
# TEACHER TURNOVER INTENTION: A SOCIAL COGNITIVE CAREER THEORY PERSPECTIVE

A Thesis submitted by

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# ABSTRACT

The rate at which beginning teachers are leaving the profession is of concern in Australia and internationally (Plunkett & Dyson, 2011; Toropova et al., 2021). Teacher turnover affects the individual teachers, their students, and the school systems that they exit, with higher turnover rates negatively impacting on student academic outcomes and creating an additional financial burden of recruiting and inducting new teachers (Borman & Dowling, 2008; Sorensen & Ladd, 2020). Teacher turnover intention estimates a teacher's desire to remain in the teaching profession. Work engagement, job satisfaction, and life satisfaction have been found to influence turnover intention in other professions; however, their combined predictive role in teacher turnover was unclear (Amah, 2009; Dreer, 2021b; Ghiselli et al., 2001; Williams, 2011).

The Social Cognitive Career Theory (SCCT; Brown & Lent, 2019; Lent & Brown, 2019) well-being model provided the theoretical framework by which to investigate the relationships among personality, contextual, social, and cognitive variables, and their predictive value for work engagement, job satisfaction, and life satisfaction. The aims of this research project were firstly, to investigate to what extent the SCCT well-being model is able to explain teacher work engagement, job satisfaction, and life satisfaction; and secondly, to investigate the relationships between work engagement, job satisfaction, and life satisfaction and teacher turnover intentions. The SCCT well-being model was operationalised with variables relevant to the domain of the teaching profession, including openness, conscientiousness, extraversion, agreeableness, neuroticism, dispositional optimism, perceived organisational support, teaching self-efficacy, vocational outcome expectations, work engagement, teaching satisfaction, and life satisfaction. Surveys were deployed to obtain measures of the operationalised variables in two studies. The Study 1 sample ($N$ = 371) included preservice teachers enrolled in teacher education programs at a regional

Queensland university and in-service Australian teachers. Study 2 participants ($N$ = 394) were teachers from Australia, Canada, New Zealand, Northern Ireland, the United Kingdom, and the United States of America.

The SCCT well-being model provided a testable framework for investigating the predictors of teachers' work engagement, job satisfaction, and turnover intention, accounting for 45.7% and 58.5% of the variance in work engagement, 62.3% and 47.3% of the variance in job satisfaction, and 45.1% and 41.9% of the variance in teachers' life satisfaction in Studies 1 and 2, respectively. Teachers' job satisfaction accounted for 13.0% and 26.7% of the unique variance in turnover intentions in Studies 1 and 2 respectively. Work engagement and life satisfaction, whilst correlated with turnover intention, did not account for any unique variance in turnover intention in the final models of the sequential multiple regression analyses. The findings from this research contribute to the teacher turnover intention literature, and suggest a number of practical implications that universities, schools, and education centres can employ to increase teachers' work engagement, job satisfaction, life satisfaction, and intention to remain in the profession. These interventions include increasing teacher's positive affect at work through positive psychological interventions, increasing teaching self-efficacy through professional development activities such as scenario-based learning, and increasing teacher's perceived organisational support through mentoring programs, and offering teachers ongoing employment contracts. Whilst the cross-sectional design of the study did not provide evidence for causal links among the variables, the SCCT well-being model provided a testable, theorised order of constructs that can be contextualised for specific professions.

KEYWORDS

*Dispositional optimism, job satisfaction, life satisfaction, Social Cognitive Career Theory, teacher attrition, teacher well-being, turnover intention, vocational outcome expectations*

# THESIS CERTIFICATION PAGE

This Thesis is entirely the work of Cristy Bartlett except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

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Bartlett, C., Perera, H., & Danaher, P. A. (2014). *Towards an integrated theory of optimism: The rules of, and the relationships between, two models of optimism*. 13th University of Southern Queensland Postgraduate and Early Career Researcher Group Research Symposium. Toowoomba, QLD, Australia: University of Southern Queensland.

# POSTER PRESENTATION

Bartlett, C. (2015). *Teacher well-being: A Social Cognitive Career Theory perspective.* Golden Key 2015 International Summit, Gold Coast, QLD, Australia.

# CHAPTER ONE: INTRODUCTION

This chapter introduces the current international concerns regarding teacher attrition, and notes potential predictors of teacher turnover intention. The Social Cognitive Career Theory (SCCT; Brown & Lent, 2019; Lent & Brown, 2019) is proposed as a potential theoretical perspective to investigate the predictors of teachers' work engagement, job satisfaction, life satisfaction, and turnover intentions. The research aims and design are provided, followed by an overview of the theoretical, methodological, and practical implications of the research. The chapter concludes with an overview of the thesis organisation.

## Teacher Attrition and Retention

Teacher attrition and the factors that support teacher well-being and retention are of international interest (Geiger & Pivovarova, 2018; OECD, 2005; Plunkett & Dyson, 2011; Toropova et al., 2021). Determining the factors that influence teacher attrition is a topic of international interest as teacher attrition is associated with a number of negative outcomes. In addition to the implications for the individual teacher, teacher attrition is associated with reduced student outcomes, can disrupt the sense of cohesion amongst school staff, diverts school funding, time, and other resources to recruit new teachers, and is disruptive to school planning (Borman & Dowling, 2008; Brill & McCartney, 2008; Brown & Wynn, 2009; Geiger & Pivovarova, 2018; Sorensen & Ladd, 2020). The exact attrition rates of teachers leaving the profession are not clear and are difficult to determine (Mason & Matas, 2015; Weldon, 2018). The difficulty in determining attrition rates is partly due to distinct education systems and schools independently recruiting teachers, thereby making it difficult to determine the number of teachers who move between schools and school systems, and the number who leave the profession entirely (Weldon, 2018). Estimates vary, with some researchers indicating that between 25 and 33% of beginning teachers leave the profession

entirely within their first five years (Ewing & Manuel, 2005; Gallant & Riley, 2014), with others suggesting that the rate of attrition is much smaller (Mason & Matas, 2015). Regardless of the attrition rates, demand for, and supply of teachers, understanding the factors that create teaching environments that support teachers' well-being, work engagement, and job satisfaction is a valuable endeavour.

Work engagement, job satisfaction, and life satisfaction have been shown to be predictive of turnover intention within a number of occupations, including customer service, hospitality, banking, and tertiary education (e.g., Amah, 2009; Ghiselli et al., 2001; Williams, 2011; Wright & Bonett, 2007). Whilst job satisfaction has been shown to predict turnover intention in the teaching profession, the roles of work engagement and life satisfaction in supporting teacher retention are less clear (Dreer, 2021b; Madigan & Kim, 2021). The current research seeks to identify predictors of teachers' work engagement, job satisfaction, and life satisfaction and to determine the predictive value of work engagement, job satisfaction, and life satisfaction on teacher turnover intention. In this research, turnover intention refers to an in-service or preservice teacher's desire to remain in the teaching profession, whereas, teacher attrition refers to teacher's actually leaving a teaching position.

**The Australian Teaching Context**

Teachers in Australian schools must hold teacher registration in their respective state or territory. Mutual recognition provides abbreviated registration processes for teachers who hold current teacher registration in another Australian state or territory or in New Zealand; however, there is no nationwide registration or accreditation process (Queensland College of Teachers, n.d.). Qualification requirements for registration normally require a four-year Bachelor degree in teacher education or else a one year postgraduate degree in teacher education plus a three year Bachelor degree (Queensland College of Teachers, n.d.). In the state of Queensland, where participants in Study 1 of this research were either working or

studying, applicants for teacher registration are also required to demonstrate English language proficiency and suitability to teach (criminal history and previous disciplinary action or refusal of registration checks). Registration must be renewed every five years, with teachers required to demonstrate continuing professional development (Queensland College of Teachers, n.d.).

The lack of a national registration system for teachers makes determining exact attrition rates in Australia problematic (Weldon, 2018). It is currently not possible to track the movement of teachers between public school systems in Australian states and territories or between public and independent sectors, making it difficult to identify which teachers are lost to the profession permanently or temporarily, and which teachers are leaving one school system for another (Queensland College of Teachers, n.d.; Weldon, 2018). The balance between teacher availability and demand also varies between states and territories and between the primary and secondary sectors (Weldon, 2015).

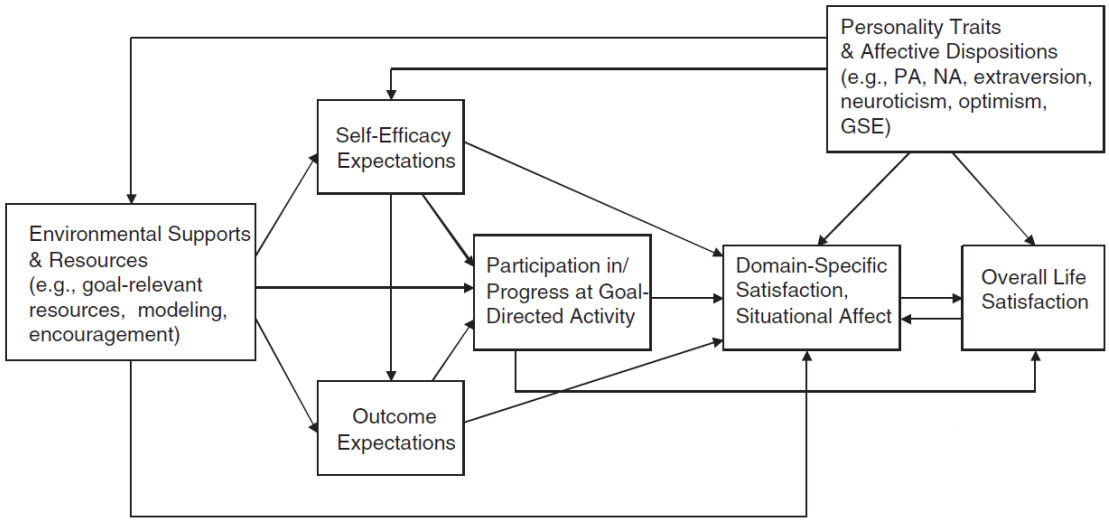
**The SCCT Well-Being Model**

The SCCT well-being model is a process model incorporating dispositional and contextual constructs to understand vocational and life satisfaction (see Figure 1.1; Lent, 2004). The SCCT well-being model is an extension of the SCCT work by Lent, Brown, and Hackett (1994), which incorporated person inputs (e.g., personality and affective traits), contextual affordances, self-efficacy beliefs, outcome expectations, and goal-directed behaviour to predict educational and vocational choice and performance (Brown & Lent, 2019; Lent & Brown, 2019). The SCCT well-being model provides a framework to investigate career behaviours and includes predictor variables that are suitable for targeted interventions (Lent & Brown, 2019). In this research, the SCCT well-being model was operationalised to investigate the predictors of teachers' work engagement, job satisfaction, and life satisfaction, as these variables have been shown to predict turnover intention. The

present research tested a model of teacher engagement and satisfaction that linked teachers' personality and affective traits (i.e., conscientiousness, neuroticism, extraversion, agreeableness, openness, dispositional optimism, positive affect, and negative affect), perceived organisational support, teaching self-efficacy, and vocational outcomes expectations with their work engagement, job satisfaction, and life satisfaction. The order of influence theorised in the SCCT well-being model informed additional analyses investigating the predictive value of work engagement, job satisfaction, and life satisfaction on teacher turnover intention. The results of this research contribute to our understanding of the factors that influence teacher attrition and factors that may be suitable for interventions aimed at reducing teacher attrition.

**Figure 1.1**

*The Social Cognitive Career Theory Integrative Well-Being Model*




*Note.* Adapted from "Toward a unifying theoretical and practical perspective on well-being and psychosocial adjustment" by R. W. Lent, 2004, *Journal of Counseling Psychology*, *51*(4), p. 500 (https://doi.org/10.1037/0022-0167.51.4.482). Copyright 2004 by the American Psychological Association. Reprinted with permission.

**The Research Aims**

The aims of the current research were firstly, to investigate to what extent the SCCT well-being model was able to explain teacher work engagement, job satisfaction, and life satisfaction; and secondly, to explore the relationships between work engagement, job satisfaction, and life satisfaction and teacher turnover intention. As such, the current research project was designed to answer the following research questions:

1. Does the SCCT well-being model explain how psychological variables inter-relate to predict teacher work engagement?
2. Does the SCCT well-being model explain how psychological variables inter-relate to predict teacher job satisfaction?
3. Does the SCCT well-being model explain how psychological variables inter-relate to predict teacher life satisfaction?
4. What is the predictive ability of work engagement, job satisfaction, and life satisfaction in relation to teacher turnover intentions?

**The Research Design**

Data were collected in two studies via online surveys, which included measures for personality and dispositional traits, perceived organisational support, teaching self-efficacy, vocational outcome expectations, work engagement, job satisfaction, life satisfaction, and turnover intention. Study 1 participants included teachers in Australian primary and secondary schools and preservice teachers undertaking their four-year teacher education degree or a postgraduate teacher registration program at a regional Australian university. Study 2 included an international sample of teachers from Australia, Canada, New Zealand, Northern Ireland, the United Kingdom, and the United States of America.

## Impact of the COVID-19 Pandemic

The COVID-19 pandemic interrupted the data collection planned for this project. It was originally anticipated that Study 1 participants would be Australian preservice teachers undertaking their university studies, with Study 2 participants registered teachers in Australian schools. In early 2020, when the pandemic was declared and schools were moving to remote and online delivery, the Queensland Department of Education paused approval for research within schools and for research involving teachers. Whilst this directive did not include teachers at independent schools, it was appropriate to stop data collection with all teachers and preservice university students during the transition period. When the data collection halted, the number of survey responses was not sufficient for analysis as two distinct groups; therefore, the pre-pandemic data from Australian preservice teachers and in-service teachers were combined in Study 1 to investigate whether the SCCT model could adequately explain the experiences of pre-service and in-service teachers in an Australian context. At the beginning of 2021, an additional survey was deployed via the Prolific survey platform to survey an international sample of teachers from Australia, Canada, New Zealand, Northern Ireland, the United Kingdom, and the United States of America to test the generalisability of the SCCT well-being model in an international teaching context. In addition to the measures included for Study 1, the Study 2 survey contained an extra measure, the Kessler Psychological Distress Scale (K10; Kessler et al., 2002), to provide information about participants' level of psychological distress.

## Contributions of the Research

The purpose of current research was to examine the utility of the SCCT well-being model in predicting teacher work engagement, job satisfaction, and life satisfaction, and to advance understanding of the role of teachers' work engagement, job satisfaction, and life

satisfaction in predicting turnover intention. It is anticipated that this research will make the following theoretical, methodological, and practical contributions:

- The research provides evidence of the psychological factors that influence teachers' work engagement, job satisfaction, and life satisfaction.
- The research provides evidence regarding the predictive value of work engagement, job satisfaction, and life satisfaction for teacher turnover intention.
- The research provides evidence regarding the utility of the SCCT well-being model in explaining teacher work engagement, job satisfaction, and life satisfaction.
- The research discusses the methodological value of collecting data via the online survey platform, Prolific.
- The research provides universities, schools, and education systems with evidence of psychological factors that may be suitable for interventions aimed at increasing teachers' work engagement, job satisfaction, life satisfaction, and retention.

**Organisation of the Thesis**

An overview of the thesis organisation and a summary of the chapters are provided in Table 1.1.

**Table 1.1**

*Summary of Thesis Chapters*

| Chapter | Heading | Contents |
|---|---|---|
| One | Introduction | Introduction and rationale for the current research |
| Two | Review of literature | Teacher Attrition |
| | | Social Cognitive Career Theory (SCCT) |
| | | Operationalised SCCT well-being model |
| | | Impact of the COVID-19 pandemic |
| Three | Methodology | Motivations to engage with the current research |
| | | Research Questions |
| | | Methodological principles and research design |
| | | Ethical considerations |
| Four | Study 1 | Methods and results for Study 1 |
| Five | Study 2 | Methods and results for Study 2 |
| Six | Discussion | General discussion regarding the Study 1 and 2 results |
| | | Theoretical, methodological, and practical implications |
| | | Limitations of the current research project |
| | | Recommendations for future research |
| | | Conclusion |

# CHAPTER TWO: LITERATURE REVIEW

This chapter provides a review of the relevant literature related to teacher turnover intention and the current research project. The review begins with an introduction to teacher attrition, including Australian and international turnover rates, the costs associated with teachers leaving the profession, and factors that influence attrition. The SCCT well-being model is presented as a suitable conceptual framework for investigating teachers' work engagement, job satisfaction, and life satisfaction. The SCCT well-being model operationalised variables and their inter-relationships are then presented, followed by an overview of the impact of the COVID-19 pandemic on teaching. Finally, the chapter concludes with the research aims and hypotheses investigated in the current research.

## Teacher Attrition

The rate at which beginning teachers are leaving the profession is of concern in Australia and internationally (Geiger & Pivovarova, 2018; OECD, 2005; Plunkett & Dyson, 2011; Toropova et al., 2021). It has been suggested that more than a quarter of beginning teachers in the Western world leave the profession within five years (Gallant & Riley, 2014). Determining exact attrition figures for the Australian teaching profession is difficult (Mason & Matas, 2015; Weldon, 2018). However, Ewing and Manuel (2005) estimated that up to one third of Australian beginning teachers leave the profession within five years. In a 2014 survey of registered teachers in Queensland who had completed their teaching qualifications in the previous year, only 89% indicated they were somewhat to very likely to remain or seek employment as a teacher (Queensland College of Teachers, 2015). Ingersoll (2003) estimated that, in the United States, approximately 50% of teachers are leaving the profession within their first five years of teaching. Sorensen and Ladd (2020) found a 26% average 3-year turnover rate of middle school teachers in North Carolina, USA, between 1994–2016, and a 2016 report indicated that 19% of new teachers in England were no longer working as

teachers in England two years later (Department for Education, 2016). Teacher attrition rates are also of concern in New Zealand (Maher et al., 2019), Canada (Ontario College of Teachers, 2020; Wang et al., 2015), and Northern Ireland (Gray et al., 2006; Ross & Hutchings, 2003). It should be noted that teachers leave the profession for a variety of reasons, including reasons unrelated to the profession or their employer, for example owing to ill health or family responsibilities, and that not all attrition is undesirable (Plunkett & Dyson, 2011; Weldon, 2018). Attrition may be due to teachers voluntarily leaving the profession or may be involuntary, such as when a teacher's short-term contract ends (Park & Shaw, 2013). In addition, many teachers leave a particular school or centre to teach somewhere else. Whilst these teachers are not lost to the profession, this contributes to the turnover of teachers and impacts on the schools that they leave in the same way that leaving the profession would (Brown & Wynn, 2009).

Teacher attrition has implications for the education systems and schools that teachers leave, including the additional cost, time, and effort required to recruit and induct new teachers (Borman & Dowling, 2008; Brown & Wynn, 2009; Geiger & Pivovarova, 2018). For example, Borman and Dowling (2008) estimated that the cost of replacing public school teachers in the United States of America who left the profession during the 1999-2000 school year was approximately US$2.2 billion. Teacher turnover also impacts on school planning and can disrupt the sense of community and cohesiveness amongst school staff (Brill & McCartney, 2008). Sorensen and Ladd (2020) found that higher turnover rates led to an increase in the proportion of inexperienced and probationary teachers at a school and to increased rates of teachers being required to teach outside their discipline or year level expertise. They also found that higher turnover rates were negatively associated with student academic outcomes, including test scores. In their meta-analysis including multiple professions, Park and Shaw (2013) determined that the meta-analytic correlation between

turnover rates and organisational performance was -.15. For the five education industry studies included, the meta-analytic correlation between turnover rates and organisational performance was -.19. Park and Shaw (2013) also found that the impact of turnover rates on organisational performance was greater for smaller organisations. In the teaching context, these results suggested that smaller schools are likely to experience more negative effects as a result of teacher turnover compared to larger schools.

In addition to the impact on the education system, school, and students, teacher attrition also has costs for the individuals themselves, as they have invested significant effort and resources in obtaining teaching qualifications, teacher registration, and teaching positions. It is difficult to determine exact attrition rates for the teaching profession within Australia, and it is likely that attrition rates will vary between Australian states and territories, between primary and secondary schools, and between metropolitan and rural schools (Weldon, 2018). However, determining and addressing the factors that influence teacher attrition are likely to lead to reduced teacher turnover, reduced recruitment load on schools, increased student academic outcomes, and a more stable teaching workforce.

### *Factors That Influence Teacher Attrition*

There are many individual and organisational factors influencing teacher attrition (Hughes, 2012). In a review of Australian teacher retention research published between 1995 and 2014, Mason and Matas (2015) found that teacher retention was influenced by a range of factors, including personality factors, perceived support from the organisation, and school leadership and culture. Borman and Dowling (2008), in their meta-analysis of United States teacher retention research published between 1980 and 2005, found similar results. Teachers will also be leaving the profession owing to non work-related reasons, including ill health, for extended travel, and family relocation (Weldon, 2018). Rajendran et al. (2020) investigated turnover intention and burnout in a sample of 1,255 teachers in the Australian states of

Victoria and New South Wales. They found that work-family conflict predicted emotional exhaustion, which in turn predicted turnover intention. These results suggested that teachers are likely to experience greater emotional exhaustion and turnover intention when their job-related activities and workload influence their ability to dedicate time and energy to their family and other non work-related activities. Competing work-family demands may be particularly relevant for teachers as they often complete work, such as lesson plan preparation and grading, at home (Rajendran et al., 2020). Work-family conflict will also occur when family and other non work-related demands influence teacher's ability to dedicate time and energy to their work (Rajendran et al., 2020).

In their study of 523 Canadian teachers, Wang et al. (2015) found that teachers' personal control attributions and self-efficacy for student engagement predicted lower levels of turnover intention, and that internal attributions and self-efficacy for instructional strategies predicted higher levels of turnover intention. Whilst teacher attrition is a complex issue, lower levels of job satisfaction have been consistently linked to attrition in the teaching profession (Dreer, 2021b). Studies investigating the predictive value of work engagement in relation to turnover intention have provided mixed results (e.g., Halbesleben & Wheeler, 2008; Takawira et al., 2014); however, work engagement has been shown to have a positive relationship with the job satisfaction of Australian teachers (Perera, Vosicka, et al., 2018). Life satisfaction has been shown to predict attrition in other professions, including managers in customer service industries (Wright & Bonett, 2007) and hospitality (Ghiselli et al., 2001); however, the influence of life satisfaction on teacher attrition is not clear. A number of factors make comparing the results of existing studies difficult, including: the lack of consistency in the research regarding terms such as "attrition", "turnover intention", and "retention"; the lack of studies that measure teacher attrition; and the lack of an Australian national registration system for teachers (Weldon, 2018). In this research, turnover intention

was operationalised as a teacher's plan, or intent, to remain in the teaching profession within the next 12 months. An aim of this research was to investigate the influence of work engagement, job satisfaction, and life satisfaction on teachers' turnover intention.

### *Work Engagement and Teacher Attrition*

A number of studies across multiple professions have found that increased work engagement is related to the intention to remain in the profession (Shibiti, 2020; Takawira et al., 2014). Halbesleben and Wheeler (2008) suggested that individuals with higher levels of work engagement are likely to have greater levels of personal identity with their roles and to have invested more time and effort in their roles. Engaged workers may be less inclined to discard their role identity and the effort that they have expended to start afresh in a new role. In a study of 153 employees at a South African university, Takawira et al. (2014) found that work engagement was negatively correlated with intention to leave ($r$ = -.42) and explained 13% of the variance in turnover intention. In their study of 573 individuals employed in the United States of America across a number of professions, including education, Halbesleben and Wheeler (2008) found that work engagement was negatively correlated with turnover intention ($r$ = -.12); however, work engagement did not account for any unique variance in turnover intention.

### *Job Satisfaction and Teacher Attrition*

Lower levels of job satisfaction are associated with increased intention to leave the teaching profession (Dreer, 2021b; Madigan & Kim, 2021). Madigan and Kim (2021) undertook a meta-analysis across 14 studies that investigated the relationship between job satisfaction and teachers' intentions to leave the profession. The studies included teachers from primary school, secondary school, and tertiary education sectors, and included samples from Belgium, Canada, China, Israel, Nigeria, Norway, Pakistan, and the United States of America. They found that job satisfaction was negatively correlated with the intention to

leave the teaching profession ($r$ = -.40; 95% CI [-.47, -.32]; $N$ = 6,678). These studies consistently found that teachers with lower job satisfaction are more likely to indicate their intention to leave the profession compared to teachers with higher levels of job satisfaction. Conley and You (2009) found similar results in their study of high school teachers in California, United States of America, with job satisfaction negatively correlated ($r$ = -.43) with intention to leave. A teacher with low job satisfaction is a teacher who is deriving less enjoyment from teaching (Madigan & Kim, 2021). It is therefore not unexpected that low job satisfaction is linked to intention to leave.

### *Satisfaction with Life and Teacher Attrition*

The association between teachers' life satisfaction and turnover intention is less clear. Life satisfaction is a cognitive assessment that individuals make about their life in general (Schimmack et al., 2002). Individuals' level of life satisfaction is based on their cognitive assessment of their life based on criteria that are meaningful to the individual (Diener et al., 1985). When individuals make a positive assessment of their satisfaction with life, they are likely to assess that their professional role is congruent with their criteria for a satisfying life (Amah, 2009). This life assessment is not the same as job satisfaction, which assesses enjoyment and satisfaction with the tasks, experiences, and activities involved in their job (Dormann & Zapf, 2001). When assessing life satisfaction, individuals will assess whether their professional role and other aspects of their life contribute positively or negatively to their life in general. For example, teachers may enjoy working with students and have high job satisfaction, but find that the hours of work required negatively impacts on their life, leading to lower life satisfaction. In a study of bank employees, Amah (2009) found that life satisfaction moderated the effect of job satisfaction on turnover intention. Whilst job satisfaction had a direct negative effect on turnover intention, employees with lower life satisfaction were more likely to indicate turnover intention even with high levels of job

satisfaction. Wright and Bonett (2007) found that both job satisfaction and well-being were negatively related to the voluntary attrition of managers in a large customer service organisation in the United States of America over a two-year period. Managers in their study who had both low well-being and low job satisfaction were most likely to leave the organisation voluntarily during the period of the study. Ghiselli et al. (2001) found similar results in a sample of hospitality managers, with job satisfaction and life satisfaction both negatively associated with short-term turnover intention within the next year, and long-term turnover intention, within the next five years.

Whilst job satisfaction is a domain-specific assessment of satisfaction with work, life satisfaction is a broader assessment of life in general (Schimmack et al., 2002). If individuals are experiencing higher life satisfaction and they perceive congruence with their job circumstances and requirements for a satisfying life, then they may be less likely to make significant changes in their employment. Conversely, if individuals are experiencing lower life satisfaction and they perceive incongruence with their employment, they may be more likely to make changes, regardless of their job satisfaction. If teaching engagement, job satisfaction, and life satisfaction influence teacher attrition, then understanding the predictors of these variables will assist in further understanding why teachers leave the profession.

***Summary***

There is evidence to suggest that job satisfaction positively predicts a teacher's intention to remain in the teaching profession (Dreer, 2021b; Madigan & Kim, 2021). Work engagement and life satisfaction have been shown to positively predict retention in a number of professions (Amah, 2009; Halbesleben & Wheeler, 2008), and in this research they are proposed as predictors of teachers intention to remain in the teaching profession. Understanding the predictors of teachers' work engagement, job satisfaction, and life satisfaction will provide additional information regarding these variables and consequent

turnover intention. In the section below, the Social Cognitive Career Theory (SCCT) is introduced and its utility as a framework for investigating the predictors of teachers' work engagement, job satisfaction, and life satisfaction is discussed.

## Social Cognitive Career Theory (SCCT)

The SCCT is a predominant theory in career self-management (McLennan et al., 2017). The SCCT was first introduced by Lent, Brown, and Hackett (1994) as a framework for understanding career behaviour, and now includes a number of different models for understanding career interests, career choice-making, vocational performance, career self-management, and job satisfaction and well-being (Lent & Brown, 2019). The SCCT well-being model was chosen for this research as it provides a framework for investigating the influence of personality and other dispositional traits, perceived organisational support, vocational outcome expectations, and teaching self-efficacy on work engagement, job satisfaction, and life satisfaction. In a 2018 meta-analysis conducted by Sheu and colleagues, the SCCT well-being model was shown to account for approximately 43% of the variance in job satisfaction and 28% of the variance in life satisfaction (Brown & Lent, 2019). The following sections of the literature review discuss the development of the SCCT models, followed by the SCCT well-being model being operationalised for this research, and the operationalised variables.

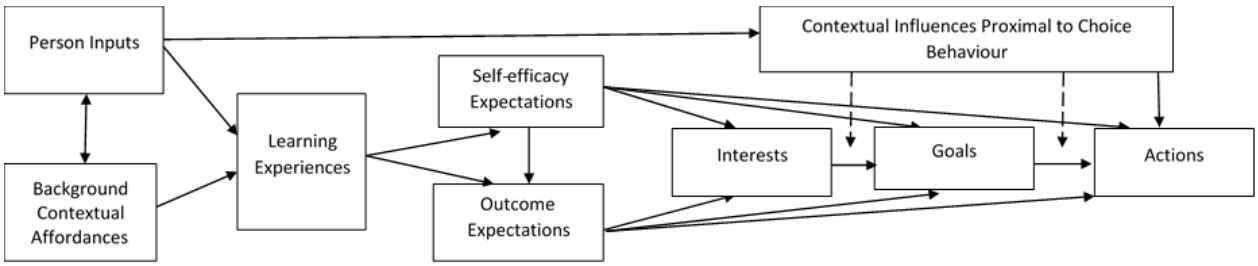
### *Development of the SCCT*

The SCCT models are informed by Bandura's social cognitive theory (SCT; Bandura, 1977, 1986) and Hackett and Betz's (1981) career self-efficacy theory (Ali et al., 2005). Bandura's SCT explains the causal relationship between self-efficacy and behaviours, thoughts, and physiological states (Bandura, 1977, 1986, 2001). Core to the SCCT model are the cognitive person variables self-efficacy, outcome expectations, and goals and goal-directed behaviour (Lent & Brown, 2008). The initial SCCT model proposed by Lent et al.

(1994) had a focus on self-efficacy, outcome expectations, and goal-directed behaviour in relation to career development, including career interests, goals, and actions (see Figure 2.1). According to the SCCT, person inputs such as personality traits plus background contextual affordances influence self-efficacy (i.e., belief about ability to perform a specific behaviour). Self-efficacy, in turn, influences outcome expectations (i.e., belief about likely outcomes of actions or specific behaviours) and goal-directed behaviours (i.e., intention to act to achieve a specific end state; Lent & Brown, 2019). Background contextual factors may include perceived social support, organisational support, and financial status (Chronister & McWhirter, 2003). In the teaching context, social supports could include support from other teachers, the school leadership, other colleagues, family, friends, and the wider community. Additional models of the SCCT have been developed to provide frameworks for understanding career interest, development, choice, and performance as well as job satisfaction and well-being (Brown & Lent, 2019; Lent & Brown, 2006, 2019; Lent et al., 2012).

**Figure 2.1**

*The Social Cognitive Career Theory*



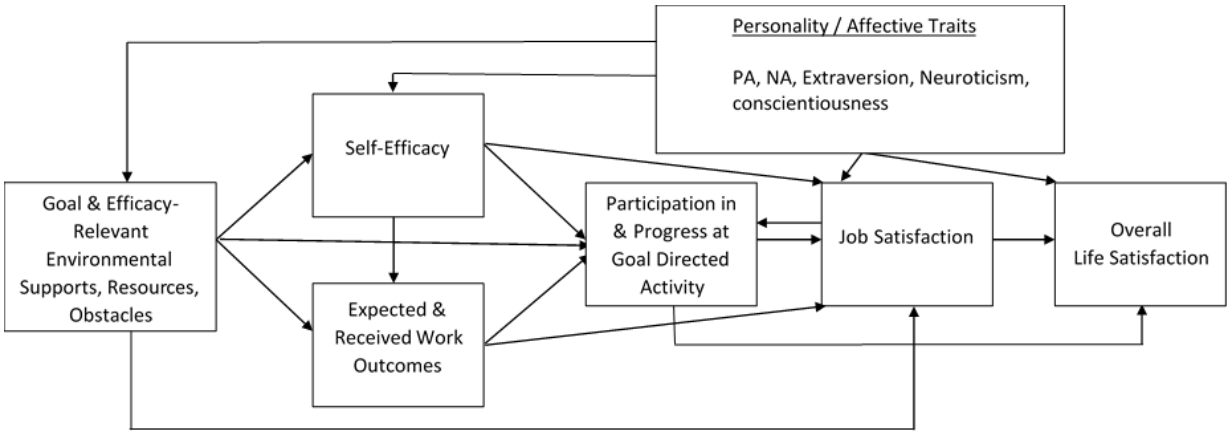

*Note.* Adapted from "Contextual supports and barriers to career choice: A social cognitive analysis," by R. W. Lent, S. D. Brown, and G. Hackett, 2000, *Journal of Counseling Psychology, 47*(1), p. 37. (https://doi.org/10.1037/0022-0167.47.1.36). Copyright 2000 by the American Psychological Association. Reprinted with permission.

### *The SCCT Well-Being Model*

The well-being model of the SCCT provides a theoretical framework by which to investigate the relationships among person inputs, contextual, social, and cognitive variables, and their influence on work engagement, job satisfaction, and life satisfaction (Brown & Lent, 2019; Lent & Brown, 2013; Lent et al., 2012), and is applicable to both educational and career contexts (Lent & Brown, 2006). The SCCT well-being model provides a framework for investigating work engagement, job satisfaction, and life satisfaction, which are hypothesised in this research to predict teacher turnover intention. The well-being model provides the greatest predictive value when the predictor and outcome variables are operationalised for the specific domain of interest (Lent & Brown, 2006). The SCCT well-being model adapted for the context of work holds that person inputs have a direct effect on goal and efficacy relevant supports, resources, and obstacles, and that these supports, resources, and obstacles influence self-efficacy and outcome expectations, which in turn influence work engagement, which influences job satisfaction, which influences life satisfaction (see Figure 2.2; Lent & Brown, 2008). The model provides a framework for investigating the psychological factors that influence teacher work engagement, job satisfaction, and well-being, and provides directional and inter-relational information about these variables. The well-being model includes person and environmental systems over which the individual has some control, to promote academic and work-based engagement and satisfaction, and overall life satisfaction (Lent & Brown, 2008; Lent et al., 2012). These variables are also suitable for targeted interventions, including professional development and structured learning opportunities. The SCCT well-being model therefore provides a testable framework by which to understand teachers' work engagement, job satisfaction, and life satisfaction, and consequent turnover intention.

**Figure 2.2**

*The Social Cognitive Career Theory Well-Being Model in the Context of Work*




*Note.* Adapted from "Social Cognitive Career Theory and subjective well-being in the context of work," by R. W. Lent, and S. D. Brown, 2008, *Journal of Career Assessment, 80(1)*, p. 10. (https://doi.org/10.1016/j.jvb.2011.08.009). Copyright 2008 by Sage. Reprinted with permission.

### *Applications of the SCCT Well-Being Model*

The SCCT has been operationalised and applied in a range of contexts. It has been used to investigate job satisfaction in the nursing profession (Chang & Edwards, 2015), predictors of work and life satisfaction in working adults of retirement age (Foley & Lytle, 2015), and academic satisfaction and life satisfaction in college students (Lent et al., 2012). SCCT models have also been used to investigate teachers' job satisfaction and satisfaction with life (e.g., Duffy & Lent, 2009; Lent et al., 2011). For instance, Duffy and Lent (2009) used the SCCT framework to investigate job satisfaction in teachers working in independent schools in North Carolina. Lent et al. (2011) tested the SCCT well-being model with Italian middle and high school teachers and found that the model explained 41% of the variance in job satisfaction and 24% of the variance in life satisfaction. The SCCT has also been

successfully utilised to investigate the role of teaching self-efficacy in Australian preservice teachers (McLennan et al., 2017).

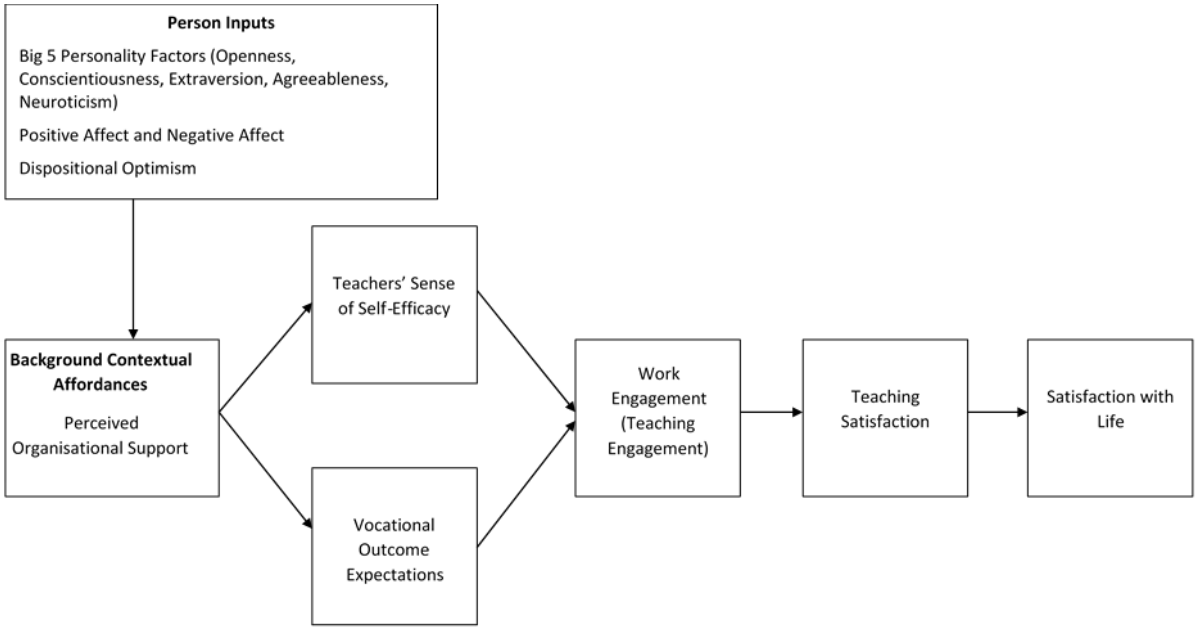
The SCCT well-being model provides a theorised order of inter-related constructs that can be operationalised for the specific domain under investigation and has been applied within the teaching domain with both preservice and in-service teachers (Brown & Lent, 2019; Duffy & Lent, 2009; Lent & Brown, 2019; McLennan et al., 2017). The following subsection outlines the SCCT well-being model as it was operationalised for this research, including the proposed order of influence of the operationalised variables.

### *The Operationalised SCCT Well-Being Model*

In this research, the SCCT well-being model has been operationalised for the teaching domain (see Figure 2.3). Individual variables are operationalised for the teaching context where relevant and appropriate, for example, self-efficacy is operationalised as teaching self-efficacy and goal and efficacy relevant supports, resources, and obstacles is operationalised as perceived organisational support. Perceived organisational support was chosen for this research to provide an indication of perceived support from the school or centre where the teacher is employed (Eisenberger et al., 1986), which has been found to influence teacher self-efficacy (Bogler & Nir, 2012), work engagment (Hakanen et al., 2006), and teaching satisfaction (Lent et al., 2011) in previous studies. This subsection provides an overview of the individual variables and their proposed inter-relationships with other variables in the operationalised model.

**Figure 2.3**

*The Social Cognitive Career Theory Well-Being Model Operationalised for the Teaching Profession*




### *Person Inputs*

Person inputs in the SCCT models refer to characteristics of the individual, such as physical attributes, gender, ethnicity, disability, health status, and dispositional traits (Lent & Brown, 2019; Lent et al., 1994, 2000). Dispositional traits are the person inputs of interest in this research, including personality traits, affective dispositions, and dispositional optimism. Personality traits are characteristic patterns of thoughts, feelings, and behaviours that are relatively stable over time and are useful in investigating individual differences and predicting behavioural trends (Costa Jr & McCrae, 2009; Funder, 2001). The Big Five factors of personality, which includes the personality traits openness, conscientiousness, extraversion, agreeableness, and neuroticism, is a dominant structure of personality (Donnellan et al., 2006; Judge et al., 2002; Judge & Ilies, 2002).

Measures of teachers' personality have been shown to predict work outcomes such as teacher effectiveness (Kim et al., 2019). Kim et al. (2019) found that personality domains were differentially related to teacher effectiveness in their meta-analysis of articles investigating the relationships between the five-factor model of personality (openness, conscientiousness, extraversion, agreeableness, and emotional stability) and teacher effectiveness and job burnout. Openness ($r$ = .10), conscientiousness ($r$ = .13), extraversion ($r$ = .17), and emotional stability ($r$ = .10) were all positively related to teacher effectiveness (Kim et al., 2019). There were non-significant relationships between the five-factor model personality traits and teacher burnout; however, this may have been due to the relatively small number of effect sizes (maximum of 6) in the meta-analysis (Kim et al., 2019).

In this research project, openness, conscientiousness, extraversion, agreeableness, neuroticism, positive affect, negative affect, and dispositional optimism were included as person inputs in the models investigating the predictors of work engagement, job satisfaction, and life satisfaction. These person inputs were investigated for their individual influence on the dependent variables in this research; however, combinations of personality traits, or personality profiles, have also been shown to have predictive value for self-efficacy, work engagement, and job satisfaction (Perera, Granziera, et al., 2018).

**Openness.** An individual with high openness is likely to be open to new ideas and experiences, to enjoy a variety of experiences, and to be tolerant of ambiguity (McCrae & Costa Jr, 1997). By contrast, individuals with low openness are likely to avoid new experiences, prefer concrete or practical experiences, and may seem rigid in their ways (McCrae & Costa Jr, 1997). A teacher with higher openness is more likely to try new approaches in the classroom and use a wider range of teaching approaches as they are more open to new ideas and experiences. binti Rusbadrol et al. (2015), in their study of Malaysian high school teachers, found that openness was positively correlated ($r$ = .199) with job

performance. Openness was also a significant predictor (β = .283), in a regression model of job performance, with openness, conscientiousness, extraversion, agreeableness, and neuroticism as predictor variables. These results suggested that openness was accounting for unique variance in job performance when other personality traits were held constant.

