SECOND SCHOOL TEACHERS' SELF-EFFICACY FOR CAREER DEVELOPMENT TEACHING AND LEARNING

A Thesis Submitted by

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Abstract

Career development in schools in Australia has been touted as a priority since the Organisation for Economic Cooperation Development (OECD, 2004a) provided advice and guidance to assist in understanding the importance of career development. Australia's journey in career development has gained momentum since the Melbourne Declaration (Ministerial Council for Education Early Childhood Development and Youth Affairs [MCEECDYA], 2008) . The importance of schools in preparing our future citizens has been recognised, yet there is no indication of a nationwide approach to career development in schools. The classroom teacher is perceived as a trusted source of information for students. Notwithstanding, while our classroom teachers are arguably in the best position to provide and facilitate career education programs in schools, there has been no provision of extra funding to provide professional development for teachers from a national perspective. Some State Departments of Education in Australia have invested in supporting classroom teachers to meet the Professional Standards for Australian Career Development Practitioners (Career Industry Council of Australia, 2013). For example, there has been a commitment by the Victorian Department of Education that started in 2019 with scholarships for secondary school teachers to gain the qualification for the Graduate Certificate in Career Development.

This research sought to gain an understanding of teachers' self-efficacy for career development teaching and learning across Australia. The question was posed: "What is the overall level of perceived self-efficacy for career development teaching and learning by secondary school teachers in Australia?"

A new instrument was developed based upon the Teacher Self Efficacy Scale (Tschannen-Moran & Hoy, 2001) and adapted for a career development focus. The Career Education Teachers' Self-Efficacy Scale (CETSES) was developed and tested using a mixed-methods approach. Study 1 used a qualitative approach using Thematic Analysis (Braun & Clarke, 2006) to improve content validity of the draft CETSES instrument. A focus group (n = 11) was assembled to provide expert feedback on items developed for the CETSES that were based upon the Teacher Self-Efficacy Scale (TSES) across the three factors of Student Engagement, Classroom Management and Instructional Skills from a career education perspective. To evaluate concurrent validity, two other self-efficacy scales were included in the overall survey including the 12-item TSES, the 6-item Occupational Self-Efficacy Scale (OSS-SF). Further, a bespoke index (appendix I) was created that sought to gain an understanding of teachers' understanding of the 11 career competencies that are inherent to the Australian Blueprint for Career Development (ABCD). The study recruited 153

participants who completed the overall survey. A statistical analysis of the data using SPSS 25 was conducted using a principal components analysis to determine if the hypothesised statistical model fitted the actual data set structure. Subsequently, confirmatory factor analysis was completed using AMOS 26 where a short form of the CETSES was explored. It was found that a 9-item CETSES had potential with promising *goodness of fit* results.

Overall, the results indicated that teachers across Queensland, New South Wales, Victoria, South Australia and Catholic Education in Melbourne had a self-efficacy for career development teaching and learning approaching the *quite a bit* level. These same teachers had a general teacher self-efficacy above the *quite a bit* level. It was also found that neither age, years of teaching experience, subject area specialisation or school location could predict a teacher's self-efficacy for career development teaching and learning.

These findings indicate that teachers who participated in the research had an enhanced level of self-efficacy for career development teaching and learning. However, their content knowledge of the ABCD was less conclusive but did suggest that teachers had a strong grasp of career development concepts without necessarily being exposed to each competency of the ABCD. Classroom teachers are in the best position to facilitate career education programs and have a very good level of self-efficacy to do so. Notably, they will require professional development in career development concepts to ensure the students are provided with best practice aligning with career development professionals.

Certification of Thesis

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

Principal Supervisor: Professor Peter McIlveen

Associate Supervisor: Dr Brad McLennan

Student and supervisor's signatures of endorsement are held at the University.

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Table of Contents

List of Figures

List of Conferences

Souvan, G. (September 2019). A Case Study of a Queensland School's Journey into Integrating Career Development into a Post-Contemporary Curriculum that Prepares Students for the World of Work. Conference presentation at the Career Development Association of Australia (CDAA) Canberra ACT.

Glossary of Career Related Terms

All career related terms sourced from the Career Industry Council of Australia (2007)

Career. A lifestyle concept that involves work, learning and leisure activities across the lifespan. Careers are dynamic, unique to each person, and involve balancing paid and unpaid work and personal life roles.

Career Adviser. Career Advisers hold Professional Qualifications in Career Development and provide a service that facilitates career decision making. They provide timely and authoritative advice and information to students, parents and colleagues in educational settings.

Career Assessment. A process that gives meaning to quantitative test results and informal qualitative career assessment instruments.

Career Counselling. A process that assists people by emphasising self-awareness and understanding in order to develop a satisfying and meaningful career direction that guides learning, work and transition decisions and manage changing work and learning environments over the lifespan. Career counselling may be conducted individually or in small groups. Career Counsellors hold Professional Qualifications in Career Development as well as Specialised Qualifications in career counselling.

Career Development. The process of managing life, learning, work, leisure, and transitions across the lifespan in order to move towards a personally determined future.

Career Development Practitioner. Career Development Practitioners provide a wide variety of services to diverse client groups in order to foster their career development. Career Development Practitioners may deliver services in settings such as, but not limited to, schools, higher education (e.g., TAFE and universities), business organisations, government agencies and private practice in a range of formats including one-to-one, small groups, via the web, large classes and self-help materials. Such services may include, but are not limited to, career counselling, career advice, career education, job placement, employment services, recruitment, career coaching, training, mentoring and coordinating work experience or

internships programs. Career Development Practitioners may work at either a Professional or Associate level.

Career Development Services. A wide range of programs and services provided in many different jurisdictions and delivery settings to stimulate career development learning in order that clients gain the knowledge, skills, attitudes and behaviours to manage their life, learning and work in self-directed ways.

Career Education. The development of knowledge, skills and attitudes through a planned program of learning experiences in education and training settings to assist students make informed decisions about their life, learning and work options and enable their effective participation in working life.

Career Guidance. An umbrella term for the services provided by Professional Career Development Practitioners, intended to assist individuals, of any age and at any point throughout their lives, to make educational, training and occupational choices and to manage their careers.

Career Information. Occupational and industry information, education and training information and social information related to the world of work sourced from resources such as computer-based career information delivery systems, the Internet, print and media materials, informational interviews, and workplace speakers.

Career Management Skills. The knowledge, skills and behaviours required by all citizens to manage and develop their learning and employment across their working lives. These skills include gathering, analysing, synthesising and organising self, educational and occupational information as well as the skills for making and implementing career decisions and transitions.

List of Tables

CHAPTER 1: INTRODUCTION

1.1 Introduction

This present research considers the field of career development in secondary schools in Australia as the main topic of the study. One of the major areas to be investigated in this field is secondary school teachers' self-efficacy for career development teaching and learning.

McCowan, McKenzie, and Shah (2017) explain that career development describes the human development that occurs in the lifelong process of managing life, learning, work, leisure and transitions in order to move towards a personally determined and evolving future. In schools, career education enables students to develop an understanding of their own career development through a classroom environment. Career development in Australia has gathered increased momentum since the Organisation for Economic Cooperation and Development (OECD, 2004a) first provided advice through a handbook to assist policymakers in member countries such as Australia. The intent of this advice was to harness career guidance as a tool of public policy and to help develop, articulate and communicate effective policies for career guidance in education, training and employment. The suggestions by the OECD established a pathway for several critical systems in Australia, including the professional standards for Australian career development practitioners that was first published in 2006 by the Career Industry Council of Australia (CICA) and the Guiding Principles for Career Development Services and Career Information Products (CICA, 2007). Other initiatives included the development of the MyFuture resource (McMahon & Tatham, 2008) with an intent to describe the theoretical underpinnings of the National Career Information System and the Australian Blueprint for Career Development (MCEECDYA, 2010).

A key document developed was the National Career Development Strategy (2013) recognising the importance of schools in preparing students with high quality career education, information and services. It has been identified (COAG, 2009; Department of Education & Training, November 2016; MCEECDYA, 2008; COAG, 2004a) that schools are a key factor in the economic success of Australia and effective career development programs in schools are vital. However, data gathered in the Programme for International Student Assessment (PISA) 2012 from Australia suggested career development activities in schools are inconsistent. Further, Sweet, Nissinen, and Vuorinen (2014) indicated that Australian

students in higher socio-economic schools are provided more opportunities for career development participation than students from lower socio-economic backgrounds. They add that school systems do have an impact on career-related outcomes.

The Australian Curriculum, Assessment and Reporting Authority (ACARA) developed a career education program to assist in contributing to goals as set by the Melbourne Declaration on Educational Goals for Young People (MCEECDYA, 2008). The ACARA Work Studies Years 9-10 curriculum was developed as a national program for schools (ACARA, April 2013). Somewhat surprisingly, there was no directive by education departments in Australia for its mandatory inclusion in a school's curriculum. There is much written in the literature on the importance of career development, yet there has been very little progress in government policy of its implementation in schools. The OECD in their latest working paper (Musset & Kurekova, 2018) remind us that schools play a critical role in preparing young people for the critical skills required in future career planning. Recent initiatives and research indicate that teachers are best placed to provide support for with career advice for students (Australian Government, 2019; Holman, 2014; Hooley, 2015; Ithaca Group, 2019; The Careers & Enterprise Company & Gatsby Charitable Foundation, 2018). Of concern is the state of the provision of career development in Australian secondary schools where it was concluded that it was largely fragmented, variable and often inadequate (Keele, Swann, & Davie-Smythe, 2020). Upskilling teachers to support students with career advice will value-add to the shared responsibility that schools must take in ensuring students are ready for the future of work (Australian Government, 2019). It is argued that teachers are in the best position to support students with career advice however, schools will need the extra expertise of career development practitioners to support teachers. In schools this includes the Guidance Officers and career counsellors that should oversee career education content and delivery for students.

It is apparent that career education in schools will need to be driven by classroom teachers from a variety of subject area specialisations. What is clear is that funding for professional development is not on the national agenda. At this time, it is left to the State education departments like Victoria to offer some scholarships for teachers to gain formal qualifications in career development. Consequently, it will be our teachers who need to develop the belief that they can be effective career practitioners in the classrooms. These self-efficacious teachers will draw upon the four sources of self-efficacy according to Bandura (1986) that develops an individual's capacity to foresee and enact high levels of performance. For teachers, the outcomes of these practices in turn will influence teacher

performance and student learning (Tschannen-Moran, Hoy, & Hoy, 1998). Career education's success in secondary schools in Australia requires teachers to develop the belief that they can make a difference to assist students with their career decision-making. However, efficacy research in general suggests that it is unrealistic to expect teachers to effectively facilitate programs that are outside their teaching specialisation (Goddard, Hoy, & Hoy, 2004). The question that arises when schools commit to deliver career education programs, is how will teachers will be selected to teach the program. Further, will current teachers have the desire and self-efficacy to teach at a competent level that will initiate change in student thinking towards career development?

