When describing this experience of students mitigating negative affective states, participants articulated their students as a supportive community, issuing 'grace' to their teacher. This suggests that the schooling context, in the form of a school climate, interacted with the physiological and affective states of teachers via its students. Tsouloupas et al. (2014) has shown that school climate variables and their relationship to TSE is often mediated by other factors, like professional development programs. This raises the question as to whether school climate features such as relationships with students have a similar effect on teacher physiological and affective states. Further research into the relationship

between school climate and teacher experiences of physiological and affective states will be necessary for a deeper understanding of the phenomena.

5.4 Implications of the Research

As an exploratory study in a severely understudied field, this study has provided insights and implications for the future development of research methods in this field and practical applications for the maintenance and development of teacher self-efficacy in CEN schools.

The limited and predominantly quantitative research that has examined the phenomena of self-efficacy among the teachers of Christian schools has found little relationship between measures of religiosity and teacher self-efficacy (Anderson, 2016; Wright, 2010). However, this exploratory research project has provided a preliminary research base which suggests that the social and religious elements of the Christian schooling environment do influence teacher self-efficacy, as illustrated in the sources of self-efficacy. In line with Morris et al. (2017) and Wyatt (2014), this would indicate that researchers in this field need to go beyond the quantitative measures of self-efficacy and religiosity and identify the sources of self-efficacy that these teachers select, so that teacher self-efficacy can be understood in the context of Christian schooling.

This research also provides preliminary insights about the implementation of Christian curriculum frameworks and their sources of teacher self-efficacy. If CEN schools are to implement a Christian curriculum framework in their school, they must create opportunities for teachers to develop a sense of mastery through enactive mastery experiences, if they are to support the self-efficacy of their teachers. This will mean that more supports will need to be placed around teachers, in the form of collegial feedback and authentic and safe opportunities to test the framework in a teaching setting. The evidence in this project suggests that CEN schools need to go beyond program-based adherence to Christian curriculum frameworks, if TSE is to be preserved. There is some indication of a shift in professional development for *Transformation by Design* with the recent publication of *Transformation by Design: Crafting Formational Learning* (Hanscamp et al., 2019) from program-based approaches to active pedagogical approaches. However, this shift was not borne out in the findings of this study.

This research has indicated that principals in these schooling contexts may need to develop relational trust with their staff, by developing expert knowledge in faith-learning integrative practices, if their feedback is to be persuasive. The data presented here suggested that when principals did not possess an acceptable level of knowledge in faith-based teaching practices, it negatively influenced the work rates and affective states of staff. This was particularly the case when principals gave feedback to their staff, where it was silently rejected. This may indicate that principals in CEN schools need an additional level of knowledge in pedagogical practices that their secular schooling counterparts do not need to have if they are to have a positive influence on the self-efficacy of their staff; an in-depth knowledge of faith-learning integrative practices

It was clear, in this study, that a proportion of the sample saw the “grace” of students as a mitigating factor when they experienced negative physiological and affective states. Using the goodwill of students as a device to regulate negative affective states has not been readily described in the literature but could be attributed to the positive relational culture developed between teachers and students in the context of a Christian community. This may indicate to principals that teachers in CEN schooling contexts may need more supports to self-regulate, without needing the “grace” of students, or could be indicative of a healthy school community, reflecting the communal goals of CEN schooling. This phenomenon requires considerably deeper study.

5.5 Limitations

The sample was purposefully limited to teachers currently employed with Christian Education National schools in Sydney, Australia. This was to ensure that the contextual schooling environment would be relatively consistent across the sample. However, the population of Christian Education National schools in Sydney is small, which led to a very small available sample. The issue of recruitment in this phase was exacerbated by the timing of data collection in the final quarter of 2019, when teachers are least likely to participate in research due to the busy time at the end of school year. This required a second round of recruitment and drew in schools from a wider array of Christian Education National schools in the Sydney Metropolitan region. Recruitment in this phase was undermined by the emergence of the COVID-19 pandemic, which placed extraneous pressure on the workloads of potential participants and could have made them less inclined to participate in the project. As an exploratory study, the

sample recruited prior to the pandemic proved to be adequate to make initial claims about the phenomena under examination. Although, the small sample size limits the generalisability of these findings, stimulating the need for further research in this area.