**Conscientiousness.** Characteristics and behaviours of a conscientious person may include dutifulness, deliberation, self-discipline, and being purposeful, punctual, reliable, orderly, assertive, and rule conscious (DeNeve & Cooper, 1998; Judge & Ilies, 2002; McCrae & Costa Jr, 1989). An individual with low levels of conscientiousness may tend to be disorganised, negligent, and careless (Organ & Lingl, 1995). A teacher with higher conscientiousness is more likely to adhere to school-based rules and policies, be punctual at work, and have prepared teaching activities in advance. In their meta-analysis of the relationships between personality and well-being factors, DeNeve and Cooper (1998) found that conscientiousness had a positive correlation with positive affect ($r$ = .14), and a negative correlation with negative affect ($r$ = -.10).

**Extraversion.** Individuals with high extraversion are generally sociable, talkative, gregarious, and dominant, and may be excitement seeking (DeNeve & Cooper, 1998; Judge & Ilies, 2002; Judge et al., 1997). These characteristics are likely to lead to a greater number, and higher perceived quality, of interpersonal relationships. Individuals with higher extraversion are also more likely to choose situations that encourage positive affect (Judge et al., 2002). Individuals with lower levels of extraversion are generally less sociable and talkative, and may avoid social interactions (binti Rusbadrol et al., 2015). In their study of teachers in Spain, Cano-García et al. (2005) found that teachers with low levels of extraversion plus high levels of neuroticism were most likely to experience higher levels of burnout. DeNeve and Cooper (1998) found that extraversion had a positive correlation with

positive affect ($r$ = .20), and a negative correlation with negative affect ($r$ = -.07), in their meta-analysis of the relationships between personality and well-being factors.

**Agreeableness.** Agreeable individuals tend to be kind, display warmth towards others, be cooperative, courteous, and good-natured, and are generally more likeable (Costa Jr et al., 1988; Graziano & Eisenberg, 1997; Jensen-Campbell & Graziano, 2001; Judge et al., 2002; McCrae & Costa Jr, 1989; Organ & Lingl, 1995). By contrast, individuals with low levels of agreeableness tend to display a distrustful, hostile, uncooperative, callous, or critical attitude towards others, and may be argumentative or uncooperative (Cano-García et al., 2005; Costa Jr & McCrae, 1988; Costa Jr et al., 1988; McCrae & Costa Jr, 1989; Organ & Lingl, 1995). Agreeable individuals tend to get along with others and have more positive social interactions and relationships (Alarcon et al., 2009; Jensen-Campbell & Graziano, 2001). Jensen-Campbell and Graziano (2001) found that adolescents with higher levels of agreeableness chose compromise and constructive conflict strategies and were rated as having higher levels of interpersonal adjustment compared to their less agreeable peers. Teachers with high agreeableness will tend to have more positive relationships with their school colleagues, students, and parents. Cano-García et al. (2005) found that teachers with higher levels of agreeableness reported greater personal accomplishments.

**Neuroticism.** Neurotic individuals are often described as having poor emotional adjustment, being stressed, anxious, nervous, worried, and depressed (Judge & Ilies, 2002; Judge et al., 1997; Scheier et al., 1994). Individuals higher on neuroticism are more likely to choose situations that encourage negative affect and are more likely to experience negative life events (Judge et al., 1997). In their meta-analysis of the relationships between personality and well-being factors, DeNeve and Cooper (1998) found that neuroticism had a negative correlation with positive affect ($r$ = -.14), and a positive correlation with negative affect ($r$ = .23).

Higher levels of neuroticism have also been associated with lower job performance in teachers. In their study of 489 high school teachers in Malaysian public schools, binti Rusbadrol et al. (2015) found that neuroticism was negatively correlated with job performance ($r$ = -.246). They also found that neuroticism was a significant negative predictor of job performance (β = -.335) in a regression model of job performance, with openness, conscientiousness, extraversion, agreeableness, and neuroticism as predictor variables. These results suggested that neuroticism accounts for unique variance in teachers' job performance.

**Optimism.** Optimism is a cognitive dispositional trait (Carver & Scheier, 2014) characterised by holding positive outcome expectancies (Carver et al., 2010, p. 879). When all other factors are equivalent, an individual with higher levels of optimism will expect more positive outcomes (Carver & Scheier, 2014). Individuals with higher optimism also tend to report fewer feelings of distress and less negative affect (Carver et al., 2010). Having general expectations of positive outcomes is likely to lead to greater engagement and persistence with activities (Scheier & Carver, 1992). Individuals with higher levels of dispositional optimism tend to have better health outcomes, live longer, experience fewer depression symptoms and less distress, utilise more proactive coping strategies, and have wider social networks (Carver & Scheier, 2014; Lee et al., 2019). There are potential negative outcomes associated with higher optimism. For example, it is possible that more optimistic individuals may be more prone to problematic gambling, as their expectations of positive outcomes may lead to gambling persistence (Carver & Scheier, 2014). There may also be situations and work roles where higher levels of optimism are not beneficial, such as financial and budgeting tasks, where a more pessimistic approach may be desirable.

**Affect.** Positive affect and negative affect are emotional dispositions of feeling (Thoresen et al., 2003; Watson & Slack, 1993). Whilst there is some discussion in the

literature as to whether positive and negative affect are two distinct states, or represent the extremes of a single dimension (Thoresen et al., 2003), they are considered as two separate variables for the purpose of this research. Positive affect includes pleasant emotions such as joy, happiness, pride, and affection, whereas negative affect includes unpleasant emotions such as sadness, envy, and anger (Diener, et al., 1999). Individuals with higher dispositional positive affect tend to experience positive emotions more frequently than individuals with lower positive affect; similarly, individuals with higher negative affect tend to experience negative, or unpleasant, emotions more frequently than individuals with lower negative affect (Watson & Slack, 1993). Individuals with higher positive affect tend to display enthusiasm and engage in activities that promote positive affect comparted to individuals with lower positive affect. Similarly, individuals with higher negative affect tend to experience greater dissatisfaction and distress compared to individuals with lower negative affect (Watson & Slack, 1993). Positive affect and negative affect have been found to be correlated with other dispositional traits, such as conscientiousness and neuroticism. In their meta-analysis of the relationships between personality factors, DeNeve and Cooper (1998) found that positive affect was positively correlated with conscientiousness ($r$ = .14), and negatively correlated with neuroticism ($r$ = -.14). They also found that negative affect was negatively correlated with conscientiousness ($r$ = -.10), and positively correlated with neuroticism ($r$ = .23).

**Personality Traits and Perceived Organisational Support.** The SCCT model posits a direct path between person inputs and perceived organisational support. Dormann and Zapf (2001) suggested that personality traits lead to differential support within the work environment. Individuals higher on extraversion and agreeableness may be more likeable and therefore receive more peer support, whereas individuals with higher neuroticism and negative affect may be less likeable and receive less peer support. Individuals with higher levels of optimism tend to have higher levels of perceived support compared to individuals

with lower levels of optimism with the same apparent social resources (Brissette et al., 2002). The optimists are also likely to receive more actual support from their social networks (Brissette et al., 2002; Vollmann et al., 2011). Expecting positive outcomes may lead optimists to engage more with their social networks, resulting in greater support and higher perceptions of support.

**Personality Traits and Self-Efficacy.** According to the SCCT model, person inputs directly influence self-efficacy (Lent & Brown, 2008). Self-efficacy involves a self-appraisal and judgment, which is a cognitive process involving selecting, weighing, and integrating information perceived as relevant (Bandura, 1986). How much weighting a particular piece of information (e.g., past performance on the same task) is given will depend on a number of factors, including task difficulty and current affect (Bandura, 1986). Individuals with higher neuroticism may be more likely to experience self-doubt, which may lead to reduced self-efficacy appraisals (Judge et al., 1997). Judge and Ilies (2002) found that extraversion predicted more positive self-efficacy appraisals. Individuals with higher levels of conscientiousness may have higher self-efficacy levels as their self-efficacy appraisal is likely to take into account their greater level of deliberation and purposefulness in their task planning (Caprara et al., 2011). Perera, Granziera, et al. (2018) investigated the interactions of personality traits and found four distinct personality profiles in a sample of Australian teachers: rigid, ordinary, well-adjusted, and excitable. These profiles differentially related to teaching self-efficacy for student engagement, instructional strategies, and classroom management. Teachers with a well-adjusted profile or an excitable profile tended to have higher levels of classroom management efficacy, and teachers with a well-adjusted profile tended to have greater efficacy for student engagement and instructional strategies (Perera, Granziera, et al., 2018).

Individuals with higher levels of optimism are likely to have higher levels of self-efficacy, as they tend to make more positive assessments of the likelihood of successfully completing a task and achieving outcomes (Munyon et al., 2010). When assessing their ability to complete a task successfully, optimists have higher expectations of success, leading to greater self-efficacy for completing the task. Scheier et al. (1994) found that optimism had a positive relationship with self-efficacy ($r$ = .54).

**Personality Traits and Work Engagement.** Although the SCCT model does not posit a direct path between personality and work engagement there are theoretical and empirical reasons to suggest that a direct path exists (Langelaan et al., 2006). Work engagement may be reduced in neurotic individuals owing to increased levels of stress, anxiousness, nervousness, and worry, leading to increased exhaustion and decreased work engagement (Langelaan et al., 2006). The characteristics common to people with higher conscientiousness, including being purposeful, punctual, reliable, orderly, and rule conscious (Judge & Ilies, 2002), are also likely to lead to greater work engagement. Kim et al. (2009) found that conscientiousness had a positive relationship with work engagement, and that neuroticism showed a negative relationship with work engagement in retail employees in the United States of America. In their meta-analysis, Kim et al. (2019) found that conscientiousness, extraversion, and emotional stability had a negative relationship with teacher burnout.

Individuals with higher levels of optimism are more likely to expect positive work-related outcomes and to have positive assessments of their work activities, leading to an increased engagement in, and persistence with, work-related activities (Carver & Scheier, 2014; Munyon et al., 2010). Perera, Granziera, et al. (2018) in their study of the personality profiles of Australian teachers, found that teachers with well-adjusted or excitable profiles tended to have greater engagement with colleagues, as well as greater cognitive and

emotional engagement, and that teachers with well-adjusted profiles tended to have higher levels of engagement with students.

**Personality Traits and Job Satisfaction.** The SCCT model posits a direct path between personality and job satisfaction (Lent & Brown, 2008). Positive affect, negative affect, extraversion, neuroticism, conscientiousness, and optimism have all been shown to predict job satisfaction (e.g., Judge et al., 2002; Judge et al., 1997; Schimmack et al., 2002). In a meta-analysis of the relationship between personality and job satisfaction, Judge et al. (2002) found that job satisfaction was negatively correlated with neuroticism ($r$ = -.24), and positively correlated with conscientiousness ($r$ = .20) and extraversion ($r$ = .19). Thoresen et al. (2003), in a meta-analysis of 79 studies, found that job satisfaction was negatively correlated with neuroticism ($r$ = -.28) and negative affect ($r$ = -.34), and positively correlated with positive affect ($r$ = .34), and extraversion ($r$ = .22).

Job satisfaction is likely to be lower for people with higher neuroticism as they are more likely to choose work situations that foster negative affect (Connolly & Viswesvaran, 2000; Judge et al., 2002). The combination of experiencing more negative work and life events and generally experiencing higher levels of anxiousness, which is associated with higher levels of neuroticism, is likely to lead to lower job and life satisfaction evaluations. By contrast, individuals with higher levels of extraversion may find relationships with their work colleagues more satisfying, leading to a more positive appraisal of their work experiences and greater job satisfaction (Judge et al., 2002). A conscientious individual is more likely to set more ambitious goals, engage in goal-directed behaviour, and achieve work goals (Gellatly, 1996), which may lead to increased work performance and feelings of accomplishment that subsequently lead to greater job satisfaction (Judge et al., 2002). Perera, Granziera, et al. (2018), in their study of the personality profiles of Australian teachers, found that teachers with well-adjusted profiles generally had the highest levels of job satisfaction, and that rigid

teachers had higher levels of job satisfaction compared to teachers with excitable and ordinary profiles.

A number of studies provide evidence for the relationship between dispositional affect and job satisfaction (Lent et al., 2011). Connolly and Viswesvaran (2000), in their meta-analysis of 27 studies investigating dispositional affect and job satisfaction, found significant relationships between job satisfaction and both positive affect ($r$ = .49) and negative affect ($r$ = -.33). In a study of 366 teachers in North Carolina in the United States of America, Duffy and Lent (2009) found that positive affect was positively correlated with job satisfaction ($r$ = .55–.57). In a study of 457 teachers in Germany, Dreer (2021b) found that positive emotions had the greatest predictive value for job satisfaction in a regression analysis that included positive emotions, achievement, relationships, engagement, and meaning. Lent et al. (2011) in their study of Italian teachers, found that positive affect was positively related ($r$ = .48) with job satisfaction.

In three separate studies, Munyon et al. (2010) found that optimism had a direct effect on job satisfaction and an interactive effect with organisational citizenship on job satisfaction in undergraduate business students, human resource managers, and employees in a financial organisation. In their international study of 47 teachers who teach English to speakers of other languages (ESOL), Sturm et al. (2012) found that optimism had a positive association with teachers' level of satisfaction with their teaching performance ($r$ = .47). Individuals with higher levels of optimism tend to be well-liked and to develop positive relationships, which may lead to a more positive work experience and therefore greater job satisfaction (Munyon et al., 2010).

**Personality Traits and Life Satisfaction.** According to the SCCT well-being model, person inputs directly influence life satisfaction (Lent & Brown, 2008). In a study of 461 undergraduate students, Lounsbury et al. (2005) found that optimism ($r$ = .54),

conscientiousness (*r* = .22), extraversion (*r* = .38), and agreeableness (*r* = .26) were all significantly correlated with life satisfaction. Conscientious individuals are more likely to engage in goal-directed behaviour and to achieve life goals, which may lead to greater overall satisfaction with life (Gellatly, 1996). They may also set more ambitious goals, which may lead to the achievement of more valued life goals (Gellatly, 1996). In their meta-analysis of the relationships between personality and well-being factors, DeNeve and Cooper (1998) found that conscientiousness (*r* = .22) and extraversion (*r* = .17) had positive correlations with life satisfaction, and that neuroticism had a negative correlation with life satisfaction (*r* = -.24).

An individual with higher optimism is likely to see an event in a more positive way (Carver et al., 2010; Scheier et al., 1994). This tendency to see things in a more positive way is likely to lead to a more positive evaluation of life satisfaction. Optimists are also more likeable than pessimists (Carver et al., 2010). This increased likeability may lead to greater satisfaction with relationships, increased positive affect, and overall life satisfaction (Carver & Scheier, 2014; Carver et al., 2010). Individuals who experience more frequent positive affect and less frequent negative affect are likely to have a more positive appraisal of their overall life satisfaction. Lent et al. (2011), in their study of Italian teachers, found a positive relationship (*r* = .36) between life satisfaction and positive affect.

***Perceived Organisational Support***

Perceived organisational support includes individuals' perception of their organisations' commitment to, appreciation of, and concern for the individual as an employee, as well as the perception of the availability of information, physical, and other resources that individuals may require in their work role (Rhoades & Eisenberger, 2002). In the teaching profession, perceived organisational support includes the perception of support from the school or the education centre where the teacher is employed, and the broader

education department, system, or employer. A teacher's perceived support from the school administration, support from colleagues, and other general working conditions all contribute to that teacher's perception of organisational support (Hughes, 2012). Perceived support from the school or education centre can be influenced by factors such as the presence of a mentoring program for teachers, whether there is a collaborative teaching environment, and opportunities for advancement (Borman & Dowling, 2008). Mentoring programs may have the dual perceived benefits of support from the school and support from colleagues. Ongoing induction for new teachers is another strategy that can be effective in developing perceptions of organisational support (Brill & McCartney, 2008). Geiger and Pivovarova (2018) found that teachers in Arizona, United States of America, commented on mentoring, professional development opportunities, school leadership, and the provision of facilities and resources when asked about their school, suggesting that these aspects of perceived organisational support were of particular consequence to the teachers participating in the study. The teachers commented on both positive and negative school support experiences, indicating that both perceived supports and perceived deficits were of importance to them (Geiger & Pivovarova, 2018). Brown and Wynn (2009) interviewed school principals who had lower than average teacher attrition at their schools, enquiring about the support provided to new and existing teachers. The principals all highlighted aspects of organisational support, such as the school administration being approachable and supportive, straightforward processes for accessing resources for teaching, support to attend professional development, having a voice in school decision-making, and an environment that fostered and supported collaboration between teachers (Brown & Wynn, 2009).

Perceived lack of organisational support may include the absence of supportive mechanisms or the inclusion of supportive mechanisms that the teacher perceives as ineffectual. For example, Brill and McCartney (2008) suggested that the presence of a

mentoring program is not enough; it needs also to be perceived to be supportive and respectful of a teacher's existing professionalism to be effective. Many teachers in Australia, particularly beginning teachers, are employed on short-term or casual contracts (Plunkett & Dyson, 2011). Teachers on contracts and casual appointments may perceive that their employer is not making a commitment to them, nor values their contribution, leading to lower levels of perceived organisational support.

**Perceived Organisational Support and Self-Efficacy.** According to the SCCT well-being model, perceived organisational support directly influences self-efficacy (Lent & Brown, 2008). When individuals are receiving positive messages of support and encouragement in their workplace and are receiving messages endorsing their skills and abilities, they are more likely to make positive appraisals regarding their abilities and to have higher self-efficacy (Lent et al., 2012). Additionally, when teachers perceive that they have all the required resources to complete a work-based activity, they may be more likely to believe that they are able to complete the task successfully. Bogler and Nir (2012) in their survey of 2,565 elementary school teachers in Israel, found that perceived organisational support had a positive association with self-efficacy ($r$ = .55). Lent et al. (2011), in their study of Italian teachers also found a positive relationship ($r$ = .25) between perceived organisational support and self-efficacy.

**Perceived Organisational Support and Outcome Expectations.** The SCCT well-being model posits that perceived organisational support directly influences outcome expectations (Lent & Brown, 2008). If employees believe that their organisation values their contributions and provides the resources required to undertake their work role, then they may be more likely to expect positive outcomes from their work actions. For example, where individuals believe that their supervisors value their contributions, they may believe that they are more likely to receive positive outcomes such as recognition, promotion, or appreciation.

**Perceived Organisational Support and Work Engagement.** According to the SCCT well-being model, perceived organisational support directly influences work engagement (Lent & Brown, 2008). When individuals believe that they have the support of their organisation, they are more likely to engage with their work goals. This increased engagement with work goals may occur because they believe that they have the support and resources required to undertake their work and to try different approaches when required. Teachers who believe that their school genuinely supports them may also be less fearful of the consequence of unsuccessful attempts when using new techniques, leading to more willingness to engage with innovative teaching practices. Hakanen et al. (2006) found that perceived support in Finnish schools was positively correlated with teachers' work engagement ($r$ = .20–.24). Tadić et al. (2015) found that Croatian teachers had increased work engagement when they felt supported by their colleagues and supervisors ($r$ = *.50*).

**Perceived Organisational Support and Job Satisfaction.** The SCCT well-being model posits that perceived organisational support directly influences job satisfaction (Lent & Brown, 2008). Higher levels of perceived support are likely to lead to greater feelings of satisfaction in teaching roles. The belief in being supported by colleagues and by the school may in itself be a pleasurable experience and lead to positive work-related affectivity. Lent et al. (2011) found that perceived organisational support was positively associated with job satisfaction ($r$ = .50) in their study of 235 middle and high school teachers in Italy. Perceived organisational support was also positively associated with job satisfaction ($r$ = .79) in a study of 85 special education teachers in Pakistan (Bibi et al., 2019). Similarly, in a study of 366 teachers in North Carolina in the United States of America, Duffy and Lent (2009) found that perceived organisational support was positively correlated with teaching satisfaction ($r$ = .56).

### *Self-Efficacy*

Self-efficacy is a core construct in the SCCT models (Brown & Lent, 2019; Lent & Brown, 2019). Self-efficacy refers to individuals' beliefs regarding their ability to control their own actions and behaviours and their ability to undertake the necessary behaviours to achieve their goals (Bandura, 1986; Brown & Lent, 2019). A domain-specific appraisal is made in advance of the activity as to whether the required skills or abilities fall within the individual's perceived capacity or limit (Bandura, 1986, 2005). Work-related self-efficacy refers to individuals' belief that they are able to perform the behaviours required in their work context (Duffy & Lent, 2009; Multon et al., 1991). In the context of this study, self-efficacy refers to self-efficacy in the work domain, specifically teaching self-efficacy. Teaching self-efficacy includes teachers' beliefs regarding their ability to engage students, provide instruction, and manage classroom behaviours (Tschannen-Moran & Hoy, 2001). The SCCT well-being model holds that self-efficacy directly influences outcome expectations, work engagement, and job satisfaction (Lent & Brown, 2008).

**Self-Efficacy and Vocational Outcome Expectations.** The SCCT well-being model posits a direct path between self-efficacy and outcome expectations (Lent & Brown, 2008). Individuals with high self-efficacy are likely to attempt challenging, but achievable goals as they assess that they have the skills to maximise their success and to achieve positive outcomes (Wang et al., 2015). Individuals with lower self-efficacy may perceive that they do not have the necessary skills and abilities to perform the tasks required, leading to lower expectations of positive outcomes. McLennan et al. (2017) found similar results in their study of 402 Australian preservice teachers, with teaching self-efficacy having a direct relationship with career optimism.

**Self-Efficacy and Work Engagement.** According to the SCCT well-being model, self-efficacy directly influences work engagement (Lent & Brown, 2008). Teachers with

higher teaching self-efficacy tend to have better developed planning and to be more organised (Tschannen-Moran & Hoy, 2001), and are more likely to display increased commitment to, and engagement with, teaching-related tasks (Klassen & Tze, 2014). Where individuals have a high belief that they are able to perform a specific job-related task, they are more likely to attempt the behaviour and to reattempt the behaviour if the initial attempt is not successful. Individuals with higher self-efficacy may also have more confidence to use a variety of strategies in their work (Lent & Brown, 2008). Self-efficacy relates to whether individuals believe that they can successfully complete the task, and in turn influences whether individuals will undertake an activity, and how much effort they are willing to exert in completing the activity, as well as their level of persistence when they face obstacles (Bandura, 2005; Brown & Lent, 2019).

In a longitudinal study of Croatian teachers, across three time points, Kim and Burić (2020) found that teaching self-efficacy at time 1 predicted disengagement at time 2, and that exhaustion and disengagement predicted teaching self-efficacy at subsequent time points. These findings suggested that exhaustion and disengagement influence future teaching self-efficacy, plus a possible reciprocal relationship between the variables. The temporal relationships between variables were invariant across gender, teaching experience, and year level of instruction (Kim & Burić, 2020).

**Self-Efficacy and Job Satisfaction.** The SCCT well-being model posits a direct relationship between self-efficacy and job satisfaction (Lent & Brown, 2008). Having high self-efficacy is likely to be a positive experience, which when related to work tasks and behaviours may lead to positive experiences at work and to greater job satisfaction. Low self-efficacy may lead to performance anxiety and increased stress if individuals are required to attempt a task that they do not believe that they can successfully complete. Failure at a work task may lead to an increase in anxiety and distress and to decreased job satisfaction. Caprara

et al. (2003) found that teaching self-efficacy was positively correlated with job satisfaction ($r$ = .56) in a sample of 2,688 teachers in Italian junior high schools. In a study of 366 teachers in North Carolina in the United States of America, Duffy and Lent (2009) found a positive correlation between teacher self-efficacy and teaching satisfaction ($r$ = .41). Lent et al. (2011) found a similar positive relationship between self-efficacy and job satisfaction ($r$ = .37) in their study of Italian teachers. A direct relationship between teaching self-efficacy and job satisfaction has also been found in Canadian teachers (Klassen & Chiu, 2010; Wang et al., 2015). Wang et al. (2015), in their study of Canadian teachers, found that higher teaching self-efficacy for student engagement ($\beta$ = .27, $p$ < .001) and classroom management ($\beta$ = .18, $p$ = .003) predicted greater job satisfaction. In their review of the research literature regarding teacher self-efficacy, Zee and Koomen (2016) found that preservice and in-service teachers' teaching self-efficacy was negatively associated with teacher burnout ($r$ = -.17–-.63), and positively associated with job satisfaction ($r$ = .10–.86). Zee and Koomen (2016) found that the majority of the research articles reviewed had investigated the role of self-efficacy in factors reducing teachers' job satisfaction or well-being, such as teacher burnout and recommended further research into the inter-relationships between teacher self-efficacy and factors that promote teacher well-being.

### *Vocational Outcome Expectations*

Outcome expectations are individuals' beliefs about the likely result of their behaviours or actions (Brown & Lent, 2019; Fouad & Guillen, 2006; Lent & Brown, 1996). Outcome expectations is not an assessment of whether individuals believe that they can perform a behaviour, but rather what the outcomes of a particular behaviour are likely to be (Fouad & Guillen, 2006). Outcomes can include physical outcomes (such as pain or pleasure), social outcomes (such as recognition or disapproval from peers), or self-evaluations (such as "I am a good/bad person"; Bandura, 1986; Fouad & Guillen, 2006).

Vocational outcome expectations are domain-specific expectancies regarding career outcomes (McLennan et al., 2017), and may include expectations of recognition, promotion, or other forms of career advancement.

**Vocational Outcome Expectations and Work Engagement.** The SCCT well-being model holds that there is a direct path between vocational outcome expectations and work engagement (Lent & Brown, 2008). When individuals expect a positive outcome from completing an activity, they are more likely to engage, and persist, with the activity and to expend effort on the task (Brown & Lent, 2019). If individuals' outcome expectations are low, indicating that they do not expect a positive outcome, then they are less likely to expend effort on the activity. For example, teachers employed on a short-term contract who believe that, regardless of their teaching effort and commitment, they are unlikely to be offered continuing employment may demonstrate less teaching engagement compared to teachers who believe that they may be offered a permanent position.

**Vocational Outcome Expectations and Job Satisfaction.** The SCCT well-being model holds that there is a direct path between outcome expectations and job satisfaction (Lent & Brown, 2008). When individuals believe that their work-related outcomes are likely to be positive, they are likely to experience positive work-related affect, which leads to greater job satisfaction. Individuals may also be more likely to have higher teaching satisfaction when they have positive expectations of their teaching career.

### *Work Engagement*

Work engagement can be characterised as being absorbed by one's work, being dedicated and strongly involved in work, and having vigour, or a willingness to invest effort or energy in one's work (Bakker & Bal, 2010; Kim et al., 2009; Schaufeli et al., 2006). In addition to these physical, cognitive, and affective aspects of work engagement, Klassen et al. (2013) highlighted the importance of social engagement in teachers' work engagement. They

argued that social engagement is a key component of work engagement for teachers, as teaching is a social activity, involving long-term relationships with their students and colleagues. Engaged teachers voluntarily exert effort, demonstrate social engagement with their students and colleagues, and invest emotional energy (Klassen et al., 2013; Perera, Vosicka, et al., 2018). Work engagement has been positively associated with a number of teaching outputs. For example, Bakker and Bal (2010) found that work engagement was positively related to the work performance of beginning teachers in the Netherlands.

Perera, Vosicka, et al. (2018), in their study of Australian teachers, found that primary school teachers had higher levels of both social engagement with students and of general engagement compared to high school teachers. They found no difference between primary and secondary school teachers' social engagement with colleagues, cognitive-physical engagement, or emotional engagement. The higher levels of primary school teachers' social engagement with students may be partially due to the greater time that primary school teachers spend with their students compared to secondary teachers (Perera, Vosicka, et al., 2018). The results of their study suggested that teachers' work engagement comprises of a general work engagement dimension plus specific work engagement dimensions, such as social engagement, emotional engagement, and cognitive-physical engagement (Perera, Vosicka, et al., 2018).

Whilst there is some discussion in the literature as to whether work engagement and burnout are two distinct, but related, states, or whether they represent the extremes of a single dimension (Bakker et al., 2014), overall work engagement was the measured variable in this research. Burnout is characterised by emotional exhaustion, depersonalisation or cynicism, and lack of accomplishment (González-Romá et al., 2006; Yorulmaz et al., 2017). González-Romá et al. (2006), in their study of employees from three separate companies, found that exhaustion and vigour are conceptual opposites that contribute to a single "energy"

dimension. They also found that dedication and cynicism were conceptual opposites contributing to an "identification" dimension. Burnout has been associated with decreased work performance and increased absenteeism in a number of studies (Bakker et al., 2014). Saloviita and Pakarinen (2021), in their study of 4,567 Finnish primary school teachers, found that lower grade teachers tended to have lower burnout levels compared to their colleagues in upper year levels. Saloviita and Pakarinen (2021) also found that older teachers experienced less overall burnout and less emotional exhaustion than their younger colleagues, and that male teachers experienced higher levels of overall burnout, depersonalisation, and lack of accomplishment. In their study of Australian teachers, Rajendran et al. (2020) found that emotional exhaustion was positively correlated with intention to leave the profession (r = .42–.52). Madigan and Kim (2021), in their meta-analysis of 11 studies investigating the relationship between burnout and turnover intention, found that depersonalisation, lack of accomplishment, and exhaustion were predictors of teachers' intention to leave the profession.

**Work Engagement and Job Satisfaction.** The SCCT well-being model holds that there is a direct path between work engagement and job satisfaction (Lent & Brown, 2008). It is likely that the characteristics of increased work engagement, such as being dedicated and strongly involved in one's work and being willing to invest effort or energy into work activities (Schaufeli et al., 2006), will lead to increased achievement and success at work, which is likely to lead to subsequent positive feelings about their work and to greater job satisfaction. Teachers who engage with their students and colleagues are also more likely to develop positive relationships, which is likely to lead to more positive appraisals of their work experiences. Perera, Vosicka, et al. (2018) found that global work engagement, social engagement with colleagues, social engagement with students, and emotional engagement differentially predicted the job satisfaction of Australian teachers. General work engagement

positively predicted job satisfaction, and social engagement with colleagues and emotional engagement positively predicted job satisfaction above and beyond the influence of general work engagement. However, social engagement with students negatively predicted job satisfaction above and beyond the influence of general work engagement. The general and specific work engagement dimensions accounted for 55% of the variance in teachers' job satisfaction (Perera, Vosicka, et al., 2018). Yorulmaz et al. (2017), in their meta-analysis of studies published between 2005 and 2016, found negative correlations between exhaustion and job satisfaction ($r$ = -.41), lack of achievement and job satisfaction ($r$ = -.30), and depersonalisation and job satisfaction ($r$ = -.18).

**Work Engagement and Life Satisfaction**. The SCCT well-being model holds that there is a direct path between work engagement and life satisfaction (Lent & Brown, 2008). Being energised by, and absorbed in, one's work and having greater social engagement may lead to more satisfying appraisals of overall life experiences. Teachers with higher work engagement are more likely to achieve their teaching goals, which is likely to lead to a positive life satisfaction appraisal. In a longitudinal study of Finnish dentists, Hakanen and Schaufeli (2012) found that work engagement was a positive predictor of life satisfaction.

### *Job Satisfaction*

Job satisfaction is a domain-specific appraisal of satisfaction in the work domain (Lent et al., 2011). Job satisfaction can be described as the extent of individuals' overall work-related affectivity, or emotional state, resulting from an appraisal or evaluation of their work experiences (Dormann & Zapf, 2001; Lent & Brown, 2008; Lent et al., 2011; Schimmack et al., 2002). Individuals' appraisal of the factors that they consider salient to their work role or work experience informs their level of job satisfaction, with pleasurable and positive appraisals indicating greater job satisfaction.

**Job Satisfaction and Life Satisfaction.** The SCCT well-being model holds that there is a direct path between job satisfaction and life satisfaction (Lent & Brown, 2008). If individuals are satisfied with their work, which is domain-specific, they are more likely to be satisfied with their life in general (Brown & Lent, 2016; Lent et al., 2011). Satisfaction in relevant or salient specific life domains - for example, marital satisfaction of a married person, or the job satisfaction of a working person - will influence the overall evaluation of life satisfaction (Schimmack et al., 2002). If teachers have low job satisfaction and are unhappy with their teaching role, this dissatisfaction in a significant part of their life experience is likely to impact negatively on their appraisal of their overall life experience. Lent et al. (2011), in their study of Italian teachers, found that job satisfaction was positively related ($r$ = .46) to life satisfaction.

### *Life Satisfaction*

Life satisfaction refers to a cognitive appraisal of life quality in line with the individual's subjective judgement (Diener, Emmons, Larsen, & Griffin, 1985; Schimmack, Diener, & Oishi, 2002), and is a global or overall appraisal of satisfaction (Lent et al., 2005). The appraisal involves comparing the current life experience with individuals' own judgements of what their life experience should be (Diener et al., 1985). Whilst life satisfaction has been described as being relatively stable over time, cognitive, behavioural, and contextual variables have been shown to influence life satisfaction (Lent et al., 2005). Domain-specific appraisals of satisfaction (e.g., job satisfaction, academic satisfaction, and social satisfaction) are positively related to global life satisfaction (Lent et al., 2011; Lent et al., 2005), and have been shown to have an additive influence on life satisfaction (Lent et al., 2005). The current research project was situated within the work domain of the teaching profession, and investigated the influence of teachers' domain-specific job satisfaction on life satisfaction.

### *Summary*

The SCCT well-being model provides a framework for investigating the predictors of work engagement, job satisfaction, life satisfaction, and subsequent turnover intention. Personality traits, positive and negative affect, and dispositional optimism were included as person inputs in the current research. As there are conflicting results in the literature regarding the predictive relationships of person inputs in relation to work engagement, job satisfaction, and life satisfaction (binti Rusbadrol et al., 2015), all person inputs (i.e., openness, conscientiousness, extraversion, agreeableness, neuroticism, positive affect, negative affect, and dispositional optimism) were included in the analyses where there was a statistically significant correlation between the person input and the dependent variable. The SCCT well-being model has been operationalised for the teaching profession, with teaching domain-specific variables included where possible and appropriate. Person inputs, perceived organisational support, teaching self-efficacy, vocational outcome expectations, work engagement, job satisfaction, life satisfaction, and turnover intention were included in the operationalised SCCT well-being model that informed the analyses undertaken in this research. The following section discusses the impact of the COVID-19 pandemic on the teaching profession.

## Impact of the COVID-19 Pandemic

The COVID-19 pandemic disrupted the way that individuals went about their lives across nearly every domain throughout the world (Greenhow et al., 2021). The pandemic and the subsequent responses required were unanticipated and required changes to be implemented almost immediately. Across the globe, students were unable to attend school in person, with schools moving to remote learning (Romero-Tena et al., 2021). Towards the end of March 2020, State Governments in Australia were closing non-essential services and schools started moving to remote learning (Ewing & Cooper, 2021). In New Zealand, all

schools closed on 25 March 2020 and moved to remote learning when they re-opened two weeks later (Yates et al., 2021). In both the United Kingdom and the United States, most schools had moved to remote and online teaching during April 2020 (Greenhow et al., 2021). Schools in most provinces in Canada had moved to remote and online learning by the end of March 2020 (Aurini & Davies, 2021). Adding to the complexity of the pandemic, it was not clear how long the impact and restrictions would endure. A year after the pandemic was declared, nearly half the world's population were still experiencing remote schooling or only partial return to in person instruction (UNESCO, 2021).

### *Teaching Remotely*

For many teachers across the world, the COVID-19 pandemic and the physical closure of schools meant moving to online instruction, with teachers working from their homes (Pressley & Ha, 2021). This transition to remote teaching required teachers to engage with technologies and instructional approaches suitable for online delivery that many teachers had not previously experienced (Starkey et al., 2021). This forced change to online delivery also required teachers to have appropriate technologies at home, including reliable internet access, computer, web camera, and appropriate software. Most teachers were required to use video conferencing in some form while working remotely to provide synchronous teaching for their students (Cheung, 2021). For many teachers, this was a novel experience, with teachers being required to learn new software and to adapt their teaching practices to suit online teaching (Cheung, 2021; Howard et al., 2021). Additionally, some teachers reported reluctance from their schools to move to synchronous online teaching (Cheung, 2021). Whilst remote teaching required a significant change in teaching practice, there were benefits from the transition to online. For example, Cheung (2021) found that the use of education applications increased, providing students with additional learning opportunities outside the synchronous teaching. Ewing and Cooper (2021) found that some teachers reported increased

individualised learning and connection with students and parents while teaching remotely, while others reported decreased individualised learning, indicating that the remote learning experience varied between teachers and student cohorts.

### *Potential Impact on Variables of Interest*

Teachers were often required to adapt and improvise individually in their teaching practice (Ewing & Cooper, 2021). Teachers will have uniquely experienced the transition to online teaching; however, emerging research suggests that the pandemic has had detrimental effects on teachers. For example, in their study conducted in October 2020, Pressley and Ha (2021) found that teachers in the United States who were teaching virtually or using a mix of virtual and in person teaching had lower self-efficacy scores than teachers who were teaching only in person. To account for some of the potential impacts of the COVID-19 pandemic, a measure of psychological distress was included in Study 2, providing information regarding participants' level of psychological distress, which could be accounted for in the analyses undertaken.

## Research Aims and Questions

Whilst the SCCT models have been well-researched and have been shown to be useful in a range of contexts, much of the research regarding the SCCT model has focused on the influence of self-efficacy, rather than of personality and outcome expectations, or the whole model (Schaub & Tokar, 2005). The current research sought firstly, to investigate to what extent the SCCT well-being model could explain teacher work engagement, job satisfaction, and overall life satisfaction; and secondly, to investigate the relationships between work engagement, job satisfaction, and life satisfaction with teacher turnover intention. As such, it was hypothesised that:

1. The variables proposed in the operationalised SCCT well-being model would predict work engagement and show incremental increases in the prediction of work engagement.
2. The variables proposed in the operationalised SCCT well-being model would predict job satisfaction and show incremental increases in the prediction of job satisfaction.
3. The variables proposed in the operationalised SCCT well-being model would predict life satisfaction and show incremental increases in the prediction of life satisfaction.
4. Work engagement, job satisfaction, and life satisfaction would account for unique variance in teacher turnover intentions.

# CHAPTER THREE: METHODOLOGY

In this chapter, the principles and motivation underpinning the research design and the strategies used to investigate the factors that influence teacher turnover intention are presented. The chapter includes an overview of the paradigmatic positioning of the research undertaken and the epistemological perspectives. The motivations to engage in the research are presented, followed by an outline of the research questions and design, and finally an overview of the ethical considerations is presented. In undertaking this research project, it is important that the research paradigm and the chosen methods are aligned to the research aims (Morrow, 2005). Chapter Four provides detailed information regarding the methods and results for Study 1 and Chapter Five provides detailed information regarding the methods and results for Study 2.

## Motivations to Engage in the Current Research

The researcher shapes the research that is undertaken (Clark, 1998). The following information regarding my motivation for engaging in the current study is provided to locate my position as researcher within the research. My formal education includes a Bachelor of Science (with Distinction) and a Bachelor of Science (Honours) with a major in Psychology, plus a Master of Learning and Development. My tertiary education provided me with a broad understanding of psychological constructs that may influence work engagement, job satisfaction, and life satisfaction. I have also previously held positions within the Faculty of Education at the University of Southern Queensland, which delivered the teacher education programs at the university, and I observed the required effort and financial commitment of students as they undertook a teacher education degree. I developed an interest in what may lead a teacher who has completed a teaching qualification and obtained teacher registration to leave the profession after a relatively short time. The research and the resulting thesis have been undertaken as partial requirements for the completion of the Doctor of Philosophy

degree, which I am undertaking to extend my knowledge, develop my research skills, and increase my career advancement opportunities.

I developed a particular interest in optimism as a construct after reading Martin Seligman's (2006) work on learned optimism and attributional styles. After reading Seligman's work, I began to engage with the research on dispositional optimism. This interest led me to the work by Michael Scheier, Charles Carver, and others (e.g., Carver & Connor-Smith, 2010; Carver & Scheier, 2014; Carver et al., 2010; Scheier & Carver, 1992; Scheier et al., 1994; Scheier et al., 1986). It was intriguing to me that individuals who generally expect to have positive outcomes tend to have outcomes that are more positive. I am interested in what other benefits, and potential disadvantages, of higher levels of dispositional and domain-specific optimism might exist.

I have drawn from my own personal education and work experiences to theorise and design this research. Based on these experiences, I am interested in investigating psychological variables, including dispositional optimism, and their influence on teachers' work engagement, job satisfaction, and life satisfaction. I chose the SCCT well-being model as the theoretical framework as it aligned with my post-positivist perspectives. Further, it provided a testable model for predicting the influence of psychological variables on job and life satisfaction, and it had been successfully applied to a range of contexts (Brown & Lent, 2019; Lent & Brown, 2019). I chose a survey-based approach using quantitative methods that aligned with the perspective that psychological variables can be indirectly measured using empirical methods. It is accepted that these measurements are approximations of the variables at a specific point in time. Whilst an aim of the research was to understand the factors that influence work engagement, job satisfaction, life satisfaction, and teacher retention, we will never definitively know if the findings and conclusions are a complete explanation of the processes occurring. I acknowledge the importance of understanding my own values,

assumptions, and epistemological stance, and I aimed for objectivity when undertaking the research project.

**Philosophical Considerations**

This doctoral research was conducted within the post-positivism paradigm and involved nomothetic research (Ponterotto, 2005), which aims to understand the patterns or inter-relationships between variables in order to understand the phenomena of teacher work engagement, job satisfaction, life satisfaction, and turnover intention. I took an ontological perspective that the universe is knowable; however, there is no certainty that the existing knowledge of any phenomenon is complete (Clark, 1998; Ryan, 2006). I take the epistemological perspective that, while I, as the researcher, influence the research that I choose to undertake, I aimed for objectivity and to undertake the research without bias. An additional assumption is that psychological variables can be indirectly measured using empirical methods (Clark, 1998). Given that this research was undertaken within the post-positivism paradigm, the rhetorical structure follows a scientific format, providing aggregate data and results of analyses (Ponterotto, 2005). The methodology employed in this research utilised a scientific approach whereby the variables were estimated from items on an online survey. A quantitative approach was chosen as it allowed the investigation of patterns and the testing of a predictive framework across many cases (Ryan, 2006). Post-positivist paradigmatic principles informed the approach to data collection, the measures used, and the analysis and interpretation of the findings. The conceptual framework and the measures chosen to estimate variables had demonstrated validity and reliability in estimating and understanding the inter-relationships of the variables of interest.

**Research Questions**

I argued in Chapter Two that understanding the predictors of work engagement, job satisfaction, and life satisfaction was likely to lead to a greater understanding of teacher

retention. Additionally, I contended that the SCCT well-being model provides a theoretical framework for understanding the influence of psychological variables as predictors of teachers' work engagement, job satisfaction, and life satisfaction, and consequently, our understanding of teacher retention. The current research project aimed to test the SCCT well-being model as a framework for understanding the psychological variables that influence teacher work engagement, job satisfaction, and satisfaction with life. Specifically, this research project investigated the following research questions:

1. Does the SCCT well-being model explain how psychological variables inter-relate to predict teacher work engagement?
2. Does the SCCT well-being model explain how psychological variables inter-relate to predict teacher job satisfaction?
3. Does the SCCT well-being model explain how psychological variables inter-relate to predict teacher life satisfaction?
4. What is the predictive ability of work engagement, job satisfaction, and life satisfaction in relation to teacher turnover intentions?