1.2 The Purpose of the Present Research

To date, it appears that understanding and measuring teachers' self-efficacy for career development teaching and learning has not been explicitly researched. Extensive literature searches did not reveal any reports, emerging research or measurement scales that sought to explore the efficacy beliefs of teachers facilitating career education programs in any context globally. Hooley and Dodds (2018) acknowledged that there is limited research that has specifically looked at the role of teachers in students' career learning when they developed the Teachers' Attitudes towards Career Learning Index (TACLI). The TACLI specifically sought to measure teacher attitude which is a different construct to teacher self-efficacy. The TACLI was first developed as an evaluation tool to assess the impact of a professional development program. Dodd and Hooley (2018) explained that the professional development intervention was to engage teachers in career learning and to increase their capacity to deliver career learning as part of their practice. The TACLI was used as a pre-test post-test tool to evaluate the changes of teacher's attitudes and engagement to career learning. Interestingly, the TACLI sought to measure teacher attitudes in five factors of career learning and support, school career strategy attitudes, subject career learning attitudes, career support attitudes and school career strategy practices. Self-efficacy is a different construct to attitudes and the CETSES sought to measure secondary school teachers' beliefs in their capacity to teach career development concepts rather than their attitude.

The primary focus of this research is to investigate mainstream teachers' perceptions about their self-efficacy for teaching career development concepts within their classes in secondary schools in Australia. The term *mainstream teache*r is referring to all qualified teachers employed to teach in any subject area within the secondary school who are not specifically trained in career development. Essentially, do mainstream teachers possess

sufficient self-efficacy to transfer their current teaching skills into a career education context? The five research questions to be investigated are:

1. What is the overall level of perceived self-efficacy for career development teaching and learning by secondary school teachers in Australia?

2. What are the differences, if any, in Australia's secondary school teacher' levels of perceived self-efficacy for teaching career development pertaining to student engagement, instructional strategies, and classroom management?

3. What levels of content knowledge do Australian secondary school teachers believe they possess across the eleven competencies of the Australian Blueprint for Career Development?

4. What levels of general occupational self-efficacy do Australian school teachers have in fulfilling their professional duties and being able to cope in the workplace?

5. Can any correlations be drawn from Australian secondary school teachers' self-efficacy beliefs in their specialist teaching area, school location, gender, age, years of teaching experience with teaching career education concepts?

A new domain specific scale was developed to measure teachers' self-efficacy for career development teaching and learning. The Career Education Teaching Self-Efficacy scale (CETSES) was initially conceived based upon the Teacher Self-Efficacy Scale (TSES) by Tschannen-Moran and Hoy (2001). Using a mixed-methods approach, the CETSES underwent a rigorous validation process to ensure content validity.

1.3 Significance of the Research

The findings from this research will help clarify the current levels of secondary school teachers' perceived self-efficacy for career development teaching and learning. Further, the findings can assist inform policymakers about the current levels of teacher understanding of career development competencies of secondary school teachers. This in turn, will have implications for program developers in university undergraduate teaching programs. Additionally, the findings will likely assist career development practitioners and school

administrators target interventions to increase teacher self-efficacy for career education teaching and learning that will in turn effectively influence positive career development decisions in students. This research will develop a scale (CETSES) that is unique in the measurement of teacher self-efficacy towards career development and learning in schools. The CETSES will pioneer this measurement and it is anticipated that other researchers will be inspired to conduct further research in this field of career education.

1.4 The Structure of the Thesis

This thesis comprises six chapters and nine appendices. Table 1.4 provides a summary of the thesis chapters.

Table 1.1

Summary of Thesis Chapters

Chapter No.	Summary
Chapter 1	Thesis introduction. Provides of the background of the research, the research purpose and design, key terms clarified.
Chapter 2	Literature review. Discusses career development in Australia and how the construct of teacher self-efficacy evolved. Further discussion is provided with regard to the connection of career education in schools and its association with self-efficacious teachers who will be required to embed career development concepts in the classroom.
Chapter 3	Methodology. Describes the methodological principles underpinning this research. Further, this chapter presents the personal and professional rationales for undertaking this research.
Chapter 4	Study 1a and 1b. Study 1a. Desktop audit. Describes the processes in the pre-planning of the CETSES design and the creation of the ABCD bespoke index and demographic questions. Further descriptions are provided on the Pilot study and the processes involved in the preparations for the release of the complete survey. Study 1b. Focus Group Validation. Describes the qualitative approach used through a thematic analysis that assisted in establishing the content validity of the CETSES
Chapter 5	Study 2. Describes the quantitative approach used in the main study. The processes are elaborated upon using SPSS 25 where a principal components analysis was used to determine if the hypothesised statistical model fitted the actual data set. Next, a parsimonious version of the CETSES was proposed via a confirmatory factor analysis using AMOS 26 for *goodness of fit*.
Chapter 6	Summarises and offers general discussion of the research findings including: • Main findings as they relate to the research questions • Theoretical implications • Methodological implications • Practical implications • Policy implications • Limitations and future research • The significance of the research • Conclusion

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The intent of the literature review is to examine existing research and knowledge related to both career development and teacher self-efficacy. Initially, this chapter defines the current notion of *career* and subsequently provides an analysis of the literature to clarify the term career development. The analysis of literature will narrow to career development in schools and the goals for the future as determined by relevant government departments. Initially, a brief summary will be provided of future selves which seeks to clarify this concept in context of a school student from a career development lens. Then, Career development theory will be explored to understand the links between the developmental stages of school-aged children and how this relates to how teachers are best placed to facilitate career education programs according to a continuum of theory from Donald Super (Super, 1980, 1990, 1992), Linda Gottfredson (Gottfredson, 1981, 2005) and social cognitive career theory (Lent, 1996; Lent & Brown, 2008; Lent, Brown, & Hackett, 2002). Accordingly, the present research is focused on teachers' roles in career development learning in the secondary classroom environment.

The existing literature on social cognitive theory and its direct relationship with the psychological construct of self-efficacy will be explored (Bandura, 1997). This will be specifically framed within Social Cognitive Career Theory (SCCT) as the underpinning theory that supports the current research into teacher self-efficacy (Lent, 2013; Lent & Brown, 2006). The literature will illuminate the different conceptualisations and measurements of teacher-self efficacy since the inaugural locus of control theory (Rotter, 1966). Finally, the literature will explore the nature of a self-efficacious teacher. Subsequently, the relationship between what is considered to be a *great teacher* and a self-efficacious teacher will be probed. To conclude, the discussion will focus on great teachers, linking pedagogical practices and how classroom teachers are best positioned to provide valuable career education and advice to students (Department of Education Employment & Workplace Relations [DEEWR], 2013; Hooley, 2015; Zhang, Yuen, & Chen, 2018).

2.2 School Students' Future Selves

Throughout this thesis, it will be discussed how career development is integral to allowing students to explore and ponder their future selves. The term *future self* therefore needs to be clarified in context within a career development focus. Future self and possible self are terms that will be seen as synonymous and is defined seen as selves that are imagined

what a student can become in the future (Markus & Nurius, 1986). A future self or a possible self is a future oriented component of a multifaceted self-concept (Oyserman & Fryberg, 2006). This is an important concept as this thesis starts to explore career development and the need for schools and their teachers to be better equipped to not only prepare students for the world of work but also to promote better educational outcomes for students in becoming more motivated and self-regulatory in shaping future behaviour. Career development has an important role in students pondering their future or possible self. Without planning ahead and setting goals, McClelland (2011)) stated that adolescents will have nothing to strive for and that that possible selves could be seen as the development of the self through achieving and avoiding certain hopes and fears. There is a distinct connection with students engaging with career education activities at school and how this assists these students in daring to dream about their future selves in the world of work. Oyserman and Fryberg (2006) comment that adolescents who believe positive possible selves are likely to attain higher levels of self-esteem than those who do not. They add that possible selves are the selves that are imagined to become in the future, the selves we hope to become and the selves we are afraid to become and the selves we fully expect we will become. Importantly, Oyserman and Fryberg (2006) state that possible selves can be rooted in one's own values, ideals and aspirations. Students engaging in career development learning activities are exploring their possible selves where there is exploration and the generating of options to increase self-awareness and formulating plans to achieve their goals (Shepard & Marshall, 1999).

2.3 Definition of Career Development

Since the beginning of the twentieth century, the term career development has evolved because of the changes to the nature of work, job and career. Frank Parsons (1909) published *Choosing a Vocation* as commentary to his view of vocational guidance that had been influenced by the industrial boom in the United States at that time. Historically, Parsons is regarded as a founding scholar of vocational psychology and an advocate for social change through career intervention (O'Brien, 2001, Savickas, 2009). Parsons influenced others in the field and began a scientific approach to vocational guidance and the promise of social good when matching workers to work and fostering the personal development of workers. Additionally, Parsons posited that the individual can be described as possessing certain traits that can be matched with different occupations with the intent of providing direct assistance to persons needing to make occupational choices that have not been orientated towards socio-economic backgrounds (Herr, Cramer, & Niles, 2004).

Current thinking into the notion of a career has influences from a variety of sources. The literature explains that career development needs to be perceived as a process of managing learning and work over one's lifespan. McMahon, Patton, and Tatham (2003) argued that career development is a lifespan process where paid employment is embedded in the complex system that represents the lives of people. They add that career and career development has changed over time to reflect:

1. Holistic views of paid employment as one facet of an individual's life
2. Dynamic interaction between individuals, paid employment and life
3. A constantly changing world of work
4. The necessity for individuals to be proactive life/career managers

The evolution of literature in the field demonstrates that the definition of a career has changed markedly since the beginning of the twentieth century until today. McMahon and Tatham (2008) provide insight into past interpretations where a career was considered an objective process of individuals matched to jobs. Today, career development is interpreted as a multifaceted range of activities that assist career choices made by individuals. Herr (2001) and Niles and Harris-Bowlsbey (2009) define career development as "the total constellation of psychological, sociological, educational, physical, economic and chance factors that combine to shape individual career behaviour over the life span" (p. 12). This also includes the interventions or practices that are used to enhance a person's career development or to enable that person to make more effective career decisions. Watts (1996) describes the revolution of the structures in work that has emerged in this postindustrial era that will see individuals having to adjust to changing careers multiple times in their lifetime. This thinking has transformed the meaning to career and to economic success in a globalised economy.

Others describe career development as the lifelong process of managing learning, work, leisure and transitions towards a personally determined and evolving future (CICA, 2007; 2008). The OECD (2004b) definition of career guidance is described as services intended to assist people, of any age and at any point throughout their lives, to make educational, training and occupational choices and to manage their careers. However, there are important distinctions between the process and the services within the concepts of *career* and the semantics used. Patton (2001) assists in distinguishing the various terms used in the literature by arguing that career development is often confused with career counselling and career information. Whereas, career counselling is a more intensive activity and is most often

conducted in a one-to-one or small group setting. Additionally, Patton (2001) explains that it is concerned with assisting individuals to identify, own and manage their career concerns. Career development prepares individuals for the world of work which differs from career education that seeks to develop knowledge, skills and attitudes within individuals in a planned program. There is congruence in the literature about the importance of understanding the difference across the meanings of career development, career development services, career information, career development practitioner/counsellor and career education (CICA, 2013; DEEWR, 2011; Watts, 1996). Predominantly, the literature is in alignment with the contemporary view of career development and the following definition by DEEWR (2001) is subscribed to by many in the field, with minor differences in wording that essentially defines: "Career development is the development by an individual of skills that will support the lifelong process of managing learning and work activities in order to live a productive and fulfilling life" (p.9). Further clarification of the differences between career education and career developed is provide by McCowan et al. (2017) who explain that career development describes the human development that occurs in the lifelong process of managing life, learning, work, leisure and transitions in order to move towards a personally determined and evolving future. Whereas career education enables students to develop an understanding of their own career development through a classroom environment with the key concept being a planned set of interventions and activities.