Despite a strong indication from the literature that a relationship between Christian schooling contexts and sources of teacher self-efficacy existed, the literature did not clearly conceptualise or operationalise the relationship. This limited the study as it meant that a priori assumptions needed to be made regarding the environmental properties of CEN schooling and the articulated sources of self-efficacy. In addition, a portion of the framework developed by Elliott et al. (2018) to explore the self-efficacy of religious education teachers, was used to support coding of environmental properties in the CEN schooling context. However, these properties were not fully conceptualised or operationalised by Elliott et al. (2018). A clearer conceptualisation of the environmental properties that compose Christian schooling is needed to further develop understandings about the relationship between CEN's Christian schooling context and TSE.

5.6 Future Directions of Research

This research project was designed to develop the beginnings of a research base regarding the relationship between the context of CEN schools as a potential factor shaping the sources of teacher self-efficacy. This study has identified this relationship in reports of enactive mastery experiences, social persuasions, and physiological and affective states that teachers related to the CEN school context. Future research should include an expanded sample and recruitment of more teachers and could be broadened to include other faith-based schools in Australia, examining how these contexts influence teacher self-efficacy. Further study could include the investigation of change and development in the sources of teacher self-efficacy over time as some teachers did refer to time and experience as factors that shaped their view of particular experiences. Other potential studies could also focus on the relationship between Christian curriculum frameworks and TSE, or the ways that relational trust interacts with TSE in Christian schooling contexts. More significantly, the unique faith-learning integrative curriculum context of many faith-based schools is a contextual factor worthy of further scrutiny in the development of teacher self-efficacy in these schooling contexts.

CONCLUSION

This exploratory research project was designed to explore the relationship between the context of Christian Education National schools in Sydney, Australia and sources of teacher self-efficacy. Results indicated that teachers report similar, yet slightly lower levels of self-efficacy reported in the literature. In particular, teacher self-efficacy for student engagement was particularly low ($M=6.40$, $SD=1.27$), while teacher self-efficacy for classroom management was higher than expected. Close examination of the sources of teacher self-efficacy through written responses and interviews revealed that these schooling contexts did influence teacher self-efficacy through enactive mastery experiences in the form of Christian curriculum framework implementations, social persuasions in the form of the principal's adherence to Christian principles; and via physiological and affective states which were influenced by 'Christian' understanding of teacher-student relationships. The interaction between the CEN schooling context and teacher vicarious experiences was indicative and in need of further exploration.

In conclusion, this exploratory study suggests that there is a relationship between the social and religious contexts of Christian Education National schools and sources of teacher self-efficacy. Further studies with larger, more representative samples are needed to continue exploring the relationship between the context of faith-based schools in Australia and the ways that they influence the self-efficacy of their teachers.

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APPENDICES

Appendix A: Teachers' Sense of Efficacy Scale (Long Form)

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education*, 17, 783-805.

Statements	1 = nothing 3 = very little 5 = some influence 7 = quite a bit 9 = a great deal
1. How much can you do to get through to the most difficult students?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
2. How much can you do to help your students think critically?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
3. How much can you do to control disruptive behavior in the classroom?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
4. How much can you do to motivate students who show low interest in schoolwork?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
5. To what extent can you make your expectations clear about student behavior?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
6. How much can you do to get students to believe they can do well in schoolwork?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
7. How well can you respond to difficult questions from your students?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
8. How well can you establish routines to keep activities running smoothly?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
9. How much can you do to help your students value learning?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
10. How much can you gauge student comprehension of what you have taught?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
11. To what extent can you craft good questions for your students?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
12. How much can you do to foster student creativity?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
13. How much can you do to get children to follow classroom rules?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
14. How much can you do to improve the understanding of a student who is failing?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
15. How much can you do to calm a student who is disruptive or noisy?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
16. How well can you establish a classroom management system with each group of students?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
17. How much can you do to adjust your lessons to the proper level for individual students?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
18. How much can you use a variety of assessment strategies?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
19. How well can you keep a few problem students from ruining an entire lesson?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
20. To what extent can you provide an alternative explanation or example when students are confused?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
21. How well can you respond to defiant students?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
22. How much can you assist families in helping their children do well in school?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
23. How well can you implement alternative strategies in your classroom?	(1) (2) (3) (4) (5) (6) (7) (8) (9)
24. How well can you provide appropriate challenges for very capable students?	(1) (2) (3) (4) (5) (6) (7) (8) (9)

Appendix B: Open-ended questions at conclusion of TSES survey

1. Have you received any feedback about your teaching that helped you to make an informed decision about some of your scores?
2. How have any of your past experiences of teaching influenced the scores you gave?
3. Are there any models of teaching/education that helped you to make an informed decision about some of your scores?
4. Are there any personal factors that influenced some of your scores?