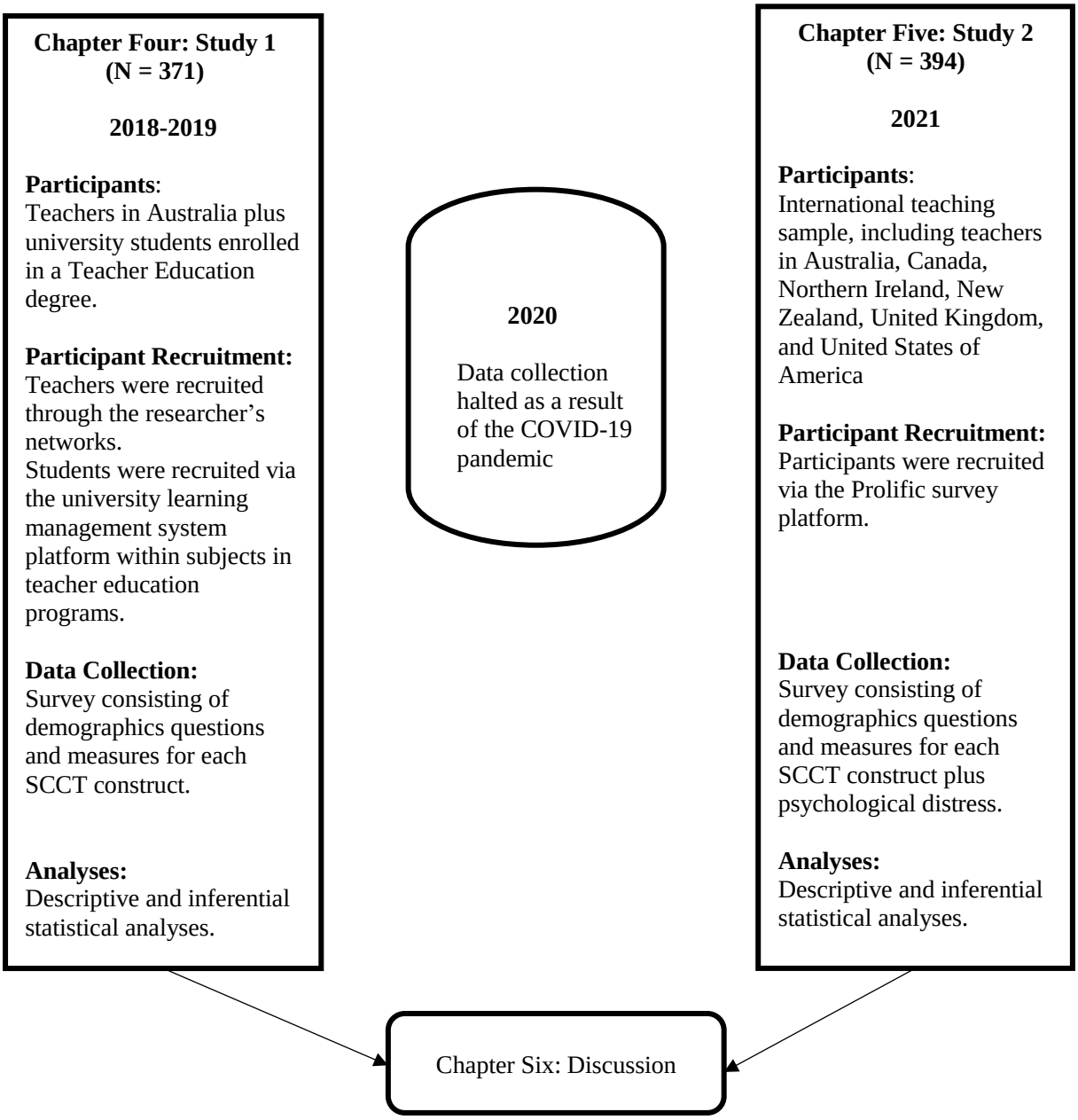
**Research Design**

Data were collected via online surveys consisting of demographic questions and measures with Likert scale responses for each of the SCCT variables. It is acknowledged that survey-based research has a number of limitations. The data generated is subjective from the perspective of the individual, participants may respond in a way that they perceive is socially desirable, participants are able to provide answers only to the questions asked, and participants are able to respond only using the response options provided (Coughlan et al., 2009). Additionally, the scales and subscales provide approximations of measured variables and include an element of error in the approximations, plus the cross-sectional design of the study meant that approximations were recorded at a single point in time (Coughlan et al.,

2009). Where possible, to minimise the impact of these limitations, measures were chosen that had undergone psychometric testing, where internal consistency values were available, and where the measure had demonstrated effectiveness for the target population. Online surveys have the benefit of allowing participants to answer questions in private, which reduces the effects of social desirability biases, as responses are confidential. Quantitative methods, involving sequential multiple regression analyses, were undertaken to analyse the data from Studies 1 and 2. An overview of the research design, participant samples, timing of data collection, and the relevant thesis chapters is presented in Figure 3.1.

**Figure 3.1**

*Research Design and Related Thesis Chapters for the Current Research Project*




Study 1 data collection for the student and teacher samples were happening concurrently during 2018–2019, and was planned to continue in 2020. In early 2020, when the COVID-19 pandemic was declared, the Queensland Department of Education paused approval for research within schools and research involving teachers. It was decided that it would be appropriate to cease data collection with both the student and the teacher participant

groups at this time. It was unclear at that time how long the lockdowns and the effects of the pandemic would last. In early 2021 it was decided to include a third participant group of teachers from Australia, Canada, Northern Ireland, New Zealand, the United Kingdom, and the United States of America. This decision to add another participant group was made owing to the continuing uncertainty about the duration of lockdowns and the global impacts of the COVID-19 pandemic and the time limitations imposed by the university for the completion of the doctoral degree. The data collected in Study 2 included additional questions regarding any periods of lockdown experienced by the participants and a measure of psychological distress. The participant information provided prior to commencing the survey for Study 2 included additional information for support services in each country included in the participant pool.

**Ethical Considerations**

University Human Research Ethics Committee approval was obtained (approval number: H16REA183) before data collection commenced. The ethics committee assessed the research as “low risk”, indicating that the risk for participants was no greater than “normal day-to-day living”. Participant information was provided to potential participants before the first survey question was presented. The participant information included an overview of the project, contact information for the researchers if participants wanted to ask any questions, and contact details for the university Ethics Office for participants to raise any ethical concerns. Participants were advised not to participate in the research until any, and all, of their questions regarding the research had been answered to their satisfaction. No participants contacted the researchers with questions regarding the study, and no participants requested that their data be withdrawn from the study. Incomplete survey responses, where the participant had not submitted the survey, were treated as if participants had revoked their consent to participate and their data were not included in any analyses. There was no

deception as to the intent or purpose of this research. Copies of the participant information provided to the preservice teacher sample in Study 1, the teacher sample in Study 1, and the international teacher sample in Study 2 are presented in Appendices A, B, and C, respectively. To minimise the risk to participants further, all the items on the surveys were non-mandatory except for the consent to participate item, the Study 1 item asking whether the individual wished to be entered into a prize draw, and the Study 2 item asking for participants' Prolific identification. The non-mandatory items allowed participants to skip demographic and other items if they wished to do so.

Participants in Study 1 were able to nominate to be included in a prize draw for one of five $25 gift cards. The value was determined to encourage participation, but not to exert undue influence on the decision whether to participate (Grant & Sugarman, 2004). Participants in Study 2 were paid £1.88 for completing the survey via the Prolific recruitment platform. This payment was based on the Prolific recommendations of £7.50 per hour and an average survey completion time of 15 minutes (Prolific, n.d.). Whilst the current research may help to influence future teacher retention, the outcomes were unlikely to provide immediate benefits to the participants. The £1.88 payment was designed to attract potential participants and to provide a tangible benefit for participation. Payment was made to individual participants via Prolific. Participants were identified using their Prolific identification, a unique 24-character alphanumeric identifier, and the research team did not have access to participants' names, contact details, nor payment details.

**Conclusion**

The information in this chapter, including the researcher's motivation to conduct the study, was provided to afford the reader additional information to understand the study design, analyses, results, and the conclusions drawn in the research project. Further

description of the methods used in Study 1 is provided in Chapter Four and further description of the methods used in Study 2 is provided in Chapter Five.

# CHAPTER FOUR: STUDY 1 AUSTRALIAN SAMPLE

The previous chapter outlined the aims and research design of the current research project. This chapter presents the research aims, methods, and results for Study 1, which included a sample of Australian teachers and a sample of university students undertaking a teaching qualification at an Australian regional university. The research aims, methods, and results for Study 2 are provided in Chapter Five, and a more in-depth discussion of the implications of the findings from both Study 1 and Study 2 is presented in Chapter Six.

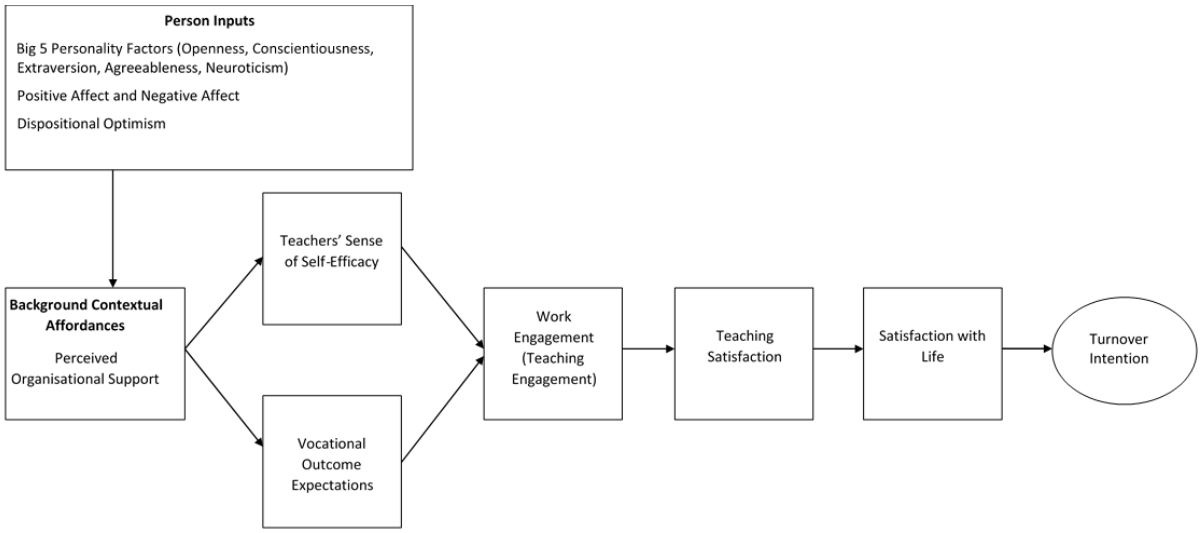
In Chapter Two, the importance of understanding the predictors of teacher turnover intention was discussed. In previous studies, work engagement, job satisfaction, and life satisfaction have been shown to influence turnover intention within a number of professions (e.g., Amah, 2009; Wright & Bonett, 2007); however, the combined influence of these variables in teacher turnover intention is not clear. The SCCT well-being model provides a theoretical framework for investigating the predictors of work engagement, job satisfaction, and life satisfaction of teachers. According to the SCCT well-being model, personality traits and affective dispositions, environmental supports and resources, self-efficacy expectations, and outcome expectations inter-relate to influence work engagement, job satisfaction, and life satisfaction (Brown & Lent, 2019). Additionally, the SCCT well-being model proposes that work engagement influences job satisfaction, which in turn influences life satisfaction.

Domain-specific variables, informed by the SCCT well-being model (Lent & Brown, 2008), were estimated in a sample of preservice teachers (i.e., university student undertaking teacher education training) and in-service teachers (i.e., employed as a teacher) in Australia, with sequential multiple regression analyses being undertaken to investigate the predictors of work engagement, job satisfaction, and life satisfaction. An additional sequential multiple regression analysis was conducted to investigate whether work engagement, job satisfaction, and life satisfaction predicted turnover intention. The order of influence described in the

SCCT well-being model informed the sequential multiple regression analyses undertaken. Figure 4.1 shows the SCCT well-being model operationalised for Study 1.

**Figure 4.1**

*The Social Cognitive Career Theory Well-Being Model Operationalised for Study 1*




Note. Whilst the SCCT Well-Being Model does not include turnover intention, it is hypothesised that work engagement, teaching satisfaction, and satisfaction with life will account for unique variance in teacher turnover intentions.

The research hypotheses investigated in Study 1 were as follows:

1. The variables proposed in the operationalised SCCT well-being model would predict work engagement and show incremental increases in the prediction of work engagement.
2. The variables proposed in the operationalised SCCT well-being model would predict job satisfaction and show incremental increases in the prediction of job satisfaction.
3. The variables proposed in the operationalised SCCT well-being model would predict life satisfaction and show incremental increases in the prediction of life satisfaction.

4. Work engagement, job satisfaction, and life satisfaction would account for unique variance in teacher turnover intentions.

## METHOD

This section outlines the procedures for participant recruitment, the demographic information about participants, and the data collection procedures. This information is followed by a summary of the instruments used to estimate the variables of interest and the correlations between those variables.

### Participants

There were two participant groups in Study 1, preservice teachers enrolled in an Australian teacher education program and in-service Australian teachers. The two samples were combined for analysis as a single Australian teaching sample when data collection was unexpected stopped before obtaining adequate sample sizes for two separate analyses. Teachers were recruited via the researcher's networks from Queensland primary and secondary schools in Australia. Inclusion criteria for the teaching population included working as a registered teacher in a school in Queensland. The student participants were recruited through messages on the internal learning management system in subjects within the teacher education programs at the researcher's university and via the researcher's networks. To be eligible to participate, preservice teachers were required to have undertaken at least one professional experience placement within their program of study. This requirement was to ensure that the participants had at least some practical experience of the teaching profession to inform their responses.

The Study 1 sample was composed of 376 participants (teacher $N$ = 197; student $N$ = 179) with ages ranging from 18–68 years ($M$ = 37.09, $SD$ = 11.89). Teacher ages ranged from 21–68 years ($M$ = 41.41, $SD$ = 11.87), and student ages ranged from 18–56 years ($M$ = 32.24, $SD$ = 9.89). The total sample for Study 1 included female ($n$ = 304; 80.9%), male ($n$ = 68;

18.1%), and no response (*n* = 4; 1.1%). Teacher participants comprised female (*n* = 159; 80.7%), male (*n* = 37; 18.8%), and no response (*n* = 1; 0.5%). Preservice teacher participants comprised female (*n* = 145; 81.0%), male (*n* = 31; 17.3%), and no response (*n* = 3; 1.7%). The teachers had 0.5–50 years teaching experience (*M* = 14.78, *SD* = 11.03) and were working full-time (*n* = 154; 78.2%), part-time (*n* = 42; 21.3%), and no response (*n* = 1; 0.5%). The majority of the in-service teachers indicated that their highest qualification was a Bachelor degree (*n* = 107; 54.3%; see Table 4.1). Preservice teachers had completed up to seven separate practicum placements totalling up to 100 days of placement (*M* = 35.39, *SD* = 25.31) and were enrolled full-time in their program of study (*n* = 119; 66.5%), part-time (*n* = 59; 33.0%) and no response (*n* = 1; 0.6%). Preservice teachers' year levels of study are provided in Table 4.2.

**Table 4.1**

*Frequency and Percentage Distribution of Teachers' Highest Qualification Level*

| Qualification Level | Frequency | % |
|---|---|---|
| Certificate or Diploma | 19 | 9.6 |
| Bachelor Degree | 107 | 54.3 |
| Graduate Diploma or Graduate Certificate | 41 | 20.8 |
| Masters Degree | 28 | 14.2 |
| Doctorate | 1 | 0.5 |
| Did not indicate | 1 | 0.5 |
| Total | 197 | 100.0 |

**Table 4.2**

*Frequency and Percentage Distribution of Preservice Teachers' Year Level of Study*

| Year Level | Frequency | % |
|---|---|---|
| 1 | 27 | 15.1 |
| 2 | 60 | 33.5 |
| 3 | 44 | 24.6 |
| 4 | 10 | 5.6 |
| 5 | 37 | 20.7 |
| Did not indicate | 1 | 0.6 |
| Total | 179 | 100 |

## Procedure

Data were collected during the 2018–2019 teaching terms via online surveys, hosted on the University of Southern Queensland Lime Survey platform. Separate surveys were deployed for preservice teachers and in-service teachers, with demographic questions and measures being worded appropriately for the target population (see Appendices D and E). Preservice teachers were requested to reflect on their professional experience placements in schools and centres when completing the survey. A participant information sheet summarising the research aims and survey requirements, was provided to participants on the commencement page of the online survey (see Appendices A and B). Participants were required to provide their consent to participate by clicking a mandatory consent checkbox before proceeding to the survey questions. It was anticipated that the survey would take approximately 10 minutes to complete.

Participants were able to nominate to enter a draw for one of five $25 gift cards. These gift cards could be used in a range of Australian retail outlets, including supermarkets,

department stores, service stations, and other retailers. Permission to recruit preservice teachers for the research was granted by the Executive Dean of the Faculty of Business, Education, Law, and Arts. University Human Research Ethics Committee approval was obtained (approval number: H16REA183) before data collection commenced and the research was conducted according to the approval of the committee. Participation was voluntary and any personally identifying information was removed before analyses were undertaken. Sequential multiple regression analyses were planned to investigate whether the order of influence proposed in the SCCT well-being model predicted work engagement, job satisfaction, and life satisfaction, and to investigate whether work engagement, job satisfaction, and life satisfaction predicted turnover intention.

**Measures**

SCCT constructs were operationalised as measured variables. Table 4.3 provides a list of the measures used in Study 1 to estimate the variables for analysis. The correlations between variables and the mean, standard deviation, and internal consistency coefficient Cronbach α for each measure are provided in Table 4.4. All scales and subscales appeared to have acceptable internal consistency with a Cronbach's alpha greater than .70, except the Agreeableness (α = .66), Conscientiousness (α = .67), Neuroticism (α = .62), and Openness (α = .69) subscales; however, these subscales consisted of 4 items each and the α levels were deemed acceptable (Cronbach, 1951; Field, 2009). Skew and kurtosis values did not exceed an absolute value of one, except Turnover Intention, which was measured with a single item (*Skewness* = -1.68; *Kurtosis* = 2.98). There were no substantial correlations between predictor variables ($r < .80$), indicating no collinearity concerns (Field, 2009).

**Demographic Items.** In addition to the measures listed in Table 4.3, the following demographic items were included in the survey for preservice teachers: age in years, gender, year level of study, enrolment load (e.g., part-time or full-time), number of professional

experience (practicum) placements, and number of practicum days completed. The following demographic items were included in the survey for in-service teachers: age in years, gender, teaching load (e.g., part-time or full-time), years teaching, and highest qualification completed.

**Table 4.3**

*Study 1 Variables and their Associated Measures*

| Variable | Description | Measure |
|---|---|---|
| Openness | Openness subscale | 20-item shortened form of the International Personality Item Pool (Mini IPIP; Donnellan et al., 2006) |
| Conscientiousness | Conscientiousness subscale | |
| Extraversion | Extraversion subscale | |
| Agreeableness | Agreeableness subscale | |
| Neuroticism | Neuroticism subscale | |
| Optimism | Scale total | Life Orientation Test Revised (LOT-R; Scheier et al., 1994) |
| Positive Affect | Positive affect subscale | Scale of Positive and Negative Experience (SPANE; Diener et al., 2010) |
| Negative Affect | Negative affect subscale | |
| POS | Total of all items on scale | Perceived Organizational Support Scale-Short Form (SPOS; Eisenberger et al., 1986) |
| Self-Efficacy | Total of all items on scale | Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001) |
| VOE | Total of all items on scale | Vocational Outcome Expectations (VOE; McWhirter et al., 2000) |
| Work Engage | Total of all items on scale | Engaged Teachers Scale (ETS; Klassen et al., 2013) |
| Job Satisfaction | Total of all items on scale | Teaching Satisfaction Scale (TSS; Ho & Au, 2006) |
| Life Satisfaction | Total of all items on scale | Satisfaction with Life Scale (SWLS; Diener et al., 1985) |
| Turnover | Single item | In one year's time, I hope to be working in the teaching profession (In-service teacher sample)<br>In one year's time, I hope to be continuing my study of a teaching qualification or working in the teaching profession (Preservice teacher sample) |

*Note.* POS = perceived organisational support; Self-Efficacy = teaching self-efficacy; VOE = vocational outcome expectations; Work Engage = work engagement; Turnover = turnover intention.

**Table 4.4**

*Correlations of Measured Variables, Descriptive Statistics, and Internal Consistency Coefficient Cronbach α in Parentheses (Study 1)*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Agreeableness | (.66) | | | | | | | | | | | | | | |
| 2. Conscientiousness | .11 | (.67) | | | | | | | | | | | | | |
| 3. Extraversion | .29 | .02* | (.80) | | | | | | | | | | | | |
| 4. Neuroticism | .00* | -.13 | -.11 | (.62) | | | | | | | | | | | |
| 5. Openness | .20 | -.09* | .19 | .15 | (.69) | | | | | | | | | | |
| 6. Optimism | .12 | .21 | .23 | -.52 | -.13 | (.82) | | | | | | | | | |
| 7. Positive Affect | .10* | .19 | .12 | -.42 | -.11 | .36 | (.92) | | | | | | | | |
| 8. Negative Affect | .01* | -.12 | -.04* | .46 | .09* | -.43 | -.68 | (.85) | | | | | | | |
| 9. POS | .11 | .09* | .08* | -.14 | -.06* | .22 | .37 | -.33 | (.92) | | | | | | |
| 10. Teaching SE | .23 | .15 | .13 | -.15 | .10 | .14 | .30 | -.21 | .24 | (.91) | | | | | |
| 11. VOE | .17 | .16 | .15 | -.28 | .00* | .38 | .55 | -.37 | .37 | .38 | (.90) | | | | |
| 12. Work Engage | .32 | .17 | .16 | -.18 | .09* | .17 | .54 | -.33 | .36 | .47 | .49 | (.92) | | | |
| 13. Job Satisfaction | .08* | .07* | .05* | -.24 | .01* | .19 | .63 | -.41 | .47 | .41 | .60 | .67 | (.84) | | |
| 14. Life Satisfaction | .08* | .16 | .17 | -.37 | -.12 | .57 | .53 | -.44 | .30 | .22 | .45 | .29 | .40 | (.92) | |
| 15. Turnover | -.02* | .02* | -.07* | -.06* | .04* | .08* | .24 | -.19 | .16 | .11 | .13 | .23 | .37 | .14 | - |
| M | 16.32 | 15.03 | 11.97 | 11.93 | 13.35 | 14.80 | 22.50 | 15.15 | 29.78 | 81.65 | 19.36 | 96.01 | 18.94 | 24.96 | 4.17 |
| SD | 2.46 | 3.00 | 3.67 | 3.13 | 2.19 | 4.22 | 4.18 | 4.25 | 10.77 | 12.79 | 3.00 | 10.83 | 4.00 | 7.10 | .99 |
| Skewness | -.60 | -.45 | .13 | -.15 | -.45 | -.34 | -.56 | .18 | -.39 | -.21 | -.19 | -.68 | -.67 | -.70 | -1.68 |
| Kurtosis | .30 | -.28 | -.74 | -.40 | .02 | .02 | .30 | -.24 | -.47 | .01 | -.01 | .25 | .13 | -.25 | 2.98 |

*Note.* POS = perceived organisational support; Teachings SE = teaching self-efficacy; VOE = vocational outcome expectations; Work Engage = work engagement; Turnover = turnover intention.

All correlations were significant ($p < .05$) except that those marked with * were not significant ($p > .05$).

**Personality.** Agreeableness, conscientiousness, extraversion, neuroticism, and openness were estimated using the Mini-IPIP scale. The Mini-IPIP is a 20-item shortened form of the 50-item International Personality Item Pool - Five Factor Model (IPIP-FFM) measure of personality (Donnellan et al., 2006). The Mini-IPIP has four items per personality factor with 11 of the 20 items being reverse scored. Respondents were asked to rate how accurately the statement described them on a 5-point scale from 1 (*very inaccurate)* to 5 (*very accurate)*, for example "Talk to a lot of different people at parties" which contributed to the score for extraversion (see Appendix F). Total scores for each subscale ranged from 4–20. Donnellan et al. (2006) found α levels between .61 and .83 for the five personality subscales across four studies. The Mini-IPIP has also shown good internal consistency in Australian teacher samples. In a study of 574 Australian teachers, Perera, Granziera, et al. (2018) found acceptable Cronbach's alpha coefficients for all subscales of the Mini-IPIP: Openness (α = .81), Conscientiousness (α = .69), Extraversion (α = .73) Agreeableness (α = .85), and Neuroticism (α = .74).

**Positive and Negative Affect.** The Scale of Positive and Negative Experience (SPANE: Diener et al., 2010) is a 12-item scale with six items to assess positive feelings (SPANE-P) and six items to assess negative feelings (SPANE-N). Respondents were asked to indicate from 1 (*very rarely or never*) to 5 (*very often or always*) how often they had experienced the feeling, for example "Happy" and "Sad", over the last four weeks (see Appendix G). Scores for the subscales ranged from 6–30, with higher scores indicating greater frequency of positive affect (SPANE-P) and negative affect (SPANE-N). The SPANE items and the scoring protocol are included in Appendix G. The scale measures frequency rather than intensity or source of the feeling (Silva & Caetano, 2013). Diener et al. (2010) found α levels of .87 for the SPANE-P and .81 for the SPANE-N. The SPANE has shown good internal consistency in teacher samples - for example, Rahm and Heise (2019) found

that the SPANE subscales demonstrated good internal consistency with a German teaching sample: SPANE-N (α = .81) and SPANE-P (α = .89).

**Dispositional Optimism.** Dispositional optimism was measured using the Life Orientation Test - Revised (LOT-R; Scheier et al., 1994). The LOT-R is a 10-item measure, which includes four filler items, and with three items being reverse coded (see Appendix H). Respondents were asked to indicate their agreement with each of the items on a 5-point scale from 0 (*strongly disagree*) to 4 (*strongly agree*). Scores can range from 0–24, with higher scores indicating higher levels of optimism. The LOT-R has a single factor structure and has been shown to have acceptable internal consistency (α = .78) and good retest reliability, with test-retest correlations of up to .79 over 28 months (Scheier et al., 1994). In an international study of teachers who taught English to speakers of other languages (ESOL), Sturm et al. (2012) found the LOT-R to have acceptable internal consistency (α = .73).

**Perceived Organisational Support.** Perceived organisational support was estimated using the Perceived Organizational Support Scale - Short Form (POSS), which is an 8-item short version of the Survey of Perceived Organizational Support Scale (SPOS; Eisenberger et al., 1986). The items were adapted for the teaching context by replacing the word "organization" in each item with "school/centre". Respondents indicated on a 7-point Likert scale from 0 (*strongly disagree*) to 6 (*strongly agree*) their degree of agreement with the item statements, for example "The school/centre would ignore any complaint from me" (reverse scored; see Appendix I). The POSS is a unidimensional scale with potential scores ranging from 0–48, with higher scores indicating greater perceived organisational support. Four of the eight items are reverse coded. The scale has been shown to have good internal consistency, with estimates ranging from .89 to .94 (Eisenberger et al., 1999; Settoon et al., 1996). Longer versions of the scale have shown good internal consistency with teaching samples, for example the 22-item SPOS showed excellent internal consistency (α = .93) in a sample of

2,565 elementary school teachers in Israel (Bogler & Nir, 2012). Moreover, the 16-item SPOS showed excellent internal consistency (α = .91) in a sample of 235 middle and high school teachers in Italy (Lent et al., 2011) and the 12-item SPOS demonstrated good internal consistency (α = .80) in a sample of special education teachers in Pakistan (Bibi et al., 2019).

**Teaching Efficacy.** Teaching efficacy was measured using the 12-item short form of the Teachers' Sense of Efficacy Scale (TSES). The TSES measures the self-efficacy of both preservice and in-service teachers across three subscales: instructional strategies (IS), student engagement (SE), and classroom management (CM; Tschannen-Moran & Hoy, 2001). The IS subscale captures efficacy for developing and implementing instructional strategies (Chang & Engelhard, 2016). The SE subscale measures self-efficacy in engaging with and motivating students (Chang & Engelhard, 2016). The CM subscale describes self-efficacy in maintaining order in the classroom (Chang & Engelhard, 2016).

Respondents indicated their degree of agreement on a 9-point response scale for each item, including 1 (*nothing)*, 3 (*very little)*, 5 (*some influence)*, 7 (*quite a bit)*, and 9 (*a great deal*), for example "To what extent can you provide an alternative explanation or example when students are confused?" (see Appendix J). The TSES has shown acceptable internal consistency across the three subscales, with estimates ranging for IS from .77 to .80, for CM from .85 to .86, and for SE from .80 to .81 (Perera, Granziera, et al., 2018; Tschannen-Moran & Hoy, 2001). Tschannen-Moran and Hoy (2001) found that the overall total teaching efficacy score was meaningful for both preservice teachers and in-service teachers. The items have also been shown to be invariant across teaching experience, including teaching populations in the United States of America (Chang & Engelhard, 2016) and Canada (Klassen & Chiu, 2010; Wang et al., 2015). McLennan et al. (2017) found that the TSES demonstrated good internal consistency for the total teaching efficacy score (α = .93), and

also for the three subscales, IS (α = .81), CM (α = .94), and SE (α = .88) in an Australian preservice teacher sample.

**Outcome Expectations.** The Vocational Outcome Expectations (VOE) scale is a six-item scale that measures outcome expectancies for career-related behaviours (McWhirter et al., 2000). The instrument has been shown to have good internal consistency, with estimates ranging from .83 to .92, and it has shown good retest reliability ($r$ = .59) over 9 weeks (McWhirter et al., 2000). Respondents are asked to indicate their degree of agreement with the items using a 4-point scale from 1 (*strongly disagree*) to 4 (*strongly agree*), for example "I have control over my career decisions". Responses are totalled to provide an overall score ranging from 6–24, with higher scores indicating more positive career outcome expectations (see Appendix K). The VOE has also shown good internal consistency in a university student sample. For example, in a study of 219 community college students in California, Fiebig et al. (2010) found the VOE to have good internal consistency (α = .84).

**Work Engagement**. Work engagement was estimated using the Engaged Teachers Scale (ETS; Klassen et al., 2013). The ETS is a 16-item measure of work engagement with four items each measuring four dimensions of work engagement: cognitive-physical engagement; emotional engagement; social engagement with colleagues; and social engagement with students. Respondents are asked to indicate how often they have felt the way stated in the item on a 7-point scale from 1 (*never)* to 7 (*always).* Example items include "While teaching, I work with intensity" (cognitive-physical engagement); "I find teaching fun" (emotional engagement); "In class, I show warmth to my students" (social engagement with students); and "At school, I connect with my colleagues" (social engagement with colleagues; see Appendix L). Total scores range from 16–112, with higher scores indicating higher levels of work engagement. The ETS measure of overall work engagement has been shown to have good internal consistency in Australian teaching samples, with estimates

ranging from .89 to .92 (Perera, Vosicka, et al., 2018). In their study of 574 Australian teachers, Perera, Granziera, et al. (2018) found that each of the four subscales demonstrated good internal consistency: Cognitive Engagement (α = .84); Emotional Engagement (α = .91); Social Engagement with Students (α = .87); and Social Engagement with Colleagues (α = .84).

**Job Satisfaction.** Job satisfaction was estimated using the Teaching Satisfaction Scale (TSS; Ho & Au, 2006). The TSS is a 5-item, single factor, measure of job satisfaction within the teaching profession. Respondents are asked to indicate their degree of agreement with items using a 5-point scale from 1 (*strongly disagree)* to 5 (*strongly agree*), for example "I want to be a teacher". Responses are totalled to provide an overall score ranging from 5–25, with higher scores indicating greater job satisfaction (see Appendix M). The TSS has been shown to have acceptable internal consistency with estimates ranging from .70 to .93, and acceptable retest reliability, with a test-retest correlation of .76 over two weeks (Ho & Au, 2006).

**Satisfaction with Life.** Satisfaction with life was estimated using the Satisfaction with Life Scale (SWLS; Diener et al., 1985). The SWLS is a single factor, 5-item scale that has been shown to have good internal consistency, with estimates ranging from .85 to .87 (Diener et al., 1985; Lent et al., 2012). Respondents are asked to indicate their agreement with each item on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*); for example, "If I could live my life over, I would change almost nothing" (see Appendix N). Total scores can range from 5–35, with higher scores indicating higher satisfaction with life. Rahm and Heise (2019) found that the SWLS demonstrated good internal consistency with a German teaching sample (α = .90). The SWLS has also been shown to have good internal consistency with preservice teachers. Hultell and Gustavsson (2008) calculated a Cronbach's alpha of .88 for the SWLS in their study of 2,900 preservice teachers in Sweden.

**Turnover Intention.** Preservice teacher turnover intention was estimated using the item "*In one year's time, I hope to be continuing my study of a teaching qualification or working in the teaching profession*". In-service teacher turnover intention was estimated using the item "*In one years' time, I hope to be working in the teaching profession*". Respondents are asked to indicate their agreement with the item on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 1–5, with higher scores indicating lower levels of turnover intention.

**Plan for Data Analysis**

Sequential multiple regression analyses were undertaken to investigate the predictors of work engagement, job satisfaction, and satisfaction with life. Sequential multiple regression was chosen as it allows the sequential addition of independent variables according to the order proposed in the theoretical framework (Tabachnick & Fidell, 2013). The SCCT well-being model (Lent & Brown, 2008) provides the theoretical order of influence for each variable. Only variables with a significant correlation with the dependent variable were included in the analyses for that dependent variable (see Table 4.4). Dispositional optimism was added at Step 1, to determine the full contribution of dispositional optimism in predicting variance in the dependent variables (Tabachnick & Fidell, 2013), as dispositional optimism was a dispositional trait of particular interest. Positive and negative affect, extraversion, openness, conscientiousness, agreeableness, and neuroticism were added at Step 2 to determine the unique variance in the dependent variables that was accounted for by each of the dispositional traits included in the research. Openness was excluded from the analyses for work engagement; openness, conscientiousness, extraversion, and agreeableness were excluded from the analyses for job satisfaction; and agreeableness was excluded from the analyses for life satisfaction, as there were non-significant correlations (see Table 4.4). Following the SCCT well-being model (Lent & Brown, 2008), perceived organisational

support was added at Step 3 and both teaching self-efficacy and vocational outcome expectations were added at Step 4. A sequential multiple regression analysis was also undertaken to investigate the predictors of turnover intention, with work engagement being added at Step 1, job satisfaction being added at Step 2, and life satisfaction being added at Step 3, as per the theoretical order of influence of each variable in the SCCT well-being model (Lent & Brown, 2008). All analyses were conducted using the IBM SPSS Statistics for Windows, Version 26.

# RESULTS

## Data Screening

No respondents selected the same response option for all items on any scale, and all the data were within the correct range.

### *Outliers*

One univariate outlier was identified using a criterion of $z > \pm 3.29$, $p < .001$, and removed prior to analyses (Tabachnick & Fidell, 2013). Multivariate outliers were identified by calculating the Mahalanobis distance statistic for each case (Tabachnick & Fidell, 2013). Four multivariate outliers were removed from the data prior to analysis based on the squared Mahalanobis distance ($D^2$) estimate, which is central $\chi^2$ distributed with *df* equal to the number of observed variables and $p < .001$ (Tabachnick & Fidell, 2013). A total of 371 cases were retained for further analysis, including teachers ($n = 196$) and students ($n = 175$).

### *Missing Data*

A total of 512 item responses were missing across all items contributing to a scale or subscale (1.53%), with the highest percentage of missing data being for self-efficacy (4.13%). The percentage of missing responses for all measures was less than 5% (see Table 4.5). Missing values were estimated before analyses were undertaken. Maximum likelihood estimation was used to manage missing data as this method provides unbiased parameter

estimates and maximises the power of analyses (Baraldi & Enders, 2010). Little's (1988) statistical test was not statistically significant, $\chi^2(5521) = 3095.52$, $p > .05$, indicating that data were missing completely at random (MCAR). MCAR suggests that the missingness of data is unrelated to any of the variables within the study and that there is no systemic explanation for the missing data. All the survey items contributing to a scale or a subscale were non-mandatory. As there was no pattern to the missing data, it was likely that respondents inadvertently missed responding to items as they progressed through the survey.

**Table 4.5**

*Percentage of Missing Data for the Observed Variables in Study 1*

| Variable | Items on Scale or Subscale | % Missing | No. Missing |
|---|---|---|---|
| Openness | 4 | 0.40 | 6 |
| Conscientiousness | 4 | 0.27 | 4 |
| Extraversion | 4 | 0.27 | 4 |
| Agreeableness | 4 | 0.47 | 7 |
| Neuroticism | 4 | 0.20 | 3 |
| Optimism | 6 | 0.36 | 8 |
| Positive Affect | 6 | 1.30 | 29 |
| Negative Affect | 6 | 1.57 | 35 |
| Perceived Organisational Support | 8 | 2.12 | 63 |
| Self-Efficacy | 12 | 4.13 | 184 |
| Vocational Outcome Expectations | 6 | 0.63 | 14 |
| Work Engagement | 16 | 1.87 | 111 |
| Job Satisfaction | 5 | 1.40 | 26 |
| Life Satisfaction | 5 | 0.97 | 18 |
| Turnover Intention | 1 | 0.00 | 0 |

*Note.* $N = 371$. % Missing = percentage of missing data; No. Missing = total number of responses missing across all items contributing to the scale or the subscale.

### *Predictors of Work Engagement*

Sequential multiple regression was undertaken with work engagement as the dependent variable (see Table 4.6). Openness was not included in the analyses as it was not significantly correlated with work engagement (see Table 4.4). Dispositional optimism was

added at Step 1. The model at Step 1 was statistically significant and accounted for 2.7 % of the variance in work engagement, $R = .173$, $F(1,369) = 11.443$, $p = .001$, and dispositional optimism ($\beta = .173$, $p = .001$) was a significant predictor of work engagement. Positive affect, negative affect, extraversion, agreeableness, conscientiousness, and neuroticism were added at Step 2. The model at Step 2 accounted for 36.3% of the variance in work engagement, $R = .613$, $F(7,363) = 31.184$, $p < .001$, ($\Delta R^2 = .345$, $p < .001$). At Step 2, positive affect ($\beta = .547$, $p < .001$), agreeableness ($\beta = .247$, $p < .001$), and conscientiousness ($\beta = .095$, $p = .027$) were significant predictors; however, dispositional optimism, negative affect, extraversion, and neuroticism were all non-significant predictors of work engagement. Perceived organisational support was added at Step 3. The model at Step 3 accounted for 38.4% of the variance in work engagement, $R = .631$, $F(8,362) = 29.877$, $p < .001$ ($\Delta R^2 = .022$, $p < .001$). Positive affect ($\beta = .504$, $p < .001$), agreeableness ($\beta = .236$, $p < .001$), conscientiousness ($\beta = .091$, $p = .031$), and perceived organisational support ($\beta = .163$, $p < .001$) were significant predictors of work engagement at Step 3; however, dispositional optimism, negative affect, extraversion, and neuroticism were non-significant predictors.

Teaching self-efficacy and vocational outcome expectations were added at Step 4. The model at Step 4 accounted for 45.7% of the variance in work engagement, $R = .687$, $F(10,360) = 32.184$, $p < .001$ ($\Delta R^2 = .074$, $p < .001$). Dispositional optimism ($\beta = -.098$, $p = .048$), positive affect ($\beta = .382$, $p < .001$), agreeableness ($\beta = .184$, $p < .001$), perceived organisational support ($\beta = .105$, $p = .014$), teaching self-efficacy ($\beta = .235$, $p < .001$), and vocational outcome expectations ($\beta = .158$, $p = .002$) were all significant predictors of work engagement at Step 4. However, negative affect, extraversion, conscientiousness, and neuroticism were non-significant predictors. Using the criterion of a Durbin-Watson value close to 2, and between 1 and 3 (Field, 2009), the data met the assumption of independent errors (*Durbin-Watson value* = 1.875).

**Table 4.6**

*Sequential Multiple Regression Results for Work Engagement (Study 1)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 1 | | | | | | | | .027 | |
| Constant | 89.417 | 2.026 | | 44.138 | .000 | 85.433 | 93.401 | | |
| Disp. Optimism | 0.445 | 0.132 | .173 | 3.383 | .001 | 0.186 | 0.704 | | |
| Step 2 | | | | | | | | .363 | .345* |
| Constant | 40.071 | 6.718 | | 5.965 | .000 | 26.860 | 53.281 | | |
| Disp. Optimism | -0.156 | 0.134 | -.061 | -1.164 | .245 | -0.421 | 0.108 | | |
| Positive Affect | 1.419 | 0.151 | .547 | 9.379 | .000 | 1.121 | 1.716 | | |
| Negative Affect | 0.047 | 0.154 | .018 | 0.304 | .761 | -0.256 | 0.350 | | |
| Extraversion | 0.129 | 0.131 | .044 | 0.986 | .325 | -0.129 | 0.387 | | |
| Agreeableness | 1.086 | 0.194 | .247 | 5.610 | .000 | 0.705 | 1.467 | | |
| Conscientiousness | 0.344 | 0.154 | .095 | 2.227 | .027 | 0.040 | 0.647 | | |
| Neuroticism | 0.098 | 0.179 | .028 | 0.547 | .585 | -0.255 | 0.451 | | |
| Step 3 | | | | | | | | .384 | .022* |
| Constant | 39.107 | 6.612 | | 5.915 | .000 | 26.105 | 52.110 | | |
| Disp. Optimism | -0.196 | 0.133 | -.076 | -1.479 | .140 | -0.457 | 0.065 | | |
| Positive Affect | 1.307 | 0.152 | .504 | 8.608 | .000 | 1.009 | 1.606 | | |
| Negative Affect | 0.107 | 0.153 | .042 | 0.701 | .484 | -0.193 | 0.407 | | |
| Extraversion | 0.123 | 0.129 | .042 | 0.951 | .342 | -0.131 | 0.377 | | |
| Agreeableness | 1.038 | 0.191 | .236 | 5.435 | .000 | 0.662 | 1.413 | | |
| Conscientiousness | 0.328 | 0.152 | .091 | 2.160 | .031 | 0.029 | 0.626 | | |
| Neuroticism | 0.047 | 0.177 | .013 | 0.264 | .792 | -0.301 | 0.395 | | |
| POS | 0.164 | 0.045 | .163 | 3.650 | .000 | 0.075 | 0.252 | | |
| Step 4 | | | | | | | | .457 | .074* |
| Constant | 27.501 | 6.423 | | 4.282 | .000 | 14.870 | 40.133 | | |
| Disp. Optimism | -0.253 | 0.127 | -.098 | -1.983 | .048 | -0.503 | -0.002 | | |
| Positive Affect | 0.989 | 0.155 | .382 | 6.387 | .000 | 0.685 | 1.294 | | |
| Negative Affect | 0.075 | 0.144 | .030 | 0.524 | .601 | -0.208 | 0.358 | | |
| Extraversion | 0.077 | 0.121 | .026 | 0.634 | .527 | -0.162 | 0.316 | | |
| Agreeableness | 0.809 | 0.182 | .184 | 4.441 | .000 | 0.451 | 1.168 | | |
| Conscientiousness | 0.224 | 0.143 | .062 | 1.565 | .119 | -0.058 | 0.506 | | |
| Neuroticism | 0.075 | 0.166 | .022 | 0.451 | .653 | -0.252 | 0.402 | | |
| POS | 0.106 | 0.043 | .105 | 2.458 | .014 | 0.021 | 0.191 | | |
| Teaching SE | 0.199 | 0.036 | .235 | 5.479 | .000 | 0.127 | 0.270 | Durbin-Watson | |
| VOE | 0.572 | 0.181 | .158 | 3.161 | .002 | 0.216 | 0.927 | = 1.875 | |

*Note*. *B* = unstandardised estimate; β = standardised estimate; Disp. Optimism = dispositional optimism; POS = perceived organisational support; Teaching SE = teaching self-efficacy; VOE = vocational outcome expectations; CI = confidence interval; $R^2$ values were adjusted.
*$p < .01$.