2.4 Theory of Career Development

The overarching goal of providing an education is to provide children with the skills and knowledge to plan for their futures. The Melbourne Declaration on Education Goals for Young Australians (MCEECDYA, 2008) articulate two overarching goals. Firstly, that Australian schooling promotes equity and excellence in education. Secondly, that all young Australians become successful learners, confident and creative individuals and active and informed citizens. Within our schools, the influences a teacher can have on their students move beyond the curriculum of teaching the key learning areas (e.g., Mathematics, English and Science) to a seemingly large role in students being active and informed citizens from many perspectives. Skill preparation for the world of work is essential and career exploration is required to assist students to effectively focus their efforts. It is generally acknowledged that crucial career-related concepts and attitudes are first formed in childhood (Schultheiss, 2008). The literature quite distinctly indicates that effective teachers do have a positive impact on student outcomes (see Hattie, 2003; Marzano, 2007a; Nye, Konstantopoulos, &

Hedges, 2004). Further, teachers are in a great position to play a valuable role in supporting a young person's career development (Hooley, 2015; House of Commons Education Committee, 2013; Teach First, 2015). Understanding the theories of career development from the perspective of school aged children is crucial to supporting the goals of the Melbourne Declaration. The literature reveals many different career development theories. In the current research, the focus will privilege three of these theories and how they pertain to school aged children; and therefore highlights the need for two initiatives:

1. Career development in schools must start from the early years of learning through to year 12.
2. School teachers need professional development to promote career development in the classroom that is integrated with the curriculum.

2.4.1 Donald Super's Lifespan-Lifespace Career Development Theory

Super's lifespan-lifespace theory (Super, 1980, 1990, 1992) is a developmentally based framework and is influential toward the notion that school aged children need to be exposed to intentional career education at all year levels of schooling. Broadly, the lifespan-lifespace perspective recognises that career development does not end in young adulthood but continues throughout life resulting in an increased sense of maturity (Patton & McMahon, 2006). Super's lifespan-lifespace theory is a combination of stage development and social role theory (Super, Savickas, & Super, 1996). During the career development process, people progress through five stages: growth, exploration, establishment, maintenance and disengagement. Super et al. (1996) added that the theory is not stage rigid whereby an individual's age dictates their progression from stage to stage but rather a process referred to as maxicycling. There would be movement and flexibility through these five stages and people would minicycle though certain stages during periods of their lives. The introduction of the Archway Model (Super, 1990) depicts that many factors influence career development, including social learning experiences, personality development and a person's needs, values and abilities. Watson (2019) summarises Super's theory by explaining: "Central to Super's theory is the defining of one's concept of self, the redefining of that self-concept over time, and the ongoing contextualization of one's self-concept throughout the lifespan" (p. 3).

The foundation of the lifespan-lifespace career development theory is the lifespan component. It progresses through five stages: growth, exploration, establishment, maintenance and disengagement (Super, 1990). The first two are the stages that school children progress through. The growth stage (ages 4-13) would align with students who are

preparing to start school in kindergarten/playgroup through to around year eight in early secondary school. The exploration stage (14-24) would be for students who are in year nine of junior secondary and beyond to post-secondary school options. The present research has a focus on classroom teachers whose work resides with students in the growth and exploration stages of the lifespan-lifespace career development theory.

The growth and exploration stages of Super's developmental model has a direct association to whole school curricula where students should be supported with their emerging future vocational selves. Watson (2019) explains that the growth stage encompasses four developmental tasks: being concerned about the future, increasing personal control over one's life, motivating oneself to achieve at school and acquiring competent work attitudes and habits. At this beginning sense of self, students are able to develop an understanding of the world of work. Niles and Harris-Bowlsbey (2009) describe this as a sense of curiosity that children have where they firstly engage with occupational fantasies and then by exploring their own environments (e.g., home, parental and peer relationships). The exploration stage requires adolescents and young adults to sequentially crystallise, specify and implement career choice. Through the exploration stage students start to crystallise their career interests by narrowing choices. Vocational choices are more detailed and students are working towards implementing and clarifying those choices via deliberate subject choices and possibly work experience (Kosine & Lewis, 2008; Niles & Harris-Bowlsbey, 2009). Students moving through the growth and explorations stages require opportunities for discovery. Schools can provide career education at both these stages via effective career pedagogy embedded within the curriculum.

2.4.2 Gottfredson's Theory of Circumscription, Compromise & Self-Creation

Hereditary or biological factors according to Gottfredson (2005) influence the choices that individuals make as they deal with a complex world. She explains that children as young as six have already begun to categorise the world around them with simple concrete distinctions. She explains that children in this age group become more aware of recognisable job roles and begin to assign them to particular sexes. From the age of six to eight, children start to see jobs that do not match their gender as unacceptable and have already started ruling out future careers. Examples of this could be that only females become nurses and preparatory/kindergarten teachers or only boys become engineers and work in trades. By age nine, children become aware of low-status occupations and are not mentioned as vocational

preferences. By age 13, children rank occupations in the same way as adults do and they understand the tight links among income, education and occupation.

Gottfredson (2005) discussed in detail that children have a ready facility to construct common social maps to perceive the same occupational map of social order as adults do. She adds that individuals identify the occupation they most prefer by assessing the compatibility of difference occupations with their images of themselves. What she states next is important as there is a blending of thoughts towards social cognitive career theory (Lent et al., 2002) and her original emphasis that sought to explain gender and class differences in career development and the barriers that individuals face (Gottfredson, 1981). There is a link between SCCT and how career outcomes are developed with self-efficacy beliefs and with Gottfredson's theory of circumscription, compromise and self-creation. In explaining further how circumscription and compromise relate to individuals (including school aged children) Gottfredson (2005) stated:

> Individuals identify the occupations they most prefer by assessing the *compatibility* of different occupations with their images of themselves. Compatibility is what is usually meant by the terms *congruence* and *person-environment fit.* The greater the perceived compatibility (suitability), the stronger the person's preference. (p. 91)

Gottfredson (2005) is ostensibly describing self-efficacy as she elaborates that the occupations that conflict with the core elements of self-concept will be mostly rejected. For all individuals, including school children, circumscription is the process that one uses to narrow down their alternatives in occupations as they eliminate unacceptable options in order to carve out a social space. Further, Gottfredson (2005) explained that "compromise is the process by which youngers begin to relinquish their most preferred alternatives for less compatible ones that they perceive as more accessible" (p.93). It is clear that there is a developmental (and sociological) approach to Gottfredson's theory of circumscription, compromise and self-creation towards career development over time (Niles & Harris-Bowlsbey, 2009). Further, there is the moral standpoint that teachers are in a great position to be able to reduce student thinking of unnecessarily circumscribing and compromising career options. Career education from a teacher's role is about allowing students to ponder their unique internal selves to explore and have belief of their future self.

2.4.3 Social Cognitive Career Theory (SCCT) and Self-Efficacy

Sheu and Wang (2019) explain that social cognitive career theory (SCCT) extends upon the seminal work of Bandura (1986). They add that that several models were developed to account for career outcomes including: developing and interest in, choosing and entering, performing and persisting, and feeling satisfied with one's chosen career (Lent & Brown, 2008; Lent, Brown, & Hackett, 1994). In describing the background to SCCT, Lent et al. (2002) stated that there was an increasing focus on cognitive variables and processes that help to govern career behaviour. Further, there was an important trend toward viewing people as active agents and shapers of their career development. They cited their work (Lent et al., 1994) where they felt that it would be useful in unifying models that would bring together conceptually related constructs of self-efficacy and self-concept and to fully explain outcomes that are common to a number of career theories and account for the relations among seemingly diverse constructs (i.e., self-efficacy, interests, abilities, needs). Lent et al. (2002) explain that SCCT is derived principally from Bandura's general social cognitive theory where there was an emphasis between self-referent thought and social processes in guiding human behaviour.

Vocational interests are influenced by the sources of self-efficacy, self-efficacy beliefs and outcome expectations (see figure 2.1). These three sources from the general social cognitive theory are the building blocks of career development (Lent et al., 2002). They add that self-efficacy has received the most attention as it refers to people's beliefs about their capabilities.

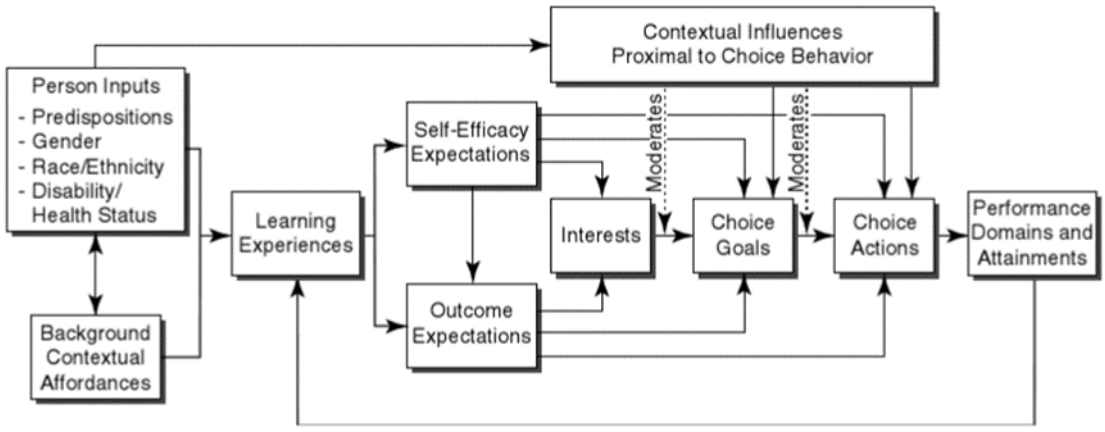

Figure 2.1 Model of Person, Contextual, and Experiential Factors Affecting Career Related Choice Behaviour

Note. Direct relations between variables are indicated with solid lines; moderator effects (where a given variable strengthens or weakens the relations between two other variables) are shown with dotted lines. Copyright 1994 by R.W. Lent, S.D. Brown, and G. Hackett.

Commentary by Leong (2008) explains that SCCT views career relevant activities as the outgrowth of self-efficacy and outcome expectations. People are exposed directly and vicariously to a variety of occupationally relevant activities in school, home or in the communities. In his summary, Leong (2008) states that people are likely to form an enduring interest in an activity when they view themselves as competent at performing it and when the activity is expected to produce valued outcomes. Leong adds that SCCT builds upon the interests model that arises from self-efficacy and outcome expectations. The model quite often is influenced by environmental factors e.g., economic need, family pressures or educational limitations. Further, SCCT focuses on influences of ability, self-efficacy outcome expectations and performance goals on success and persistence. Within SCCT, Lent (2013) proposed that self-efficacy beliefs can facilitate attainment in a given academic or career domain as long as the individual possesses the minimum levels of skills required in that domain. Lent does warn that increased confidence alone will not guarantee success but it does imply that self-efficacy can help people make the most of the skills they possess and it can lead to further development of their skills.

When it comes to school aged students, school counsellors and teachers need to understand which factors influence career choices. A student who has exposure to a number of experiences at all year levels of school move through the model of person, contextual, and experiential factors affecting career related choice behaviour (Lent et al., 1994). Thus, the present research explores the role of teachers whose job is about value-adding to the learning experiences of each student and improve the possibilities so that each child can realise their potential regardless of their situation in life (Corrigan, 2019).