Appendix C: Semi-structured interview protocol

- Social Persuasions
 - Where does the majority of your feedback come from? Students, colleagues, parents, or your own self-evaluation?
 - Discuss some of your experiences of receiving feedback.
 - To what extent do you think those experiences of feedback have influenced your teaching practice?
- Enactive Mastery Experience
 - Discuss some of your experiences of success and failure in the classroom.
 - How would you define a success in your classroom? Could you give an example?
 - How would you define a failure in your classroom? Could you give an example?
 - How have your memories of past successes and failures influenced the way you work in the classroom now?
- Vicarious Experience
 - Are there particular teachers in your school that teach in a fashion that influences the way you teach? How do they influence you?
- Physiological and Affective States
 - To what extent does your mood affect your teaching ability on a day-to-day basis?
- Pedagogical and Curriculum Models
 - Discuss some of the models of education you have encountered.
 - To what extent do these models of education influence the way you work in the classroom?

Appendix D: Recruitment email sent by principals to their staff

Hello,

My name is Michael Street. I am a candidate in the Master of Research program at Macquarie University. I am currently researching the relationship between Christian schooling contexts and the sources of your beliefs about your self-efficacy. By examining this as yet unexplored area in our understanding of Christian education, this research will hopefully give some insight into the ways that teachers in Christian schools develop their beliefs about their capacities as educators and provide directions to support Christian teachers in their work.

The research has two phases. If you are interested in participating in this research, it will involve a survey and then an interview. However, if you complete the survey and then do not wish to continue with the interview, you can do so without having to give a reason and without consequence. Your personal information and data related to your participation in the project will be kept completely confidential.

The first phase is a survey. Before you begin the survey, you will be asked for some basic demographic information. In the survey, you will be given the Teachers' Sense of Efficacy Scale. The Teachers' Sense of Efficacy Scale is designed to give an indication of the kinds of difficulties and capabilities teachers perceive themselves possessing in particular situations. At the end of the Teachers' Sense of Efficacy Scale, you will be asked four questions requesting examples or reasons for your answers to some of the questions in the Teachers' Sense of Efficacy Scale. Once the survey is complete you will be asked for some personal contact information so that an interview can be arranged. All personal information provided will be kept confidential and secured in accordance with legislation.

The second phase of research will involve a 20-30 minute, one-on-one interview. The interview can be completed on the phone or in person, depending on what you would prefer. In this interview, I would like to discuss your capabilities as a teacher and what sources of information you use to assess those capabilities. Once again, if you complete the survey, give your contact details for an interview, but then decide that you do not wish to proceed, you do not need to give a reason and there will be no consequence to you. Participating in the second phase is entirely voluntary and all personal information collected in the interviews will be kept confidential.

If you would like to participate in this research project, please go to the link below, complete the consent form, the survey and then provide your contact details.

URL: [URL to be placed here]

If you would like to ask any further questions about the research, please contact me at call me on

Yours Sincerely,

Michael Street

Appendix E: Participation Information and Consent Form

You are invited to participate in a study of sources of teacher self-efficacy beliefs in Christian school contexts. The purpose of the study is to understand how and in what way, if at all, Christian schooling contexts influence the sources of information that teachers use to understand their efficacy as a teacher.

The study is being conducted by Michael Street from the Faculty of Educational Studies at Macquarie University. You can contact him at any time by phone on _____ or by email at _____. This research project is being conducted to meet the requirements of the Master of Research under the supervision of Dr Norman McCulla (_____) and Dr Anne McMaugh (_____) of the Department of Educational Studies.

If you decide to participate, you will be asked to complete a survey and participate in an interview. The survey will take approximately 10-15 minutes to complete and the interview up to 30 minutes. All interviews will be audio-recorded with your consent and will be conducted, at your discretion, either in person or by telephone at a time convenient to you. There are no identified risks associated with the project. However, you may withdraw from the project at any point without justification.

You will not be identified on any survey documents as a code will be assigned to your survey and data. You will not be identified in the audio recording as the same code will be stated at the beginning of the recorded interview. Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. The Chief Investigator, Michael Street, and a transcriber, will be the only people that will access the data produced in this project. A summary of the aggregated results of the project can be made available to you once the thesis has been completed in early 2020.

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, _____ have read (*or, where appropriate, have had read to me*) and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in the research knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

I consent to participation in the research involving completion of a survey and interview.

Participant's Name: _____
(Block letters)

Participant's Signature: _____ Date: _____

Investigator's Name: Norman McCulla

Investigator's Signature: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (_____) ; email _____. Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Appendix F: Macquarie University Human Ethics Committee Project Approval

Appendix F removed from Open Access version as they may contain sensitive/confidential content.