***Predictors of Job Satisfaction***

Sequential multiple regression was undertaken with job satisfaction as the dependent variable (see Table 4.7). As there were non-significant correlations between job satisfaction and each of openness, conscientiousness, extraversion, and agreeableness, these variables were not included in the analyses (see Table 4.4). Dispositional optimism was added at Step 1. The model at Step 1 accounted for 3.3% of the variance in job satisfaction, $R = .188$, $F(1,369) = 13.530$, $p < .001$, and dispositional optimism, ($\beta = .188$, $p < .001$), was a significant predictor of job satisfaction. Positive affect, negative affect, and neuroticism were added at Step 2. The model at Step 2 accounted for 39.6% of the variance in job satisfaction, $R = .634$, $F(4,366) = 61.582$, $p < .001$, ($\Delta R^2 = .367$, $p < .001$). At Step 2, positive affect, ($\beta = .665$, $p < .001$), was a significant predictor; however, dispositional optimism, negative affect, and neuroticism were non-significant predictors of job satisfaction.

Perceived organisational support was added at Step 3. The model at Step 3 accounted for 46.1% of the variance in job satisfaction, $R = .684$, $F(5,365) = 64.332$, $p < .001$ ($\Delta R^2 = .066$, $p < .001$). Positive affect, ($\beta = .587$, $p < .001$), and perceived organisational support, ($\beta = .280$, $p < .001$), were significant predictors of job satisfaction at Step 3; however, dispositional optimism, negative affect, and neuroticism were non-significant predictors of job satisfaction.

Teaching self-efficacy and vocational outcome expectations were added at Step 4. The model at Step 4 accounted for 55.5% of the variance in job satisfaction, $R = .751$, $F(7,363) = 67.005$, $p < .001$ ($\Delta R^2 = .095$, $p < .001$). Dispositional optimism ($\beta = -.137$, $p = .002$), positive affect ($\beta = .400$, $p < .001$), perceived organisation support ($\beta = .203$, $p < .001$), teaching self-efficacy ($\beta = .148$, $p < .001$), and vocational outcome expectations ($\beta = .307$, $p < .001$), were significant predictors of job satisfaction at Step 4; however, negative affect and neuroticism were non-significant predictors.

Work engagement was added at Step 5. The model at Step 5 accounted for 62.3% of the variance in job satisfaction, $R = .794$, $F(8,362) = 77.368$, $p < .001$ ($\Delta R^2 = .067$, $p < .001$). Dispositional optimism ($\beta = -.119$, $p = .003$), positive affect ($\beta = .262$, $p < .001$), perceived organisational support ($\beta = .164$, $p < .001$), vocational outcome expectations ($\beta = .248$, $p < .001$), and work engagement ($\beta = .345$, $p < .001$) were significant predictors of job satisfaction at Step 5; however, negative affect, neuroticism, and teaching self-efficacy were non-significant predictors. The data met the assumption of independent errors (*Durbin-Watson value* = 2.098).

**Table 4.7**

*Sequential Multiple Regression Results for Job Satisfaction (Study 1)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 1 | | | | | | | | .033 | |
| Constant | 16.307 | 0.745 | | 21.880 | .000 | 14.841 | 17.772 | | |
| Disp. Optimism | 0.178 | 0.048 | .188 | 3.678 | .000 | 0.083 | 0.273 | | |
| Step 2 | | | | | | | | .396 | .367* |
| Constant | 4.546 | 2.237 | | 2.032 | .043 | 0.146 | 8.946 | | |
| Disp. Optimism | -0.031 | 0.046 | -.033 | -0.678 | .498 | -0.123 | 0.060 | | |
| Positive Affect | 0.636 | 0.054 | .665 | 11.852 | .000 | 0.531 | 0.742 | | |
| Negative Affect | 0.018 | 0.055 | .020 | 0.338 | .736 | -0.089 | 0.126 | | |
| Neuroticism | 0.022 | 0.064 | .017 | 0.346 | .729 | -0.104 | 0.149 | | |
| Step 3 | | | | | | | | .461 | .066* |
| Constant | 3.493 | 2.119 | | 1.649 | .100 | -0.673 | 3.493 | | |
| Disp. Optimism | -0.062 | 0.044 | -.066 | -1.412 | .159 | -0.149 | -0.062 | | |
| Positive Affect | 0.561 | 0.052 | .587 | 10.810 | .000 | 0.459 | 0.561 | | |
| Negative Affect | 0.053 | 0.052 | .056 | 1.016 | .310 | -0.049 | 0.053 | | |
| Neuroticism | -0.013 | 0.061 | -.010 | - 0.209 | .835 | -0.132 | -0.013 | | |
| POS | 0.104 | 0.015 | .280 | 6.740 | .000 | 0.074 | 0.104 | | |
| Step 4 | | | | | | | | .555 | .095* |
| Constant | -1.760 | 2.049 | | - 0.859 | .391 | -5.790 | 2.270 | | |
| Disp. Optimism | -0.130 | 0.041 | -.137 | -3.165 | .002 | -0.211 | -0.049 | | |
| Positive Affect | 0.383 | 0.052 | .400 | 7.428 | .000 | 0.282 | 0.484 | | |
| Negative Affect | 0.015 | 0.047 | .016 | 0.315 | .753 | -0.078 | 0.108 | | |
| Neuroticism | -0.013 | 0.055 | -.010 | -0.228 | .820 | -0.121 | 0.096 | | |
| POS | 0.075 | 0.014 | .203 | 5.241 | .000 | 0.047 | 0.104 | | |
| Teaching SE | 0.046 | 0.012 | .148 | 3.904 | .000 | 0.023 | 0.069 | | |
| VOE | 0.409 | 0.060 | .307 | 6.784 | .000 | 0.290 | 0.528 | | |
| Step 5 | | | | | | | | .623 | .067* |
| Constant | -6.298 | 1.968 | | -3.200 | .001 | -10.169 | -2.427 | | |
| Disp. Optimism | -0.113 | 0.038 | -.119 | -2.976 | .003 | -0.188 | -0.038 | | |
| Positive Affect | 0.251 | 0.050 | .262 | 5.001 | .000 | 0.152 | 0.350 | | |
| Negative Affect | -0.006 | 0.044 | -.007 | -0.146 | .884 | -0.093 | 0.080 | | |
| Neuroticism | -0.029 | 0.051 | -.023 | -0.577 | .564 | -0.130 | 0.071 | | |
| POS | 0.061 | 0.013 | .164 | 4.541 | .000 | 0.034 | 0.087 | | |
| Teaching SE | 0.016 | 0.012 | .051 | 1.395 | .164 | -0.007 | 0.039 | | |
| VOE | 0.330 | 0.056 | .248 | 5.855 | .000 | 0.219 | 0.441 | Durbin-Watson | |
| Work Engage | 0.127 | 0.016 | .345 | 8.122 | .000 | 0.096 | 0.158 | = 2.098 | |

*Note*. *B* = unstandardised estimate; β = standardised estimate; Disp. Optimism = dispositional optimism; POS = perceived organisational support; Teaching SE = teaching self-efficacy; VOE = vocational outcome expectations; Work Engage = work engagement; CI = confidence interval; $R^2$ values were adjusted.

*$p < .01$.

***Predictors of Life Satisfaction***

Sequential multiple regression was undertaken with life satisfaction as the dependent variable (see Table 4.8). The variables were included based on the order of influence theorised in the SCCT well-being model. Agreeableness was not included in the analyses as it was not significantly correlated with life satisfaction (see Table 4.4). Dispositional optimism was added at Step 1. The model at Step 1 accounted for 32.6% of the variance in life satisfaction, $R = .572$, $F(1,369) = 179.572$, $p < .001$, and dispositional optimism, ($\beta = .572$, $p < .001$), was a significant predictor. Positive affect, negative affect, extraversion, conscientiousness, neuroticism, and openness were added in Step 2. The model at Step 2 accounted for 43.9% of the variance in life satisfaction, $R = .670$, $F(7,363) = 42.341$, $p < .001$ ($\Delta R^2 = .122$, $p < .001$). Dispositional optimism ($\beta = .430$, $p < .001$) and positive affect ($\beta = .363$, $p < .001$) were significant predictors of life satisfaction at Step 2; however, negative affect, extraversion, conscientiousness, neuroticism, and openness were non-significant.

At Step 3, there was no significant change in the model when perceived organisational support was added ($\Delta R^2 = .004$, $p = .087$). The model at Step 3 was statistically significant and accounted for 44.2% of the variance in life satisfaction, $R = .674$ $F(8,362) = 37.617$, $p < .001$. Dispositional optimism ($\beta = .423$, $p < .001$) and positive affect ($\beta = .343$, $p < .001$) remained significant predictors of life satisfaction; however perceived organisational support, negative affect, extraversion, conscientiousness, neuroticism, and openness were non-significant predictors.

At Step 4, there was no significant change in the model when teaching self-efficacy and vocational outcome expectations were added ($\Delta R^2 = .007$, $p = .101$). The model at Step 4 was statistically significant and accounted for 44.6% of the variance in life satisfaction, $R = .679$, $F(10,360) = 30.770$, $p < .001$. Dispositional optimism ($\beta = .404$, $p < .001$) and positive affect ($\beta = .291$, $p < .001$) remained significant predictors of life satisfaction; however,

negative affect, extraversion, conscientiousness, neuroticism, openness, perceived organisational support, teaching self-efficacy, and vocational outcome expectations were not statistically significant predictors.

At Step 5, there was no significant change in the model when work engagement was added ($\Delta R^2 = .001$, $p = .379$). The model at Step 5 was statistically significant and accounted for 44.6% of the variance in life satisfaction, $R = .680$, $F(11,359) = 28.026$, $p < .001$. Dispositional optimism ($\beta = .400$, $p < .001$) and positive affect ($\beta = .309$, $p < .001$) remained significant predictors of life satisfaction; however, negative affect, extraversion, conscientiousness, neuroticism, openness, perceived organisational support, teaching self-efficacy, vocational outcome expectations, and work engagement were non-significant predictors of life satisfaction.

Job satisfaction was added at Step 6. The model at Step 6 accounted for 45.1% of the variance in life satisfaction, $R = .685$, $F(12,358) = 26.361$, $< .001$ ($\Delta R^2 = .007$, $p = .029$). Dispositional optimism ($\beta = .413$, $p < .001$) and positive affect ($\beta = .272$, $p < .001$), remained significant predictors, and job satisfaction ($\beta = .141$, $p = .029$) was also a significant predictor of life satisfaction; however, negative affect, extraversion, conscientiousness, neuroticism, openness, perceived organisational support, teaching self-efficacy, vocational outcome expectations, and work engagement were non-significant predictors. The data met the assumption of independent errors (*Durbin-Watson value* = 2.002).

**Table 4.8**

*Sequential Multiple Regression Results for Life Satisfaction (Study 1)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 1 | | | | | | | | .326 | |
| Constant | 10.710 | 1.105 | | 9.689 | .000 | 8.536 | 12.884 | | |
| Disp. Optimism | 0.963 | 0.072 | .572 | 13.400 | .000 | 0.821 | 1.104 | | |
| Step 2 | | | | | | | | .439 | .122* |
| Constant | -0.307 | 4.413 | | -0.069 | .945 | -8.985 | 8.372 | | |
| Disp. Optimism | 0.724 | 0.083 | .430 | 8.750 | .000 | 0.561 | 0.887 | | |
| Positive Affect | 0.616 | 0.093 | .363 | 6.647 | .000 | 0.434 | 0.798 | | |
| Negative Affect | -0.026 | 0.095 | -.016 | -0.274 | .785 | -0.212 | 0.160 | | |
| Extraversion | 0.070 | 0.080 | .036 | 0.870 | .385 | -0.088 | 0.228 | | |
| Conscientiousness | 0.063 | 0.095 | .027 | 0.670 | .503 | -0.123 | 0.249 | | |
| Neuroticism | 0.058 | 0.110 | .025 | 0.521 | .603 | -0.159 | 0.274 | | |
| Openness | -0.105 | 0.132 | -.032 | -0.794 | .428 | -0.364 | 0.155 | | |
| Step 3 | | | | | | | | .442 | .004 |
| Constant | -0.798 | 4.410 | | -0.181 | .857 | -9.471 | 7.875 | | |
| Disp. Optimism | 0.712 | 0.083 | .423 | 8.597 | .000 | 0.549 | 0.875 | | |
| Positive Affect | 0.582 | 0.094 | .343 | 6.164 | .000 | 0.397 | 0.768 | | |
| Negative Affect | -0.009 | 0.095 | -.005 | -0.097 | .923 | -0.196 | 0.177 | | |
| Extraversion | 0.064 | 0.080 | .033 | 0.805 | .422 | -0.093 | 0.222 | | |
| Conscientiousness | 0.058 | 0.094 | .024 | 0.613 | .540 | -0.128 | 0.243 | | |
| Neuroticism | 0.041 | 0.110 | .018 | 0.370 | .712 | -0.176 | 0.258 | | |
| Openness | -0.098 | 0.131 | -.030 | -0.745 | .457 | -0.357 | 0.161 | | |
| POS | 0.048 | 0.028 | .073 | 1.718 | .087 | -0.007 | 0.103 | | |
| Step 4 | | | | | | | | .446 | .007 |
| Constant | -2.308 | 4.502 | | -0.513 | .609 | -11.162 | 6.547 | | |
| Disp. Optimism | 0.679 | 0.085 | .404 | 8.033 | .000 | 0.513 | 0.846 | | |
| Positive Affect | 0.494 | 0.103 | .291 | 4.792 | .000 | 0.291 | 0.696 | | |
| Negative Affect | -0.028 | 0.095 | -.017 | -0.298 | .766 | -0.215 | 0.158 | | |
| Extraversion | 0.058 | 0.080 | .030 | 0.719 | .472 | -0.100 | 0.215 | | |
| Conscientiousness | 0.037 | 0.095 | .016 | 0.394 | .694 | -0.149 | 0.224 | | |
| Neuroticism | 0.043 | 0.110 | .019 | 0.387 | .699 | -0.174 | 0.259 | | |
| Openness | -0.135 | 0.133 | -.042 | -1.020 | .309 | -0.396 | 0.126 | | |
| POS | 0.034 | 0.029 | .052 | 1.200 | .231 | -0.022 | 0.090 | | |
| Teaching SE | 0.016 | 0.024 | .029 | 0.675 | .500 | -0.031 | 0.063 | | |
| VOE | 0.219 | 0.120 | .093 | 1.828 | .068 | -0.017 | 0.455 | | |

**Table 4.8 continued**

*Sequential Multiple Regression Results for Life Satisfaction (Study 1)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 5 | | | | | | | | .446 | .001 |
| Constant | -1.501 | 4.596 | | -0.327 | .744 | -10.539 | 7.537 | | |
| Disp. Optimism | 0.674 | 0.085 | .400 | 7.943 | .000 | 0.507 | 0.841 | | |
| Positive Affect | 0.525 | 0.109 | .309 | 4.811 | .000 | 0.311 | 0.740 | | |
| Negative Affect | -0.024 | 0.095 | -.014 | -0.247 | .805 | -0.211 | 0.164 | | |
| Extraversion | 0.062 | 0.080 | .032 | 0.772 | .440 | -0.096 | 0.220 | | |
| Conscientiousness | 0.046 | 0.095 | .020 | 0.486 | .627 | -0.141 | 0.234 | | |
| Neuroticism | 0.046 | 0.110 | .020 | 0.414 | .679 | -0.171 | 0.262 | | |
| Openness | -0.121 | 0.134 | -.038 | -0.909 | .364 | -0.384 | 0.141 | | |
| POS | 0.038 | 0.029 | .058 | 1.313 | .190 | -0.019 | 0.095 | | |
| Teaching SE | 0.023 | 0.025 | .041 | 0.905 | .366 | -0.027 | 0.072 | | |
| VOE | 0.236 | 0.122 | .100 | 1.945 | .053 | -0.003 | 0.476 | | |
| Work Engage | -0.030 | 0.034 | -.046 | -0.881 | .379 | -0.097 | 0.037 | | |
| Step 6 | | | | | | | | .451 | .007* |
| Constant | -0.100 | 4.616 | | -0.022 | .983 | -9.179 | 8.979 | | |
| Disp. Optimism | 0.694 | 0.085 | .413 | 8.178 | .000 | 0.527 | 0.861 | | |
| Positive Affect | 0.462 | 0.112 | .272 | 4.114 | .000 | 0.241 | 0.683 | | |
| Negative Affect | -0.025 | 0.095 | -.015 | -0.262 | .793 | -0.211 | 0.161 | | |
| Extraversion | 0.084 | 0.080 | .043 | 1.041 | .299 | -0.074 | 0.242 | | |
| Conscientiousness | 0.068 | 0.095 | .029 | 0.714 | .476 | -0.119 | 0.256 | | |
| Neuroticism | 0.054 | 0.110 | .024 | 0.488 | .626 | -0.162 | 0.269 | | |
| Openness | -0.125 | 0.133 | -.039 | -0.944 | .346 | -0.387 | 0.136 | | |
| POS | 0.023 | 0.030 | .034 | 0.767 | .444 | -0.035 | 0.081 | | |
| Teaching SE | 0.018 | 0.025 | .032 | 0.719 | .473 | -0.031 | 0.067 | | |
| VOE | 0.153 | 0.127 | .065 | 1.211 | .227 | -0.096 | 0.403 | | |
| Work Engage | -0.063 | 0.037 | -.097 | -1.698 | .090 | -0.137 | 0.010 | Durbin-Watson | |
| Job Satisfaction | 0.250 | 0.114 | .141 | 2.189 | .029 | 0.025 | 0.474 | = 2.002 | |

*Note*. *B* = unstandardised estimate; β = standardised estimate; Disp. Optimism = dispositional optimism; POS = perceived organisational support; Teaching SE = teaching self-efficacy; VOE = vocational outcome expectations; Work Engage = work engagement; CI = confidence interval; $R^2$ values were adjusted.

*$p < .05$.

***Predictors of Turnover Intention***

To investigate the predictors of teacher turnover intention, a sequential multiple regression was undertaken with turnover intention as the dependent variable (see Table 4.9). Work engagement was added at Step 1, job satisfaction was added at Step 2, and life satisfaction was added at Step 3, based on the order of influence theorised in the SCCT well-being model (Lent & Brown, 2008). The model at Step 1 accounted for 5.2% of the variance in turnover intention, $R = .234$, $F(1,369) = 21.42$, $p < .001$, and work engagement ($\beta = .234$, $p < .001$) was a significant predictor. The model at Step 2 accounted for 13.0% of the variance in turnover intention, $R = .367$, $F(2,368) = 28.721$, $p < .001$ ($\Delta R^2 = .080$, $p < .001$). Job satisfaction ($\beta = .383$, $p < .001$) was a significant predictor of turnover intention; however, work engagement was no longer a significant predictor.

At Step 3, there was no significant change in the model when life satisfaction was added ($\Delta R^2 = .000$, $p = .893$). The model at Step 3 was statistically significant and accounted for 12.8% of the variance in turnover intention, $R = .368$, $F(3,367) = 19.102$, $p < .001$. Job satisfaction ($\beta = .386$, $p < .001$) remained a significant predictor of turnover intention; however, work engagement and life satisfaction were non-significant predictors. The data met the assumption of independent errors (*Durbin-Watson value* = 2.065).

**Table 4.9**

*Sequential Multiple Regression Results for Turnover Intention (Study 1)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 1 | | | | | | | | .052 | |
| Constant | 2.128 | 0.445 | | 4.784 | .000 | 1.253 | 3.003 | | |
| Work Engage | 0.021 | 0.005 | .234 | 4.628 | .000 | 0.012 | 0.030 | | |
| Step 2 | | | | | | | | .130 | .080* |
| Constant | 2.595 | 0.434 | | 5.987 | .000 | 1.743 | 3.448 | | |
| Work Engage | -0.002 | 0.006 | -.024 | -0.371 | .711 | -0.014 | 0.010 | | |
| Job Satisfaction | 0.095 | 0.016 | .383 | 5.840 | .000 | 0.063 | 0.126 | | |
| Step 3 | | | | | | | | .128 | .000 |
| Constant | 2.606 | 0.441 | | 5.912 | .000 | 1.739 | 3.472 | | |
| Work Engage | -0.002 | 0.006 | -.024 | -0.368 | .713 | -0.014 | 0.010 | | |
| Job Satisfaction | 0.095 | 0.017 | .386 | 5.618 | .000 | 0.062 | 0.129 | Durbin-Watson | |
| Life Satisfaction | -0.001 | 0.007 | -.007 | -0.134 | .893 | -0.015 | 0.013 | = 2.065 | |

*Note*. *B* = unstandardised estimate; β = standardised estimate; Work Engage = work engagement; CI = confidence interval; $R^2$ values were adjusted.

*$p < .05$.

**Summary**

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict work engagement and show incremental increases in the prediction of work engagement was supported. Each step of the sequential multiple regression accounted for additional variance in work engagement, with the final model accounting for 45.7% of the variance in work engagement. Positive affect, agreeableness, perceived organisational support, teaching self-efficacy, and vocational outcome expectations positively predicted work engagement, and dispositional optimism was a negative predictor of work engagement in the final step of the regression model.

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict job satisfaction and would show incremental increases in the prediction of job satisfaction was supported. Each step of the sequential model accounted for additional

variance in job satisfaction, and the final model accounted for 62.3% of the variance in job satisfaction. Positive affect, perceived organisational support, vocational outcome expectations, and work engagement positively predicted job satisfaction, and dispositional optimism negatively predicted job satisfaction in the final step of the regression model; however, teaching self-efficacy was not a significant predictor of job satisfaction in the final model.

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict life satisfaction and would show incremental increases in the prediction of life satisfaction was partially supported. There were significant changes to the model at Steps 1, 2, and 6; however, there were non-significant changes to the model at Step 3, 4, and 5. The final model accounted for 45.1% of the variance in life satisfaction. Dispositional optimism, positive affect, and job satisfaction were positive predictors of life satisfaction in the final model; however, perceived organisational support, teaching self-efficacy, vocationally outcome expectations, and work engagement were non-significant predictors of life satisfaction.

The hypothesis that work engagement, job satisfaction, and life satisfaction would account for unique variance in teacher turnover intentions was partially supported. Work engagement was a significant positive predictor of turnover intention at Step 1, and job satisfaction was a significant predictor of turnover intention at Step 2. There was no change to the model at Step 3 when life satisfaction was added. The model at Step 2 accounted for 13% of the variance in turnover intention.

# CHAPTER FIVE: STUDY 2 INTERNATIONAL SAMPLE

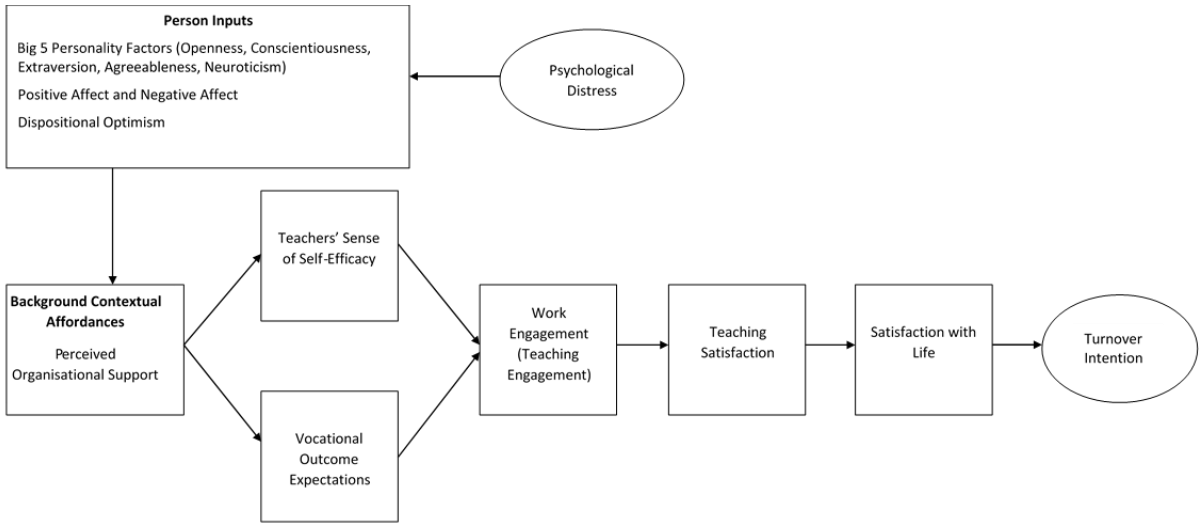
The previous chapter included the research aims, methods, and results for Study 1, which involved data collection from Australian preservice teachers enrolled in an Australian teacher education program and teachers in Australian schools, prior to the COVID-19 pandemic. This chapter presents the research aims, methods, and results for Study 2, which involved data collection during the COVID-19 pandemic from an international sample of teachers from Australia, Canada, New Zealand, Northern Ireland, the United Kingdom, and the United States of America. Study 2 was designed to investigate whether the operationalised SCCT Well-Being Model would predict teacher work engagement, job satisfaction, and life satisfaction in an international teaching sample; and secondly, to explore the relationships between work engagement, job satisfaction, and life satisfaction and teacher turnover intention in an international teaching context. A more in-depth discussion of the implications of the findings from both Study 1 and Study 2 is presented in Chapter Six.

In Chapter Two, the importance of understanding the predictors of teacher turnover intention was discussed. In previous studies, work engagement, job satisfaction, and life satisfaction have been shown to influence turnover intention within a number of professions (e.g., Amah, 2009; Wright & Bonett, 2007); however, the combined influence of these variables in teacher turnover intention is not clear. The SCCT well-being model provides a theoretical framework for investigating the predictors of work engagement, job satisfaction, and life satisfaction of teachers. According to the SCCT well-being model, personality traits and affective dispositions, environmental supports and resources, self-efficacy expectations, and outcome expectations inter-relate to influence work engagement, job satisfaction, and life satisfaction (Brown & Lent, 2019). Additionally, the SCCT well-being model proposes that work engagement influences job satisfaction, which in turn influences life satisfaction.

Domain-specific variables, informed by the SCCT well-being model (Lent & Brown, 2008), were estimated in a sample of teachers, with sequential multiple regression analyses being undertaken to investigate the predictors of work engagement, job satisfaction, and life satisfaction. An additional sequential multiple regression analysis was conducted to investigate whether work engagement, job satisfaction, and life satisfaction predicted turnover intention. The order of influence described in the SCCT well-being model informed the sequential multiple regression analyses undertaken. As the Study 2 data collection was undertaken in February 2021, during the COVID-19 pandemic and while many schools were operating remotely (UNESCO, 2021), an additional measure of psychological distress was included. This additional measure enabled analysis of the regression models after accounting for psychological distress. See Figure 5.1 for the SCCT well-being model operationalised for Study 2.

**Figure 5.1**

*The Social Cognitive Career Theory Well-Being Model Operationalised for Study 2*




Note. Psychological distress was included to account for any additional psychological distress due to the COVID-19 pandemic. Whilst the SCCT Well-Being Model does not include turnover intention, it is hypothesised that work engagement, teaching satisfaction, and satisfaction with life will account for unique variance in teacher turnover intentions.

The research hypotheses investigated in Study 2 were as follows:

1. The variables proposed in the operationalised SCCT well-being model would predict work engagement and show incremental increases in the prediction of work engagement.
2. The variables proposed in the operationalised SCCT well-being model would predict job satisfaction and show incremental increases in the prediction of job satisfaction.
3. The variables proposed in the operationalised SCCT well-being model would predict life satisfaction and show incremental increases in the prediction of life satisfaction.
4. Work engagement, job satisfaction, and life satisfaction would account for unique variance in teacher turnover intentions.

## METHOD

This section outlines the procedures for participant recruitment, the demographic information about participants, and the data collection procedures. This information is followed by a summary of the instruments used to estimate the variables of interest and the correlations between those variables.

### Participants

The participants represent a convenience sample of teachers who have previously registered with the Prolific online survey site to participate in online surveys. Participants were recruited through the Prolific using the inclusion criteria of English language proficiency, currently residing in Australia, Canada, New Zealand, Northern Ireland, the United Kingdom, or the United States of America, and an occupation code of Teacher. Participants self-selected to complete the survey after receiving an invitation via the Prolific site. A sample size of 400 participants was determined based on the funding available and for

approximate equivalence with the Study 1 sample size (i.e., $N = 376$). Survey completion for two participants did not correctly register on the Prolific site, resulting in a total of 402 completed survey responses.

Participants ages ranged from 18–75 years ($M = 37.57$, $SD = 10.86$) with participants identifying as female ($n = 290$; 72.1%), male ($n = 111$; 27.6%), and no response ($n = 1$; 0.2%). Teaching experience ranged from 0.5–40 years ($M = 10.24$, $SD = 8.23$) and participants were working full-time ($n = 289$; 71.9%), part-time ($n = 103$; 25.6%), other ($n = 6$; 1.5%), and no response ($n = 4$; 1.0%). The majority of the participants resided in the United Kingdom ($n = 320$; 79.6%) at the time of completing the survey. The country of residence frequencies for participants are provided in Table 5.1. The majority of participants had completed a Bachelor degree or a higher qualification ($n = 356$; 88.56%; see Table 5.2). Of the 402 participants, the majority were experiencing a lockdown when they completed the survey ($n = 340$; 86.3%), with the current lockdown ranging from 5–360 days ($M = 47.91$, $SD = 47.78$). The majority of participants were teaching at home when they completed the survey ($n = 257$; 65.2%). Nearly all participants indicated that they had previously been in a lockdown, excluding any current lockdown ($n = 371$; 94.2%), and the majority of the participants had previously taught from home, excluding any current lockdown, at the time of completing the survey ($n = 287$; 72.8%). For those who had experienced a previous lockdown, the previous total lockdown had ranged from 3–360 days ($M = 93.25$, $SD = 47.61$).

**Table 5.1**

*Frequency and Percentage Distribution of Survey Participants' Country of Residence*

| Country | Frequency | % |
|---|---|---|
| Australia | 10 | 2.5 |
| Canada | 12 | 3.0 |
| New Zealand | 6 | 1.5 |
| Northern Ireland | 7 | 1.7 |
| United Kingdom | 320 | 79.6 |
| United States of America | 43 | 10.7 |
| Did not indicate | 4 | 1.0 |
| Total | 402 | 100.0 |

**Table 5.2**

*Frequency and Percentage Distribution of Teachers' Highest Qualification Level*

| Qualification Level | Frequency | % |
|---|---|---|
| Certificate or Diploma | 45 | 11.2 |
| Bachelor Degree | 144 | 35.8 |
| Graduate Diploma or Graduate Certificate | 71 | 17.7 |
| Masters Degree | 108 | 26.9 |
| Doctorate | 33 | 8.2 |
| Did not indicate | 1 | 0.2 |
| Total | 402 | 100 |

**Procedure**

Data were collected via an online survey (see Appendix P) hosted on the University of Southern Queensland Lime Survey platform, with participants being recruited via the Prolific online research recruitment platform (prolific.co.uk). A participant information sheet, summarising the research aims and survey requirements, was provided to participants on the commencement page of the online survey (see Appendix C). Participants were required to provide their consent to participate by clicking a mandatory consent checkbox before proceeding to the survey questions. The survey was deployed during February 2021, and participants were paid £1.88 for completing the survey. It was anticipated that the survey would take approximately 10 minutes to complete. University Human Research Ethics Committee approval was obtained (approval number: H16REA183) before data collection commenced and the research was conducted according to the approval of the committee. Participation was voluntary and any personally identifying information was removed before analyses were undertaken. Sequential multiple regression analyses were planned to investigate whether the order of influence proposed in the SCCT well-being model predicted work engagement, job satisfaction, and life satisfaction, and to investigate whether work engagement, job satisfaction, and life satisfaction predicted turnover intention.

**Measures**

SCCT constructs were operationalised as measured variables. Table 5.3 provides a list of the measures used in Study 2 to estimate the variables for analysis. The correlations of the variables and the mean, standard deviation, and internal consistency coefficient Cronbach α for each measure are provided in Table 5.4. All scales and subscales appeared to have acceptable internal consistency with a Cronbach's alpha greater than .70, except the Openness subscale (α = .68); however, that subscale consisted of 4 items and the α level of .68 was deemed acceptable (Cronbach, 1951; Field, 2009). Skew and kurtosis values did not

exceed an absolute value of one, except Agreeableness (*Kurtosis* = 1.14) and Turnover Intention (*Skewness* = -1.1). There were no substantial correlations between predictor variables ($r < .80$), indicating no collinearity concerns (Field, 2009).

**Table 5.3**

*Study 2 Variables and their Associated Measures*

| Variable | Description | Measure |
|---|---|---|
| Openness | Openness subscale | 20-item shortened form of the International Personality Item Pool (Mini IPIP; Donnellan et al., 2006) |
| Conscientiousness | Conscientiousness subscale | |
| Extraversion | Extraversion subscale | |
| Agreeableness | Agreeableness subscale | |
| Neuroticism | Neuroticism subscale | |
| Optimism | Scale total | Life Orientation Test Revised (LOT-R; Scheier et al., 1994) |
| Positive Affect | Positive affect subscale | Scale of Positive and Negative Experience (SPANE; Diener et al., 2010) |
| Negative Affect | Negative affect subscale | |
| POS | Total of all items on scale | Perceived Organizational Support Scale – Short Form (SPOS; Eisenberger et al., 1986) |
| Self-Efficacy | Total of all items on scale | Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001) |
| VOE | Total of all items on scale | Vocational Outcome Expectations (VOE; McWhirter et al., 2000) |
| Work Engage | Total of all items on scale | Engaged Teachers Scale (ETS; Klassen et al., 2013) |
| Job Satisfaction | Total of all items on scale | Teaching Satisfaction Scale (TSS; Ho & Au, 2006) |
| Life Satisfaction | Total of all items on scale | Satisfaction with Life Scale (SWLS; Diener et al., 1985) |
| Psychol. Distress | Total of all items on scale | Kessler Psychological Distress Scale (K10; Kessler et al., 2002) |
| Turnover | Single item | In one year's time, I hope to be working in the teaching profession |

*Note.* POS = perceived organisational support; Self-Efficacy = teaching self-efficacy; VOE = vocational outcome expectations; Work Engage = work engagement; Psychol. Distress = psychological distress; Turnover = turnover intention.

**Table 5.4**

*Correlations of Measured Variables, Descriptive Statistics, and Internal Consistency Coefficient Cronbach α in Parentheses*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Agreeableness | (.79) | | | | | | | | | | | | | | | |
| 2. Conscientiousness | -.02* | (.71) | | | | | | | | | | | | | | |
| 3. Extraversion | .25 | .02* | (.83) | | | | | | | | | | | | | |
| 4. Neuroticism | .07* | -.25 | -.06* | (.76) | | | | | | | | | | | | |
| 5. Openness | .24 | .09 | .23 | -.15 | (.68) | | | | | | | | | | | |
| 6. Optimism | .09 | .22 | .15 | -.55 | .22 | (.86) | | | | | | | | | | |
| 7. Positive Affect | .18 | .24 | .18 | -.42 | .15 | .47 | (.91) | | | | | | | | | |
| 8. Negative Affect | -.05* | -.25 | -.12 | .55 | -.12 | -.49 | -.66 | (.87) | | | | | | | | |
| 9. POS | .17 | .11 | .08* | -.25 | .12 | .29 | .39 | -.38 | (.93) | | | | | | | |
| 10. Teaching SE | .23 | .14 | .15 | -.22 | .20 | .24 | .33 | -.26 | .32 | (.91) | | | | | | |
| 11. VOE | .20 | .20 | .19 | -.28 | .18 | .45 | .52 | -.38 | .42 | .50 | (.89) | | | | | |
| 12. Work Engage | .48 | .12 | .24 | -.13 | .19 | .20 | .46 | -.27 | .40 | .62 | .53 | (.93) | | | | |
| 13. Job Satisfaction | .20 | .13 | .11 | -.16 | .02* | .22 | .49 | -.33 | .48 | .42 | .57 | .56 | (.88) | | | |
| 14. Life Satisfaction | .16 | .18 | .20 | -.29 | .05* | .44 | .52 | -.40 | .36 | .26 | .48 | .37 | .54 | (.91) | | |
| 15. Psychol. Distress | .01* | -.26 | -.13 | .60 | -.11 | -.50 | -.45 | .68 | -.36 | -.25 | -.32 | -.17 | -.22 | -.33 | (.92) | |
| 16. Turnover | .12 | .03* | -.00* | -.10* | .00* | .16 | .31 | -.21 | .29 | .23 | .30 | .30 | .52 | .29 | -.14 | - |
| M | 16.32 | 14.73 | 11.46 | 11.61 | 15.09 | 13.75 | 21.26 | 15.03 | 30.55 | 84.74 | 18.87 | 92.31 | 18.06 | 23.82 | 21.59 | 3.99 |
| SD | 2.87 | 3.18 | 3.80 | 3.59 | 3.01 | 4.76 | 4.07 | 4.57 | 10.54 | 12.61 | 2.75 | 12.13 | 4.12 | 6.49 | 7.590 | 1.10 |
| Skewness | -.98 | -.35 | -.01 | -.12 | -.26 | -.33 | -.11 | .27 | -.48 | -.29 | .17 | -.65 | -.56 | .65 | -.60 | -1.1 |
| Kurtosis | 1.14 | -.38 | -.84 | -.62 | -.51 | -.45 | -.23 | -.22 | -.35 | -.10 | .01 | .33 | .27 | -.09 | -.30 | .55 |

*Note*. POS = perceived organisational support; Teaching SE = teaching self-efficacy; VOE = vocational outcome expectations; Work Engage = work engagement; Psychol. Distress = psychological distress; Turnover = turnover intention.
All correlations were significant ($p < .05$) except for those marked with * were non-significant ($p > .05$).

**Demographic Items.** In addition to the measures listed in Table 5.3, the following demographic items were included: age, gender, country of residence, teaching load (e.g., part-time or full-time), years teaching, highest qualification completed, previous lockdowns and total previous lockdown days, current lockdown and current lockdown days, and currently working from home and previously working from home.

**Personality.** Agreeableness, conscientiousness, extraversion, neuroticism, and openness were estimated using the Mini-IPIP scale. The Mini-IPIP is a 20-item shortened form of the 50-item International Personality Item Pool - Five Factor Model (IPIP-FFM) measure of personality (Donnellan et al., 2006). The Mini-IPIP has 4 items per personality factor, with 11 of the 20 items being reverse scored. Respondents are asked to rate how accurately the statement described them on a 5-point scale from 1 (*very inaccurate)* to 5 (*very accurate)*, for example, "Talk to a lot of different people at parties" which contributed to the score for extraversion (see Appendix F). Total scores for each subscale range from 4–20. Donnellan et al. (2006) found α levels between .61 and .83 for the five personality subscales across four studies. The Mini-IPIP has also shown good internal consistency in Australian teacher samples. In a study of 574 Australian teachers, Perera, Granziera, et al. (2018) found acceptable Cronbach's alpha coefficients for all sub scales of the Mini-IPIP: Openness (α = .81), Conscientiousness (α = .69), Extraversion (α = .73) Agreeableness (α = .85), and Neuroticism (α = .74).

**Positive and Negative Affect.** The Scale of Positive and Negative Experience (SPANE: Diener et al., 2010) is a 12-item scale with six items to assess positive feelings (SPANE-P), and six items to assess negative feelings (SPANE-N). Respondents were asked to indicate from 1 (*very rarely or never*) to 5 (*very often or always*) how often they had experienced the feeling, for example "Happy", and "Sad", over the last four weeks. Scores for the subscales range from 6–30, with higher scores indicating greater frequency of positive

affect (SPANE-P) and negative affect (SPANE-N). The scale measures frequency rather than intensity or source of the feeling (Silva & Caetano, 2013). The SPANE items and the scoring protocol are included in Appendix G. Diener et al. (2010) found α levels of .87 for the SPANE-P and .81 for the SPANE-N. The SPANE has shown good internal consistency in teacher samples; for example, Rahm and Heise (2019) found that the SPANE subscales demonstrated good internal consistency with a German teaching sample, SPANE-N (α = .81) and SPANE-P (α = .89).

**Dispositional Optimism.** Dispositional optimism was measured using the Life Orientation Test - Revised (LOT-R; Scheier et al., 1994). The LOT-R is a 10-item measure, which includes four filler items, and with three items being reverse coded (see Appendix H). Respondents are asked to indicate their agreement with each of the items on a 5-point scale from 0 (*strongly disagree*) to 4 (*strongly agree*). Scores can range from 0–24, with higher scores indicating higher levels of optimism. The LOT-R has a single factor structure and has been shown to have acceptable internal consistency (α = .78) and retest reliability with test-retest correlations of up to .79 over 28 months (Scheier et al., 1994). In an international study of teachers who taught English to speakers of other languages (ESOL), Sturm et al. (2012) found the LOT-R to have acceptable internal consistency (α = .73).