2.5 Summary of Career Development Theory

Each of the career development theories discussed considers the developmental stages that individuals progress through. When the focus is placed upon school aged students, each of these theories provide convincing arguments that schools are in the ideal position to provide career learning opportunities at all year levels. School children at times do have to confront stereotype gender roles and do need to be supported to reduce the barriers of hereditary or biological factors that may influence their choices. From a social justice perspective, effective career development programs at whole school level can have a positive impact on how children view their future selves. Career development has to be an intentional process as part of a holistic approach to a child's education. Further, it needs to start from the growth stage (preparatory/kindergarten) while children are engaging in the process of

learning, play and fantasy. As children get older and move to the exploration stage, SCCT has an important role where students are developing self-efficacy beliefs for their future selves. SCCT helps explain the need for students in the early years of learning through to those students who are deciding upon post-secondary options. It is about our young learners needing learning experiences and exposure to the world of work to enable self-efficacy beliefs and outcome expectations to develop (Lent et al., 1994). All the career development theories presented provide a strong argument that schools have a significant role to play in preparing our students for the world of work. It is argued that effective schools will have a career development focus as part of its whole school curriculum. Further, it will require teachers with the skills, knowledge and self-efficacy in career development to provide guidance for students with possibilities in thinking about their future selves in the world of work. Accordingly, the present research addresses the limitations in the literature as it seeks to understand school teacher's self-efficacy beliefs about their ability to develop the skills and knowledge for career development teaching and learning.

2.6 The Importance of Career Development

The world of work has changed and the traditional notion in Australia that there was one job for life is now almost extinct. This changing workforce required reform of Australia's education and training systems for a skilled and flexible labour force (Dawkins, 1988a) and it now requires reform to how schools prepare students for this changing workforce. Teachers are ideally placed to inspire a passion in students in an array of learning opportunities at school to prepare them for their future selves. Research from participants enrolled in teacher education programs indicated several motivating factors why teaching was chosen as a profession (Richardson & Watt, 2006). These included perceived teaching abilities, the intrinsic value of teaching, the desire to make a social contribution, to shape the future and work with children/adolescents. The motivations for becoming a teacher further highlight the important role teachers have with regard to career development and learning as part of a child's education. The literature over time clearly articulates that the contemporary concept of a career is vastly different to what it was considered to be just over a generation ago. Looking back at how the notion of career development has changed is equally as important as to how it is seen currently.

Career theory from a traditional perspective has been based upon a system of clear, hierarchal organisations and a growing economy (Sullivan & Baruch, 2009). These linear careers were described as taking place within the context of stable, organisational structures

with individuals progressing up the firm's hierarchy to obtain greater extrinsic rewards. During this time of linear careers, Watts (1996) in a similar discussion commented on the structure organisations had for individuals who were promoted up the corporate ladder. These individuals had careers while others had jobs. Watts was referring to the stable environments of the workplace where individuals had jobs for life and there was little need for future career planning.

Significant change has occurred and the move from organisations that offered jobs for life toward a reorganised and redefined workplace is now evidenced. Fulltime employment is a thing of the past and one job for life is now available to few (Patton & McMahon, 2001). Baruch (2004) explains that a career was based on hierarchal, highly structured and rigid structures. He further explains that past career models had a clear uni-dimensional or linear direction of prescribed advancement. The organisational hierarchy was the ladder to climb and the upward rate of mobility evaluated success. He reflects that in the past, people expected to serve their organisation for their entire life. Today, people expect the organisation to serve them and the time span for the relationship could very well be just a few years. Niles and Harris-Bowlsbey (2009) argue that the eliminations of vertical hierarchies bring into question the definition of a successful career. It would appear now that people experience a succession of ministages. This shift suggests that work has ended and the career has died, as now individuals frequently move in and out of aspects of jobs, organisations, short and long-term contracts. The present research takes an active interest in teachers' knowledge of these changes in the world of work.

McMahon et al. (2003) explained that individuals needed to be responsive and proactive to their changing needs and the changes in nature of the structure of paid employment that included a proliferation of short-term contract work, casual work, contingent work and a decrease in full-time permanent work. McMahon et al. (2003) cited (Hall & Moss, 1999; Herr, 2001; Patton & McMahon, 1999) who agreed that the world of work has changed to the growing complexities and being described as non-linear in nature. Hall and Moss (1999) discussed the need for employees to be flexible and adaptive as organisations had to become smaller, smarter, and swifter in response to the changing market conditions. Their argument rests on the notion of a *protean career* where an individual, not the organisation, manages their career. Here, Hall and Moss (1999) add to the urgency of understanding the meaning of career development in a society that has moved into post-modernity.

Patton (2001) provided an argument at that time for further research in career development. She contended that a post-industrialist epoch had been entered into and the notions of work and career were no longer relevant. Patton commented on the globalised workforce that is replacing the industrialist era and that the changing world of work had issues to manage including transformations in organisations, the rising importance of the knowledge worker, the linkages between work experiences and physical and mental health, family responsibilities and life options and the changes in pathways between school and work. The underpinning argument for Patton was the changes required in understanding the notion of career. She provides discussion on the evolving nature of the term career from generations past and argues that the practice and the definition of career needed to change to better adapt to a post-industrialist age.

The literature describes clearly the changes that organisations have confronted and the impact this has had on individuals. In contemporary society, very few individuals are positioned in a job for life in one organisation and the notion of career has changed markedly since the industrial era. It became evident that an effective career development policy was required for countries like Australia to compete globally and for its citizens to manage the turbulent employment in this post-industrialist era. Australia, like many member countries of the OECD, responded to the need to have well planned and well-organised career guidance services.

The OECD (2004a) handbook was written to assist policymakers in the member countries to harness career guidance as a tool of public policy and to help develop, articulate and communicate effective policies for career guidance in education, training and employment. It recognised that the foundations of career self-management skills are founded at an early age and directly focused on the policy issues schools must confront to better prepare students for the transitions from school to work or further education and training.

For Australia, the suggestions by the OECD established a pathway for several critical systems. This included the professional standards for Australian career development practitioners first published in 2006 (CICA, 2013) and the Guiding Principles for Career Development Services and Career Information Products (CICA, 2007).

It can be summarised that current career development thinking emphasises the developmental nature of careers and cultivating the career efficacy and resilience of young people to manage a dynamic and elongated career and transition process (Miles Morgan Australia, 2012). It was concluded that there was a considerable amount of research that

provides an evidence base for the positive impacts of good quality career development services. They summarised the positive effects to be:

- Increased educational engagement and attainment
- Increased self-awareness and self-confidence
- Increased goal/future awareness and orientation
- Increased awareness of the labour market
- Strengthened pathways for young people at risk of disengaging from education, training or work
- Enhanced employment opportunities

Miles Morgan Australia (2012) cited global research to also conclude that the positive outcomes for young people also have positive implications for local communities and local labour markets which have flow on effects right through to national economies. The focus on career development let to other initiatives include the development of the MyFuture resource (McMahon & Tatham, 2008) with an intent to describe the theoretical underpinnings of the National Career Information System and the Australian Blueprint for Career Development (MCEECDYA, 2010). It was recognised that there was a need for a unifying national framework. The Australian Blueprint for Career Development (ABCD) is a framework that can be used to design, implement and evaluate career development programs for young people and adults. According to MCEECDYA (2010) , "At its core, the Blueprint identifies the skills, attitudes and knowledge that individuals need to make sound choices and to effectively manage their careers" (p. 9).

2.7 The Importance of Career Development: A European Perspective

Europe like Australia also recognised that the model of one job for life is being replaced by alternate thought of the meaning of a career (Vuorinen & Watts, 2012). It was quite clear that the European Lifelong Guidance Policy Network (ELGPN) views lifelong guidance as a support for individuals in the management of their careers as increasingly important at any age and at any point in their lives (Vuorinen & Watts, 2012). Additionally, lifelong guidance throughout Europe has been recognised as a crucial dimension of lifelong learning and promoting social and economic goals. The ELGPN also links lifelong guidance requires the improvement in efficiency and effectiveness of education, training and the labour market, as it is seen as being a contributor to reducing school drop-out and preventing skill

mismatches and boosting productivity. Further, lifelong guidance also seeks to address social equity and social inclusion (Vuorinen & Watts, 2012).

Given that students are a captive audience in the compulsory education sector, the ELGPN consider schools as being located in a unique position to ensure all citizens are equipped with suitable career management skills. Their research of career development activities across Europe revealed that it was varied and ad hoc. This called for an organised approach between countries and within education systems in each country. The research findings are not dissimilar to what is occurring in Australia in schools where there is a lack of consistency on what is considered to be effective career education in all Australian states. The research report from the Ithaca Group (2019) that influenced Australia's current National Career Education Strategy (Australian Government, 2019), provided examples of the many career education activities that were occurring across the nation. Like Europe, career development in schools in Australia is ad hoc without a consistent approach.

International data that included career development related items were collected during the 2012 Programme for International Student Assessment (PISA). PISA seeks to measure how well young adults at age 15 are prepared to use their knowledge and skills in particular areas to meet real-life challenges (Thomson, De Bortoli, & Buckley, 2013). In an analysis of the career development data collected, Sweet et al. (2014) reported in the ELGPN Research Paper No.1 the national differences in career development outcomes and relate these to the characteristics of individuals, their families and of schools. The option of completing the career questionnaire was taken up by 22 of the 65 countries. Participating countries included: Australia; Austria; Belgium; Canada; Croatia; Denmark; Finland; Hong Kong-China; Hungary; Ireland; Italy; Korea; Latvia; Luxembourg; Macao-China; New Zealand; Portugal; Serbia; Shanghai-China; Singapore; Slovak Republic; and Slovenia. Fourteen of the participant countries were members of the ELGPN. Overall, Sweet et al. (2014) determined that there was a considerable variation both between and within countries to the extent that 15-year-olds participate in career development activities. It was found that the highest participation was in Denmark and Finland which were the only two countries that participants indicated that they have taken part in more than half of all the career development activities in the scale. The data from Australia revealed above average participation but wide variation in participation levels in career development activities at school. Further, school was rated as a more important source for the acquisition of career development competence that sources outside of school in only five countries including Australia. Of interest, is the data from Australia where a large private school sector

differentiates students by socio-economic status at an earlier age. Sweet et al. (2014) found that between school variation in Australia is higher than in most other countries. The data from PISA 2012 further confirms that career development activities in Australia are not consistent in its approach between schools.

2.7.1 Summary of the Importance of Career Development in Australian Schools

The motivation for teachers taking up the profession in Australia can be pinpointed to a desire to make a social contribution, their self-efficacy in pedagogical practices as well as a desire to help shape the future of their students (Richardson & Watt, 2006). The world of work has changed and this has been acknowledged globally. From a career development perspective, the data gained from PISA 2012 (Sweet et al., 2014) appears to confirm that an ad hoc approach to career education in schools is used across Australia. The PISA 2012 data suggests that students from more affluent backgrounds are accessing a broader range of career development activities than students from lower socio-economic backgrounds.

In Australia, it is our teachers that are uniquely placed to provide students with requisite skills so that they can become responsive and proactive with their careers. Career development for school children must be seen as a social priority in the curriculum as much as all other aspects of a whole school curriculum. Contemporary curriculum design in schools is already becoming archaic in structure as it fails to fully prepare students from all socio-economic backgrounds for the world of work. Additionally, contemporary school curriculum designs also fail to provide students with a range of opportunities to ponder their future selves with well designed integrated career education.