**Perceived Organisational Support.** Perceived organisational support was estimated using the Perceived Organizational Support Scale - Short Form (POSS), which is an 8-item short version of the Survey of Perceived Organizational Support Scale (SPOS; Eisenberger et al., 1986). The items were adapted for the teaching context by replacing the word "organization" in each item with "school/centre". Respondents indicated on a 7-point Likert scale from 0 (*strongly disagree*) to 6 (*strongly agree*) their degree of agreement with the item statements, for example "The school/centre would ignore any complaint from me" (reverse scored; see Appendix I). The POSS is a unidimensional scale with potential scores ranging

from 0–48, with higher scores indicating greater perceived organisational support. Four of the eight items are reverse coded. The scale has been shown to have good internal consistency, with estimates ranging from .89 to .94 (Eisenberger et al., 1999; Settoon et al., 1996). Longer versions of the scale have shown good internal consistency with teaching samples, for example the 22-item SPOS showed excellent internal consistency ($\alpha = .93$) in a sample of 2,565 elementary school teachers in Israel (Bogler & Nir, 2012). Furthermore, the 16-item SPOS showed excellent internal consistency ($\alpha = .91$) in a sample of 235 middle and high school teachers in Italy (Lent et al., 2011), and the 12-item SPOS demonstrated good internal consistency ($\alpha = .80$) in a sample of special education teachers in Pakistan (Bibi et al., 2019).

**Teaching Efficacy.** Teaching efficacy was measured using the 12-item short form of the Teachers' Sense of Efficacy Scale (TSES). The TSES measures the self-efficacy of both preservice and in-service teachers across three subscales: instructional strategies (IS), student engagement (SE), and classroom management (CM; Tschannen-Moran & Hoy, 2001). The IS subscale captures efficacy for developing and implementing instructional strategies (Chang & Engelhard, 2016). The SE subscale measures self-efficacy in engaging with and motivating students (Chang & Engelhard, 2016). The CM subscale describes self-efficacy in maintaining order in the classroom (Chang & Engelhard, 2016).

Respondents indicated their degree of agreement on a 9-point response scale for each item, including 1 (*nothing)*, 3 (*very little)*, 5 (*some influence)*, 7 (*quite a bit)*, and 9 (*a great deal*), for example "To what extent can you provide an alternative explanation or example when students are confused" (see Appendix J). The TSES has shown acceptable internal consistency across the three subscales with estimates ranging for IS from .76 to .80, for CM from .85 to .86, and for SE from .79 to .81 (Perera, Granziera, et al., 2018; Tschannen-Moran & Hoy, 2001). Tschannen-Moran and Hoy (2001) found that the overall total teaching efficacy score was meaningful for both preservice teachers and in-service teachers. The items

have also been shown to be invariant across teaching experience, including with teaching populations in the United States of America (Chang & Engelhard, 2016) and Canada (Klassen & Chiu, 2010; Wang et al., 2015).

**Outcome Expectations.** The Vocational Outcome Expectations (VOE) scale is a six-item scale that measures outcome expectancies for career-related behaviours (McWhirter et al., 2000). The instrument has been shown to have good internal consistency with estimates ranging from .83 to .92, and it has shown good retest reliability ($r$ = .59) over 9 weeks (McWhirter et al., 2000). Respondents are asked to indicate their degree of agreement with the items using a 4-point scale from 1 (*strongly disagree*) to 4 (*strongly agree*), for example "I have control over my career decisions". Responses are totalled to provide an overall score ranging from 6–24, with higher scores indicating more positive career outcome expectations (see Appendix K).

**Work Engagement**. Work engagement was estimated using the Engaged Teachers Scale (ETS; Klassen et al., 2013). The ETS is a 16-item measure of work engagement with four items each measuring four dimensions of work engagement: cognitive-physical engagement, emotional engagement, social engagement with colleagues, and social engagement with students. Respondents were asked to indicate how often they have felt the way stated in the item on a 7-point scale from 1 (*never)* to 7 (*always).* Example items include "While teaching, I work with intensity" (cognitive-physical engagement); "I find teaching fun" (emotional engagement); "In class, I show warmth to my students" (social engagement with students); and "At school, I connect with my colleagues" (social engagement with colleagues; see Appendix L). Total scores range from 16–112, with higher scores indicating higher levels of work engagement. The ETS has been shown to have good internal consistency in Australian teaching samples, with estimates ranging from .89 and .92 for the total score (Perera, Vosicka, et al., 2018). In their study of 574 Australian teachers, Perera,

Granziera, et al. (2018) found that the four subscales demonstrated good internal consistency: Cognitive Engagement (α = .84), Emotional Engagement (α = .91), Social Engagement with Students (α = .87), and Social Engagement with Colleagues (α = .84).

**Job Satisfaction.** Job satisfaction was estimated using the Teaching Satisfaction Scale (TSS; Ho & Au, 2006). The TSS is a 5-item, single factor, measure of job satisfaction within the teaching profession. Respondents were asked to indicate their degree of agreement with items using a 5-point scale from 1 (*strongly disagree)* to 5 (*strongly agree*), for example "I want to be a teacher". Responses are totalled to provide an overall score ranging from 5–25, with higher scores indicating greater job satisfaction (see Appendix M). The TSS has been shown to have acceptable internal consistency, with estimates ranging from .70 to .93, and acceptable retest reliability, with a test-retest correlation of .76 over two weeks (Ho & Au, 2006).

**Satisfaction with Life.** Satisfaction with life is estimated using the Satisfaction with Life Scale (SWLS; Diener et al., 1985). The SWLS is a single factor, 5-item scale that has been shown to have good internal consistency, with estimates ranging from .85 to .87 (Diener et al., 1985; Lent et al., 2012). Respondents are asked to indicate their agreement with each item on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*), for example, "If I could live my life over, I would change almost nothing" (see Appendix N). Total scores can range from 5–35, with higher scores indicating higher satisfaction with life. Rahm and Heise (2019) found that the SWLS demonstrated good internal consistency with a German teaching sample (α = .90).

**Psychological Distress.** Psychological distress was estimated using the Kessler Psychological Distress Scale (K10; Kessler et al., 2002). The K10 is a single factor, 10-item, measure of non-specific psychological distress that has been shown to have excellent internal consistency (α = .93; Kessler et al., 2002). Respondents were asked to indicate how often

they have felt a particular way in the past 30 days on a 5-point Likert scale from 1 (*all of the time*) to 5 (*none of the time*), for example "How often in the past 30 days did you feel nervous?" (see Appendix O). Total scores range from 10–50, with higher scores indicating higher psychological distress.

**Turnover Intention.** Turnover intention was estimated using the item "In one year's time, I hope to be working in the teaching profession". Respondents are asked to indicate their agreement with the item on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 1–5, with higher scores indicating lower levels of turnover intention.

## Plan for Data Analysis

Sequential multiple regression analyses were undertaken to investigate the predictors of work engagement, job satisfaction, and satisfaction with life. Sequential multiple regression was chosen as it allows the sequential addition of independent variables according to the order proposed in the theoretical framework (Tabachnick & Fidell, 2013). The SCCT well-being model (Lent & Brown, 2008) provides the theoretical order of influence for each variable. Only variables with a significant correlation with the dependent variable were included in the analyses for that dependent variable. Psychological distress was entered at Step 1 for each analysis, so that the results for subsequent steps showed significant predictors over and above the influence of psychological distress. Dispositional optimism was added at Step 2, to determine the contribution of dispositional optimism in explaining variance in the dependent variables, including any predictive ability shared with the other dispositional traits included in the research (Tabachnick & Fidell, 2013), as dispositional optimism was a dispositional trait of particular interest. Positive and negative affect, extraversion, openness, conscientiousness, agreeableness, and neuroticism were added at Step 3 to determine the unique variance in the dependent variables that was accounted for by each of the dispositional

traits included in the research. Openness was excluded from the analyses for job satisfaction and life satisfaction, as there was a non-significant correlation between openness and these dependent variables. Following the SCCT well-being model (Lent & Brown, 2008), perceived organisational support was added at Step 4, and both teaching self-efficacy and vocational outcome expectations were added at Step 5. To investigate the predictors of turnover intention, a sequential multiple regression analysis was also undertaken, with work engagement being added at Step 1, job satisfaction being added at Step 2, and life satisfaction being added at Step 3, as per the theoretical order of influence of each variable in the SCCT well-being model (Lent & Brown, 2008). All analyses were conducted using the IBM SPSS Statistics for Windows, Version 26.

# RESULTS

## Data Screening

No respondents selected the same response option for all items on any scale, and all the data were within the correct range. All survey responses were submitted within an acceptable completion time, with no respondents completing the survey in less than 4 minutes.

### *Outliers*

No univariate outliers were identified using a criterion of $z > \pm 3.29$, $p < .001$ (Tabachnick & Fidell, 2013). Multivariate outliers were identified by calculating the Mahalanobis distance statistic for each case (Tabachnick & Fidell, 2013). Eight multivariate outliers were removed from the data prior to analysis based on the squared Mahalanobis distance ($D^2$) estimate, which is central $\chi^2$ distributed with *df* equal to the number of observed variables and $p < .001$ (Tabachnick & Fidell, 2013). A total of 394 cases were retained for further analysis.

***Missing Data***

A total of 33 item responses were missing (0.08%), with the highest percentage of missing data being for the Agreeableness and Neuroticism subscales (0.25%). Maximum likelihood estimation was used to manage missing data as this method provides unbiased parameter estimates and maximises the power of analyses (Baraldi & Enders, 2010). Little's (1988) test was not statistically significant, $\chi^2(3729) = 630.60$, $p > .05$, indicating that data were missing completely at random (MCAR). MCAR suggests that the missingness of data is unrelated to any of the variables within the study and that there is no systemic explanation for the missing data. All the survey items contributing to a scale or a subscale were non-mandatory. As there was no pattern to the missing data, it was likely that respondents inadvertently missed responding to items as they progressed through the survey. Table 5.5 provides the percentage of missing data for each observed variable.

**Table 5.5**

*Percentage of Missing Data for the Observed Variables in Study 2*

| Variable | Items on Scale or Subscale | % Missing | No. Missing |
|---|---|---|---|
| Openness | 4 | 0.00 | 0 |
| Conscientiousness | 4 | 0.22 | 3 |
| Extraversion | 4 | 0.08 | 1 |
| Agreeableness | 4 | 0.25 | 4 |
| Neuroticism | 4 | 0.25 | 4 |
| Optimism | 6 | 0.08 | 2 |
| Positive Affect | 6 | 0.04 | 1 |
| Negative Affect | 6 | 0.00 | 0 |
| Perceived Organisational Support | 8 | 0.10 | 3 |
| Self-Efficacy | 12 | 0.06 | 3 |
| Vocational Outcome Expectations | 6 | 0.21 | 5 |
| Work Engagement | 16 | 0.10 | 6 |
| Job Satisfaction | 5 | 0.05 | 1 |
| Life Satisfaction | 5 | 0.00 | 0 |
| Psychological Distress | 10 | 0.00 | 0 |
| Turnover Intention | 1 | 0.00 | 0 |

*Note.* $N$ = 394; % Missing = percentage of missing data; No. Missing = total number of responses missing across all items on the scale or the subscale.

***Predictors of Work Engagement***

Sequential multiple regression was undertaken with work engagement as the dependent variable (see Table 5.6). Psychological distress was added at Step 1 to allow subsequent models to show the influence of SCCT operationalised variables after accounting for any additional psychological distress that may have resulted from the COVID-19 pandemic.

The model at Step 1 accounted for 2.6 % of the variance in work engagement, $R$ = .168, $F(1,392) = 11.454$, $p = .001$, and psychological distress (β = -.168, $p = .001$) was a significant predictor of work engagement. Dispositional optimism was added at Step 2. The model at Step 2 accounted for 4.2% of the variance in work engagement, $R = .216$, $F(2,391) = 9.609$, $p < .001$ ($\Delta R^2 = .018$, $p = .006$). At Step 2, dispositional optimism (β = .157, $p < .006$) was a significant predictor of work engagement; however, psychological distress was non-significant.

Positive affect, negative affect, agreeableness, extraversion, conscientiousness, neuroticism, and openness were added at Step 3. The model at Step 3 accounted for 37.0% of the variance in work engagement, $R = .620$, $F(9,384) = 26.592$, $p < .001$ ($\Delta R^2 = .337$, $p < .001$). At Step 3, positive affect (β = .395, $p < .001$) and agreeableness (β = .384, $p < .001$) were significant predictors; however, psychological distress, dispositional optimism, negative affect, extraversion, conscientiousness, and openness were all non-significant predictors of work engagement.

Perceived organisational support was added at Step 4. The model at Step 4 accounted for 41.3% of the variance in work engagement, $R = .654$, $F(10,383) = 28.641$, $p < .001$ ($\Delta R^2 = .044$, $p < .001$). At Step 4, positive affect (β = .347, $p < .001$), extraversion (β = .084, $p = .041$), agreeableness (β = .353, $p < .001$), and perceived organisational support (β = .237, $p < .001$) were significant predictors of work engagement; however, psychological distress,

dispositional optimism, negative affect, conscientiousness, neuroticism, and openness were non-significant.

Teaching self-efficacy and vocational outcome expectations were added at Step 5. The model at Step 5 accounted for 58.5% of the variance in work engagement, $R = .773$, $F(12,381) = 47.256$, $p < .001$ ($\Delta R^2 = .170$, $p < .001$). At Step 5, dispositional optimism (β = -.099, $p = .024$), positive affect (β = .226, $p < .001$), agreeableness (β = .289, $p < .001$), perceived organisational support (β = .126, $p = .001$), teaching self-efficacy (β = .385, $p < .001$), and vocational outcome expectations (β = .175, $p < .001$) were significant predictors of work engagement; however, psychological distress, negative affect, extraversion, conscientiousness, neuroticism, and openness were non-significant. Using the criterion of a Durbin-Watson value close to 2, and between 1 and 3 (Field, 2009), the data met the assumption of independent errors (*Durbin-Watson value* = 1.972).

**Table 5.6**

*Sequential Multiple Regression Results for Work Engagement (Study 2)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 1 | | | | | | | | .026 | |
| Constant | 98.130 | 1.821 | | 53.887 | .000 | 94.550 | 101.710 | | |
| Psychol. Distress | -0.269 | 0.080 | -.168 | -3.384 | .001 | -0.426 | -0.113 | | |
| Step 2 | | | | | | | | .042 | .018* |
| Constant | 89.924 | 3.486 | | 25.793 | .000 | 83.070 | 96.778 | | |
| Psychol. Distress | -0.144 | 0.091 | -.090 | -1.578 | .115 | -0.323 | 0.035 | | |
| Disp. Optimism | 0.400 | 0.145 | .157 | 2.752 | .006 | 0.114 | 0.685 | | |
| Step 3 | | | | | | | | .370 | .337* |
| Constant | 34.339 | 6.517 | | 5.269 | .000 | 21.526 | 47.152 | | |
| Psychol. Distress | 0.006 | 0.096 | .004 | 0.061 | .951 | -0.183 | 0.194 | | |
| Disp. Optimism | -0.101 | 0.133 | -.040 | -0.762 | .446 | -0.363 | 0.160 | | |
| Negative Affect | 0.054 | 0.175 | .021 | 0.312 | .755 | -0.289 | 0.398 | | |
| Positive Affect | 1.178 | 0.167 | .395 | 7.039 | .000 | 0.849 | 1.507 | | |
| Extraversion | 0.241 | 0.136 | .075 | 1.768 | .078 | -0.027 | 0.508 | | |
| Agreeableness | 1.625 | 0.183 | .384 | 8.864 | .000 | 1.264 | 1.985 | | |
| Conscientiousness | 0.166 | 0.161 | .044 | 1.034 | .302 | -0.150 | 0.483 | | |
| Neuroticism | -0.034 | 0.187 | -.010 | -0.183 | .855 | -0.403 | 0.334 | | |
| Openness | 0.136 | 0.173 | .034 | 0.790 | .430 | -0.203 | 0.476 | | |
| Step 4 | | | | | | | | .413 | .044* |
| Constant | 29.114 | 6.362 | | 4.576 | .000 | 16.606 | 41.623 | | |
| Psychol. Distress | 0.084 | 0.094 | .052 | 0.895 | .371 | -0.100 | 0.268 | | |
| Disp. Optimism | -0.136 | 0.129 | -.053 | -1.057 | .291 | -0.388 | 0.117 | | |
| Negative Affect | 0.114 | 0.169 | .043 | 0.675 | .500 | -0.218 | 0.446 | | |
| Positive Affect | 1.035 | 0.164 | .347 | 6.330 | .000 | 0.714 | 1.357 | | |
| Extraversion | 0.270 | 0.131 | .084 | 2.050 | .041 | 0.011 | 0.528 | | |
| Agreeableness | 1.496 | 0.178 | .353 | 8.381 | .000 | 1.145 | 1.847 | | |
| Conscientiousness | 0.181 | 0.155 | .048 | 1.168 | .243 | -0.124 | 0.487 | | |
| Neuroticism | -0.058 | 0.181 | -.017 | -0.323 | .747 | -0.414 | 0.297 | | |
| Openness | 0.113 | 0.167 | .028 | 0.676 | .499 | -0.215 | 0.441 | | |
| POS | 0.273 | 0.050 | .237 | 5.421 | .000 | 0.174 | 0.372 | | |
| Step 5 | | | | | | | | .585 | .170* |
| Constant | 5.213 | 5.670 | | 0.919 | .358 | -5.936 | 16.361 | | |
| Psychol. Distress | 0.119 | 0.079 | .074 | 1.512 | .131 | -0.036 | 0.274 | | |
| Disp. Optimism | -0.252 | 0.111 | -.099 | -2.263 | .024 | -0.471 | -0.033 | | |
| Negative Affect | 0.057 | 0.142 | .021 | 0.401 | .689 | -0.222 | 0.336 | | |
| Positive Affect | 0.675 | 0.143 | .226 | 4.722 | .000 | 0.394 | 0.956 | | |
| Extraversion | 0.187 | 0.111 | .058 | 1.684 | .093 | -0.031 | 0.404 | | |
| Agreeableness | 1.222 | 0.152 | .289 | 8.059 | .000 | 0.923 | 1.520 | | |
| Conscientiousness | 0.075 | 0.131 | .020 | 0.570 | .569 | -0.183 | 0.332 | | |
| Neuroticism | 0.006 | 0.153 | .002 | 0.041 | .967 | -0.294 | 0.306 | | |
| Openness | -0.058 | 0.141 | -.014 | -0.408 | .683 | -0.334 | 0.219 | | |
| POS | 0.145 | 0.044 | .126 | 3.309 | .001 | 0.059 | 0.231 | | |
| Teaching SE | 0.371 | 0.037 | .385 | 9.952 | .000 | 0.298 | 0.444 | Durbin-Watson | |
| VOE | 0.771 | 0.195 | .175 | 3.959 | .000 | 0.388 | 1.154 | = 1.972 | |

*Note*. *B* = unstandardised estimate; β = standardised estimate. Psychol. Distress = psychological distress; Disp. Optimism = dispositional optimism; POS = perceived organisational support; Teaching SE = teaching self-efficacy; VOE = vocational outcome expectations; CI = confidence interval; $R^2$ values were adjusted.

*$p < .01$.

***Predictors of Job Satisfaction***

Sequential multiple regression was undertaken with job satisfaction as the dependent variable (see Table 5.7). Openness was not included in the analyses, as there was a non-significant correlation between openness and job satisfaction (see Table 5.4). Psychological distress was added at Step 1 to allow subsequent models to show the influence of SCCT operationalised variables after accounting for any additional psychological distress that may result from the COVID-19 pandemic. The model at Step 1 accounted for 4.8 % of the variance in job satisfaction, $R = .224$, $F(1,392) = 20.791$, $p < .001$, and psychological distress ($\beta = -.224$, $p < .001$) was a significant predictor. Dispositional optimism was added at Step 2. The model at Step 2 accounted for 6.2% of the variance in job satisfaction, $R = .258$, $F(2,391) = 13.971$, $p < .001$, ($\Delta R^2 = .016$, $p = .009$). At Step 2, psychological distress ($\beta = -.151$, $p = .008$) remained a significant predictor, and dispositional optimism ($\beta = .148$, $p = .009$) was also a significant predictor of job satisfaction.

Positive affect, negative affect, agreeableness, extraversion, conscientiousness, and neuroticism were added at Step 3. The model at Step 3 accounted for 24.4% of the variance in work engagement, $R = .509$, $F(8,385) = 16.863$, $p < .001$ ($\Delta R^2 = .193$, $p < .001$). At Step 3, positive affect ($\beta = .459$, $p < .001$) and agreeableness ($\beta = .117$, $p = .012$) were significant predictors; however, psychological distress, dispositional optimism, extraversion, conscientiousness, and neuroticism were non-significant predictors of job satisfaction.

Perceived organisational support was added at Step 4. The model at Step 4 accounted for 34.0% of the variance in work engagement, $R = .596$, $F(9,384) = 23.514$, $p < .001$ ($\Delta R^2 = .096$, $p < .001$). At Step 4, positive affect ($\beta = .389$, $p < .001$) and perceived organisational support ($\beta = .350$, $p < .001$) were significant predictors of job satisfaction. However, psychological distress, dispositional optimism, negative affect, agreeableness, extraversion, conscientiousness, and neuroticism were non-significant predictors of job satisfaction.

Teaching self-efficacy and vocational outcome expectations were added at Step 5. The model at Step 5 accounted for 44.4% of the variance in job satisfaction, $R = .678$, $F(11,382) = 29.493$, $p < .001$ ($\Delta R^2 = .104$, $p < .001$). At Step 5, dispositional optimism ($\beta = -.113$, $p = .025$), positive affect ($\beta = .262$, $p < .001$), perceived organisational support ($\beta = .249$, $p < .001$), teaching self-efficacy ($\beta = .127$, $p = .005$), and vocational outcome expectations ($\beta = .337$, $p < .001$) were significant predictors; however, psychological distress, negative affect, extraversion, agreeableness, conscientiousness, and neuroticism were non-significant.

Work engagement was added at Step 6. The model at Step 6 accounted for 47.3% of the variance in job satisfaction, $R = .700$, $F(12,381) = 30.420$, $p < .001$ ($\Delta R^2 = .030$, $p < .001$). At Step 6, positive affect ($\beta = .200$, $p < .001$), perceived organisational support ($\beta = .215$, $p < .001$), vocational outcome expectations ($\beta = .289$, $p < .001$), and work engagement ($\beta = .273$, $p < .001$) were significant predictors; however, psychological distress, dispositional optimism, negative affect, extraversion, agreeableness, conscientiousness, neuroticism, and teaching self-efficacy were non-significant predictors of job satisfaction. The data met the assumption of independent errors (*Durbin-Watson value* = 2.006).

**Table 5.7**

*Sequential Multiple Regression Results for Job Satisfaction (Study 2)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 1 | | | | | | | | .048 | |
| Constant | 20.691 | 0.611 | | 33.879 | .000 | 19.490 | 21.892 | | |
| Psychol. Distress | -0.122 | 0.027 | -.224 | -4.560 | .000 | -0.174 | -0.069 | | |
| Step 2 | | | | | | | | .062 | .016* |
| Constant | 18.073 | 1.170 | | 15.443 | .000 | 15.772 | 20.373 | | |
| Psychol. Distress | -0.082 | 0.031 | -.151 | -2.668 | .008 | -0.142 | -0.021 | | |
| Disp. Optimism | 0.128 | 0.049 | .148 | 2.616 | .009 | 0.032 | 0.223 | | |
| Step 3 | | | | | | | | .244 | .193* |
| Constant | 5.237 | 2.349 | | 2.229 | .026 | 0.618 | 9.855 | | |
| Psychol. Distress | -0.015 | 0.036 | .028 | -0.431 | .667 | -0.085 | 0.055 | | |
| Disp. Optimism | -0.004 | 0.049 | -.005 | -0.087 | .931 | -0.101 | 0.092 | | |
| Negative Affect | -0.036 | 0.065 | -.040 | -0.560 | .576 | -0.164 | 0.091 | | |
| Positive Affect | 0.464 | 0.062 | .459 | 7.468 | .000 | 0.342 | 0.586 | | |
| Extraversion | -0.013 | 0.050 | -.012 | -0.254 | .799 | -0.111 | 0.085 | | |
| Agreeableness | 0.168 | 0.067 | .117 | 2.520 | .012 | 0.037 | 0.300 | | |
| Conscientiousness | 0.028 | 0.060 | .021 | 0.464 | .643 | -0.090 | 0.300 | | |
| Neuroticism | 0.076 | 0.069 | .066 | 1.097 | .274 | -0.060 | 0.213 | | |
| Step 4 | | | | | | | | .340 | .096* |
| Constant | 2.511 | 2.224 | | 1.129 | .260 | -1.862 | 6.884 | | |
| Psychol. Distress | 0.024 | 0.034 | .043 | 0.700 | .485 | -0.043 | 0.090 | | |
| Disp. Optimism | -0.023 | 0.046 | -.026 | -0.493 | .622 | -0.113 | 0.068 | | |
| Negative Affect | -0.007 | 0.061 | -.007 | -0.108 | .914 | -0.126 | 0.113 | | |
| Positive Affect | 0.393 | 0.059 | .389 | 6.681 | .000 | 0.277 | 0.509 | | |
| Extraversion | 0.000 | 0.047 | .000 | 0.007 | .994 | -0.091 | 0.092 | | |
| Agreeableness | 0.101 | 0.063 | .071 | 1.609 | .109 | -0.023 | 0.226 | | |
| Conscientiousness | 0.035 | 0.056 | .027 | 0.622 | .535 | -0.075 | 0.144 | | |
| Neuroticism | 0.065 | 0.065 | .057 | 1.000 | .318 | -0.063 | 0.193 | | |
| POS | 0.137 | 0.018 | .350 | 7.554 | .000 | 0.101 | 0.172 | | |

**Table 5.7 continued**

*Sequential Multiple Regression Results for Job Satisfaction (Study 2)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 5 | | | | | | | | .444 | .104* |
| Constant | -3.437 | 2.188 | | -1.571 | .117 | -7.739 | 0.865 | | |
| Psychol. Distress | 0.027 | 0.031 | .049 | 0.865 | .388 | -0.034 | 0.088 | | |
| Disp. Optimism | -0.098 | 0.044 | -.113 | -2.253 | .025 | -0.184 | -0.012 | | |
| Negative Affect | -0.022 | 0.056 | -.024 | -0.391 | .696 | -0.132 | 0.088 | | |
| Positive Affect | 0.265 | 0.056 | .262 | 4.713 | .000 | 0.154 | 0.375 | | |
| Extraversion | -0.030 | 0.043 | -.028 | -0.708 | .479 | -0.115 | 0.054 | | |
| Agreeableness | 0.040 | 0.059 | .028 | 0.682 | .496 | -0.075 | 0.155 | | |
| Conscientiousness | -0.002 | 0.051 | -.002 | -0.043 | .966 | -0.103 | 0.099 | | |
| Neuroticism | 0.060 | 0.060 | .052 | 1.003 | .316 | -0.058 | 0.178 | | |
| POS | 0.097 | 0.017 | .249 | 5.652 | .000 | 0.064 | 0.131 | | |
| Teaching SE | 0.042 | 0.015 | .127 | 2.850 | .005 | 0.013 | 0.070 | | |
| VOE | 0.504 | 0.077 | .337 | 6.582 | .000 | 0.353 | 0.654 | | |
| Step 6 | | | | | | | | .473 | .030* |
| Constant | -3.880 | 2.131 | | -1.821 | .069 | -8.070 | 0.310 | | |
| Psychol. Distress | 0.016 | 0.030 | .029 | 0.523 | .601 | -0.044 | 0.075 | | |
| Disp. Optimism | -0.074 | 0.043 | -.086 | -1.739 | .083 | -0.158 | 0.010 | | |
| Negative Affect | -0.027 | 0.054 | -.030 | -0.499 | .618 | -0.134 | 0.080 | | |
| Positive Affect | 0.202 | 0.056 | .200 | 3.591 | .000 | 0.091 | 0.312 | | |
| Extraversion | -0.047 | 0.042 | -.043 | -1.122 | .263 | -0.130 | 0.035 | | |
| Agreeableness | -0.072 | 0.062 | -.050 | -1.169 | .243 | -0.194 | 0.049 | | |
| Conscientiousness | -0.009 | 0.050 | -.007 | -0.178 | .859 | -0.107 | 0.089 | | |
| Neuroticism | 0.059 | 0.058 | .051 | 1.015 | .311 | -0.055 | 0.174 | | |
| POS | 0.084 | 0.017 | .215 | 4.936 | .000 | 0.051 | 0.117 | | |
| Teaching SE | 0.007 | 0.016 | .022 | 0.458 | .647 | -0.024 | 0.039 | | |
| VOE | 0.432 | 0.076 | .289 | 5.688 | .000 | 0.283 | 0.582 | Durbin-Watson | |
| Work Engage | 0.093 | 0.020 | .273 | 4.735 | .000 | 0.054 | 0.131 | = 2.006 | |

*Note*. *B* = unstandardised estimate; β = standardised estimate; Psychol. Distress = psychological distress; Disp. Optimism = dispositional optimism; POS = perceived organisational support; Teaching SE = teaching self-efficacy; VOE = vocational outcome expectations; Work Engage = work engagement; CI = confidence interval; $R^2$ values were adjusted.

*$p < .01$.

***Predictors of Life Satisfaction***

Sequential multiple regression was undertaken with life satisfaction as the dependent variable (see Table 5.8). Openness was not included in the analyses as there was a non-significant correlation between openness and life satisfaction (see Table 5.4). Psychological distress was added at Step 1 to allow subsequent models to show the influence of SCCT operationalised variables after accounting for any additional psychological distress that may have resulted from the COVID-19 pandemic. The model at Step 1 accounted for 10.3% of the variance in life satisfaction, $R = .325$, $F(1,392) = 46.196$, $p < .001$, and psychological distress ($\beta = -.325$, $p < .001$) was a significant predictor. Dispositional optimism was added at Step 2. The model at Step 2 accounted for 20.2% of the variance in life satisfaction, $R = .454$, $F(2,391) = 50.861$, $p < .001$ ($\Delta R^2 = .101$, $p < .001$). At Step 2, psychological distress ($\beta = -.141$, $p = .007$) remained a significant predictor, and dispositional optimism ($\beta = .367$, $p < .001$) was also a significant predictor of life satisfaction.

Positive affect, negative affect, extraversion, agreeableness, conscientiousness, and neuroticism were added at Step 3. The model at Step 3 accounted for 31.4% of life satisfaction, $R = .572$, $F(8,385) = 23.460$, $p < .001$ ($\Delta R^2 = .121$, $p < .001$). At Step 3, dispositional optimism ($\beta = .233$, $p < .001$) remained a significant predictor, and positive affect ($\beta = .348$, $p < .001$) was also a significant predictor; however, psychological distress, negative affect, extraversion, agreeableness, conscientiousness, and neuroticism were non-significant predictors of life satisfaction.

Perceived organisational support was added at Step 4. The model at Step 4 accounted for 33.0% of the variance in life satisfaction, $R = .588$, $F(9,384) = 22.523$, $p < .001$ ($\Delta R^2 = .018$, $p = .001$). At Step 4, dispositional optimism ($\beta = .223$, $p < .001$) and positive affect ($\beta = .318$, $p < .001$) remained significant predictors, and extraversion ($\beta = .088$, $p = .044$) and perceived organisation support ($\beta = .151$, $p = .001$) were also significant predictors of life

satisfaction; however, psychological distress, negative affect, agreeableness, conscientiousness, and neuroticism were non-significant predictors.

Teaching self-efficacy and vocational outcome expectations were added at Step 5. The model at Step 5 accounted for 34.9% of the variance in life satisfaction, $R = .606$, $F(11,382) = 20.167$, $p < .001$ ($\Delta R^2 = .022$, $p = .002$). At Step 5, dispositional optimism ($\beta = .174$, $p = .001$), positive affect ($\beta = .261$, $p < .001$), and perceived organisational support ($\beta = .111$, $p = .020$) remained significant predictors, and vocational outcome expectations ($\beta = .198$, $p < .001$) was also a significant predictor of life satisfaction. However, psychological distress, negative affect, extraversion, agreeableness, conscientiousness, neuroticism, and teaching self-efficacy were non-significant predictors of life satisfaction.

At Step 6, there was no significant change in the model when work engagement was added ($\Delta R^2 = .005$, $p = .076$). The model at Step 6 was statistically significant and accounted for 35.3% of the variance in life satisfaction, $R = .610$, $F(12,381) = 18.854$, $p < .001$. Dispositional optimism ($\beta = .186$, $p = .001$), positive affect ($\beta = .235$, $p < .001$), perceived organisational support ($\beta = .097$, $p = .045$), and vocational outcome expectations ($\beta = .178$, $p = .002$) remained significant predicators; however, psychological distress, negative affect, extraversion, agreeableness, conscientiousness, neuroticism, teaching self-efficacy, and work engagement were non-significant predictors of life satisfaction.

Job satisfaction was added at Step 7. The model at Step 7 accounted for 41.9% of the variance in life satisfaction, $R = .662$, $F(13,380) = 22.788$, $p < .001$ ($\Delta R^2 = .065$, $p < .001$). At Step 7, dispositional optimism ($\beta = .217$, $p < .001$) and positive affect ($\beta = .163$, $p = .006$) remained significant predictors, and extraversion ($\beta = .086$, $p = .035$) and job satisfaction ($\beta = .358$, $p < .001$) were also significant predictors; however, psychological distress, negative affect, agreeableness, conscientiousness, neuroticism, perceived organisational support, teaching self-efficacy, vocational outcome expectations, and work engagement were non-

significant. The data met the assumption of independent errors (*Durbin-Watson value* = 1.935).

**Table 5.8**

*Sequential Multiple Regression Results for Life Satisfaction (Study 2)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 1 | | | | | | | | .103 | |
| Constant | 29.813 | .934 | | 31.927 | .000 | 27.977 | 31.649 | | |
| Psychol. Distress | -0.277 | .041 | -.325 | -6.797 | .000 | -0.358 | -0.197 | | |
| Step 2 | | | | | | | | .202 | .101* |
| Constant | 19.554 | 1.700 | | 11.502 | .000 | 16.211 | 22.896 | | |
| Psychol. Distress | -0.120 | 0.044 | -.141 | -2.71 | .007 | -0.208 | -0.033 | | |
| Disp. Optimism | 0.500 | 0.071 | .367 | 7.055 | .000 | 0.36 | 0.639 | | |
| Step 3 | | | | | | | | .314 | .121* |
| Constant | 3.678 | 3.526 | | 1.043 | .298 | -3.254 | 10.611 | | |
| Psychol. Distress | -0.016 | 0.053 | -.019 | -0.296 | .768 | -0.121 | 0.089 | | |
| Disp. Optimism | 0.317 | 0.074 | .233 | 4.301 | .000 | 0.172 | 0.461 | | |
| Negative Affect | -0.056 | 0.097 | -.039 | -0.571 | .568 | -0.247 | 0.136 | | |
| Positive Affect | 0.554 | 0.093 | .348 | 5.939 | .000 | 0.371 | 0.737 | | |
| Extraversion | 0.141 | 0.075 | .083 | 1.882 | .061 | -0.006 | 0.288 | | |
| Agreeableness | 0.120 | 0.100 | .053 | 1.195 | .233 | -0.077 | 0.317 | | |
| Conscientiousness | 0.076 | 0.090 | .037 | 0.849 | .397 | -0.100 | 0.252 | | |
| Neuroticism | 0.043 | 0.104 | .024 | 0.41 | .682 | -0.162 | 0.248 | | |
| Step 4 | | | | | | | | .330 | .018* |
| Constant | 1.829 | 3.530 | | 0.518 | .605 | -5.112 | 8.770 | | |
| Psychol. Distress | 0.011 | 0.053 | .012 | 0.198 | .843 | -0.094 | 0.116 | | |
| Disp. Optimism | 0.304 | 0.073 | .223 | 4.176 | .000 | 0.161 | 0.447 | | |
| Negative Affect | -0.035 | 0.096 | -.025 | -0.367 | .713 | -0.225 | 0.154 | | |
| Positive Affect | 0.506 | 0.093 | .318 | 5.417 | .000 | 0.322 | 0.689 | | |
| Extraversion | 0.150 | 0.074 | .088 | 2.023 | .044 | 0.004 | 0.296 | | |
| Agreeableness | 0.075 | 0.100 | .033 | 0.744 | .457 | -0.122 | 0.271 | | |
| Conscientiousness | 0.081 | 0.089 | .040 | 0.912 | .362 | -0.093 | 0.255 | | |
| Neuroticism | 0.035 | 0.103 | .019 | 0.341 | .733 | -0.167 | 0.238 | | |
| POS | 0.093 | 0.029 | .151 | 3.229 | .001 | 0.036 | 0.149 | | |

**Table 5.8 continued**

*Sequential Multiple Regression Results for Life Satisfaction (Study 2)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 5 | | | | | | | | .349 | .022* |
| Constant | -0.826 | 3.728 | | -0.222 | .825 | -8.156 | 6.504 | | |
| Psychol. Distress | 0.009 | 0.053 | .010 | 0.165 | .869 | -0.095 | 0.112 | | |
| Disp. Optimism | 0.237 | 0.074 | .174 | 3.201 | .001 | 0.092 | 0.383 | | |
| Negative Affect | -0.044 | 0.095 | -.031 | -0.458 | .647 | -0.231 | 0.143 | | |
| Positive Affect | 0.415 | 0.096 | .261 | 4.342 | .000 | 0.227 | 0.603 | | |
| Extraversion | 0.131 | 0.073 | .077 | 1.793 | .074 | -0.013 | 0.276 | | |
| Agreeableness | 0.055 | 0.100 | .024 | 0.550 | .583 | -0.142 | 0.252 | | |
| Conscientiousness | 0.057 | 0.088 | .028 | 0.649 | .517 | -0.115 | 0.229 | | |
| Neuroticism | 0.016 | 0.102 | .009 | 0.156 | .876 | -0.185 | 0.216 | | |
| POS | 0.068 | 0.029 | .111 | 2.331 | .020 | 0.011 | 0.126 | | |
| Teaching SE | -0.015 | 0.025 | -.029 | -0.608 | .544 | -0.064 | 0.034 | | |
| VOE | 0.466 | 0.130 | .198 | 3.571 | .000 | 0.209 | 0.722 | | |
| Step 6 | | | | | | | | .353 | .005 |
| Constant | -1.116 | 3.721 | | -0.300 | .764 | -8.433 | 6.200 | | |
| Psychol. Distress | 0.002 | 0.053 | .002 | 0.029 | .977 | -0.102 | 0.105 | | |
| Disp. Optimism | 0.253 | 0.074 | .186 | 3.398 | .001 | 0.107 | 0.399 | | |
| Negative Affect | -0.047 | 0.095 | -.033 | -0.495 | .621 | -0.233 | 0.140 | | |
| Positive Affect | 0.374 | 0.098 | .235 | 3.812 | .000 | 0.181 | 0.567 | | |
| Extraversion | 0.120 | 0.073 | .071 | 1.643 | .101 | -0.024 | 0.265 | | |
| Agreeableness | -0.019 | 0.108 | -.008 | -0.172 | .863 | -0.231 | 0.194 | | |
| Conscientiousness | 0.052 | 0.087 | .026 | 0.600 | .549 | -0.119 | 0.224 | | |
| Neuroticism | 0.015 | 0.102 | .008 | 0.151 | .880 | -0.185 | 0.215 | | |
| POS | 0.060 | 0.030 | .097 | 2.008 | .045 | 0.001 | 0.118 | | |
| Teaching SE | -0.038 | 0.028 | -.073 | -1.350 | .178 | -0.092 | 0.017 | | |
| VOE | 0.419 | 0.133 | .178 | 3.157 | .002 | 0.158 | 0.680 | | |
| Work Engage | 0.061 | 0.034 | .114 | 1.777 | .076 | -0.006 | 0.128 | | |

**Table 5.8 continued**

*Sequential Multiple Regression Results for Life Satisfaction (Study 2)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 7 | | | | | | | | .419 | .065* |
| Constant | 1.072 | 3.542 | | 0.303 | .762 | -5.891 | 8.036 | | |
| Psychol. Distress | -0.007 | 0.050 | -.009 | -0.148 | .883 | -0.106 | 0.091 | | |
| Disp. Optimism | 0.295 | 0.071 | .217 | 4.162 | .000 | 0.156 | 0.434 | | |
| Negative Affect | -0.032 | 0.090 | -.022 | -0.353 | .725 | -0.208 | 0.145 | | |
| Positive Affect | 0.260 | 0.095 | .163 | 2.752 | .006 | 0.074 | 0.446 | | |
| Extraversion | 0.147 | 0.070 | .086 | 2.112 | .035 | 0.0100 | 0.284 | | |
| Agreeableness | 0.022 | 0.103 | .010 | 0.217 | .829 | -0.179 | 0.224 | | |
| Conscientiousness | 0.057 | 0.083 | .028 | 0.694 | .488 | -0.105 | 0.220 | | |
| Neuroticism | -0.018 | 0.097 | -.010 | -0.187 | .852 | -0.208 | 0.172 | | |
| POS | 0.012 | 0.029 | .020 | 0.423 | .673 | -0.045 | 0.069 | | |
| Teaching SE | -0.042 | 0.026 | -.081 | -1.580 | .115 | -0.094 | 0.010 | | |
| VOE | 0.175 | 0.131 | .074 | 1.336 | .182 | -0.083 | 0.433 | | |
| Work Engage | 0.008 | 0.033 | .016 | 0.253 | .800 | -0.057 | 0.074 | Durbin-Watson | |
| Job Satisfaction | 0.564 | 0.085 | .358 | 6.655 | .000 | 0.397 | 0.731 | = 1.935 | |

*Note*. *B* = unstandardised estimate; β = standardised estimate. Psychol. Distress = psychological distress; Disp. Optimism = dispositional optimism; POS = perceived organisational support; Teaching SE = teaching self-efficacy; VOE = vocational outcome expectations; Work Engage = work engagement; CI = confidence interval; $R^2$ values were adjusted.

*$p < .01$.