2.8 Impact of Career Development Interventions in Post-Contemporary Schools

Academic rigour alone is insufficient to prepare students for the world of work. Curriculum design needs to look deep into the business of learning and consider not only what is going on inside the classroom, but also at what is occurring outside the classroom in the lives of children. Effective contemporary schools have established systems in place to support student learning. This would typically include a positive behaviour for learning (PBL) program, a whole school social-emotional program and an underpinning pedagogical framework (e.g., the Art and Science of Teaching) that teachers base their craft upon. Career development is a fourth element to supporting students but is yet to be integrated into a whole school curriculum in the vast majority of schools in Australia (see figure 2.2).

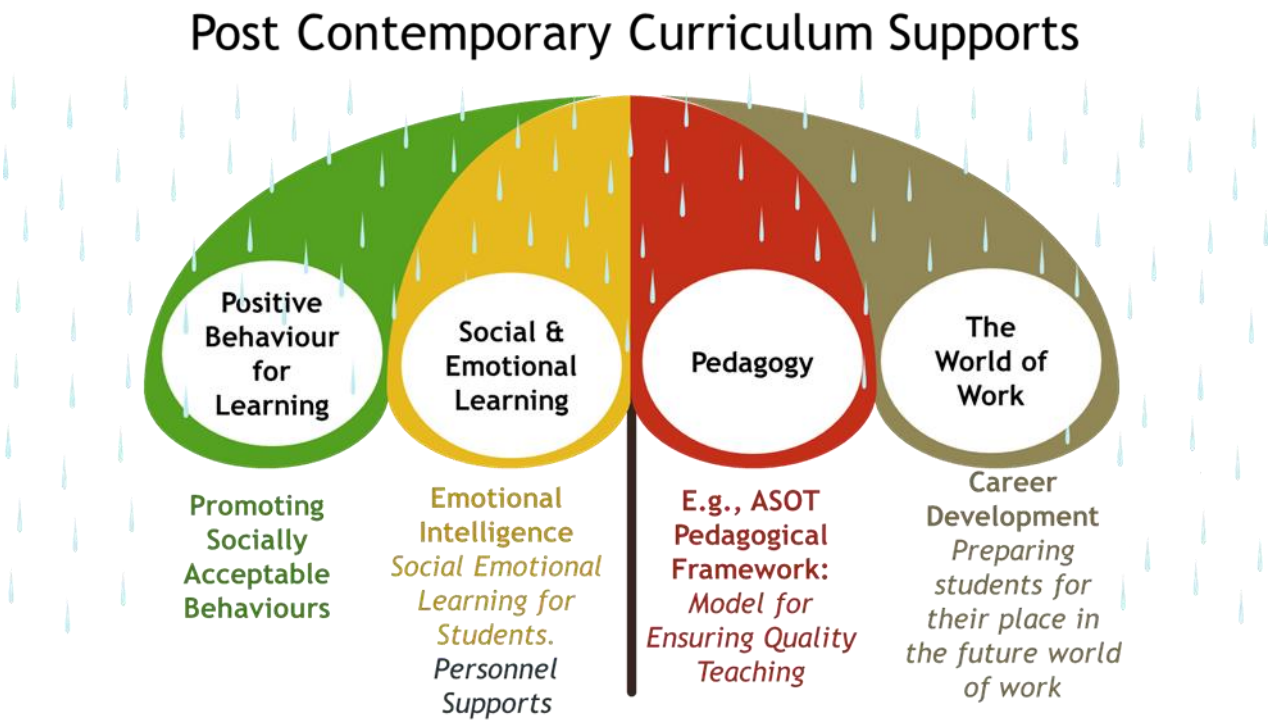

Figure 2.2 Graphic representation of post-contemporary curriculum supports in schools

There is some evidence in the literature that career development occurs in a deliberate approach to support student learning in schools in Australia (Ithaca Group, 2019). However, it is apparent from this report that career development in schools across Australia is sporadic and often superficial. Further discussion on the topic of career development in schools in Australia will be provided in this literature review.

It has been previously discussed that career development has implications for students' social justice including gender stereotyped roles in jobs and reducing the barriers of hereditary or biological factors that may influence their choices (Gottfredson, 2005). Further, it was discussed young learners need learning experiences and exposure to the world of work to enable self-efficacy beliefs and outcome expectations to develop (Lent et al., 1994). For many students, obtaining effective career advice from the home environment is not assisting in developing self-efficacy beliefs about their future selves in the world of work. Research into the barriers with student engagement with school in a longitudinal survey of Australian youth, found parental education and occupation are associated with engagement (Fullarton, 2002). The findings illuminated that socio-economic status and parental education level is strongly associated with student engagement.

Career development has provided positive student outcomes overall in a student's education. Meta-analyses of the influences that career development on improved outcomes

for students suggests the effect size is high in many areas (Brown & Ryan Krane, 2000; Ryan, 1999; Whiston, Li, Mitts, & Wright, 2017). These areas include: having higher overall grades, being better prepared for their futures, the school having a positive climate, students feeling safe at school and having better relationships with teachers (Hughes & Karp, 2004). Whiston et al. (2017) in their research found via a meta-analysis that the average effect size of those who received career intervention tended to score about a third of a standard deviation higher for school success than those who did not receive any intervention. Other researchers including (Choi, Kim, & Kim, 2015; Meijers, Kuijpers, & Gundy, 2013) report results that indicate that career education programs in schools correlated positively for overall school success.

It was suggested that the format of a career intervention strategy may be less important than what is done with the intervention itself. A meta-analysis focussing on career choice outcomes was able to propose that there were 19 specific intervention components identified in each of the studies used (Ryan, 1999). Brown et al. (2003) explained that these 19 intervention components will increase the effect size of the intervention. Importantly it was found in a further meta-analysis that the effectiveness of career choice interventions can be increased if five of these apparently critical interventions components (see table 2.1) are built into the program (Brown & Ryan Krane, 2000). Essentially, an effective career development program must be able to provide five intervention ingredients that are have been identified with linearly related increases in career choice outcomes (Brown et al., 2003).

Table 2.1

Five critical ingredients of career choice interventions

Components	Definitions
Workbooks and written exercises	The use of logbooks, logs, and other written material require participants to write their goals, future plans, occupational analysis etc.
Individualised interpretations and feedback	The provision of opportunities to receive individualised feedback on test results, goals, future plans etc regardless of intervention format
World of work information	The provision of opportunities in-session to gather information on the world of work and on specific career options
Modelling	Exposure to models of career exploration, decision making, career implementation etc
Attention to building support	Activities designed to help participants understand or build support for the career choices and plans

2.8.1 Teachers Transferring Pedagogical Skills Towards Career Development

When it comes to career development intervention in schools, teachers are well placed to facilitate the five essential ingredients that provide increased career outcomes for students. Teachers arguably possess the pedagogical expertise to professionally develop resources and facilitate content for the classroom. Defining what teachers do, Education Queensland (Department of Education, 2018) state on their website:

> Teachers play a key role in the delivery of quality education to students. Adhering to the Australian Curriculum, teachers plan, prepare and deliver effective learning programs, lessons and teaching materials for every student in their allocated classes. This involves working with students of differing ages and abilities, assessing student progress and liaising with non-teaching staff such as teacher aides and therapists.

Teachers interact with students in different capacities. Potentially, they have three tiers of involvement in the delivery of career education concepts. The first layer of involvement is the teacher's role in their pastoral care and as a career informant. The second layer of support is as a teacher within their subject area assisting students in their career

decision making. The third tier of involvement is in a middle leadership role in coordinating and promoting career activities with students (Teach First, 2015).

In Australia, career development in schools is gaining some momentum albeit in a non-systematic approach nationwide. Research on incorporating career education in the Australian Curriculum (Ithaca Group, 2019) indicated that a variety of programs are being used. These include various certified courses in work education, work readiness, Work Studies years 9-10 (ACARA, April 2013) and more recently the use of the Australian Curriculum's General Capabilities foray into career education (ACARA, 2019). At State level in Australia, it appears only the Department of Education in Tasmania is providing career education in their My Education initiative (years 7-12). They are using the General Capabilities (ACARA), Work Readiness, and Career Life Planning which are courses accredited by the Office of Tasmanian Assessment, Standards and Certification (TASC). Other jurisdictions in Australia have programs targeting the career education of specific cohorts (Ithaca Group, 2019).

The recommendations from the research on incorporating career education into the Australian Curriculum ((Ithaca Group, 2019) have one common theme. That is, it will be the teachers that will be interpreting and implementing career education syllabi in its various formats (e.g., ACARA, Work Studies). There are two distinct approaches to career education being used in schools according to the research by the Ithaca Group. This includes standalone practices (e.g., Work Studies) and embedded/integrated approaches (e.g., ACARA's General Capabilities). Further, there are other programs developed at school level based upon the Australian Blueprint for Career Development (MCEECDYA, 2010) and other existing national resources.

2.8.2 School Teacher Training in Career Education in Australia

A desktop audit of undergraduate teacher education programs in Australia to date revealed that career development was not provided as an elective area of study. However, there are a number of educational institutions offering career development studies at Certificate IV level and at post-graduate level. The Career Development Association (CDAA) published a list of Australian institutes (see Table 2.2) that offer certificate level and post-graduate level qualifications in career development (Career Development Association of Australia, 2020).

Table 2.2

Australian Institutions Offering Career Development Qualifications

	Certificate IV	Graduate Certificate	Graduate Diploma	Masters
Australian Catholic University		✓		✓
Australian National Institute of Business & Technology		✓		✓
Betterlink Group	✓			
Career Education Association of Victoria	✓	✓		
Interskills Training	✓			
James Cook University		✓		✓
Jigsaw Training	✓	✓		
Queensland University of Technology		✓		✓
Royal Melbourne Institute of Technology		✓	✓	
Skills Recognition International	✓	✓		
Cairnmillar Institute	✓			
University of New England		✓		
University of Queensland		✓		✓
University of Southern Queensland		✓	✓	✓
Worklinks	✓			

*Accurate as of February 2020 (CDAA)

2.8.3 Career Education Strategy in Australia

The National Career Development Strategy Green Paper (DEEWR, 2012) discussed the importance of career development for Australia's future and outlined a proposed direction for a National Career Development Strategy (NCDS). It stated that all Australians required the knowledge and skills to manage their careers throughout life. This begins early with school students, through school where students are transitioning from school to further training education or work. Further, it continues beyond education with employees changing career directions, groups entering or re-entering the workforce and mature age workers who are looking to change careers or change their lifestyle as they transition to retirement. The NCDS (DEEWR, 2012) is explicit in pointing out that "the schooling sector is key to young Australians develop effective career development skills" (p. 7). Further, the NCDS outlines the responsibilities of State and Territory governments have in providing quality career development services in all areas of education. The latest NCDS for Australia (Australian Government, 2019), illustrated in an abbreviated glossy infographic report how every school student will have access to high quality career education. Yet, the NCDS (Australian Government, 2019; DEEWR, 2012), fail to fully recognise the important role classroom teachers will have in preparing students for the world of work at all year levels. This includes a lack of commitment that describes how to develop the capacity of teachers, and how and where funding will be derived to support teacher capability to make connections between classroom learning and the world of work.

When the NCDS was formalised, it was noted that the Australian Government needed to provide support for individuals to manage their careers throughout their lives and to make appropriate choices (DEEWR, 2013). The NCDS takes the view of career being a lifelong process that is now widely accepted in Career Development Theory (DEEWR, 2013) that was adopted from the OECD. The NCDS states that individual needs and national productivity benefit from career development and clarify this by discussing the benefits that include increased confidence, better-informed decisions, smoother transitions and higher job satisfaction. Specific mention is made to how important schools are in the process of raising educational attainment and skill levels, and successful career transitions. The NCDS state this is important to develop a national strategy to promote the development of career management skills with high quality career education, information and services. Their aim is to bring all key stakeholders together and promote high quality career development. A review of the NCDS commenced in a roundtable discussion with stakeholders in 2016. A press release (Department of Education & Training, November 2016) by the Honourable

Karen Andrews indicated the government was committed to ensuring students receive the best possible preparation for the jobs of today and the future.

Career development in Australia is continuing to gather momentum to ensure the future of its economy and the future of its individuals are best placed to manage in the volatile times of the modern era. It has been identified broadly that schools are a key factor in the economic success of Australia and effective career development programs in schools are vital (COAG, 2009; DET, November 2016; MCEECDYA, 2008; OECD, 2004a). Further, the NCDS (Australian Government, 2019) highlights the importance of schools in their overall strategy. Despite the Australian Government's NCDS, there has been very little research and development into the role of school teachers at the frontline.

2.9 The Role of Schools in Career Development

It was notable in the Melbourne Declaration on Educational Goals for Young Australians (MCCEECDYA, 2008) the need for Australia to compete in a global economy is linked with education. In particular, MCEECDYA was clear in its vision that schools will play a major role in developing the virtues in young Australians that ensure the nation's ongoing economic prosperity. There were two overarching goals for education in Australia. The first goal was to promote equity and excellence in Australian schools. The second goal was that all young Australians will become successful learners, confident individuals and active and informed citizens. The Melbourne Declaration included a *commitment to action* in eight interrelated areas to assist in supporting the educational goals. These interrelated areas have direct links to the effective fostering of career development in schools with references to the Australian Curriculum. The Melbourne Declaration's ongoing charter is to facilitate the three features that all young Australians need to develop i,e., being successful learners, confident and creative individuals and active and informed citizens. Soon after the Melbourne Declaration, the COAG developed a National Education Agreement (COAG, 2009). It follows the Melbourne Declaration where there was a commitment to action by Australian governments to ensure schools and all key stakeholders support students' progress through schooling and to provide them with rich learning, personal development and citizenship opportunities. Further, it was to ensure that all Australian school students acquire the knowledge and skills to participate effectively in society and employment in a globalised economy. The National Education Agreement (COAG, 2009) articulates that commitment and details the roles and responsibilities of the governments. Of particular note is the support

that will be required by all State and Territory governments to the Australian Curriculum, Assessment and Reporting Authority (ACARA).

The ACARA was established in 2008 with a variety of functions. Its first charter was to develop and administer a national school curriculum, including the content of the curriculum and achievement standards for school subjects (ACARA, 2011). The development of the Australian Curriculum provided the foundation for the exploration of an initiative to specifically support young people within schools under the National Trade Cadetship (ACARA, May 2013). The ACARA began developing school-based work programs under the NTC initiative. The NTC initiative was announced as a Commonwealth election commitment in 2010 and promoted as a government priority in a press release by the then Minister for School Education, Early Childhood and Youth, Peter Garrett (2011, April 14). The objective was to deliver a school-based initiative that would provide opportunities for students to develop work readiness skills and assist with commencing vocational training if that was the desired pathway. The NTC had two pathways; a foundation pathway for students in Years 9 and 10 and a pre-apprenticeship pathway for Students in Years 11 and 12 (Australian Curriculum Assessment & Reporting Authority, 2013). The NTC was the overarching initiative that included the ACARA Work Studies years 9-10 and the National Trade Cadetship Years 11-12. The ACARA's Work Studies Years 9-10 went through a consultative process (ACARA, May 2013) towards a completed curriculum document that was ready to implement in 2014. In a press release, the NTC years 11-12 was abandoned in 2015 by the Tony Abbot led Liberal/National party as part of their budget savings (Ellis, 2015).

The ACARA Work Studies Years 9-10 underwent a consultative process and included key stakeholders and interests from many aspects of education and Industry that included career development organisations (ACARA, April 2013). The Work Studies Year 9-10 Curriculum set out to ensure that it contributed to the educational goals set out in the Melbourne Declaration on Educational Goals for Young People (MCEECDYA, 2008). The NTC initiative was developed to prepare young people for further study or towards a skilled occupation. The ACARA stated that the Work Studies Years 9-10 will use work related contexts to enhance general capabilities and work readiness. The ACARA pointed to aspects of knowledge and understandings required for young people to manage change. However, there is a direct purpose towards the skills and competencies that underpin career development, including the importance of career and life design and readiness for work and for individuals to become life-learners. The Work Studies Year 9-10 curriculum is described

separately in two strands and also has four options. The first strand is *Skills for Learning and Work* and focusses on the development of self-understanding and non-technical workplace skills and entrepreneurial behaviours. The second strand is *Career and Life Design* that focusses on developing knowledge, understanding and experience of the world of work, skills, knowledge and dispositions in career development.

The ACARA is likely to be the best positioned to develop a career development program to suit school environments. However, care must be taken that schools are able to deliver the programs based on best practice. This was a concern expressed during the draft shaping phase of the Work Studies Years 9-10 curriculum (ACARA, April 2013). A high percentage of respondents representing Industry and key stakeholders had concerns for the resourcing and the need for teacher professional development that was deemed to be beyond the scope of the draft shape paper. *The Rationale and Options for a National Career Development Strategy* (DEEWR, 2011) highlighted Curriculum as one of the reforms as being integral for the national career development strategy. Of particular note are the recommendations to the pedagogical practices and professional development that will be required for teachers delivering ACARA's Years 9-10 Work Studies program. Further, DEEWR (2011) stressed that the university sector must embed career guidance competencies into teaching courses at undergraduate level. Teachers will need to be better prepared and possess the skills to assist students in making make educational, training and occupational choices and to assist students to learn the skills to manage their careers (CICA, 2007). The professional standards for Australian Career Development Practitioners detail the seven entry level core competencies that career practitioners are required to demonstrate (CICA, 2013). Core Competency:

1. Career Development Theory
2. Labour Market Information
3. Communication and Interpersonal Skills
4. Ethical Practice
5. Diversity and Inclusion
6. Technology, Information and Resources
7. Professional Practice Application

Arguably, teachers will mostly possess some knowledge and skills of the core competencies that would have been developed in their role as educators. However, teachers

will need upskilling in career development theory, labour market information and most importantly, how to support students in their professional practice.

ACARA has recently ventured into career education through the general capabilities. The general capabilities were included in the original scope of the Australian Curriculum (National Curriculum Board, 2008b) that had an aim to equip young people with the knowledge, skills, behaviours and dispositions to live and work successfully in the twenty-first century (Ithaca Group, 2019; MCEECDYA, 2008). The ACARA add that the general capabilities were developed as a key dimension together with curriculum content and cross-curriculum priorities (ACARA, 2016). Following from the Australian Education Council Mayer Committee (1992), a significant amount of discussion about the generic competencies were identified in the goals of education that became a focus for the general capabilities (National Curriculum Board, 2008b). Seven general capabilities were finally settled upon that included:

- Literacy
- Numeracy
- Information and Communication Technology Capability
- Critical and Creative Thinking
- Personal and Social Capability
- Ethical Understanding
- Intercultural Understanding

ACARA curriculum specialist for the general capabilities (D. Cavanagh, personal communication, July 30, 2019), explained that the general capabilities and career education project came about as part of a larger national strategy focused on career education in schools. As a part of this initiative, resources were developed to demonstrate how the curriculum could be used to develop transferable skills or general capabilities. The development of transferable skills is one of the six objectives of the national strategy (Department of Education & Training, 2019b). It was further explained that the project demonstrates how within a planned approach to career education, the general capabilities can be included to ensure that students are provided with the opportunity to develop a range of skills.

The Department of Education in Tasmania now uses the Australian Curriculum general capabilities through their *My Education* initiative (Department of Education, 2019a). Their website states that My Education is a whole-school approach to career and life planning

starting in kindergarten and continuing through to year 12. They add that the general capabilities assist a child to develop the skills, knowledge, behaviours and dispositions to assist them to be successful in the future.

The ACARA (2019) provides nine illustrations of practice to showcase how the general capabilities have been incorporated towards career education in schools around Australia. They reference the National Career Education Strategy (2019) in stating that the Australian Curriculum provides opportunities for teachers to develop school-based approaches to career education through the key learning areas, general capabilities and cross-curriculum priorities. Reviewing each of the nine illustrations of practice suggest that schools were asked to map current career education initiatives they were undertaking with the general capabilities. It appears that there is no direct career development framework that underpins career education within the notion of using the general capabilities for career development in schools. Research into incorporating career education into the Australian Curriculum, the Ithaca Group (2019) reported that experienced career educators warn that the general capabilities alone cannot address the entirety of career education.

There is much written in the literature on the importance of career development yet there has been very little progress in government policy of its implementation in schools on a national basis. Recent research by (Keele et al., 2020) also concluded that the provision of career development in Australian secondary schools was largely fragmented, variable and often inadequate. This ascertainment of the status of career development in schools was previously noted by the Ithaca Group (2019) in their research on what is occurring in schools across Australia. They commented kindly in their analysis that career education practices could be more widely adopted. This research uncovered a wide array of approaches and depth of delivery when it came to the implementation of career development in Australian schools.

Interestingly, the roundtable discussion of key stakeholders that focussed on a review of the NCDS appears to be another attempt by the government to promote the implementation of career development particularly in schools once again (Department of Education & Training, November 2016). While another current roundtable discussion focusing on *Preparing young people for the future of work* held by the Mitchell Institute (Torii & O'Connell, 2017) appeared to have been unable to make the connection and missed the opportunity to explore career development as one of their outcomes of strengthing capabilities of students. They provided a plethora of current data suggesting that in all states of Australia, students are increasingly becoming disengaged from learning for a variety of

reasons yet failed themselves to identify that most of the interventions suggested are in fact aspects of a quality career development program for schools. In New South Wales, a Youth Action Policy Paper (Bowen & Kidd, 2017) identified an overarching youth employment strategy required an emphasis on career guidance. Further, they stated that policy needed to support schools to develop a minimum level of career guidance programs based upon the Australian Blueprint for Career Development. The OECD keeps iterating to us that career guidance is vital for both the individual and social good. Their latest education working paper (Musset & Kurekova, 2018) is a constant reminder that schools are in the best position to assist in the preparation of young people in developing the critical thinking skills required in future career planning.

It is apparent in the literature that there is very little consideration to the human resources in schools to effectively deliver career education programs including ACARA's Years 9-10 Work Studies and General Capabilities or programs developed using the Australian Blueprint for Career Development. While ACARA appears to be able to develop a program that has academic rigour, there is no momentum at this stage in upskilling current teachers and preparing pre-service teachers toward the professional standards that the Career Industry Council of Australia has documented (CICA, 2013). Even more apparent in the literature is the lack of research conducted for the self-efficacy of current and pre-service teachers to deliver career programs in schools. Career development is not a major or minor teaching area for teachers, and it will require having a belief about their capabilities and developing content knowledge. Historically, career development in schools has been a matter of hit and miss. This is evident in the recommendations in the research on incorporating career education into the Australian Curriculum (Ithaca Group, 2019) and reinforced in the roundtable discussions on 'Preparing young people for the future of work' held by the Mitchell Institute (Torii & O'Connell, 2017).