***Predictors of Turnover Intention***

To investigate the predictors of teacher turnover intention, a sequential multiple regression was undertaken with turnover intention as the dependent variable (see Table 5.9). Work engagement was added at Step 1. The model at Step 1 accounted for 8.7% of the variance in turnover intention, $R = .299$, $F(1,392) = 38.577$, $p < .001$, and work engagement ($\beta = .299$, $p < .001$) was a significant predictor. Job satisfaction was added at Step 2. The model at Step 2 accounted for 26.7% of the variance in turnover intention, $R = .520$, $F(2,391) = 72.549$, $p < .001$ ($\Delta R^2 = .181$, $p < .001$). At Step 2, job satisfaction ($\beta = .515$, $p < .001$) was a significant predictor of turnover intention; however, work engagement was non-significant. At Step 3, there was no significant change in the model when life satisfaction was added ($\Delta R^2 = .000$, $p = .825$). The model at Step 3 was statistically significant and accounted for 26.5% of the variance in turnover intention, $R = .520$, $F(3,390) = 48.265$, $p < .001$. At Step 3, job satisfaction ($\beta = .509$, $p < .001$) remained a significant predictor of turnover intention; however, work engagement and life satisfaction were non-significant. The data met the assumption of independent errors (*Durbin-Watson value* = 2.107).

**Table 5.9**

*Sequential Multiple Regression Results for Turnover Intention (Study 2)*

| Variable | *B* | *SE* | β | *t* | *p* | 95% CI for *B* | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | | |
| Step 1 | | | | | | | | .087 | |
| Constant | 1.494 | 0.406 | | 3.684 | .000 | 0.697 | 2.292 | | |
| Work Engagement | 0.027 | 0.004 | .299 | 6.211 | .000 | 0.018 | 0.036 | | |
| Step 2 | | | | | | | | .267 | .181* |
| Constant | 1.432 | 0.364 | | 3.937 | .000 | 0.717 | 2.146 | | |
| Work Engagement | 0.001 | 0.005 | .010 | 0.193 | .847 | -0.008 | 0.010 | | |
| Job Satisfaction | 0.137 | 0.014 | .515 | 9.852 | .000 | 0.110 | 0.164 | | |
| Step 3 | | | | | | | | .265 | .000 |
| Constant | 1.422 | 0.367 | | 3.876 | .000 | 0.700 | 2.143 | | |
| Work Engagement | 0.001 | 0.005 | .009 | 0.170 | .865 | -0.009 | 0.010 | | |
| Job Satisfaction | 0.136 | 0.015 | .509 | 8.789 | .000 | 0.105 | 0.166 | Durbin-Watson | |
| Life Satisfaction | 0.002 | 0.009 | .011 | 0.221 | .825 | -0.015 | 0.019 | = 2.107 | |

*Note*. *B* = unstandardised estimate; β = standardised estimate; CI = confidence interval; $R^2$ values were adjusted.

*$p < .05$.

**Summary**

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict work engagement and show incremental increases in the prediction of work engagement was supported. Each step of the sequential multiple regression accounted for additional variance in work engagement, with the final model accounting for 58.5% of the variance in work engagement. Positive affect, agreeableness, perceived organisational support, teaching self-efficacy, and vocational outcome expectations positively predicted work engagement, and dispositional optimism was a negative predictor of work engagement in the final step of the regression model.

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict job satisfaction and show incremental increases in the prediction of job

satisfaction was supported. Each step of the sequential model accounted for additional variance in job satisfaction, and the final model accounted for 47.3% of the variance in job satisfaction. Positive affect, perceived organisational support, vocational outcome expectations, and work engagement positively predicted job satisfaction, and dispositional optimism negatively predicted job satisfaction in the final step of the regression model; however, teaching self-efficacy was not a predictor of job satisfaction.

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict life satisfaction and show incremental increases in the prediction of life satisfaction was partially supported. There was no significant change to the model when vocational outcome expectations and work engagement were added at Step 6. The final model accounted for 41.9% of the variance in life satisfaction. Dispositional optimism, positive affect, extraversion, and job satisfaction were positive predictors of life satisfaction in the final model; however, perceived organisational support, teaching self-efficacy, and work engagement were non-significant predictors of life satisfaction.

The hypothesis that work engagement, job satisfaction, and life satisfaction would account for unique variance in teacher turnover intentions was partially supported. Work engagement was a significant positive predictor of turnover intention at Step 1. Job satisfaction was the only significant predictor of turnover intention at Step 2, and there was no change to the model when life satisfaction was added at Step 3. The model at Step 2 accounted for 26.7% of the variance in turnover intention.

# CHAPTER SIX: DISCUSSION

This final Discussion Chapter includes a summary of the research findings and an interpretation of the findings in relation to the research aims and hypotheses. The theoretical, methodological, and practical implications of the research undertaken are discussed, followed by an overview of the limitations of the research project, directions for possible future research, the significance of the current research, and, finally, some concluding comments on the research undertaken.

## Implications of the Results in Relation to the Research Hypotheses

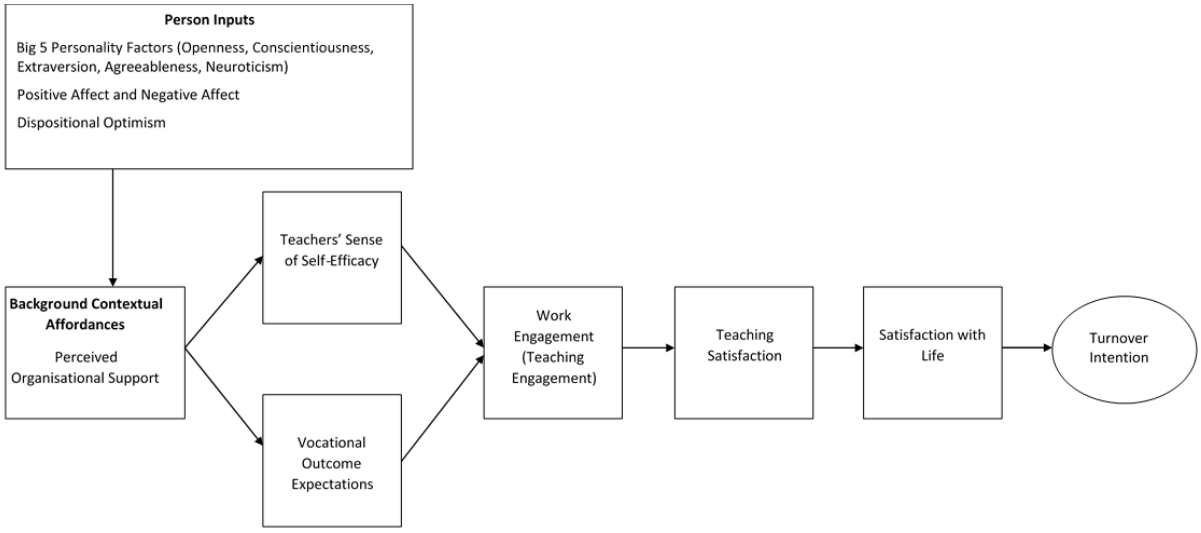
The aims of the current research were, firstly, to investigate to what extent the SCCT well-being model (depicted in Figure 6.1) was able to explain teacher work engagement, job satisfaction, and life satisfaction; and to investigate the relationships between work engagement, job satisfaction, and life satisfaction and teacher turnover intention. As such, the current research project investigated the following hypotheses:

1. The variables proposed in the operationalised SCCT well-being model would predict work engagement and show incremental increases in the prediction of work engagement.
2. The variables proposed in the operationalised SCCT well-being model would predict job satisfaction and show incremental increases in the prediction of job satisfaction.
3. The variables proposed in the operationalised SCCT well-being model would predict life satisfaction and show incremental increases in the prediction of life satisfaction.
4. Work engagement, job satisfaction, and life satisfaction would account for unique variance in teacher turnover intentions.

The SCCT well-being model was operationalised with variables relevant to the domain of the teaching profession, with surveys deployed to obtain measures of the variables specified in the operationalised SCCT model across two studies. The Study 1 sample included preservice teachers enrolled in teacher education programs at a regional Queensland university and Australian in-service teachers. Study 2 participants were in-service teachers from Australia, Canada, New Zealand, Northern Ireland, the United Kingdom, and the United States of America. Sequential multiple regression analyses were undertaken, informed by the SCCT well-being model theorised order of variables (see Figure 6.1). The results of the analyses are discussed in relation to each of these hypotheses.

**Figure 6.1**

*The Social Cognitive Career Theory Well-Being Model Operationalised for this Research*




Note. Whilst the SCCT Well-Being Model does not include turnover intention, it is hypothesised that work engagement, teaching satisfaction, and satisfaction with life will account for unique variance in teacher turnover intentions.

### *Predictors of Work Engagement*

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict work engagement and show incremental increases in the prediction of

work engagement was supported. Sequential multiple regression analyses were undertaken to investigate the predictors of work engagement in Study1 and Study 2. The independent variables were added sequentially according to the order proposed in the SCCT well-being model (Lent & Brown, 2008). In both Study 1 and Study 2, the final model in the sequential multiple regression accounted for the most variance in work engagement, accounting for 45.7% and 58.5% of the variance respectively. The results of the analyses undertaken in both Study 1 and Study 2 are discussed together in the following section, including the relationships between the variables included in the sequential multiple regression analyses and work engagement.

The SCCT theorised variables were added from Step 1 in Study 1 and from Step 2 in Study 2. Psychological distress was added at Step 1 of the Study 2 analysis to allow subsequent models to show the influence of SCCT operationalised variables after accounting for any additional psychological distress that may have resulted from the COVID-19 pandemic. The addition of psychological distress created an additional step in the Study 2 sequential multiple regression analyses compared to the Study 1 analysis.

The largest change in the predictive value for work engagement in both studies occurred when person inputs were added to the analysis in Study 1 ($\Delta R^2 = .367$, $p < .001$) and Study 2 ($\Delta R^2 = .193$, $p < .001$). There were significant increases in the predictive value of the models at each step of the sequential multiple regression analyses in both studies. The final model in both analyses accounted for the greatest variance in work engagement. Whilst models with more predictors are more likely to account for greater variance in the dependent variable, the statistically significant results suggested that the SCCT well-being model theorised variables are useful predictors of work engagement, with the final models accounting for approximately half of the variance in work engagement in these samples. Table 6.1 provides a summary of the variables that accounted for unique variance in work

engagement in the final sequential regression models for Study 1 and Study 2. The individual variables added to the models and their predictive relationships with work engagement are discussed next.

**Table 6.1**

*Variables Accounting for Unique Variance in Work Engagement in the Final Sequential Regression Model for Study 1 and Study 2*

| Variable | Study 1 | Study 2 |
|---|---|---|
| Psychological Distress [a] | — | |
| Dispositional Optimism | * | * |
| Positive Affect | * | * |
| Negative Affect | | |
| Openness [b] | — | |
| Conscientiousness | | |
| Extraversion | | |
| Agreeableness | * | * |
| Neuroticism | | |
| Perceived Organisational Support | * | * |
| Teaching Self-Efficacy | * | * |
| Vocational Outcome Expectations | * | * |

*Note.* * Indicates that the variable accounted for unique variance in work engagement; [a] Psychological distress was not measured in Study 1; [b] Openness was not included in the analysis in Study 1.

**Psychological Distress.** Psychological distress was a significant negative predictor (β = -.168, *p* = .001) of work engagement at Step 1 of the Study 2 model, and was a non-significant predictor of work engagement in subsequent models of the regression. The model at Step 1 accounted for 2.1% of the variance in work engagement. These results suggest that psychological distress was accounting for a small amount of the variance in work engagement. The K10 measure of psychological distress deployed in this research estimates the general, or non-specific, psychological distress of participants (Kessler et al., 2002), which may share characteristics with dispositional traits and account for the same variance in work engagement. The small amount of variance accounted for at Step 1 and the non-significant results in subsequent models of the regression analysis suggested that, while psychological distress is not a desirable outcome, it is unlikely to be a useful variable to target in interventions designed to increase work engagement. However, future research that investigates the potential moderation effects of psychological distress will provide additional information regarding the role of psychological distress in work engagement.

**Dispositional Optimism.** Dispositional optimism was a positive predictor of work engagement when added to the models, and was a negative predictor of work engagement in the final models of the regression analyses for Studies 1 and 2. The regression models when dispositional optimism was added in Study 1 and Study 2 accounted for a small amount of variance in work engagement (2.7% and 1.8%, respectively). Dispositional optimism was a non-significant predictor of work engagement when additional person input variables (i.e., positive affect, negative affect, conscientiousness, agreeableness, openness [Study 2], neuroticism, and extraversion) were added to the model, and when perceived organisational support was added to the model. However, at the final step of the sequential multiple regression, when teacher self-efficacy and vocational outcome expectations were added, dispositional optimism was a significant negative predictor of work engagement in both

Study 1 (β = -.098, $p$ = .048) and Study 2 (β = -.099, $p$ = .024). The initial positive relationship with work engagement and the subsequent negative relationship with work engagement in the final model suggested that dispositional optimism may have a direct positive effect, and also mediate or moderate the effects of other predictors on work engagement. For example, it is possible that individuals with higher perceived organisational support and higher levels of dispositional optimism experience lower work engagement than individuals with higher perceived organisational support and lower dispositional optimism. The latter individuals may feel supported by their organisation and desire to perform well in response to that perceived support, but do not have a high belief in positive outcomes, so they expend additional effort engaging with their work to ensure that they are successful. By contrast, teachers with high perceived organisational support and high dispositional optimism may make an assessment that less effort is required as they have all the resources they need and high expectations of a positive outcome. Future research that investigates the potential mediation and moderation effects of dispositional optimism will provide additional information regarding the effect of dispositional optimism on work engagement.

**Positive and Negative Affect.** Positive affect was a significant predictor of work engagement at each step where it was included in the sequential multiple regression analyses for both Study 1 and Study 2. The results suggested that individuals who reported greater frequency of experiencing positive emotions tend also to report higher work engagement. This result is likely to be partially due to the increased enthusiasm that individuals with higher positive affect tend to display (Watson & Slack, 1993). By contrast, negative affect was not a significant predictor of work engagement at any step where it was included in the regression analyses for Study 1 or Study 2. Whilst there was a significant negative correlation between work engagement and negative affect in Study 1 ($r$ = -.33) and Study 2 ($r$ = -.27), negative affect did not account for any unique variance in work engagement. These results

suggested that negative affect accounts for the same variance in work engagement as other variables in the model. The presence of positive affect rather than the absence of negative affect showed predictive value for work engagement. Positive affect is a potential variable of interest for interventions aimed at increasing work engagement, as it is a modifiable construct.

**Openness.** Openness was not included in the analysis for Study 1, as there was a non-significant correlation between openness and work engagement. There was a small significant correlation between openness and work engagement in Study 2 ($r$ = .19); however, openness was not a significant predictor of work engagement when it was added at Step 3, nor in any subsequent model in the regression analysis. These results are consistent with the non-signification relationship found between openness and teacher burnout by Kim et al. (2019). It is possible that being open to new experiences was a protective factor during lockdown when teachers were required to work from home and to adapt to new experiences and ways of doing things. That may explain why openness had a significant correlation with work engagement for the Study 2 sample of teachers after the pandemic was declared and not for the Study 1 sample of Australian teachers and in-service teachers prior to the pandemic. However, openness did not account for any unique variance in work engagement in the regression analysis for Study 2. These results suggested that any predictive value is shared with other variables in the model. Investigating the role of openness when teachers are required to adapt or change their work practices would provide additional information regarding the possible benefits of higher openness in times of significant change. In this research, openness did not account for any unique variance in teachers' work engagement, which suggests that openness is not a useful personality trait on which to focus in interventions aimed at increasing work engagement.

**Conscientiousness.** Conscientiousness was not a significant predictor of work engagement in the regression analysis for Study 2, and was a non-significant predictor of work engagement in the final model of the regression analysis for Study 1. In Study 1, conscientiousness was a significant predictor of work engagement at Step 2 when the person input variables (including conscientiousness) were added, and at Step 3 when perceived organisational support was added to the model. However, conscientiousness was no longer a significant predictor of work engagement at Step 4 when teaching self-efficacy and vocational outcome expectations were added to the model. The correlation between conscientiousness and work engagement was small but significant in both Study 1 ($r$ = .17) and Study 2 ($r$ = .12). In Study 1, conscientiousness became a non-significant predictor when teaching self-efficacy and vocational outcome expectations were added to the model. This result was unexpected, as individuals with higher levels of conscientiousness tend to display dutifulness, deliberation, self-discipline, and being purposeful, punctual, and reliable (Judge & Ilies, 2002), which would be expected to increase work engagement. In their meta-analysis of studies investigating teacher dispositional traits, teacher effectiveness, and burnout, Kim et al. (2019) found that conscientiousness had a positive relationship with teacher effectiveness ($r$ = .13), which is consistent with the relationships between conscientiousness and work engagement in Study 1 ($r$ = .17) and Study 2 ($r$ = .12) in this research. However, Kim et al. (2019) did not find a statistically significant effect of conscientiousness on teacher burnout. It is possible that conscientiousness mediates or moderates the effects of other variables on work engagement. For example, conscientiousness may have shared predictive variance with either, or both, of teaching self-efficacy and vocational outcome expectations in Study 1. It is also possible that conscientiousness influences the sub-domains of work engagement differentially. Future research investigating the relationships between conscientiousness and

different sub-domains of work engagement will provide additional information regarding the role of conscientiousness in promoting work engagement.

**Extraversion.** Extraversion was not a significant predictor of work engagement in the regression analysis for Study 1. In the Study 2 sequential multiple regression analysis, extraversion was a non-significant predictor when added to the model at Step 3, was a significant predictor at Step 4 when perceived organisation support was added, and was a non-significant predictor of work engagement in Step 5 when teaching self-efficacy and vocational outcome expectations were added. The correlation between extraversion and work engagement was significant in both Study 1 ($r$ = .16) and Study 2 ($r$ = .24), which is consistent with the relationship between extraversion and teacher effectiveness ($r$ = .17) found in the meta-analysis by Kim et al. (2019). These results suggested that extraversion may mediate or moderate the influence of one or more variables in the model on work engagement. Teachers with higher levels of extraversion will tend to be more sociable and talkative (Judge & Ilies, 2002), and these characteristics may affect the way that teachers access support. For example, a teacher with higher extraversion may access organisational support in a way that supports higher work engagement compared to a teacher with lower extraversion and the same organisational support. Future research investigating the mediation and moderation relationships between extraversion and other variables in the model will provide additional information regarding the influence of extraversion on work engagement.

**Agreeableness.** Agreeableness was a significant predictor of work engagement at each step where it was included in the regression analysis in both Study 1 and Study 2. In the final regression analysis, agreeableness accounted for unique variance in Study 1 ($\beta$ = .184, $p$ < .001) and Study 2 ($\beta$ = .289, $p$ < .001). Agreeable individuals tend to be well-liked, have positive relationships with others, and resolve conflict in a constructive way (Jensen-Campbell & Graziano, 2001). Teaching is a relationship-based role, which involves

interacting with students, parents, other teachers, and the wider school community (Klassen et al., 2013). Agreeableness is likely to support teacher's professional collaborations with others, foster engagement with their students, and consequently, enhance their teaching role. By contrast, teachers with lower levels of agreeableness may not value developing positive relationships with their students, and therefore may exert less effort in creating or developing positive relationships with students. Professional development and learning opportunities aimed at supporting individuals in developing behaviours associated with agreeableness may lead to greater connections with colleagues and students.

**Neuroticism.** Neuroticism was not a significant predictor of work engagement at any of the steps of the regression analyses for Study 1 or Study 2. Whilst neuroticism had a significant negative correlation with work engagement in Study 1 ($r$ = -.18) and Study 2 ($r$ = -.13), it did not explain any unique variance in work engagement. Neuroticism has shown to have a negative relationship with work engagement in other professions, for example Kim et al. (2009) found that neuroticism was negatively correlated ($r$ = -.13) with work engagement and accounted for unique variance (β = -.14, $p$ < .05) in the work engagement of retail employees in the United States of America. binti Rusbadrol et al. (2015) found that neuroticism was negatively correlated with high school teacher job performance ($r$ = -.246) and that neuroticism accounted for unique variance (β = -.335) in high school teacher job performance. Neuroticism may explain the same variance in work engagement as other variables included in the analyses in this research.

**Perceived Organisational Support.** Perceived organisational support was a significant predictor of work engagement in the final models of the regression analyses in both Studies 1 and 2. Perceived organisational support was a significant predictor when added at Step 3 in Study 1 ($\Delta R^2$ = .022) and Step 4 in Study 2 ($\Delta R^2$ = .044), and remained a significant predictor of work engagement in the final models of the regression analyses in

Study 1 (β = .105, $p$ = .014) and Study 2 (β = .126, $p$ = .001) when teaching self-efficacy and vocational outcome expectations were added to the models. Organisational support may include the provision of resources that support the role of teachers, including classroom resources, mentoring programs, professional development opportunities, and other physical resources that support teaching (Rhoades & Eisenberger, 2002). Other factors that are likely to increase perceived organisational support include having a school environment that encourages collaboration between teachers, collaborative school decision-making, and an approachable and supportive school administration (Brown & Wynn, 2009). Factors that are likely to lead to increased perceived organisational support, such as having the resources available for teaching activities, are also likely to make engaging with work easier. When individuals perceive that the school is supportive of them, they may be more willing and able to engage in their teaching responsibilities, leading to greater work engagement. These results suggest that perceived organisational support is a potential construct for interventions designed to increase work engagement. The relationship between perceived organisational support and work engagement is consistent with other literature on perceived organisational support as being predictive of greater work engagement (e.g., Geiger & Pivovarova, 2018).

**Teaching Self-Efficacy.** Teaching self-efficacy was a significant predictor of work engagement when added to the final step of the sequential multiple regression analyses for Study 1 (β = .235, $p$ < .001) and Study 2 (β = .385, $p$ < .001). These findings are consistent with previous research, for example Kim and Burić (2020) found that teaching self-efficacy at time 1 predicted disengagement at time 2 in their longitudinal study of Croatian teachers. Teachers who have higher teaching self-efficacy have higher belief in their ability to perform the duties required in their teaching roles (Bandura, 1986; 2005). A belief in their ability to perform the required tasks is likely to lead to greater engagement with the tasks (Bandura, 2005). An intervention that increases an individual's teaching self-efficacy is likely to lead to

greater work engagement. However, the interventions are likely to have long-term effects on work engagement only where there is a genuine match between the individuals' self-efficacy appraisal and their actual teaching ability. Providing teachers with relevant skill development opportunities may lead to greater appraisals of their ability to perform tasks, and to greater ability to perform the tasks, which may lead to sustained positive appraisals of their ability. The teachers' ongoing appraisal of their teaching self-efficacy will inform their continuing work engagement.

**Vocational Outcome Expectations.** Vocational outcome expectations were a significant predictor of work engagement when added to the final step of the sequential multiple regression analyses for Study 1 ($\beta = .158$, $p = .002$) and Study 2 ($\beta = .175$, $p < .001$). Vocational outcome expectations relate to the individuals' belief, or expectation, of a positive outcome resulting from their endeavours (Fouad & Guillen, 2006). Individuals are more likely to engage in behaviours or activities when they have positive outcome expectations for that activity (Fouad & Guillen, 2006). Positive vocational outcomes may include expectations of desirable outcomes such as recognition, promotion, or other career-related opportunities. The expectation of positive vocational outcomes may lead to greater engagement in activities that are likely to lead to those outcomes, resulting in greater work engagement. Teaching self-efficacy and vocational outcome expectations were added at the same step of the regression models as per the theorised order of influence in the SCCT well-being model. Whilst both variables predicted unique variance in work engagement, there are possible interaction or mediation effects between the variables that warrant further investigation.

**Summary.** The findings of the regression analyses suggested that individuals who tend to be agreeable, who experience frequent positive affect, who perceive that the school or centre is supportive of them, who believe that they have the skill and abilities required for their teaching duties, and who expect to have good vocational outcomes are likely to have

higher levels of work engagement. The results suggested several potential variables for interventions, including providing supportive school environments that foster positive affect, and interventions that provide opportunities for teachers to increase their teaching self-efficacy and vocational outcome expectations. The potential mediation effects of a number of the variables in this research warrant further investigation. Predictors of work engagement that may lend themselves to development through interventions or professional development are discussed in the practical implications section of this chapter.

### *Predictors of Job Satisfaction*

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict job satisfaction and show incremental increases in the prediction of job satisfaction was supported. Sequential multiple regression analyses were undertaken to investigate the predictors of job satisfaction in Study 1 and Study 2. The independent variables were added sequentially according to the order proposed in the SCCT well-being model (Lent & Brown, 2008). There were significant increases in the predictive value of the models at each step of the sequential multiple regression analyses in both studies. In both Study 1 and Study 2, the final model in the analyses accounted for the most variance in job satisfaction, accounting for 62.3% and 47.3% of the variance in job satisfaction in Studies 1 and Study 2 respectively.

The SCCT theorised variables were added from Step 1 in Study 1 and from Step 2 in Study 2. Psychological distress was added at Step 1 of the Study 2 analysis to allow subsequent models to show the influence of SCCT operationalised variables after accounting for any additional psychological distress that may have resulted from the COVID-19 pandemic. The addition of psychological distress created an additional step in the Study 2 sequential multiple regression analyses compared to the Study 1 analysis. The largest change in the predictive value for job satisfaction for both studies occurred when person inputs were

added to the analysis in Study 1 ($\Delta R^2 = .367$, $p < .001$) and in Study 2 ($\Delta R^2 = .193$, $p < .001$). Table 6.2 provides a summary of the variables that accounted for unique variance in job satisfaction in the final sequential regression models for Study 1 and Study 2. The relationships between the predictor variables included in the models and job satisfaction are discussed below.

**Table 6.2**

*Variables Accounting for Unique Variance in Job Satisfaction in the Final Sequential Regression Model for Study 1 and Study 2*

| Variable | Study 1 | Study 2 |
|---|---|---|
| Psychological Distress [a] | — | |
| Dispositional Optimism | * | |
| Positive Affect | * | * |
| Negative Affect | | |
| Openness [b c] | — | — |
| Conscientiousness [b] | — | |
| Extraversion [b] | — | |
| Agreeableness [b] | — | |
| Neuroticism | | |
| Perceived Organisational Support | * | * |
| Teaching Self-Efficacy | | |
| Vocational Outcome Expectations | * | * |
| Work Engagement | * | * |

*Note.* * Indicates that the variable accounted for unique variance in job satisfaction; [a] Psychological distress was not measured in Study 1; [b] Openness, conscientiousness, extraversion, and agreeableness were not included in the analysis in Study 1; [c] Openness was not included in the analysis for Study 2.

**Psychological Distress.** Psychological distress was not a significant predictor of job satisfaction in the final model of the regression analysis in Study 2. Psychological distress ($\beta = -.224$, $p < .001$) was a significant negative predictor of job satisfaction at Step 1 of the

Study 2 sequential multiple regression analysis, and remained a significant predictor (β = -.151, $p$ = .008) at Step 2 of the regression model when dispositional optimism was added, but was a non-significant predictor at subsequent steps of the model. These results suggested that psychological distress was accounting for unique variance in job satisfaction over and above the influence of dispositional optimism; however, psychological distress did not account for unique variance at Step 3 when other person inputs were added to the model. The K10 measure of psychological distress deployed in this research estimates the general, or non-specific, psychological distress of participants (Kessler et al., 2002), which may share characteristics with dispositional traits and account for the same variance in work engagement. It is also possible that positive affect and agreeableness are protective factors against the effects of psychological distress on teachers' job satisfaction. Alternatively, psychological distress, neuroticism, and negative affect may explain the same variance in job satisfaction. These inter-relationships warrant further investigation in future research.

**Dispositional Optimism.** Dispositional optimism was a positive predictor of job satisfaction when initially added to the sequential multiple regression models, but was a negative predictor of job satisfaction in the final models of the analyses for Studies 1 and 2. Dispositional optimism was a significant positive predictor of job satisfaction when added to the sequential multiple regression in both Study 1 (β = .188, $p$ < .001) and Study 2 (β = .148, $p$ = .009), and was a non-significant predictor at the subsequent steps when other person inputs were added and when perceived organisational support was added. Dispositional optimism was a significant negative predictor of job satisfaction when teaching self-efficacy and vocational outcome expectations were added to the models in both Study 1 (β = -.137, $p$ = .002) and Study 2 (β = -.113, $p$ = .025). Dispositional optimism remained a significant negative predictor (β = -.119, $p$ = .003) in the Study 1 regression when work engagement was added to the model, but was a non-significant predictor when work engagement was added to

the Study 2 model. The negative predictive relationship with job satisfaction was unexpected. It was anticipated that teachers who generally expected positive outcomes would experience greater job satisfaction. The results suggested that dispositional optimism may have a direct positive effect and may also be mediate or moderate the effects of one or more variables on job satisfaction. It is possible that the vocational domain-specific outcome expectations of vocational outcome expectations and the general dispositional expectations of dispositional optimism interact in their influence on job satisfaction. Future research investigating the relationships between these variables will provide us with valuable information about how domain-specific and global outcome expectations inter-relate in their influence on domain-specific job satisfaction.

**Positive and Negative Affect.** Positive affect was a significant predictor of job satisfaction at each step where it was included in the sequential multiple regression analyses for both Study 1 and Study 2. By contrast, negative affect was not a significant predictor of job satisfaction in the regression analyses in Study 1 or Study 2. These results suggested that teachers who report experiencing greater frequency of positive emotions tend also to report greater job satisfaction. Dreer (2021b), in a study of 457 teachers in Germany, found that positive emotions had the greatest predictive value ($\beta = .34$, $p < .001$) for job satisfaction in a regression analysis that included positive emotions, achievement, relationships, engagement, and meaning. Positive affect had a smaller effect size in this research, Study 1 ($\beta = .262$, $p < .001$), and Study 2 ($\beta = .200$, $p < .001$); however, the Dreer (2021b) study included different variables and used different measures. Whilst negative affect had a significant negative correlation with job satisfaction in Study 1 ($r = -.41$) and Study 2 ($r = -.33$), negative affect did not explain any unique variance in job satisfaction. The correlations between negative affect and job satisfaction in this research are consistent with the correlation ($r = -.28$) found in the meta-analysis of 79 studies by Thoresen et al. (2003).

The presence of positive affect, rather than the absence of negative affect, provided predictive value for job satisfaction. These results indicated that individuals who tend to experience more frequent positive affect are more likely to experience positive domain-specific job satisfaction and therefore, interventions that increase the experiences of positive affect are likely also to increase job satisfaction.

**Openness.** Openness was not included in the sequential multiple regression analyses in Study 1 or Study 2 owing to a non-significant correlation with job satisfaction. The non-significant relationship between openness and job satisfaction is consistent with previous research (Judge et al., 2002). These results suggested that being open to new experiences is not an important factor in teachers' job satisfaction.

**Conscientiousness.** Conscientiousness was not included in the analysis for Study 1, as there was a non-significant correlation between openness and job satisfaction (see Table 4.4). Conscientiousness was positively correlated ($r$ = .13) with job satisfaction in Study 2; however, conscientiousness was not a significant predictor of job satisfaction in any of the models in the sequential multiple regression analysis in Study 2. These findings were unexpected, as individuals with higher levels of conscientiousness tend to engage in more goal-directed behaviour and are more likely to achieve their goals (Gellatly, 1996). Previous studies have found a positive relationship between conscientiousness and job satisfaction, for example Judge et al. (2002) in their meta-analysis, found that job satisfaction was positively correlated with conscientiousness ($r$ = .20). However, conscientiousness may account for the same variance in job satisfaction as other personality traits, or being more dutiful, disciplined, or rule conscious may not necessarily lead to greater satisfaction.

**Extraversion.** Extraversion was not included in the regression analysis for Study 1, as there was a non-significant correlation between extraversion and job satisfaction (see Table 4.4). Extraversion was positively correlated with job satisfaction ($r$ = .11) in Study 2;

however, extraversion was not a significant predictor of job satisfaction in any of the models in the sequential multiple regression analysis in Study 2. Positive correlations between extraversion and job satisfaction have been found in previous studies. For example, Judge et al. (2002) and Thoresen et al. (2003) found that job satisfaction was positively correlated with extraversion ($r$ = .19) and ($r$ = .22), respectively. The results from this research suggested that extraversion does not account for any unique variance in job satisfaction when person inputs, such as positive affect and agreeableness, are included in the model.

**Agreeableness.** Agreeableness was not included in the regression analyses for Study 1, as there was a non-significant correlation between agreeableness and job satisfaction (see Table 4.4). Agreeableness was not a significant predictor of job satisfaction in the final model of the regression analysis for Study 2. Agreeableness was positively correlated ($r$ = .20) with job satisfaction in Study 2, and was a significant predictor of job satisfaction ($\beta$ = .117, $p$ = .012) when added at Step 3 of the model; however, agreeableness was not a significant predictor at subsequent steps of the model. Agreeableness no longer accounted for unique variance in job satisfaction when perceived organisational support was added to the model. These results suggested that agreeableness has an indirect effect on job satisfaction. Judge et al. (2002) in their meta-analysis of the relationship between personality and job satisfaction, found an overall positive relationship between agreeableness and job satisfaction ($\rho$ = .17); however, the correlations varied between studies, with findings of negative, zero, and positive correlations. One possible explanation for the results in this study may be that teachers with higher agreeableness tend to create supportive relationships with their peers and the school community, leading to greater perceived organisational support. The relationship between agreeableness and perceived organisational support may result in agreeableness and perceived organisational support accounting for the same variance in job satisfaction, with

other aspects of perceived organisational support, unrelated to agreeableness, also explaining unique variance in job satisfaction.

**Neuroticism.** Whilst neuroticism had a significant negative correlation with job satisfaction in Study 1 ($r$ = -.24) and Study 2 ($r$ = -.16), it did not explain any unique variance in job satisfaction at any step in the sequential multiple regression analyses in Study 1 or Study 2. Neuroticism may account for the same variance in job satisfaction as other personality traits.

**Perceived Organisational Support.** Perceived organisational support was a significant predictor of job satisfaction when added at Step 3 in Study 1 and at Step 4 in Study 2, and remained a significant predictor in subsequent steps of the regression analyses. In the final models of the sequential multiple regression analyses, perceived organisational support was a significant predictor of job satisfaction in both Study 1 ($\beta$ = .164, $p$ < .001) and Study 2 ($\beta$ = .215, $p$ < .001). Positive relationships between perceived organisational support and job satisfaction have been found in middle and high school teachers in Italy ($r$ = .50), special education teachers in Pakistan ($r$ = .79), and in teachers in the United States of America ($r$ = .56; Bibi et al., 2019; Duffy & Lent, 2009; Lent et al., 2011).

These results suggested that teachers who perceive that their school is supportive of them, and is concerned about their well-being, tend to experience greater job satisfaction compared to teachers who perceive that their school is not concerned about their well-being and is not supportive of them. Interventions aimed at increasing perceived organisational support are likely to lead to greater levels of job satisfaction in teachers. These interventions may involve changing how a school or a centre offers support, providing information to teachers about how the school values their contributions, or determining and addressing other gaps in support for teachers. These results suggest that schools can influence job satisfaction by providing a more supportive environment for teachers, which may include supervisory

support, fostering collegial relationships, and other methods of promoting a supportive and caring work environment. Possible interventions aimed at increasing teachers' perceived organisational support are discussed in the practical implications section of this chapter.

**Teaching Self-Efficacy.** Teaching self-efficacy was a significant predictor of job satisfaction when added to the regression analyses in Study 1 and Study 2; however, it was not a significant predictor when work engagement was added to the final models of the analyses. Wang et al. (2015) found that higher teaching self-efficacy for student engagement ($\beta = .27$, $p < .001$) and classroom management ($\beta = .18$, $p = .003$) predicted greater job satisfaction in Canadian teachers. The results from the Wang et al. study suggest that sub-domains of teaching self-efficacy differentially influence job satisfaction. Whilst positive relationships between overall teaching self-efficacy and job satisfaction were found in Study 1 ($r = .41$) and Study 2 ($r = .42$) of this research, overall teaching self-efficacy did not account for unique variance in job satisfaction. Future research investigating the relationships between specific domains of teaching self-efficacy, such as efficacy for instructional strategies and efficacy for classroom management, will provide additional information regarding the influence of teaching self-efficacy on job satisfaction.

Another possible explanation for this result is that the influence of teaching self-efficacy on job satisfaction is limited to the influence of teaching self-efficacy on work engagement. Future research investigating the mediation and moderation effects of teaching self-efficacy would provide additional information regarding the role that teaching self-efficacy plays in promoting job satisfaction.

**Vocational Outcome Expectations.** Vocational outcome expectations was a significant predictor of job satisfaction when added to the regression analyses in both Study 1 and Study 2, and remained a significant predictor in the final steps of the regression analyses in Study 1 ($\beta = .248$, $p < .001$) and Study 2 ($\beta = .289$, $p < .001$) when work engagement was

added. Teachers who expect to have good vocational outcomes tend also to have greater job satisfaction. These specific expectations for positive outcomes in the vocational domain lead to greater vocational domain-specific satisfaction, or job satisfaction. A teacher with higher vocational outcome expectations is likely to view vocational experiences in a more positive way, which may lead to higher levels of job satisfaction.

**Work Engagement.** Work engagement was a significant predictor of job satisfaction when added to the final step of the sequential multiple regression analyses for Study 1 ($\beta = .345$, $p < .001$) and Study 2 ($\beta = .273$, $p < .001$). These results suggested that teachers who are more engaged with their colleagues and students and in their teaching roles tend to have greater job satisfaction. A possible explanation for this association is that teachers who engage fully with their roles tend to be more successful in their role and find the role more rewarding, and therefore more satisfying, than teachers who show less engagement in their teaching work. The relationship between work engagement and job satisfaction suggests that interventions aimed at encouraging work engagement are likely to lead to greater job satisfaction.

The total score from the Engaged Teachers Scale (ETS; Klassen et al., 2013) was used as the measure of work engagement in the sequential multiple regression analyses. Perera, Vosicka, et al. (2018) found that general work engagement, social engagement with colleagues, social engagement with students, and emotional engagement differentially predicted job satisfaction of Australian teachers. In their study of teacher burnout, Saloviita and Pakarinen (2021) found that age, gender, and year level taught were differentially related to overall burnout, emotional exhaustion, depersonalisation, and lack of achievement. Future analyses including individuals' scores for general or global work engagement plus cognitive-physical engagement, emotional engagement, social engagement with students, and social

engagement with colleagues will provide additional information regarding the influence of work engagement on job satisfaction.

**Summary.** The findings of the sequential multiple regression analyses for Study 1 and Study 2 suggested that teachers who experience more frequent positive affect, perceive that the school or centre is supportive of them, expect to have good vocational outcomes, and have higher work engagement are likely to have greater job satisfaction. This finding provides a number of potential targets for interventions aimed at increasing job satisfaction, including supporting teachers' development of career outcome expectations, and increasing or demonstrating the school's support for, and valuing of, teachers. The practical implications section of this chapter discusses possible interventions in more detail.

### *Predictors of Life Satisfaction*

The hypothesis that the variables proposed in the operationalised SCCT well-being model would predict life satisfaction and show incremental increases in the prediction of life satisfaction was partially supported. Sequential multiple regression analyses were undertaken to investigate the predictors of life satisfaction in Study 1 and Study 2. The independent variables were added sequentially according to the order proposed in the SCCT well-being model (Lent & Brown, 2008). Agreeableness was not included in the analyses in Study 1, and openness was not included in the analyses in Study 2, owing to non-significant correlations with life satisfaction (see Table 4.4 and Table 5.4). The final model in the sequential multiple regression analyses accounted for the most variance in life satisfaction in both studies, accounting for 45.1% of the variance in job satisfaction in Study 1 and 41.9% of the variance in Study 2. These results supported the hypothesis that the operationalised SCCT well-being model had utility in predicting life satisfaction. However, incremental increases in the prediction of life satisfaction at each step of the model were not observed.

The SCCT theorised variables were added from Step 1 in Study 1 and from Step 2 in Study 2. Psychological distress was added at Step 1 of the Study 2 analysis to allow subsequent models to show the influence of SCCT operationalised variables after accounting for any additional psychological distress that may have resulted from the COVID-19 pandemic. The addition of psychological distress created an additional step in the Study 2 sequential multiple regression analysis compared to the Study 1 analysis. Table 6.3 provides a summary of the variables that accounted for unique variance in life satisfaction in the final sequential regression models for Study 1 and Study 2. The relationships between the variables included in the models and life satisfaction are discussed below, including potential explanations for the non-significant changes in the model.

**Table 6.3**

*Variables Accounting for Unique Variance in Life Satisfaction in the Final Sequential Regression Model for Study 1 and Study 2*

| Variable | Study 1 | Study 2 |
|---|---|---|
| Psychological Distress [a] | — | |
| Dispositional Optimism | * | * |
| Positive Affect | * | * |
| Negative Affect | | |
| Openness [c] | | — |
| Conscientiousness | | |
| Extraversion | | * |
| Agreeableness [b] | — | |
| Neuroticism | | |
| Person Inputs | | |
| Perceived Organisational Support | | |
| Teaching Self-Efficacy | | |
| Vocational Outcome Expectations | | |
| Work Engagement | | |
| Job Satisfaction | * | * |

*Note.* * Indicates that the variable accounted for unique variance in life satisfaction; [a] Psychological distress was not measured in Study 1; [b] Agreeableness was not included in the analysis in Study 1; [c] Openness was not included in the analysis in Study 2.

**Psychological Distress.** Psychological distress was a significant predictor ($\beta = -.325$, $p < .001$) of life satisfaction at Step 1 of the Study 2 model. Psychological distress remained a

significant predictor (β = -.141, $p$ = .007) at Step 2 of the regression model when dispositional optimism was added, but was a non-significant predictor at subsequent steps of the model. Psychological distress was no longer accounting for unique variance in life satisfaction when person inputs were added to the model. The K10 measure of psychological distress deployed in this research estimates the general, or non-specific, psychological distress of participants (Kessler et al., 2002), which may share characteristics with dispositional traits added at Step 3 of the sequential regression analysis and account for the same variance in life satisfaction.

**Dispositional Optimism.** Dispositional optimism was a significant positive predictor of life satisfaction when added to the sequential multiple regression in both Study 1 (β = .572, $p$ < .001) and Study 2 (β = .367, $p$ < .001), and remained a significant positive predictor at all subsequent steps of the analyses. Dispositional optimism accounted for unique variance in life satisfaction in the final step of the regression models in Study 1 (β = .413, $p$ < .001) and Study 2 (β = .217, $p$ < .001). These results suggested that individuals who have higher levels of dispositional optimism have higher levels of life satisfaction. Individuals with higher dispositional optimism are likely to expect more positive outcomes and to view events in a more positive way, leading to more positive evaluations of life satisfaction compared to individuals with lower levels of dispositional optimism (Carver & Scheier, 2014). Dispositional optimism is also associated with other factors likely to increase life satisfaction, such as better health outcomes, longer life span, fewer depression symptoms, and less distress (Carver & Scheier, 2014; Lee et al., 2019). The positive relationship between dispositional optimism and life satisfaction remained, and dispositional optimism accounted for unique variance in life satisfaction when all variables in the model were added, suggesting that dispositional optimism would be a useful intervention point when the aim is to increase life satisfaction.

**Positive and Negative Affect.** Positive affect was a significant predictor of life satisfaction at each step where it was included in the sequential multiple regression analyses for both Study 1 and Study 2. Lent et al. (2011) also found a positive relationship ($r$ = .36) between teachers' life satisfaction and positive affect. By contrast, negative affect was not a significant predictor of job satisfaction in the regression analyses in Study 1 or Study 2. The results suggested that teachers who report experiencing greater frequency of positive emotions tend also to report greater life satisfaction. Whilst negative affect had a significant negative correlation with life satisfaction in Study 1 ($r$ = -.44) and Study 2 ($r$ = -.40), negative affect did not explain any unique variance in life satisfaction. The presence of positive affect, rather than the absence of negative affect, provided predictive value for life satisfaction. These results indicated that individuals who tend generally to experience greater positive affect are more likely to experience greater life satisfaction.

**Agreeableness.** Agreeableness was not included in the regression analyses for Study 1 as there was a non-significant correlation between agreeableness and life satisfaction (see Table 4.4). Agreeableness was not a significant predictor of life satisfaction in the regression analysis for Study 2.

**Conscientiousness.** Conscientiousness was not a significant predictor of life satisfaction in the sequential multiple regression analyses in Study 1 or Study 2.

**Extraversion.** Extraversion was not a significant predictor of life satisfaction in the sequential multiple regression analysis in Study 1. Extraversion was not a significant predictor of life satisfaction when added at Step 3 of the sequential multiple regression analysis in Study 2; however, extraversion was a significant predictor ($\beta$ = .088, $p$ = .044) at Step 4 of the model when perceived organisational support was added, and in the final model ($\beta$ = .086, $p$ = .035) of the sequential multiple regression analysis in Study 2. In their meta-analysis of the relationships between personality and well-being factors, DeNeve and Cooper

(1998) found a positive relationship between life satisfaction and extraversion ($r$ = .17), which is consistent with the relationship between extraversion and life satisfaction in Study 1 ($r$ = .17) and Study 2 ($r$ = .20) of this research. These results suggested that extraversion may mediate or moderate the effects of other variables on life satisfaction. It is possible, for example, that teachers with higher levels of extraversion access the support of colleagues in a way that supports life satisfaction, whereas teachers with the same perceived organisational support with lower extraversion may not access the support in the same way as their more extraverted colleagues. Future research investigating the mediation and moderation effects of extraversion would provide additional information about the role of extraversion in promoting life satisfaction.

**Neuroticism.** Neuroticism was not a significant predictor of job satisfaction in the regression analyses in Study 1 or Study 2. Whilst neuroticism had a significant negative correlation with job satisfaction in Study 1 ($r$ = -.24) and Study 2 ($r$ = -.16), it did not explain any unique variance in job satisfaction. DeNeve and Cooper (1998) also found a negative correlation between neuroticism and life satisfaction ($r$ = -.24) in their meta-analysis of the relationships between personality and well-being factors. These results suggested that neuroticism accounts for the same variance in life satisfaction as other variables in the regression models.

**Openness.** Openness was not a significant predictor of life satisfaction in the regression analysis for Study 1. Openness was not included in the regression analysis for Study 2 as there was a non-significant correlation between agreeableness and life satisfaction (see Table 5.4). Openness has also been found to have a weak relationship with life satisfaction in previous studies (DeNeve & Cooper, 1998).

**Perceived Organisational Support.** There was no significant change in the model when perceived organisational support was added at Step 3 of the sequential multiple

regression analysis in Study 1, and perceived organisational support was not a significant predictor of life satisfaction in any steps of the Study 1 regression analysis. Perceived organisational support was a significant predictor (β = .151, *p* = .001) when added at Step 4 in Study 2, and remained a significant predictor of life satisfaction at Step 5 (β = .111, *p* = .020) when teaching self-efficacy and vocational outcome expectations were added and Step 6 (β = .097, *p* = .045) when work engagement was added. However, perceived organisational support was not a significant predictor in the final model of the Study 2 regression analysis when job satisfaction was added. This significant result in Study 2 may indicate that teachers' perceived organisational support is a protective factor during extreme work situations, such as the COVID-19 pandemic and the requirement to teach from home. However, even during these extreme work situations, perceived organisational support did not explain any unique variance in life satisfaction once job satisfaction was added to the model. Future research examining the role of teachers' perceived organisational support during challenging work situations will provide additional information about the role of perceived organisational support and life satisfaction.

**Teaching Self-Efficacy.** Teaching self-efficacy was not a significant predictor of life satisfaction in any steps of the regression analyses in Study 1 or Study 2. In Study 1, there was no significant change in the model when teaching self-efficacy and vocational outcome expectations were added at Step 4. These results suggested that teaching self-efficacy does not account for any unique variance in life satisfaction, which is consistent with the pathways proposed in the SCCT well-being model (Lent & Brown, 2008), which predicts an indirect relationship between teaching self-efficacy and life satisfaction. It is possible that self-efficacy contributes to life satisfaction via vocational outcome expectations. Previous research (e.g., McLennan et al., 2017) found that teacher self-efficacy has a direct positive influence on vocational outcome expectations. Future research investigating the pathways

through which self-efficacy influences life satisfaction will provide additional information regarding the role of self-efficacy in promoting life satisfaction.

**Vocational Outcome Expectations.** Teachers' vocational outcome expectations were not a significant predictor of life satisfaction in any steps of the sequential multiple regression analysis in Study 1, and there was no significant change in the Study 1 regression model when teaching self-efficacy and vocational outcome expectations were added. Vocational outcome expectations was a significant predictor ($\beta = .198$, $p < .001$) of life satisfaction at Step 5 of the Study 2 regression analysis when teaching self-efficacy and vocational outcome expectations were added, and remained a significant predictor ($\beta = .178$, $p = .002$) at Step 6 when work engagement was added to the model. However, vocational outcome expectations was not a significant predictor of life satisfaction at Step 7 of the analysis in Study 2 when job satisfaction was added. The difference between the Study 1 and Study 2 results suggested that vocational outcome expectations may be a protective factor during challenging work experiences, however vocational outcome expectations did not contribute to any unique variance in life satisfaction once job satisfaction was added to the model. Research investigating the possible mediation or moderation effects of vocational outcome expectations on job satisfaction, particularly during challenging or changing work conditions, would provide additional information about the predictive value of vocational outcome expectations in relation to life satisfaction.

**Work Engagement.** Work engagement was not a significant predictor of life satisfaction in any steps of the sequential multiple regression analysis in Study 1 or Study 2. There was no significant change in the model at Step 5 of the Study 1 regression model or at Step 6 of the Study 2 regression when work engagement was added to the model. The total score from the Engaged Teachers Scale (ETS; Klassen et al., 2013) was used as the measure of work engagement in the sequential multiple regression analyses. Specific domains of work

engagement have been found to differentially influence job satisfaction, burnout, and lack of achievement (Saloviita & Pakarinen, 2021; Vosicka, et al.,2018) and may also demonstrate differential influence on life satisfaction. Future analyses including individuals' scores for general or global work engagement plus cognitive-physical engagement, emotional engagement, social engagement with students, and social engagement with colleagues will provide additional information regarding the influence of work engagement on life satisfaction.

**Job Satisfaction.** Job satisfaction was a significant predictor of life satisfaction when added at Step 6 in Study 1 (β = .141, $p$ = .029; $\Delta R^2$ = .007) and Step 7 in Study 2 (β = .358, $p$ < .001; $\Delta R^2$ = .065). If individuals are satisfied with their work, which is domain-specific, they are more likely to be satisfied with their life in general (Brown & Lent, 2016; Lent et al., 2011). Lent et al. (2011) also found a positive relationship between job satisfaction and life satisfaction ($r$ = .46) in their study of teachers in Italy. The results from this research suggested that job satisfaction had greater predictive value for life satisfaction for the Study 2 sample comparted to the Study 1 sample. Future research investigating whether job satisfaction is a greater predictor of life satisfaction during changing or challenging work conditions would provide additional information regarding the role of job satisfaction on life satisfaction.

**Summary.** In both Study 1 and Study 2, the final model in the sequential multiple regression analyses accounted for the most variance in life satisfaction, accounting for 45.1% and 41.9% of the variance in life satisfaction, respectively. It was anticipated that each step of the regression models would account for additional variance in life satisfaction. The non-significant change in $R^2$ at Steps 3, 4, and 5 in Study 1 and at Step 6 in Study 2 suggested that not all variables accounted for additional variance in life satisfaction when all other variables in the model were held constant. These results partially supported the hypothesis that the

variables proposed in the operationalised SCCT well-being model would predict life satisfaction and show incremental increases in the prediction of life satisfaction. However, in previous analyses, perceived organisational support, teaching self-efficacy, vocational outcome expectation, and work engagement all predicted significant variance in job satisfaction (see Tables 4.7 and 5.7). It is possible that perceived organisational support, teaching self-efficacy, vocational outcome expectations, and work engagement contribute only to aspects of job satisfaction that are related to life satisfaction. Alternatively, there may be mediation or moderation effects between these variables. Future research exploring the potential mediation and moderation effects would provide additional information regarding the inter-relationships between these variables.

***Predictors of Turnover Intention***

The hypothesis that work engagement, job satisfaction, and life satisfaction would account for unique variance in teacher turnover intentions was partially supported. Sequential multiple regression analyses were undertaken to investigate the predictors of teachers' turnover intention in Study 1 and Study 2. Variables were added to the models in the order of influence theorised in the SCCT well-being model, such that work engagement was added at Step 1, job satisfaction was added at Step 2, and life satisfaction was added at Step 3. The model at Step 1 accounted for 5.2% of the variance in turnover intention in Study 1 and 8.7% of the variance in Study 2. When job satisfaction was added to the analyses at Step 2, the models accounted for 13.0% ($\Delta R^2 = .080$, $p < .001$) and 26.7% ($\Delta R^2 = .181$, $p < .001$) of the variance in turnover intention in Studies 1 and 2, respectively. There was no significant change in the model when life satisfaction was added at Step 3 of the sequential multiple regression analyses in Study 1 or Study 2. Table 6.4 provides a summary of the variables that accounted for unique variance in turnover intention in the final sequential regression models for Study 1 and Study 2.

**Table 6.4**

*Variables Accounting for Unique Variance in Turnover Intention in the Final Sequential Regression Model for Study 1 and Study 2*

| Variable | Study 1 | Study 2 |
|---|---|---|
| Work Engagement | | |
| Job Satisfaction | * | * |
| Life Satisfaction | | |

*Note.* * Indicates that the variable accounted for unique variance in turnover intention

It was anticipated that job satisfaction would be a significant positive predictor of intention to remain in the profession; however, it was not anticipated that job satisfaction would be the only construct accounting for unique variance in intention to remain in the teaching profession in the final model of the analyses. A possible explanation for these results is that the contribution of work engagement to turnover intention is limited to the influence of work engagement on job satisfaction. These results also suggested that the influence of life satisfaction on turnover intention is based on the contribution of job satisfaction to life satisfaction, with other unique aspects of job satisfaction contributing to turnover intention. There may be mediating or moderating effects that were not detected in the analyses and further research investigating these relationships will provide additional clarity regarding the inter-relationships of the predictors of turnover intention. Whilst the SCCT well-being model theorises the directionality of the relationships between variables, the cross-sectional design of this research precludes causal inferences in this research. Longitudinal research investigating the order of influence would also provide additional information regarding the relationships between the predictor variables and turnover intention.

**Work Engagement and Turnover Intention.** Work engagement was a significant predictor of intention to remain in the teaching profession at Step 1 of the Study 1 (β = .234, $p < .001$) and Study 2 (β = .299, $p < .001$) models, and was a non-significant predictor in subsequent models of the sequential multiple regression analyses. The model at Step 1 accounted for 5.2% of the variance in turnover intention in Study 1 and 8.7% of the variance in Study 2. These results suggested that the influence of work engagement on turnover intention is due to the influence of work engagement on job satisfaction; however, additional research investigating the possible mediation effects of work engagement would further explain the role of work engagement in reducing teacher turnover intention. It is also possible that general or global work engagement, cognitive-physical engagement, emotional engagement, social engagement with students, and social engagement with colleagues differentially influence job satisfaction and turnover intention. Future analyses incorporating multidimensional measures of work engagement will provide additional information regarding the influence of work engagement on turnover intention.

In a multiple regression analysis including both burnout and job satisfaction, Madigan and Kim (2021) found that burnout and job satisfaction accounted for 27% of the variance in the turnover intention of teachers. The measured domains of burnout, exhaustion (β = .24), depersonalisation (β = .10), and reduced accomplishment (β = .04) were positive predictors of intention to leave the profession, and job satisfaction (β = -.25) was a negative predictor of intention to leave the profession (Madigan & Kim, 2021). In this research, work engagement was no longer a significant predictor of turnover intention once job satisfaction was added to the sequential multiple regression analyses. There is some discussion in the literature as to whether work engagement and burnout are two distinct, but related, states, or represent the extremes of a single dimension (Bakker et al., 2014). Future analyses including measures of

both work engagement and burnout are required to determine if these variables influence teachers' turnover intention as a single construct.

**Job Satisfaction and Turnover Intention.** Job satisfaction was a statistically significant predictor of intention to remain in the teaching profession, over and above the influence of work engagement and life satisfaction. At Step 2 of the regression analyses, job satisfaction was a significant predictor in both Study 1 (β = .383, $p < .001$) and Study 2 (β = .515, $p < .001$). When job satisfaction was added to the analyses at Step 2, the models accounted for 13.0% ($\Delta R^2 = .080$, $p < .001$) and 26.7% ($\Delta R^2 = .181$, $p < .001$) of the variance in turnover intention in Studies 1 and 2, respectively. Whilst there was no significant change in the models when life satisfaction was added at Step 3, job satisfaction remained a significant positive predictor of intention to remain in the teaching profession at Step 3 of the sequential multiple regression analyses in both Study 1 (β = .386, $p < .001$) and Study 2 (β = .509, $p < .001$). Previous studies have also found that teachers with higher levels of job satisfaction are more likely to indicate intention to remain in the profession (Conley & You, 2009; Madigan & Kim, 2021). In their international meta-analysis of teacher job satisfaction and intention to leave the profession, Madigan & Kim (2021) found that job satisfaction was negatively correlated with the intention to leave the teaching profession ($r = -.40$). Conly and You (2009) found similar results, with job satisfaction of teachers in the United States of America negatively correlated ($r = -.43$) with intention to leave the profession.

**Life Satisfaction and Turnover Intention.** Life satisfaction did not account for any additional variance in turnover intention when added to the Study 1 and Study 2 models at Step 3. It was anticipated that life satisfaction would account for a small amount of unique variance in intention to remain in the profession. Amah (2009) found that life satisfaction moderated the effect of job satisfaction on turnover intention in bank employees. They found that employees with lower life satisfaction were more likely to indicate turnover intention

even with high levels of job satisfaction (Amah, 2009). Research investigating the mediation or moderation effects between job satisfaction and life satisfaction would provide additional information about the role of life satisfaction in promoting intention to remain in the teaching profession.

**Summary.** These findings partially supported the hypothesis that work engagement, job satisfaction, and life satisfaction would account for unique variance in teacher turnover intentions, with only job satisfaction accounting for unique variance in turnover intentions. The model at Step 2 of the regression analyses in Study 1 and Study 2 accounted for 13.0% and 26.7% of the variance in turnover intention, respectively. Clearly, other factors are contributing to turnover intention in teachers in addition to job satisfaction. Whilst job satisfaction is a useful construct to target in interventions aimed at increasing teachers' intention to remain in the profession, future research investigating other factors influencing retention intention may provide a greater explanation for turnover intention. Rajendran et al. (2020) found that work-family conflict predicted emotional exhaustion, which predicted turnover intention in Australian teachers. These results suggested that the interaction between the work domain and other domains will influence a teacher's intention to remain in the profession.

Approximately half of the Study 1 sample consisted of preservice teachers, leading to a sample of more inexperienced teachers when compared with the Study 2 sample. The difference in the predictive ability of job satisfaction in relation to turnover intention in Study 1 compared to Study 2 may be partially attributed to the difference in teaching experience in the two studies. Future research investigating the role of teaching experience on the relationships between job satisfaction and turnover intention will clarify the inter-relationships between these variables.

## Theoretical Implications

The SCCT well-being model provided a useful, testable framework for investigating the predictors of teachers' work engagement, job satisfaction, life satisfaction, and turnover intention. The constructs could be contextualised for the teaching domain, based on existing research, to provide a nuanced framework operationalised for the specific study. The model provided a theorised order of influence for the variables being investigated that informed the sequential multiple regression analyses undertaken. The sequential multiple regression analyses, informed by the SCCT well-being model, resulted in models that accounted for 45.7% and 58.5% of the variance in work engagement, 62.3% and 47.3% of the variance in job satisfaction, and 45.1% and 41.9% of the variance in life satisfaction in Studies 1 and 2, respectively. These results supported the applicability of the SCCT well-being model for the teaching profession in predicting the criterion variables investigated. However, not all variable relationships predicted by the SCCT well-being model were found in this research. In the following sections, the utility of the SCCT well-being model in predicting work engagement, job satisfaction, and life satisfaction is discussed.

### *Work Engagement*

According to the SCCT well-being model, perceived organisational support, self-efficacy, and outcome expectations directly influence work engagement, and person inputs indirectly influence work engagement via perceived organisational support and self-efficacy (Lent & Brown, 2008). The direct influence of perceived organisational support, teaching self-efficacy, and vocational outcome expectations was supported in the results, with each variable accounting for unique variance in work engagement in the final models of the sequential multiple regression analyses.

A number of direct and indirect effects of person inputs on work engagement were suggested in the results of the sequential multiple regression analyses in this research.

Positive affect and agreeableness were positive predictors of work engagement when added to the models and accounted for unique variance in work engagement in the final models of the sequential multiple regression analyses in both Study 1 and Study 2. These results suggested that positive affect and agreeableness influence work engagement, above and beyond the influence of perceived organisational support and self-efficacy, which is inconsistent with the pathways proposed in the SCCT well-being model (Lent & Brown, 2008). Agreeable teachers are likely to have more positive relationships with others and resolve conflict in a constructive way (Alarcon et al., 2009; Jensen-Campbell & Graziano, 2001). Teaching is a relationships-based role, and teachers who are more agreeable and have more positive relationships are likely to show positive work engagement with students and colleagues (Klassen et al., 2013). It should be noted that the influence of positive affect and agreeableness on work engagement may be due to the influence of positive affect and agreeableness on aspects of perceived organisational support and self-efficacy that were not measured by the instruments deployed in this research.

Dispositional optimism was a positive predictor of work engagement when added to the sequential multiple regression analyses; however, in the final models of the analyses, dispositional optimism was a negative predictor of work engagement. These results suggested that dispositional optimism was indirectly influencing work engagement via other variables in the model, and suggested possible interaction effects of dispositional optimism, which is consistent with the order of influence proposed in the SCCT well-being model (Lent & Brown, 2008).

Conscientiousness was a positive predictor of work engagement when added to the model in Study 1, but did not account for any unique variance in work engagement in the final model. These results suggested that conscientiousness has an indirect effect on work

engagement via other variables in the analyses in Study 1, which is consistent with the order of influence proposed in the SCCT well-being model (Lent & Brown, 2008).

The final models for Study 1 and Study 2 accounted for 45.7% and 58.5% of the variance in work engagement, respectively suggesting that the variables proposed in the SCCT well-being model have utility in predicting work engagement. The direct influence of organisational support, self-efficacy, and outcome expectations on work engagement, as proposed in the SCCT well-being model (Lent & Brown, 2008), was supported by the results of this research. The indirect influence of person inputs (dispositional optimism and conscientiousness) on work engagement proposed in the SCCT model (Lent & Brown, 2008) was also supported. The results also suggested a direct influence of person inputs (positive affect and agreeableness) on work engagement. Whilst the direct effect of person inputs is not theorised in the SCCT well-being model, there are theoretical reasons to suggest a direct effect of person inputs on work engagement (Langelaan et al., 2006). Individuals with higher levels of dispositional positive affect experience more frequent positive emotions and tend to display more enthusiasm (Watson & Slack, 1993), which may lead to greater teaching vigour or energy, which is a component of work engagement (Bakker & Bal, 2010). An agreeable teacher will tend to have more positive social interactions and relationships (Alarcon et al., 2009), and social engagement with students and colleagues is an important aspect of teaching work engagement (Klassen et al., 2013).

***Job Satisfaction***

According to the SCCT well-being model, person inputs, perceived organisational support, self-efficacy, outcome expectations, and work engagement directly influence job satisfaction, and person inputs, perceived organisational support, self-efficacy, and vocational outcome expectations indirectly influence job satisfaction (Lent & Brown, 2008). The direct influence of person inputs (positive affect), perceived organisational support, vocational

outcome expectations, and work engagement was supported in the results, with each variable accounting for unique variance in job satisfaction in the final models of the sequential multiple regression analyses.

Teaching self-efficacy did not account for unique variance in job satisfaction in the final models of the sequential multiple regression analyses in Studies 1 or 2. These results were inconsistent with the direct effect of self-efficacy on job satisfaction posited in the SCCT well-being model (Lent & Brown, 2008), and suggested that teaching self-efficacy indirectly influences job satisfaction. These results were consistent with the findings from the Lent et al. (2011) study of Italian teachers. They found a non-significant direct path from self-efficacy to job satisfaction, and a significant indirect path from self-efficacy to job satisfaction via perceived organisational support. By contrast, Duffy and Lent (2009) found a significant direct path from self-efficacy to job satisfaction in their study of teachers in North Carolina. The model in the Lent et al. (2011) study accounted for 41% of the variance in job satisfaction, compared to the 62.3% and 47.3% variance in job satisfaction accounted for in Studies 1 and 2, respectively in this research, and the 75% of variance in job satisfaction accounted for by Duffy and Lent (2009). A number of different measures were utilised across the research projects, and there may be cultural differences among the Australian and international samples in this study, the American teaching sample in Duffy and Lent's study, and the Italian teaching sample in Lent et al.'s study. Wang et al. (2015), in their study of Canadian teachers, found that higher teaching self-efficacy for student engagement and classroom management predicted greater job satisfaction, and Perera et al. (2019) found that teachers did not have equal teaching self-efficacy for all teaching tasks. These findings suggested that aspects of teaching self-efficacy differentially influence job satisfaction. An overall measure of teaching self-efficacy was used in this research; more task specific measures of teaching self-efficacy may have demonstrated direct effects on teachers' job

satisfaction. Future research investigating the role of self-efficacy in different teaching tasks and activities may provide additional information regarding the influence of teaching self-efficacy on job satisfaction.

Indirect effects of person inputs on job satisfaction were suggested in the results for dispositional optimism and agreeableness in this research. Dispositional optimism was a positive predictor of job satisfaction when added to the sequential multiple regression analyses; however, in the final models of the Study 1 and 2 analyses, dispositional optimism was a negative predictor of job satisfaction. These results suggested that dispositional optimism was indirectly influencing job satisfaction via other variables in the model, and suggested possible interaction effects of dispositional optimism, which is consistent with the order of influence proposed in the SCCT well-being model (Lent & Brown, 2008). Agreeableness was not a predictor of job satisfaction in Study 1; however, agreeableness was a significant predictor of job satisfaction when added to the sequential multiple regression analysis in Study 2, but did not account for any unique variance in job satisfaction in the final model of the analysis. These results suggested that agreeableness was indirectly influencing job satisfaction via other variables in the model for Study 2.

The final models for Study 1 and Study 2 accounted for 62.3% and 47.3% of the variance in job satisfaction respectively, suggesting that the variables proposed in the SCCT well-being model have utility in predicting job satisfaction. The direct influences of person inputs (positive affect), perceived organisational support, vocational outcome expectations, and work engagement on job satisfaction, proposed in the SCCT well-being model (Lent & Brown, 2008) were supported by the results of this research; however, teaching self-efficacy did not account for any unique variance in job satisfaction. Previous studies have found that specific aspects of teaching self-efficacy, for example self-efficacy for student engagement and self-efficacy for classroom management, differentially influence job satisfaction (Perera

et al., 2019; Wang et al., 2015). A measure of overall teaching self-efficacy was used in this research, which may explain why teaching self-efficacy did not account for any unique variance in job satisfaction in Studies 1 and 2. The indirect influence of person inputs (dispositional optimism and agreeableness) on job satisfaction, proposed in the SCCT model (Lent & Brown, 2008), was supported. The sequential multiple regression analyses undertaken in this research did not allow additional inferences to be made regarding the indirect effects of perceived organisational support, self-efficacy, and vocational outcome expectations on job satisfaction.

### *Life Satisfaction*

According to the SCCT well-being model, person inputs, work engagement, and job satisfaction directly influence life satisfaction; and person inputs, perceived organisational support, self-efficacy, and outcome expectations indirectly influence life satisfaction (Lent & Brown, 2008). Consistent with the SCCT well-being model, person inputs (dispositional optimism and positive affect) and job satisfaction accounted for unique variance in life satisfaction in the final models of the sequential multiple regression analyses in Study 1 and Study 2, suggesting a direct effect on life satisfaction.

However, work engagement was a non-significant predictor of life satisfaction when added to the sequential multiple regression models and did not account for any unique variance in life satisfaction in the final models. These results were inconsistent with the direct effect of work engagement on life satisfaction posited in the SCCT well-being model (Lent & Brown, 2008). Lent et al. (2011) found results consistent with the direct pathways posited in the SCCT well-being model in their study of Italian teachers, that is, teachers' positive affect, work engagement, and job satisfaction directly influenced their life satisfaction. Perera, Vosicka, et al. (2018) found that global work engagement, social engagement with colleagues, social engagement with students, and emotional engagement differentially

predicted teachers' job satisfaction. An overall measure of work engagement was used in this study; more dimension-specific measures of teachers' work engagement may have shown direct effects on teachers' job satisfaction.

The overall model in the Lent et al. (2011) study accounted for 24% of the variance in teachers' life satisfaction, compared to 45.1% and 41.9% of the variance in life satisfaction accounted for in Studies 1 and 2, respectively in this research. The inclusion of dispositional optimism in this research is likely to explain partially the greater variance in life satisfaction accounted for in this research. Dispositional optimism was a significant positive predictor of life satisfaction in both Study 1 ($\beta = .413$, $p < .001$) and Study 2 ($\beta = .217$, $p < .001$).

The findings of this research supported the indirect influence of person inputs, perceived organisational support, and outcome expectations on life satisfaction posited by the SCCT well-being model. The results in relation to the indirect effect of self-efficacy on life satisfaction posited by the SCCT well-being were less clear. Extraversion was not a significant predictor of life satisfaction in Study 1, and was not a significant predictor of life satisfaction when added to the Study 2 model; however, extraversion accounted for unique variance in life satisfaction in the final model of the sequential multiple regression analysis in Study 2. The Study 2 results suggested a mediating or moderating effect of extraversion.

In Study 1, perceived organisational support and vocational outcome expectations were non-significant predictors of life satisfaction when added to the sequential multiple regression models, and did not account for any unique variance in life satisfaction in the final models. In Study 2, perceived organisational support and vocational outcome expectations were positive predictors of life satisfaction when added to the model in Study 2, but did not account for any unique variance in life satisfaction in the final model of the sequential multiple regression analyses. The Study 2 results suggested indirect effects of perceived organisational support and vocational outcome expectations on life satisfaction, consistent

with the proposed indirect effects posited by the SCCT well-being model (Lent & Brown, 2008).

Self-efficacy did not account for any unique variance in life satisfaction at any steps of the sequential multiple regression models in Study 1 or Study 2 of this research. There was a non-significant change to the Study 1 model when self-efficacy and vocational outcome expectations were added, suggesting non-significant direct and indirect effects on life satisfaction. It is possible that self-efficacy had an indirect effect on life satisfaction via outcome expectations in Study 2, as the Study 2 model accounted for a statistically significant increase in the variance of life satisfaction when self-efficacy and vocational outcome expectations were added. However, the sequential multiple regression analyses undertaken in this research did not allow additional inferences to be made regarding the indirect effects of self-efficacy on life satisfaction. Lent et al. (2011) found a statistically significant indirect effect of self-efficacy on teachers' life satisfaction via perceived organisational support and work-related goal progress. Lent et al. (2011) measured work-related goal progress with a measure specifically designed for their study, which may partially explain the different results obtained in this research.

The final models for Study 1 and Study 2 accounted for 45.1% and 41.9% of the variance in life satisfaction, respectively, suggesting the variables proposed in the SCCT well-being model have utility in predicting life satisfaction. The direct influences of person inputs (dispositional optimism and positive affect) and job satisfaction on life satisfaction, proposed in the SCCT well-being model (Lent & Brown, 2008), were supported by the results of this research; however, work engagement did not account for unique variance in job satisfaction. Whilst some studies have found that overall work engagement directly influences life satisfaction (e.g., Lent et al., 2011), other research has found that specific aspects of teacher work engagement, such as engagement with students and engagement with

colleagues, differentially influenced life satisfaction (Perera Vosicka, et al., 2018). An overall measure of work engagement was used in this research, which may explain why work engagement did not account for any unique variance in life satisfaction in the final sequential regression models in Studies 1 and 2. The indirect influences of person inputs (extraversion), perceived organisational support, and outcome expectations on life satisfaction, proposed in the SCCT well-being model (Lent & Brown, 2008), were supported by the results of this research; however, the indirect effects of self-efficacy on life satisfaction proposed in the SCCT well-being model were less clear in this research.

## Methodological Implications

The measures deployed in this research displayed acceptable internal consistency, suggesting good reliability for estimating the variables in the teaching and preservice teacher populations sampled. Domain-specific measures were chosen where applicable and available to provide domain alignment with predictor and criterion variables.

The global COVID-19 pandemic halted the initial data collection with Australian in-service and preservice teachers and forced a change in the research design. The collection of data through university and school systems in Australia was no longer viable, and an alternative platform for recruiting participants was required. The following section outlines the benefits and limitations of using Prolific to recruit participants for this research and for research more broadly.

### *Prolific*

Prolific was a useful tool for recruiting participants for Study 2. Whilst the platform requires payment to participants, the value of the incentive was appropriate for the task and was not expected to unduly influence participants' decision to complete the survey. The payment also provides a direct benefit to participants who may often receive no other tangible outcomes from participating in a research project. Missing data were relatively few for Study

2 (total missing data = 0.08%) and no responses were removed owing to unengaged responding, indicating that the responses were valid. It is noted, though, that this was a convenience sample, and it was therefore difficult to determine if the teachers registered with Prolific differed from their peers in key aspects relevant to this study.

Prolific provides several benefits to participants. People can register and provide their personal details, including payment details, to a single entity rather than to each individual research team. The Prolific site brings research opportunities to participants, and clearly states the payment for appropriately completing the survey. Prolific does not share the personal identifying information about participants, but does provide demographic information (such as gender, age, country of birth, country of residence, and occupation) to researchers, linked to each participant's unique 9-character Prolific ID.

Prolific's demographic categories allow researchers to target their survey to participants who meet their inclusion and exclusion criteria, without the need to conduct pre-screening surveys. Prolific directs participants to the researchers' survey platform, allowing researchers to use their own survey software and platform at their own institution. Prolific does not have access to participants' responses, and the local hosting allows researchers to comply with ethics committee and institutional requirements that research data remain in the researchers' country and limits access to the data to the research team. There is a cost to researchers for using the platform, above the payments to participants. This cost will limit the accessibility of the service to research projects with access to funding. Where necessary, researchers can send messages to participants through the Prolific site using the participants' unique Prolific Identifier. This service was utilised during the current research to inform two participants that their survey completion would be manually updated.

The Prolific recruitment site allowed for quick access to participants, with over 400 responses received in less than a week. This quick response rate provided an opportunity to

collect data from an international teaching population when the original study design was disrupted by the COVID-19 pandemic. The respondents were primarily (79.6%) from the United Kingdom; however, deploying the survey in a number of smaller survey intakes at different times of the day may have led to a broader representation of participants in different countries across different time zones.

**Practical Implications**

A number of predictors of teachers' work engagement, job satisfaction, and life satisfaction may lend themselves to development through interventions or professional development. These predictor variables provide opportunities for targeted professional learning and development for teachers aimed at increasing work engagement, job satisfaction, life satisfaction, and intention to remain in the profession. Additionally, preservice education incorporating the development of these variables is likely to lead to graduate teachers with higher levels of work engagement, job satisfaction, and life satisfaction, which may ultimately lead to an increase in teacher retention. For example, professional development aimed at increasing vocational outcome expectations is likely to lead to greater work engagement, job satisfaction, and life satisfaction, and intention to stay in a teaching role.

Positive affect was a significant positive predictor of work engagement, job satisfaction, and life satisfaction in both Study 1 and Study 2. Interventions and strategies aimed at increasing the frequency of preservice and in-service teachers' experience of positive affect are, therefore, likely to lead to increased work engagement, job satisfaction, and life satisfaction and consequently reduce turnover intention. There are many possible strategies for increasing the frequency of positive affect. Dreer (2021a) implemented a podcast program for preservice teachers undertaking professional placements. The series included nine episodes on topics such as teacher well-being, gratitude, kindness, savouring, and reflection, to which preservice teachers listened throughout the semester. At the end of

the program, there was a statistically significant increase in the level of measured happiness for the preservice teachers who participated in the podcast trial compared to a control group of preservice teachers. Interventions aimed at supporting preservice teachers in developing skills and strategies for fostering positive affect are likely to be beneficial to the individual and the school systems that they enter. In a second study, Dreer (2020) implemented a two-week positive psychological intervention (PPI) for teachers in German schools. The PPI involved six emails over two weeks with short exercises based on positive psychology practices. Two weeks after the program ended, there was a small, but statistically significant, increase in teachers' job satisfaction and work engagement, and a decrease in their emotional exhaustion. The teachers reported that the PPI fostered more positive affect, perceptions, and behaviours at work. Approximately half (56.5%) of the teachers indicated that they planned to continue to use the strategies from the intervention (Dreer, 2020). Longer programs embedded in school operations are likely to foster greater increases in job satisfaction and work engagement, and consequently reduce turnover intentions. Future research into which specific activities and interventions have the greatest impact on positive affect will inform more targeted programs aimed at supporting teacher's positive affect.

Scenario-based learning (SBL) utilising realistic teaching-based scenarios has been successful in increasing preservice teachers' teaching self-efficacy. For example, in their study of 238 preservice teachers in the Australian state of New South Wales, Bardach et al. (2021) found that an online SBL program that included a reflection activity plus feedback from experienced teachers led to an increase in teaching self-efficacy and cognitive classroom readiness. Klassen et al. (2021) found that a brief online SBL program led to increases in UK preservice teachers' teaching confidence and readiness. SBL programs designed to develop preservice teachers' teaching self-efficacy over the span of the teacher education program duration may provide incremental and sustained increases in teaching

self-efficacy (Klassen et al., 2021). Increasing preservice teachers' teaching self-efficacy, whilst valuable on its own, is also likely to lead to increased work engagement and job satisfaction, and consequently to increased retention.

Interventions aimed at increasing perceived organisational support are likely to increase work engagement and job satisfaction, and consequently reduce turnover intention. Perceived organisational support involves the perception of support, rather than an objective measure of the supports available (Rhoades & Eisenberger, 2002). Strategies should be adapted for the local context and may involve relatively straightforward procedures for providing teachers with information about how the school or centre values their contributions and provides support for their teaching roles. Determining the areas that teachers perceive as gaps in the school's support for them will also provide specific areas for interventions. The perceived gaps in support are likely to vary between schools, so nuanced interventions based on understanding the perceived gaps in support are likely to be the most effective. However, larger school or system-wide perceived deficits in support are likely to affect the greatest number of teachers, and addressing these concerns is likely to lead to school and system-wide changes in perceived organisational support.

Mentoring programs within schools can influence a teacher's perceived organisational support by increasing perceived support from colleagues and perceived support from the school (Borman & Dowling, 2008). Both the mentor teacher and the new, mentee, teacher can benefit from mentoring programs (Willis et al., 2019). The Mentoring Beginner Teachers (MBT) program implemented in Queensland state schools in 2013 provided new teachers with an experienced teacher mentor for their first year of teaching (Beutel et al., 2017). Mentors were nominated for the program by the school principal, and undertook synchronous and asynchronous training prior to mentoring new teachers (Willis et al., 2019). Schools were also allocated additional funding for each new teacher at the school to facilitate the program

(Beutel et al., 2017). Beutel et al. (2017) conducted focus groups and interviews with participating mentor teachers and found that many mentor teachers experienced recognition for their mentoring role, enjoyed the additional responsibilities, and felt supported by the school leadership. Mentor teachers also found the program rewarding and a mutually beneficial learning experience (Willis et al., 2019). However, some mentor teachers reported receiving no direction from the school leadership, even when they asked for guidance, and some mentor teachers reported feeling unsupported (Beutel et al., 2017). There were no published evaluations of the new teachers' experiences in the program; however, mentor teachers reported positive mentoring relationships and increased teaching confidence of new teachers (Willis et al., 2019). Shanks et al. (2020) found that new teachers participating in mentoring programs in Scotland, Malta, and Denmark reported increased preparedness for teaching and feeling supported by their colleagues. However, some participants in their study reported difficulties in organising mentoring discussions when teachers were not provided release time.

Ingersoll and Strong (2011) in their review of research investigating beginning teacher induction programs, found that new teachers participating in an induction program generally reported increased job satisfaction, demonstrated improved teaching practice, and were more likely to be retained in the profession, comparted to new teachers who had not participated in an induction program. The greatest positive effect on retention occurred when the induction programs included a mentoring component and planning and collaboration time. They also found that school based factors, including school income and student socio-economic status, influenced the outcomes of the induction programs (Ingersoll & Strong, 2011). These findings suggest that mentoring programs most likely to lead to increased perceived organisational support are programs that are supported by the school leadership and are appropriately funded and resourced. However, a poorly implemented mentoring program, or

one that is perceived to be disrespectful of a new teacher's existing professionalism is likely to be ineffective (Brill & McCartney, 2008) and may reduce perceived organisational support, especially when the school leadership are perceived to be unsupportive of the program. Schools employing mentoring programs can increase their likely effectiveness by committing appropriate resources and providing school leadership support for the program and the teachers engaged in the progam.

Many beginning teachers are employed on short-term or casual contracts (Plunkett & Dyson, 2011). Teachers on temporary contracts may make an assessment that the employer does not value them enough to offer a continuing appointment, leading to lower levels of perceived organisational support. Whilst education systems need to manage their workforce effectively, offering continuing positions based within a geographic location, rather than in a single school, may allow staffing flexibility and assist in increasing beginning teachers' perceptions of commitment from their employer. Factors such as perceived support from the school principal and administration, support from colleagues, professional development opportunities, and the provision of classroom resources all influence perceived organisational support (Geiger & Pivovarova, 2018; Hughes, 2012) and can be influenced by the school principal. Providing principals with information about the benefits of fostering higher levels of perceived organisational support and what that might look like in their schools may lead to school environments that are perceived to be more supportive.

In addition to implementing targeted programs aimed at increasing specific variables related to work engagement, job satisfaction, life satisfaction, and turnover intention, there is likely to be benefit in providing information about predictors of turnover intention to preservice teachers as part of their formal preparation for entering the profession. This will provide teachers with an understanding of the inter-related factors likely to affect their teaching satisfaction and the longevity of their teaching careers. Being informed about the

factors influencing their job satisfaction provides teachers with opportunities to monitor and self-manage these factors.

**Limitations of the Current Research**

There are several limitations of the current research project, including the sampling techniques, analyses undertaken, and variables included in the analyses. These limitations are discussed, followed by recommendations for future research.

The initial research design included two studies, one with a sample of Australian in-service teachers and the second with a sample of Australian preservice teachers. The samples were combined for analysis when data collection stopped earlier than anticipated, due to the COVID-19 pandemic. Combining the in-service and preservice samples created an Australian teaching sample of sufficient size for analysis in Study 1. The combination of preservice and in-service teachers in one sample for analysis has a number of implications, including possible sample bias, creating a sample that may not be representative of the Australian teaching population, and data reliability issues. For example, approximately half of the participants in Study 1 were in the early stages of their teaching careers. The two populations may not demonstrate equivalent relationships between the variables, which would could lead to inaccurate results from the sequential regression analyses. Future research with larger sample sizes allowing for separate analyses for Australian in-service and preservice teachers will provide additional information regarding the relationships between the variables investigated in this research for each population.

The Study 2 sample included teachers from Australia, Canada, New Zealand, Northern Ireland, the United Kingdom, and the United States of America; however, 79.6% of the respondents were teachers in the United Kingdom. The resulting samples for analysis were not representative of the wider teaching cohorts, and this limited the generalisability of the research to the teaching profession in general.

Only teachers who had self-nominated to register with Prolific participated in Study 2. The Study 2 participant pool is a convenience sample of teachers who have self-selected to participate in research in an online environment. This may mean that the teaching sample included teachers who were more comfortable using technology than their peers. This group may have been better prepared for the move to online teaching, which may have been a protective factor, particularly in relation to their teaching self-efficacy.

The current research did not distinguish between the teaching contexts or year level taught, for example primary or elementary school, or secondary school. Wang et al. (2015), in their study of Canadian teachers, found that, whilst teaching self-efficacy was correlated to the year level taught. Rajendran et al. (2020) in their study of Australian teachers found that whilst primary school teachers reported higher levels of workload compared to secondary teachers, there was no difference in the reported emotional exhaustion and turnover intention between primary and secondary teachers. Perera, Vosicka, et al. (2018), in their study of Australian teachers, found that primary school teachers had higher levels of social engagement with students and general engagement. There are conflicting results in the literature regarding differences between primary and secondary school teachers' emotional exhaustion (Rajendran et al., 2020). Saloviita and Pakarinen (2021) found that teachers of Finnish upper grades generally experienced greater burnout than their colleagues teaching lower grade levels. Future research that differentiates between teaching contexts will provide additional information regarding the shared and unique predictors of work engagement, job satisfaction, life satisfaction, and turnover intention for teachers of different year level cohorts.

It was not possible to test the temporal ordering of variables owing to the cross-sectional design of each study. Whilst the SCCT well-being model provided a theorised order of influence, recent research has suggested alternative pathways. For example, Kim and Burić

(2020) found that exhaustion and disengagement predicted future teaching self-efficacy. There are also concerns regarding common method variance in cross-sectional studies, which may artificially increase or decrease the observed relationships between variables (Fuller et al., 2016; Spector, 2019). Longitudinal research investigating the relationships between SCCT well-being constructs over time will provide additional information regarding the size and directionality of their influence.