The recognition of the importance of career development in schools has made significant progress since the Melbourne Declaration on Educational Goals for Young Australians (MCEECDYA, 2008). On this journey, ACARA has developed a school-based career education program with its Work Studies Year 9-10 curriculum and there has been some interest in using the General Capabilities. It has been recognised that schools have an important role to play in supporting students with developing the skills and attitudes that prepare students for life beyond school. Previously, a definition was provided to describe career development by DEEWR (2011): "Career development is the development by an individual of skills that will support the lifelong process of managing learning and work

activities in order to live a productive and fulfilling life" (p. 9). Career education differs from career development. Patton (2001) explains that career development prepares individuals for the world of work which differs from career education that seeks to develop knowledge, skills and attitudes within individuals in a planned program. However, from a pedagogical perspective, the journey for career education in schools has only just begun. There is policy in place through the NCDS (Australian Government, 2019), yet there has been no real thought into how classroom teachers will develop the skills and expertise to consider career development theory in relation to school aged children (Gottfredson, 1981, 2005; Lent, 1996, 2013; Super, 1980, 1990, 1992; Super et al., 1996).

The recent research into what is occurring in career development within Australian schools has identified many concerns about the lack of qualified career practitioners (Ithaca Group, 2019). It is the classroom teacher that has been identified as being in a strategic position to play a valuable role in supporting a young person's career development (Hooley, 2015; House of Commons Education Committee, 2013; Teach First, 2015). It has also been discussed that teachers must access targeted professional development in career development pedagogy in order to gain the skills and knowledge to develop expertise. This is to ensure that their role on the frontline is value-adding in a holistic approach to a student's career development. While it can be identified that it is our teachers on the frontline who can play a significant part in a student's career development, what is unknown are the levels of interest, motivation and self-efficacy teachers actually possess when it comes to career development teaching and learning.

2.10 The Role of Teachers in Career Development Learning and Teaching

Career development can be summarised by understanding that it is a process of a person managing their life, learning and work over their lifespan. Further, it involves developing the skills and knowledge that enable individuals to plan and make informed decisions about education, training and career choices (DEEWR, 2012). Additionally, career development services include career education, career exploration, career information, career advice and career guidance. It had been identified in the Melbourne Declaration on Education Goals for Young Australians (MCEECDA, 2008) that career development in schools is a key component of its two overarching goals. Firstly, that Australian schooling promotes equity and excellence. Secondly, that all young Australians become successful learners, confident and creative individuals and active and informed citizens. The profile of career development in schools has risen and the outcomes of quality career education in

schools today are no longer just about helping students make a single career choice. It is about equipping students with skills that will enable them to respond flexibly to changing opportunities and circumstances throughout their lifetime (Department of Education & Training, 2019a). Career development is the fourth element that must be included in a holistic approach in a post-contemporary school. The research suggests that schools in Australia are making some progress with career development (Ithaca Group, 2019; Torii & O'Connell, 2017). The State education departments of Tasmania and Victoria are moving in the right direction with including career education programs in schools but are developing individual approaches. This same research about what is occurring is occurring with career development in schools, also provided recommendations for the Australian Curriculum to take a greater role to provide a national approach.

It is our schools and its educators that have been identified in the Melbourne Declaration on Education Goals for Young Australians (MCCEECDYA, 2008) that career development in schools is a key component of its two overarching goals. Generally, it can be stated that the core business of a teacher is the delivery of quality education to students. The progression of career development in schools will require all of its teachers to take a greater role in implementing an integrated approach. State schools across Australia have in place career development professionals in varying capacities that are able to support students in a limited manner (Ithaca Group, 2019). The research by the Ithaca Group provides a clear snapshot of what is currently occurring in career development in schools across Australia. They reported that it was widely acknowledged that the qualifications and expertise of people currently responsible for career education in Australian schools are variable. They added that many stakeholders identified a need for personnel with professional qualifications in career education.

Teachers are in the best position to provide support with career advice to students. particularly when advice about careers are related to their subject specialisation (Hooley, 2015). This research does seek to measure the secondary school teachers' self-efficacy to teach career education concepts to their students. What we do know is that many students will have informal conversations with their teachers about their career ideas (Hooley, 2015). Additionally, students do see their teachers as trusted adults who are experienced in making career decisions. Teachers themselves have built careers, developed networks of friends and colleagues and therefore are placed in a role that can inform a young person's career building (Hooley, 2015). The classroom teacher from any subject-specific major teaching area can play a valuable role in supporting a young person's career development. Hooley (2015)

expands by explaining the typical tasks a teacher could take in supporting a young person includes:

- talking about decisions that they made and how they made them;
- talking about their career building (including discussing challenges and regrets);
- providing relevant examples (e.g. how they used work experience to help in getting a job);
- discussing other people that they know and their careers (this may include providing links to them to offer further career learning opportunities);
- discussing the role that organisations and networks have played in their career building and providing links to these resources; and
- providing specific subject or occupational information for those students who are particularly interested in pursuing a similar career.

The way forward for career education in schools will require teachers to gain professional development in career education with opportunities to gain professional qualifications. At this time, it is apparent that career education in Australian schools will need to be driven mostly by classroom teachers from a variety of subject area specialisations. It is also clear that it will be mostly the classroom teachers who will play a critical role in career education in schools. However, these teachers must also develop the interest and motivation to provide their students with career education that is integrated within their key learning areas. Further, these same teachers must be prepared to undertake professional development that will increase the career connections in these key learning areas. It will be these teachers who need to develop the belief that they can be effective career practitioners in the classrooms. The future for how career education is framed in Australian schools may well be guided the model developed from the Gatsby Benchmarks that emerged from the Good Career Guidance research report in the United Kingdom (Holman, 2014). In particular, the guide *Understanding the role of the Careers Leader: a guide for secondary schools* (The Careers & Enterprise Company & Gatsby Charitable Foundation, 2018), assists in providing a framework that Australian schools should consider to support the role of the teacher in the classroom. The research and implementation of the careers program in secondary schools in the United Kingdom is an attempt at sustained action to improve career guidance. Australia has not developed a national approach to career guidance in secondary schools and the National Career Education Strategy is just a strategy not an explicitly written document as a

guide for career development in schools. Whereas, Understanding the Role of the Careers Leader in secondary schools does provide a model that uses a holistic approach to inter-professional working that provides an environment for the effective collaboration between stakeholders including teachers, Guidance Officers, careers professionals, senior leaders, parents, employers and external stakeholders (Dodd & Hooley, 2018).

2.11 Self-Efficacy: The Core of Career Development Learning and Teaching

Self-efficacy theory emerged through the research of Bandura (1977a). He provided an integrative theoretical framework to explain and predict psychological changes achieved by different modes of treatment. Bandura (1994) defined self-efficacy further and discusses that it is about belief in oneself to produce levels of performance that exercises influence over events Bandura introduced the concept of self-efficacy beliefs as an individual's capacity to develop high levels of performance in any endeavour. He discussed that not only can perceived self-efficacy have a direct influence on choice of activities and settings, but, through expectations of eventual success, it can affect coping efforts once they are initiated. Bandura added efficacy expectations determine the amount of effort people will expend in the face of obstacles and aversive experiences. Bandura continued by postulating a model where expectations of personal efficacy are derived from four principal sources of information including performance accomplishments, vicarious experience, verbal persuasion and physiological states. Bandura noted that of these four major influences, the most powerful is mastery experiences (performance accomplishments).

- Performance accomplishment is based on personal mastery experiences. Success raises mastery expectations and repeated failure lowers them particularly if the mishap occurs early in the course of events.
- Vicarious experiences are activities that are modelled by others performing threatening activities without adverse consequences. This will generate expectations in observers that they can as well improve if they intensify and persist in their efforts. People persuade themselves that if others can do it, then they should be able to achieve some improvement in performance.
- Verbal persuasion: People are led through suggestion into believing they can cope successfully with what has overwhelmed them in the past. Efficacy expectations induced in this manner are also likely to be weaker than those arising from one's own accomplishments.

- Physiological states: Bandura added that emotional arousal adds to the feeling of capability or incompetence. Stressful and taxing situations generally elicit emotional arousal that may have informative value concerning personal competency.

In essence, it was posited that behaviour change and decision making are mediated by expectations of self-efficacy: expectations of beliefs that one can perform a given behaviour (Herr et al., 2004). Niles and Harris-Bowlsbey (2009) cite Bandura (1986) in his definition of self-efficacy as "people's judgements of their capabilities to organise and execute courses of action required to attain designated types of performances" (p. 91). They add that self-efficacy beliefs are dynamic self-beliefs and are domain specific. Importantly, self-efficacy beliefs and outcome expectations in turn shape our interests, goals, actions and eventually our attainments (Herr et al., 2004). Additionally, Bandura argues that self-efficacy beliefs vary in generality and strength and are sensitive to various levels of task demands (Bandura, 1977b, 1986). He explained that self-efficacy beliefs were not necessarily uniform across the differing tasks, situations or domains that one may need to address.

It is important to understand other constructs that seek to explain expectancy beliefs. For example, the expectancy beliefs of self-efficacy, self-concept and self-esteem differ conceptually (Bong & Skaalvik, 2003; Pajares, 1996). Pajares (1996) explains that some researchers use the terms synonymously, yet they are different constructs. Self-efficacy is a context specific assessment of competence to perform a specific task. Whereas, self-concept is measured at a broader level of specificity. Further, it includes the evaluation of such competence and the feelings of self-worth associated with the behaviour in question. For example, Bong and Skaalvik (2003) summarised by stating: "Self-efficacy judgment is less concerned with what skills and abilities individuals possess. It considers more important what individuals believe they can do with whatever skills and abilities they may possess" (p.5). Teachers already possess the skills in content delivery within their key learning area specialisations. However, when it comes to career development learning and teaching, they will require targeted professional development and a belief that they can transfer their pedagogical skills to include career education.

2.11.1 Research in Measuring Teacher Self-Efficacy

Teacher self-efficacy has been described by Tschannen-Moran and Hoy (2001) as a teacher's judgement of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated.

Notable instruments that have been developed to measure self-efficacy in the past include: the Rand Scale (Rotter, 1966), Responsibility for Student Achievement (Guskey, 1981), Teacher Locus of Control (Rose & Medway, 1981), Bandura's Self Efficacy Scale (1997) and Gibson and Dembo (1984) Teacher Efficacy Scale. Despite each being tested, Tschannen-Moran and Hoy (2001) suggest that these instruments failed to capture the multifaceted construct teacher self-efficacy. Commentary by Pajares (1996) suggests that specificity and precision of these instruments in their development were more paramount than external validity and practical relevance.

Henson (2001b) stated that the study of teacher self-efficacy began with RAND researchers' Armor et al. (1976) evaluation of whether teachers believed they could control the reinforcement of their actions. The RAND studies based their research on Locus of Control Theory (Rotter, 1966) where it was assumed that student learning and motivation were the relevant reinforcers of teaching action. Tschannen-Moran and Hoy (2001) summarised the RAND measure as a simple idea that began with a simple measure of two items. These two items were based upon the locus of control orientation:

- Item 1: "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment."
- Item 2: "If I really try hard, I can get through to even the most difficult or unmotivated students."