Using a single item to measure turnover intention may reduce the validity of the estimation of turnover intention. Using a single item also limits the measures discrimination, with a single 5-point Likert scale as points of discrimination in this case. It should also be noted that turnover intention represents an individual's desire to leave or remain in the profession. It does not measure teacher attrition. Future longitudinal research with measures of actual attrition will provide additional information regarding the predictors of teacher turnover.

Despite these limitations, the findings of the current research suggested that the SCCT well-being model is useful in predicting teachers' work engagement, job satisfaction, and life satisfaction. Recommendations for future research are provided in the section below.

**Future Research**

Teaching is a complex profession and the inter-relationships between variables predicting teachers' work engagement, job satisfaction, and life satisfaction are also complex. Larger, longitudinal studies investigating the causal relationships between variables will provide evidence regarding the directionality and size of these relationships. Additional mediation and moderation analyses would also provide insight into the inter-relationships between the predictor variables, particularly the role of dispositional optimism in promoting work engagement and job satisfaction. Particular variables warranting further investigation

include person inputs, dispositional and domain-specific optimism, psychological distress, and teaching self-efficacy.

### *Psychological Distress*

Psychological distress was a significant negative predictor of work engagement, job satisfaction, and life satisfaction when added at Step 1 of the regression analyses; however, psychological distress did not account for any unique variance in the criterion variables in the final models of the regression analyses. There are numerous potential explanations for the observed results. There may be potential protective factors of person inputs and other SCCT variables in relation to teachers' work engagement, job satisfaction, and life satisfaction. Alternatively, psychological distress, neuroticism, and negative affect may explain the same variance in work engagement, job satisfaction, and life satisfaction. Psychological distress may also moderate the effects of other variables in the model.

The K10 measure of psychological distress deployed in this research estimates the general, or non-specific, psychological distress of participants (Kessler et al., 2002). It is likely that there are differential effects of specific mental health concerns, such as anxiety or depression, on work engagement, job satisfaction, and life satisfaction. Further research investigating the influence of specific mental health concerns, the potential moderation effects of general psychological distress, and the inter-relationships between psychological distress and other variables will help to clarify the influence of psychological distress on work engagement, job satisfaction, and life satisfaction in teachers.

### *Personality Traits*

There are conflicting results in the literature regarding which personality traits influence work engagement, job satisfaction, and life satisfaction (binti Rusbadrol et al., 2015). This research provides evidence for person inputs that account for unique variance in work engagement, job satisfaction, and life satisfaction in the populations sampled; however,

the inter-relationships between person inputs were not investigated. Investigating combinations, or profiles, of personality traits may provide additional information about how personality traits interact to influence teachers' work engagement, job satisfaction, and life satisfaction. Perera, Granziera, et al. (2018) found four distinct personality profiles in their study of Australian teachers, which differentially predicted self-efficacy, work engagement, and job satisfaction. The findings from their research suggested the value of investigating personality profiles to refine understanding further of how teachers' personality traits may interact to influence their work engagement, job satisfaction, and life satisfaction.

### *Dispositional and Domain-Specific Optimism*

Dispositional optimism was a positive predictor and accounted for unique variance in life satisfaction. However, the role of dispositional optimism in promoting work engagement and job satisfaction is less clear, with dispositional optimism a negative predictor of work engagement and job satisfaction in the final regression models. Potential mediation effects between dispositional optimism and domain-specific optimism and other variables in the models warrant further investigation. Interventions aimed at domain-specific optimism, or vocational outcome expectations, are likely to lead to greater changes in domain-specific variables, such as work engagement and job satisfaction. Both dispositional optimism and domain-specific optimism have been shown to be amendable with targeted interventions (Malouff & Schutte, 2017). However, it is critical that we understand the influence of dispositional and domain-specific optimism before embarking on an intervention that may inadvertently negatively affect our desired outcome. Future research investigating the mediation, and possible moderation, effects of dispositional optimism on the relationships between each variable and teachers' work engagement would provide additional information regarding the role of dispositional optimism in promoting work engagement. These effects

are important to understand as interventions that target only dispositional optimism could have the reverse effect and lead to a decrease in work engagement.

### *Teaching Self-Efficacy*

This research utilised an overall measure of teaching self-efficacy. The skills and abilities required of teachers are complex (Klassen et al., 2013; Perera et al., 2019). More specific measures of self-efficacy, estimating efficacy for clusters of specific teaching tasks (e.g., efficacy for assessments), may provide additional information regarding the inter-relationships of self-efficacy with work engagement and job satisfaction. For example, in predicting work engagement, a teacher's efficacy for classroom management may be more salient compared to efficacy for student engagement or instructional strategies. Wang et al. (2015), in their study of 523 Canadian teachers, found that self-efficacy for classroom management, instruction, and student engagement differentially predicted turnover intention, emotional exhaustion, job satisfaction, and physical health. Perera et al. (2019) found that teachers did not have equal teaching self-efficacy for all tasks related to teaching. They determined six teaching self-efficacy profiles that showed some differentiation in the predictive value of job satisfaction. Further research investigating possible inter-relationships between specific teaching self-efficacy levels and work engagement and job satisfaction will provide additional information regarding the inter-relationships of these variables.

### *Current Data*

An aim of the current research was to investigate the utility of the SCCT well-being model in predicting work engagement, job satisfaction, and life satisfaction across different populations of teachers. The data collected are suitable for additional analyses in future research. For example, combining the current data sets will allow larger analyses of the pathways of influence between the variables measured and the models that best represent the constructs investigated. Future analyses could include structural equation modelling (SEM),

analyses of mediation and moderation effects, and investigations into the possible differential influence of country of residence and other demographic variables.

**Significance of the Research**

The current research contributes to the literature regarding the predictors of preservice and in-service teachers' work engagement, job satisfaction, and life satisfaction, and the predictive value of work engagement, job satisfaction, and life satisfaction in relation to turnover intention. The results from this research provided universities, schools, and education systems with evidence of psychological factors that may be suitable targets for interventions, and inclusion in preservice teacher training. Study 1 data were collected from Australian preservice and in-service teachers prior to the COVID-19 pandemic, and Study 2 data were collected from an international teaching population during the COVID-19 pandemic. The inclusion of these two distinct teaching samples provides converging evidence for the utility of the results obtained in this research. The SCCT well-being model provided a theoretical framework that was able to be operationalised for the teaching profession. The results of the sequential multiple regression analyses provided evidence of the utility of the SCCT well-being model in predicting the work engagement, job satisfaction, and life satisfaction of teachers. The current research project also provides evidence regarding the value of utilising Prolific to recruit research participants.

**Conclusion**

Whilst it is difficult to determine exact teacher attrition rates (Weldon, 2018), teacher turnover is an international concern (OECD, 2005). This research sought to determine factors influencing teachers' work engagement, job satisfaction, and life satisfaction, and consequent turnover intention. It was anticipated that work engagement, job satisfaction, and life satisfaction would each account for unique variance in turnover intention; however, job satisfaction was the only significant predictor of turnover intention in the final model of the

sequential multiple regression analyses in both Study 1 and Study 2. If the sole desired outcome of an intervention is to decrease teacher turnover, then job satisfaction and the predictors of job satisfaction are the most useful targets for intervention. There are other benefits for the individual teachers and their schools related to increasing work engagement and life satisfaction, and the findings of this research provided evidence of the variables most likely to influence the work engagement and life satisfaction of teachers.

This research project makes a significant contribution to the field of vocational psychology by adding to the literature on teacher turnover intention and the SCCT well-being model. Understanding the predictors of teacher turnover intention will allow schools, and the education sector more broadly, to facilitate the development of factors that predict retention and that minimise the factors that predict teacher turnover. The development of these factors will facilitate a more stable teaching population that will benefit schools, students, and teachers themselves, by creating a more satisfying teaching experience.

# REFERENCES

Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout: A meta-analysis. *Work & Stress*, *23*(3), 244-263. https://doi.org/10.1080/02678370903282600

Ali, S. R., McWhirter, E. H., & Chronister, K. M. (2005). Self-efficacy and vocational outcome expectations for adolescents of lower socioeconomic status: A pilot study. *Journal of Career Assessment*, *13*(1), 40-58. https://doi.org/10.1177/1069072704270273

Amah, O. E. (2009). Job satisfaction and turnover intention relationship: The moderating effect of job role centrality and life satisfaction. *Research & Practice in Human Resource Management*, *17*(1), 24-35. https://doi.org/10.1.1.731.1470

Aurini, J., & Davies, S. (2021). COVID-19 school closures and educational achievement gaps in Canada: Lessons from Ontario summer learning research. *Canadian Review of Sociology*, *58*(2), 165-185. https://doi.org/10.1111/cars.12334

Bakker, A. B., & Bal, M. P. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational and Organizational Psychology*, *83*(1), 189-206. https://doi.org/10.1348/096317909X402596

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD–R approach. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 389-411. https://doi.org/10.1146/annurev-orgpsych-031413-091235

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191-215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology*, *4*(3), 359-373. https://doi.org/10.1521/jscp.1986.4.3.359

Bandura, A. (2001). Social Cognitive Theory: An agentic perspective. *Annual Review of Psychology*, *52*(1), 1-26. https://doi.org/10.1146/annurev.psych.52.1.1

Bandura, A. (2005). Guide for constructing self-efficacy scales. In T. Urdan & F. Pajares (Eds.), *Self-efficacy beliefs of adolescents* (pp. 307-337). Information Age.

Baraldi, A. N., & Enders, C. K. (2010). An introduction to modern missing data analyses. *Journal of School Psychology*, *48*, 5-37. https://doi.org/10.1016/j.jsp.2009.10.001

Bardach, L., Klassen, R. M., Durksen, T. L., Rushby, J. V., Bostwick, K. C. P., & Sheridan, L. (2021). The power of feedback and reflection: Testing an online scenario-based learning intervention for student teachers. *Computers & Education*, *169*, 104194. https://doi.org/10.1016/j.compedu.2021.104194

Beutel, D., Crosswell, L., Willis, J., Spooner-Lane, R., Curtis, E., & Churchward, P. (2017). Preparing teachers to mentor beginning teachers: An Australian case study. *International Journal of Mentoring and Coaching in Education*, *6*(3), 164-177. https://doi.org/10.1108/IJMCE-04-2017-0030

Bibi, A., Khalid, M. A., & Hussain, A. (2019). Perceived organizational support and organizational commitment among special education teachers in Pakistan. *International Journal of Educational Management*, *33*(5), 848-859. https://doi.org/10.1108/IJEM-12-2017-0365

binti Rusbadrol, N., Mahmud, N., & Arif, L. S. M. (2015). Association between personality traits and job performance among secondary school teachers. *International Academic Research Journal of Social Science*, *1*(2), 1-6.

Bogler, R., & Nir, A. E. (2012). The importance of teachers' perceived organizational support to job satisfaction. *Journal of Educational Administration*, *50*(3), 287-306. https://doi.org/10.1108/09578231211223310

Borman, G. D., & Dowling, N. M. (2008). Teacher attrition and retention: A meta-analytic and narrative review of the research. *Review of Educational Research*, *78*(3), 367-409. https://doi.org/10.3102/0034654308321455

Brill, S., & McCartney, A. (2008). Stopping the revolving door: Increasing teacher retention. *Politics & Policy*, *36*(5), 750-774. https://doi.org/10.1111/j.1747-1346.2008.00133.x

Brissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology*, *82*, 102-111. https://doi.org/10.1037/0022-3514.82.1.102

Brown, K. M., & Wynn, S. R. (2009). Finding, supporting, and keeping: The role of the principal in teacher retention issues. *Leadership & Policy in Schools*, *8*(1), 37-63. https://doi.org/10.1080/15700760701817371

Brown, S. D., & Lent, R. W. (2016). Vocational psychology: Agency, equity, and well-being. *Annual Review of Psychology*, *67*, 541-565. https://doi.org/10.1146/annurev-psych-122414-033237

Brown, S. D., & Lent, R. W. (2019). Social Cognitive Career Theory at 25: Progress in studying the domain satisfaction and career self-management models. *Journal of Career Assessment*, *27*(4), 563-578. https://doi.org/10.1177/1069072719852736

Cano-García, F. J., Padilla-Muñoz, E. M., & Carrasco-Ortiz, M. Á. (2005). Personality and contextual variables in teacher burnout. *Personality and Individual Differences*, *38*(4), 929-940. https://doi.org/10.1016/j.paid.2004.06.018

Caprara, G. V., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *Journal of Educational Psychology*, *95*(4), 821-832. https://doi.org/10.1037/0022-0663.95.4.821

Caprara, G. V., Vecchione, M., Alessandri, G., Gerbino, M., & Barbaranelli, C. (2011). The contribution of personality traits and self-efficacy beliefs to academic achievement: A longitudinal study. *British Journal of Educational Psychology*, *81*(1), 78-96. https://doi.org/10.1348/2044-8279.002004

Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology*, *61*(1), 679-704. https://doi.org/10.1146/annurev.psych.093008.100352

Carver, C. S., & Scheier, M. F. (2014). Dispositional optimism. *Trends in Cognitive Sciences*, *18*(6), 293-299. https://doi.org/10.1016/j.tics.2014.02.003

Carver, C. S., Scheier, M. F., & Segerstrom, S. C. (2010). Optimism. *Clinical Psychology Review*, *30*(7), 879-889. https://doi.org/10.1016/j.cpr.2010.01.006

Chang, M.-L., & Engelhard, G. (2016). Examining the Teachers' Sense of Efficacy Scale at the item level with Rasch measurement model. *Journal of Psychoeducational Assessment*, *34*(2), 177-191. https://doi.org/10.1177/0734282915593835

Chang, Y., & Edwards, J. K. (2015). Examining the relationships among self-efficacy, coping, and job satisfaction using Social Career Cognitive Theory: An SEM analysis. *Journal of Career Assessment*, *23*(1), 35-47. https://doi.org/10.1177/1069072714523083

Cheung, A. (2021). Language teaching during a pandemic: A case study of Zoom use by a secondary ESL teacher in Hong Kong. *RELC Journal*, 1-16. https://doi.org/10.1177%2F0033688220981784

Chronister, K. M., & McWhirter, E. H. (2003). Applying Social Cognitive Career Theory to the empowerment of battered women. *Journal of Counseling & Development*, *81*(4), 418-425. https://doi.org/10.1002/j.1556-6678.2003.tb00268.x

Clark, A. M. (1998). The qualitative-quantitative debate: Moving from positivism and confrontation to post-positivism and reconciliation. *Journal of Advanced Nursing*, *27*(6), 1242-1249. https://doi.org/10.1046/j.1365-2648.1998.00651.x

Conley, S., & You, S. (2009). Teacher role stress, satisfaction, commitment, and intentions to leave: A structural model. *Psychological Reports*, *105*(3), 771-786. https://doi.org/10.2466/PR0.105.3.771-786

Connolly, J. J., & Viswesvaran, C. (2000). The role of affectivity in job satisfaction: A meta-analysis. *Personality and Individual Differences*, *29*(2), 265-281. https://doi.org/10.1016/S0191-8869(99)00192-0

Costa Jr, P. T., & McCrae, R. R. (1988). From catalog to classification: Murray's needs and the five-factor model. *Journal of Personality and Social Psychology*, *55*(2), 258-265. https://doi.org/10.1037/0022-3514.55.2.258

Costa Jr, P. T., & McCrae, R. R. (2009). The five-factor model and the NEO Inventories. In J. N. Butcher (Ed.), *Oxford handbook of personality assessment* (pp. 299-322). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195366877.013.0016

Costa Jr, P. T., McCrae, R. R., & Dembroski, T. M. (1988). Agreeableness versus antagonism: Explication of a potential risk factor for CHD. In A. W. Siegman & T. M. Dembroski (Eds.), *In search of coronary-prone behavior* (pp. 41-63). Psychology Press.

Coughlan, M., Cronin, P., & Ryan, F. (2009). Survey research: Process and limitations. *International Journal of Therapy & Rehabilitation*, *16*(1), 9-15. https://doi.org/10.12968/ijtr.2009.16.1.37935

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297-334. https://doi.org/10.1007/BF02310555

DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, *124*(2), 197-229. https://doi.org/10.1037/0033-2909.124.2.197

Department for Education. (2016). *School workforce in England: November 2015*. https://gov.uk/government/uploads/system/uploads/attachment_data/file/533618/SFR21_2016_MainText.pdf

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, *97*(2), 143-156. https://doi.org/10.1007/s11205-009-9493-y

Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The Mini-IPIP Scales: Tiny-yet-effective measures of the Big Five factors of personality. *Psychological Assessment*, *18*(2), 192-203. https://doi.org/10.1037/1040-3590.18.2.192

Dormann, C., & Zapf, D. (2001). Job satisfaction: A meta-analysis of stabilities. *Journal of Organizational Behavior*, *22*(5), 483-504. https://doi.org/10.1002/job.98

Dreer, B. (2020). Positive psychological interventions for teachers: A randomised placebo-controlled field experiment investigating the effects of workplace-related positive activities. *International Journal of Applied Positive Psychology*, *5*(1), 77-97. https://doi.org/10.1007/s41042-020-00027-7

Dreer, B. (2021a). Fostering well-being over the radio? An empirical study investigating the effects of an audio podcast-based intervention program on student teachers' well-being. *International Journal of Community Well-Being*. https://doi.org/10.1007/s42413-020-00105-3

Dreer, B. (2021b). Teachers' well-being and job satisfaction: The important role of positive emotions in the workplace. *Educational Studies,* 1-17. https://doi.org/10.1080/03055698.2021.1940872

Duffy, R. D., & Lent, R. W. (2009). Test of a social cognitive model of work satisfaction in teachers. *Journal of Vocational Behavior*, *75*(2), 212-223. https://doi.org/10.1016/j.jvb.2009.06.001

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, *71*(3), 500-507. https://doi.org/10.1037/0021-9010.71.3.500

Eisenberger, R., Rhoades, L., & Cameron, J. (1999). Does pay for performance increase or decrease perceived self-determination and intrinsic motivation? *Journal of Personality and Social Psychology*, *77*(5), 1026. https://doi.org/10.1037/0022-3514.77.5.1026

Ewing, L.-A., & Cooper, H. B. (2021). Technology-enabled remote learning during Covid-19: Perspectives of Australian teachers, students and parents. *Technology, Pedagogy and Education*, *30*(1), 41-57. https://doi.org/10.1080/1475939X.2020.1868562

Ewing, R., & Manuel, J. V. (2005). Retaining quality early career teachers in the profession: New teacher narratives. *Change: Transformations in Education*, *8*(1), 1-16. https://doi.org/10.3316/aeipt.153838

Fiebig, J. N., Braid, B. L., Ross, P. A., Tom, M. A., & Prinzo, C. (2010). Hispanic community college students: Acculturation, family support, perceived educational

barriers, and vocational planning. *Community College Journal of Research and Practice*, *34*(10), 848-864. https://doi.org/10.1080/10668926.2010.491995

Field, A. P. (2009). *Discovering statistics using SPSS* (3rd ed.). Sage Publications.

Foley, P. F., & Lytle, M. C. (2015). Social Cognitive Career Theory, the Theory of Work Adjustment, and work satisfaction of retirement-age adults. *Journal of Career Development*, *42*(3), 199-214. https://doi.org/10.1177/0894845314553270

Fouad, N. A., & Guillen, A. (2006). Outcome expectations: Looking to the past and potential future. *Journal of Career Assessment*, *14*(1), 130-142. https://doi.org/10.1177/1069072705281370

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, *69*(8), 3192-3198. https://doi.org/10.1016/j.jbusres.2015.12.008

Funder, D. C. (2001). Personality. *Annual Review of Psychology*, *52*, 197-221. https://doi.org/10.1146/annurev.psych.52.1.197

Gallant, A., & Riley, P. (2014). Early career teacher attrition: New thoughts on an intractable problem. *Teacher Development*, *18*(4), 562-580. https://doi.org/10.1080/13664530.2014.945129

Geiger, T., & Pivovarova, M. (2018). The effects of working conditions on teacher retention. *Teachers and Teaching*, *24*(6), 604-625. https://doi.org/10.1080/13540602.2018.1457524

Gellatly, I. R. (1996). Conscientiousness and task performance: Test of cognitive process model. *Journal of Applied Psychology*, *81*(5), 474-482. https://doi.org/10.1037/0021-9010.81.5.474

Ghiselli, R. F., La Lopa, J. M., & Bai, B. (2001). Job satisfaction, life satisfaction, and turnover intent: Among food-service managers. *Cornell Hotel and Restaurant Administration Quarterly*, *42*(2), 28-37. https://doi.org/10.1177/0010880401422002

González-Romá, V., Schaufeli, W. B., Bakker, A. B., & Lloret, S. (2006). Burnout and work engagement: Independent factors or opposite poles? *Journal of Vocational Behavior*, *68*(1), 165-174. https://doi.org/10.1016/j.jvb.2005.01.003

Grant, R. W., & Sugarman, J. (2004). Ethics in human subjects research: Do incentives matter? *Journal of Medicine and Philosophy*, *29*(6), 717-738. https://doi.org/10.1080/03605310490883046

Gray, C., Bell, I., Cummins, B., Eaton, P., Greenwood, J., McCullagh, J., & Behan, S. (2006). *The recruitment and retention of teachers in post-primary schools in Northern Ireland*. Northern Ireland Department of Education. https://www.education-ni.gov.uk/publications/research-reports-2006-recruitment-and-retention-teachers-post-primary-schools-northern

Graziano, W. G., & Eisenberg, N. (1997). Agreeableness: A dimension of personality. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 795-824). Elsevier. https://doi.org/10.1016/B978-012134645-4/50031-7

Greenhow, C., Lewin, C., & Staudt Willet, K. B. (2021). The educational response to Covid-19 across two countries: A critical examination of initial digital pedagogy adoption. *Technology, Pedagogy and Education*, *30*(1), 7-25. https://doi.org/10.1080/1475939X.2020.1866654

Hackett, G., & Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior*, *18*(3), 326-339. https://doi.org/10.1016/0001-8791(81)90019-1

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, *43*(6), 495-513. https://doi.org/10.1016/j.jsp.2005.11.001

Hakanen, J. J., & Schaufeli, W. B. (2012). Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *Journal of Affective Disorders*, *141*(2), 415-424. https://doi.org/10.1016/j.jad.2012.02.043

Halbesleben, J. R. B., & Wheeler, A. R. (2008). The relative roles of engagement and embeddedness in predicting job performance and intention to leave. *Work & Stress*, *22*(3), 242-256. https://doi.org/10.1080/02678370802383962

Ho, C.-L., & Au, W.-T. (2006). Teaching Satisfaction Scale: Measuring job satisfaction of teachers. *Educational and Psychological Measurement*, *66*(1), 172-185. https://doi.org/10.1177/0013164405278573

Howard, S. K., Tondeur, J., Siddiq, F., & Scherer, R. (2021). Ready, set, go! Profiling teachers' readiness for online teaching in secondary education. *Technology, Pedagogy and Education*, *30*(1), 141-158. https://doi.org/10.1080/1475939X.2020.1839543

Hughes, G. D. (2012). Teacher retention: Teacher characteristics, school characteristics, organizational characteristics, and teacher efficacy. *Journal of Educational Research*, *105*(4), 245-255. https://doi.org/10.1080/00220671.2011.584922

Hultell, D., & Gustavsson, J. P. (2008). A psychometric evaluation of the Satisfaction with Life Scale in a Swedish nationwide sample of university students. *Personality and Individual Differences*, *44*(5), 1070-1079. https://doi.org/10.1016/j.paid.2007.10.030

Ingersoll, R. M. (2003). The teacher shortage: Myth or reality? *Educational Horizons*, *81*(3), 146-152. http://www.jstor.org/stable/42926477

Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research*, *81*(2), 201-233. https://doi.org/10.3102/0034654311403323

Jensen-Campbell, L. A., & Graziano, W. G. (2001). Agreeableness as a moderator of interpersonal conflict. *Journal of Personality*, *69*(2), 323-362. https://doi.org/10.1111/1467-6494.00148

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, *87*(3), 530-541. https://doi.org/10.1037/0021-9010.87.3.530

Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology*, *87*(4), 797-807. https://doi.org/10.1037/0021-9010.87.4.797

Judge, T. A., Martocchio, J. J., & Thoresen, C. J. (1997). Five-factor model of personality and employee absence. *Journal of Applied Psychology*, *82*(5), 745-755. https://doi.org/10.1037/0021-9010.82.5.745

Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L. T., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, *32*(6), 959-976. https://doi.org/10.1017/S0033291702006074

Kim, H. J., Shin, K. H., & Swanger, N. (2009). Burnout and engagement: A comparative analysis using the Big Five personality dimensions. *International Journal of Hospitality Management*, *28*(1), 96-104. https://doi.org/10.1016/j.ijhm.2008.06.001

Kim, L. E., & Burić, I. (2020). Teacher self-efficacy and burnout: Determining the directions of prediction through an autoregressive cross-lagged panel model. *Journal of Educational Psychology*, *112*(8), 1676. https://doi.org/10.1037/edu0000642

Kim, L. E., Jörg, V., & Klassen, R. M. (2019). A meta-analysis of the effects of teacher personality on teacher effectiveness and burnout. *Educational Psychology Review*, *31*(1), 163-195. https://doi.org/10.1007/s10648-018-9458-2

Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology*, *102*(3), 741-756. https://doi.org/10.1037/a0019237

Klassen, R. M., Rushby, J. V., Maxwell, L., Durksen, T. L., Sheridan, L., & Bardach, L. (2021). The development and testing of an online scenario-based learning activity to prepare preservice teachers for teaching placements. *Teaching and Teacher Education*, *104*, 103385. https://doi.org/10.1016/j.tate.2021.103385

Klassen, R. M., & Tze, V. M. C. (2014). Teachers' self-efficacy, personality, and teaching effectiveness: A meta-analysis. *Educational Research Review*, *12*, 59-76. https://doi.org/10.1016/j.edurev.2014.06.001

Klassen, R. M., Yerdelen, S., & Durksen, T. L. (2013). Measuring teacher engagement: Development of the Engaged Teacher Scale (ETS). *Frontline Learning Research*, *1*(2), 33-52. https://doi.org/10.14786/flr.v1i2.44

Langelaan, S., Bakker, A. B., van Doornen, L. J. P., & Schaufeli, W. B. (2006). Burnout and work engagement: Do individual differences make a difference? *Personality and Individual Differences*, *40*(3), 521-532. https://doi.org/10.1016/j.paid.2005.07.009

Lee, L. O., James, P., Zevon, E. S., Kim, E. S., Trudel-Fitzgerald, C., Spiro, A., Grodstein, F., & Kubzansky, L. D. (2019). Optimism is associated with exceptional longevity in 2

epidemiologic cohorts of men and women. *Proceedings of the National Academy of Sciences*, *116*(37), 18357-18362. https://doi.org/10.1073/pnas.1900712116

Lent, R. W. (2004). Toward a unifying theoretical and practical perspective on well-being and psychosocial adjustment. *Journal of Counseling Psychology*, *51*(4), 482-509. https://doi.org/10.1037/0022-0167.51.4.482

Lent, R. W., & Brown, S. D. (1996). Social cognitive approach to career development: An overview. *The Career Development Quarterly*, *44*(4), 310-321. https://doi.org/10.1002/j.2161-0045.1996.tb00448.x

Lent, R. W., & Brown, S. D. (2006). Integrating person and situation perspectives on work satisfaction: A social-cognitive view. *Journal of Vocational Behavior*, *69*(2), 236-247. https://doi.org/10.1016/j.jvb.2006.02.006

Lent, R. W., & Brown, S. D. (2008). Social Cognitive Career Theory and subjective well-being in the context of work. *Journal of Career Assessment*, *16*(1), 6-21. https://doi.org/10.1177/1069072707305769

Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology*, *60*(4), 557-568. https://doi.org/10.1037/a0033446

Lent, R. W., & Brown, S. D. (2019). Social cognitive career theory at 25: Empirical status of the interest, choice, and performance models. *Journal of Vocational Behavior*, *115*, 103316. https://doi.org/10.1016/j.jvb.2019.06.004

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, *45*(1), 79-122. https://doi.org/10.1006/jvbe.1994.1027

Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of Counseling Psychology*, *47*(1), 36-49. https://doi.org/10.1037/0022-0167.47.1.36

Lent, R. W., Nota, L., Soresi, S., Ginevra, M. C., Duffy, R. D., & Brown, S. D. (2011). Predicting the job and life satisfaction of Italian teachers: Test of a social cognitive model. *Journal of Vocational Behavior*, *79*(1), 91-97. https://doi.org/10.1016/j.jvb.2010.12.006

Lent, R. W., Singley, D., Sheu, H.-B., Gainor, K. A., Brenner, B. R., Treistman, D., & Ades, L. (2005). Social cognitive predictors of domain and life satisfaction: Exploring the theoretical precursors of subjective well-being. *Journal of Counseling Psychology*, *52*(3), 429-442. https://doi.org/10.1037/0022-0167.52.3.429

Lent, R. W., Taveira, M. d. C., & Lobo, C. (2012). Two tests of the social cognitive model of well-being in Portuguese college students. *Journal of Vocational Behavior*, *80*, 362-371. https://doi.org/10.1016/j.jvb.2011.08.009

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, *83*(404), 1198-1202. https://doi.org/10.2307/2290157

Lounsbury, J. W., Saudargas, R. A., Gibson, L. W., & Leong, F. T. (2005). An investigation of broad and narrow personality traits in relation to general and domain-specific life satisfaction of college students. *Research in Higher Education*, *46*(6), 707-729. https://doi.org/10.1007/11162-004-4140-6

Madigan, D. J., & Kim, L. E. (2021). Towards an understanding of teacher attrition: A meta-analysis of burnout, job satisfaction, and teachers' intentions to quit. *Teaching and Teacher Education*, *105*, 103425. https://doi.org/10.1016/j.tate.2021.103425

Maher, K., Paulin, K., & Jagger, D. (2019). *He Whakaaro: Teacher turnover in New Zealand schools*. https://www.educationcounts.govt.nz/publications/series/he-whakaaro/he-whakaaro-teacher-turnover-in-new-zealand-schools

Malouff, J. M., & Schutte, N. S. (2017). Can psychological interventions increase optimism? A meta-analysis. *The Journal of Positive Psychology*, *12*(6), 594-604. https://doi.org/10.1080/17439760.2016.1221122

Mason, S., & Matas, C. P. (2015). Teacher attrition and retention research in Australia: Towards a new theoretical framework. *Australian Journal of Teacher Education*, *40*(11), 45-66. https://doi.org/10.3316/aeipt.210650

McCrae, R. R., & Costa Jr, P. T. (1989). The structure of interpersonal traits: Wiggins's circumplex and the five-factor model. *Journal of Personality and Social Psychology*, *56*(4), 586-595. https://doi.org/10.1037/0022-3514.56.4.586

McCrae, R. R., & Costa Jr, P. T. (1997). Conceptions and correlates of openness to experience. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 825-847). Elsevier. https://doi.org/10.1016/B978-012134645-4/50032-9

McLennan, B., McIlveen, P., & Perera, H. N. (2017). Pre-service teachers' self-efficacy mediates the relationship between career adaptability and career optimism. *Teaching and Teacher Education*, *63*, 176-185. https://doi.org/10.1016/j.tate.2016.12.022

McWhirter, E. H., Crothers, M., & Rasheed, S. (2000). The effects of high school career education on social–cognitive variables. *Journal of Counseling Psychology*, *47*(3), 330-341. https://doi.org/10.1037/0022-0167.47.3.330

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology*, *52*(2), 250-260. https://doi.org/10.1037/0022-0167.52.2.250

Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology*, *38*(1), 30-38. https://doi.org/10.1037/0022-0167.38.1.30

Munyon, T. P., Hochwarter, W. A., Perrewé, P. L., & Ferris, G. R. (2010). Optimism and the nonlinear citizenship behavior—job satisfaction relationship in three studies. *Journal of Management*, *36*(6), 1505-1528. https://doi.org/10.1177/0149206309350085

OECD. (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. https://www.oecd.org/education/school/attractingdevelopingandretainingeffectiveteachers-finalreportteachersmatter.htm

Ontario College of Teachers. (2020). *Transition to teaching 2020*. https://www.oct.ca/

Organ, D. W., & Lingl, A. (1995). Personality, satisfaction, and organizational citizenship behavior. *The Journal of Social Psychology*, *135*(3), 339-350. https://doi.org/10.1080/00224545.1995.9713963

Park, T.-Y., & Shaw, J. D. (2013). Turnover rates and organizational performance: A meta-analysis. *Journal of Applied Psychology*, *98*(2), 268-309. https://doi.org/10.1037/a0030723

Perera, H. N., Calkins, C., & Part, R. (2019). Teacher self-efficacy profiles: Determinants, outcomes, and generalizability across teaching level. *Contemporary Educational Psychology*, *58*, 186-203. https://doi.org/10.1016/j.cedpsych.2019.02.006

Perera, H. N., Granziera, H., & McIlveen, P. (2018). Profiles of teacher personality and relations with teacher self-efficacy, work engagement, and job satisfaction. *Personality and Individual Differences*, *120*, 171-178. https://doi.org/10.1016/j.paid.2017.08.034

Perera, H. N., Vosicka, L., Granziera, H., & McIlveen, P. (2018). Towards an integrative perspective on the structure of teacher work engagement. *Journal of Vocational Behavior*, *108*, 28-41. https://doi.org/10.1016/j.jvb.2018.05.006

Plunkett, M., & Dyson, M. (2011). Becoming a teacher and staying one: Examining the complex ecologies associated with educating and retaining new teachers in rural Australia. *Australian Journal of Teacher Education*, *36*(1), 32–47. https://doi.org/10.3316/aeipt.187196

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology*, *52*(2), 126-136. https://doi.org/10.1037/0022-0167.52.2.126

Pressley, T., & Ha, C. (2021). Teaching during a pandemic: United States teachers' self-efficacy during COVID-19. *Teaching and Teacher Education*, *106*, 103465. https://doi.org/10.1016/j.tate.2021.103465

Prolific. (n.d.). *Prolific: How it works*. Retrieved 01/02/2021 from https://prolific.co/#how-it-works

Queensland College of Teachers. (2015). *2013 Queensland graduate teachers*.

Queensland College of Teachers. (n.d.). *Registration*. Retrieved 13/05/2021 from https://www.qct.edu.au/registration

Rahm, T., & Heise, E. (2019). Teaching happiness to teachers: Development and evaluation of a training in subjective well-being. *Frontiers in Psychology*, *10*, 1-16. https://doi.org/10.3389/fpsyg.2019.02703

Rajendran, N., Watt, H. M. G., & Richardson, P. W. (2020). Teacher burnout and turnover intent. *The Australian Educational Researcher*, *47*(3), 477-500. https://doi.org/10.1007/s13384-019-00371-x

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, *87*(4), 698-714. https://doi.org/10.1037/0021-9010.87.4.698

Romero-Tena, R., Llorente-Cejudo, C., Puig-Gutiérrez, M., & Barragán-Sánchez, R. (2021). The pandemic and changes in the self-perception of teacher digital competences of infant grade students: A cross sectional study. *International Journal of Environmental Research and Public Health*, *18*(9). https://doi.org/10.3390/ijerph18094756

Ross, A., & Hutchings, M. (2003). *Attracting, developing and retaining effective teachers in the United Kingdom of Great Britain and Northern Ireland* (Vol. 13). http://www.oecd.org/dataoecd/62/25/2635748.pdf

Ryan, A. B. (2006). Post-positivist approaches to research. In M. Antonesa (Ed.), *Researching and writing your thesis: A guide for postgraduate students* (pp. 12-26). Maynooth Adult and Community Education. http://mural.maynoothuniversity.ie/874/

Saloviita, T., & Pakarinen, E. (2021). Teacher burnout explained: Teacher-, student-, and organisation-level variables. *Teaching and Teacher Education*, *97*, 103221. https://doi.org/10.1016/j.tate.2020.103221

Schaub, M., & Tokar, D. M. (2005). The role of personality and learning experiences in social cognitive career theory. *Journal of Vocational Behavior*, *66*(2), 304-325. https://doi.org/10.1016/j.jvb.2004.09.005

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, *66*(4), 701-716. https://doi.org/10.1177/0013164405282471

Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research*, *16*(2), 201-228. https://doi.org/10.1007/BF01173489

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, *67*(6), 1063-1078. https://doi.org/10.1037/0022-3514.67.6.1063

Scheier, M. F., Weintraub, J. K., & Carver, C. S. (1986). Coping with stress: Divergent strategies of optimists and pessimists. *Journal of Personality and Social Psychology*, *51*(6), 1257-1264. https://doi.org/10.1037/0022-3514.51.6.1257

Schimmack, U., Diener, E., & Oishi, S. (2002). Life-satisfaction is a momentary judgment and a stable personality characteristic: The use of chronically accessible and stable sources. *Journal of Personality*, *70*(3), 345-384. https://doi.org/10.1111/1467-6494.05008

Seligman, M. E. (2006). *Learned optimism: How to change your mind and your life*. Vintage.

Settoon, R. P., Bennett, N., & Liden, R. C. (1996). Social exchange in organizations: Perceived organizational support, leader-member exchange, and employee reciprocity. *Journal of Applied Psychology*, *81*(3), 219-227. https://doi.org/10.1037/0021-9010.81.3.219

Shanks, R., Attard Tonna, M., Krøjgaard, F., Paaske, K. A., Robson, D., & Bjerkholt, E. (2020). A comparative study of mentoring for new teachers. *Professional Development in Education*, 1-15. https://doi.org/10.1080/19415257.2020.1744684

Shibiti, R. (2020). Public school teachers' satisfaction with retention factors in relation to work engagement. *SA Journal of Industrial Psychology*, *46*, 1-9. https://doi.org/10.4102/sajip.v46i0.1675

Silva, A., & Caetano, A. (2013). Validation of the Flourishing Scale and Scale of Positive and Negative Experience in Portugal. *Social Indicators Research*, *110*(2), 469-478. https://doi.org/10.1007/s11205-011-9938-y

Sorensen, L. C., & Ladd, H. F. (2020). The hidden costs of teacher turnover. *AERA Open*, *6*(1), 1-24. https://doi.org/10.1177/2332858420905812

Spector, P. E. (2019). Do not cross me: Optimizing the use of cross-sectional designs. *Journal of Business and Psychology*, *34*(2), 125-137. https://doi.org/10.1007/s10869-018-09613-8

Starkey, L., Shonfeld, M., Prestridge, S., & Cervera, M. G. (2021). Special issue: Covid-19 and the role of technology and pedagogy on school education during a pandemic. *Technology, Pedagogy and Education*, *30*(1), 1-5. https://doi.org/10.1080/1475939X.2021.1866838

Sturm, D. R., Conkey, E. K., Nibler, N., Brannan, D., & Bleistein, T. (2012). Gender and optimism as predictors of novice ESOL teaching performance. *PURE Insights*, *1*(1), 35-41. https://digitalcommons.wou.edu/pure/vol1/iss1/8

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson Education.

Tadić, M., Bakker, A. B., & Oerlemans, W. G. M. (2015). Challenge versus hindrance job demands and well-being: A diary study on the moderating role of job resources. *Journal of Occupational & Organizational Psychology*, *88*(4), 702-725. https://doi.org/10.1111/joop.12094

Takawira, N., Coetzee, M., & Schreuder, D. (2014). Job embeddedness, work engagement and turnover intention of staff in a higher education institution: An exploratory study. *SA Journal of Human Resource Management*, *12*(1), 1-10. https://doi.org/10.4102/sajhrm.v12i1.524

Thoresen, C. J., Kaplan, S. A., Barsky, A. P., Warren, C. R., & de Chermont, K. (2003). The affective underpinnings of job perceptions and attitudes: A meta-analytic review and integration. *Psychological Bulletin, 129*(6), 914-945. https://doi.org/10.1037/0033-2909.129.6.914

Toropova, A., Myrberg, E., & Johansson, S. (2021). Teacher job satisfaction: The importance of school working conditions and teacher characteristics. *Educational Review*, *73*(1), 71-97. https://doi.org/10.1080/00131911.2019.1705247

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, *17*(7), 783-805. https://doi.org/10.1016/S0742-051X(01)00036-1

UNESCO. (2021). *Education: From disruption to recovery*. Retrieved 18/08/2021 from https://en.unesco.org/covid19/educationresponse

Vollmann, M., Antoniw, K., Hartung, F.-M., & Renner, B. (2011). Social support as mediator of the stress buffering effect of optimism: The importance of differentiating the recipients' and providers' perspective. *European Journal of Personality*, *25*(2), 146-154. https://doi.org/10.1002/per.803

Wang, H., Hall, N. C., & Rahimi, S. (2015). Self-efficacy and causal attributions in teachers: Effects on burnout, job satisfaction, illness, and quitting intentions. *Teaching and Teacher Education*, *47*, 120-130. https://doi.org/10.1016/j.tate.2014.12.005

Watson, D., & Slack, A. K. (1993). General factors of affective temperament and their relation to job satisfaction over time. *Organizational Behavior and Human Decision Processes*, *54*(2), 181-202. https://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Affect/Watson.pdf

Weldon, P. R. (2015). *The teacher workforce in Australia: Supply, demand and data issues*. Australian Council for Educational Research. https://research.acer.edu.au/policyinsights/2/

Weldon, P. R. (2018). Early career teacher attrition in Australia: Evidence, definition, classification and measurement. *Australian Journal of Education*, *62*(1), 61-78. https://doi.org/10.1177/0004944117752478

Williams, C. S. (2011). Combating teacher burnout. *The Education Digest*, *77*(7), 39-41.

Willis, J., Churchward, P., Beutel, D., Spooner-Lane, R., Crosswell, L., & Curtis, E. (2019). Mentors for beginning teachers as middle leaders: The messy work of recontextualising. *School Leadership & Management*, *39*(3-4), 334-351. https://doi.org/10.1080/13632434.2018.1555701

Wright, T. A., & Bonett, D. G. (2007). Job satisfaction and psychological well-being as nonadditive predictors of workplace turnover. *Journal of Management*, *33*(2), 141-160. https://doi.org/10.1177/0149206306297582

Yates, A., Starkey, L., Egerton, B., & Flueggen, F. (2021). High school students' experience of online learning during Covid-19: The influence of technology and pedagogy. *Technology, Pedagogy and Education*, *30*(1), 59-73. https://doi.org/10.1080/1475939X.2020.1854337

Yorulmaz, Y. I., Colak, I., & Altinkurt, Y. (2017). A meta-analysis of the relationship between teachers' job satisfaction and burnout. *Eurasian Journal of Educational Research*, *17*(71), 175-192. https://doi.org/10.14689/ejer.2017.71.10

Zee, M., & Koomen, H. M. Y. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research*, *86*(4), 981-1015. https://doi.org/10.3102/0034654315626801

APPENDICES (not available in public version)