The intent of these two items was to assess whether a teacher believed that student learning and motivation where under a teacher's control (Henson, 2001a). During the late '70s and early '80s, this orientation guided most teacher efficacy research. However, Bandura (1977a) explained that there is a difference between self-efficacy and locus of control and thus different constructs. Self efficacy focusses on the perception of the ability to act competently and effectively. While locus of control focusses on control. Specifically, locus of control is the degree to which people believe that they have control or no control over the outcome of events in their lives. Additionally, locus of control can be categorised into two types: internal and external. Gibson and Dembo (1984) explain that internal locus of control is where a person believes that they can influence events and outcomes and has the control over any situation. Conversely, a person with an external locus of control believes that outcomes are not related to their behaviour but to external forces beyond his or her control. Reframing this, Marks (1998) stated that individuals with an internal locus of control

are more likely to change their behaviour following reinforcement than are individuals with an external locus of control.

Tschannen-Moran and Hoy (2001) explained that Bandura's (1977) social cognitive theory then emerged. Bandura's (1977) research was based upon a hypothesis that expectations of personal efficacy determine whether coping behaviour will be initiated, how much effort will be expended and how long it will be sustained in the face of obstacles and aversive experiences. He concluded that there were a number of factors identified that influence cognitive processing that supports the hypothesised relationship between perceived self-efficacy and behavioural changes. The RAND studies (Armor et al., 1976) provided a basis for Gibson and Dembo (1984) to develop the Teacher Efficacy Scale (TES) but also bringing in conceptual underpinnings of (Bandura, 1977a). Gibson and Dembo (1984) began their investigation into the relationship between the variables of teacher efficacy and observable teacher behaviours using three distinct approaches:

1. Factor analysis: What are the dimensions of teacher efficacy and how these dimensions related to Bandura's (1977) theory of self-efficacy? What is the internal consistency of the teacher efficacy measure?
2. Multitrait-multimethod analysis. Does evidence of teacher efficacy gathered from different sources in different ways converge? Can teacher efficacy be differentiated from other constructs
3. Classroom observation. Do high and low efficacy teachers exhibit different patterns of behaviour in the classroom related to academic focus and persistence in failure situations?

Gibson and Dembo (1984) cited Bandura (1977) again and noted that personal efficacy is concerned with the conviction that one can successfully execute the behaviour required to produce the outcomes. They added that outcome and efficacy expectations differ because individuals can have the belief that certain behaviours will produce certain outcomes but if they do not believe that they can perform the necessary activities they will not initiate the relevant behaviours on a long term basis. While preparing their methodology, they discussed the relationship between teacher efficacy and classroom behaviour and considered research that looked at these links (Rosenshine, 1979). Also, they considered in their construct validity other personal attributes in more effective teachers including verbal ability and flexibility which are related to teacher behaviour.

The general conclusions from the TES research (Gibson & Dembo, 1984) indicated that teacher self-efficacy is multidimensional that consisted of at least two clearly distinguishable dimensions that correspond to Bandura's two-component model of self-efficacy i.e., outcome expectations and self-efficacy expectations. Their research identified two factors: general teaching efficacy and personal teaching efficacy. In their discussion, Gibson and Dembo (1984) identified that further research should investigate the relationship between teacher characteristics (demographics), teacher efficacy and observable classroom processes in relation to mastery teaching, managing student behaviours and classroom management.

Concerns about the TES arose regarding inconsistencies with the factor analysis of the instrument. Tschannen-Moran and Hoy (2001) who later developed the Ohio State Teacher Efficacy Scale (OSTES) explained that many researchers used the TES but inconsistencies emerged in the Factor analysis of the 30-item instrument that indicated several items loaded on both factors. Shortened versions of the instrument emerged that loaded uniquely on one factor or the other. This early research in teacher self-efficacy appeared to provide explanatory constructs. However as Woolfolk and Hoy (1990) explained, there are "few consistent relationships between the characteristics of teachers and the behaviours or learning of students. Teachers' sense of efficacy…is an exception to this rule" (p.81). Essentially, teacher self-efficacy research was confronting challenges in their conception and measurement. This challenge originated from two theories that faced integration difficulties. Their summary states that the TES had problems both conceptually and statistically and the lack of clarity in the factor structure raised concerns for researchers.

2.11.2 The Teacher Efficacy Model – A Conceptual Approach

After completing a review of teacher self-efficacy, Tschannen-Moran et al. (1998) proposed a model of teacher efficacy that integrated the two theoretical strands that underpinned teacher self-efficacy research: locus of control and self-efficacy theories (Figure 2.3). As pointed out by Tschannen-Moran et al. (1998), the model draws the four sources of information about self-efficacy as described by Bandura (1986) and the outcomes and consequences that in turn influence teacher performance and student learning. Tschannen-Moran & Hoy (2001) sought to develop a new measure of measuring teacher efficacy. They acknowledged that there had been persistent measurement problems for other researchers who have studied teacher efficacy. They started by reviewing many of the major measures that have been used previously in their attempts to capture the construct and noted the

problems that arose with each. It became apparent for these researchers that it was essential to decide on how to measure teacher efficacy without being so specific in their questioning that the research loses its predictive power for anything beyond the specific skills and contexts being measured. They felt that for the research to be useful and generalisable, the measures need to tap teacher's assessment of their own competence across a wide range of activities they were asked to perform. Their model of teacher efficacy suggests a valid measure of teacher efficacy that assesses both personal competence and an analysis of the task in terms of resources and constraints in particular teaching contexts (see figure 2.3).

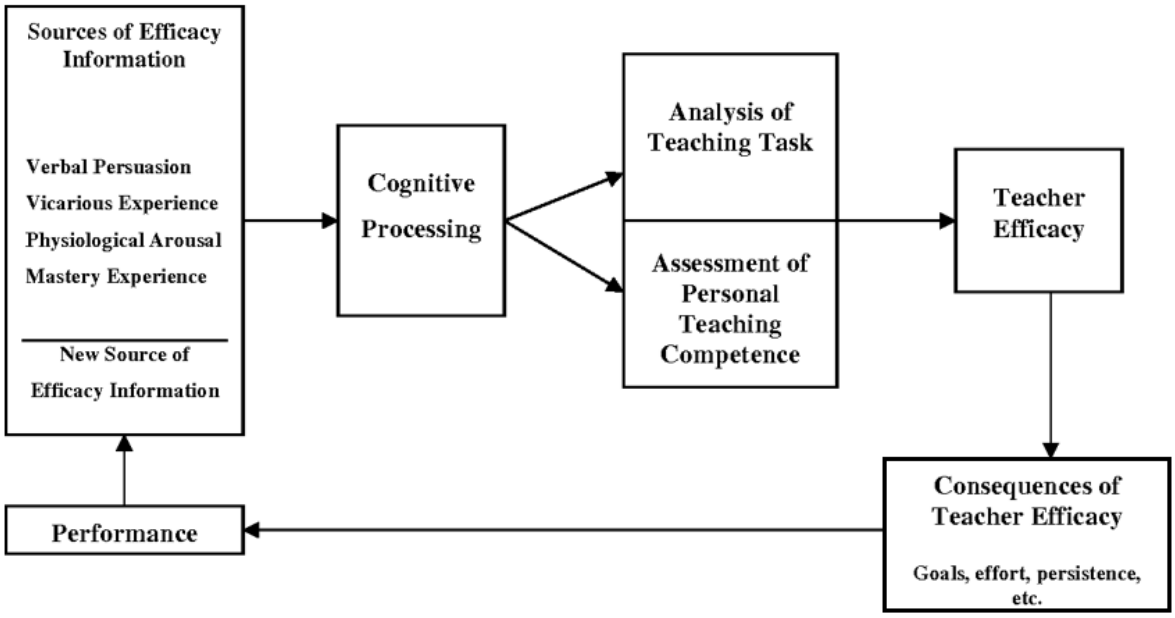

Figure 2.3 Model of teacher efficacy.

From "Teacher Efficacy: its Meaning and Measure." by M. Tschannen Moran, A Woolfolk Hoy, and W.K. Hay, Review of Educational Research, 68, p. 228 Copyright 1987 by Sage Publications.

The researchers involved in the project each independently selected items from the Bandura scale that was believed to be representative of important tasks or elements in teaching. The measure was named the Ohio State Teacher Efficacy Scale (OSTES) and was examined in three separate studies. The OSTES was later renamed the Teacher Sense of Efficacy Scale (TSES). Tschannen-Moran and Hoy (2001) stated that the development of the TSES was a step forward in capturing what has been an elusive construct and adds that it is superior to previous measures of teacher efficacy. It assesses a broad range of capabilities that teachers consider essential to good teaching without being so specific as to render it useless for comparisons of teachers across contexts, levels and subjects. The TSES instrument was refined from the original 100 items down to 52 items that were generated to assess the full range of teaching tasks and capabilities that was then further reduced to 36 items. Principal axis factoring with varimax rotation of the 36 items yield four factors with eigenvalues greater than one and accounted for 58% of the variance. A scree test suggested that three factors could be extracted. Tschannen-Moran and Hoy (2001) reduced the scale to 24 items by selecting eight items from each factor identified with the highest loadings. They added that principal axis factoring of the 24 items yielded the same three factors with loadings ranging from .5 to .78. This was further refined in the end to 24 items in an

instrument that was considered to be the long form and 12 items for a short form of the measure with three factors emerging: Instructional Skills, Classroom Management and Student Engagement. Using a separate factor analysis, it was determined that both the 12 and the 24 item measures could be considered to measure the underlying construct of efficacy.

2.12 Summary of Teacher Self-Efficacy Research

Each of the researchers presented have attempted to measure self-efficacy from similar perspectives in education and training with each seeking to gain an understanding of the self-efficacy beliefs in differing contexts. Each sought to use a multi-domain approach to improve upon the previous research instruments. Bandura (2006) explained that there is no one measure fits all approach and if this were used, it would have limited explanatory and predictive value. This is because most of the items in an all-purpose test may have little or no relevance to the domain of functioning. Further, that one measure items that are divorced from situational demands and circumstances may lead to ambiguity of what is exactly being measured. Scales must be tailored to the particular domain of functioning that is the object of interest. The researchers each have sought to measure self-efficacy in distinct realms of functioning. Bandura (2006) asserts that people cannot be all things that require mastery of every realm of human life. People differ as they cultivate their efficacy and in the levels to which they can develop it within their given pursuits. Further, self-efficacy is context specific. Teachers may not necessarily possess the belief or confidence that they can transfer their skills into other learning areas.

2.12.1 The Self-Efficacious Teacher and Student Outcomes

Teacher self-efficacy research has sought to understand and explain the beliefs human beings have in their own ability and capacity to take action and be successful (Bangs & Frost, 2012). However, there are others who disagree and argue that it is the way teachers feel that affects their motivation to do a good job (Leithwood & McAdie, 2007). The way a teacher feels is developed by the support they receive as a collective in a school, professional networks and by the leadership provided.

Throughout the literature, there is much agreement that teachers with higher levels of efficacy are more likely to learn and use innovative strategies for teaching (Silverman & Davis, 2009). Further, self-efficacious teachers implement strategies for student autonomy, set attainable goals and persists in the face of student failure. Most importantly, they are willing to offer special assistance to low achieving students and manage the curriculum to

assist students in improving their self-perceptions of their academic skills. Empirical studies have recognised that teacher self-efficacy is a major predictor of teachers' competence and commitment to teaching. Research also has indicated that teachers who develop a sense of self-efficacy for teaching a particular key learning area (KLA) are more effective at influencing positive outcomes for students (Bandura, 1997; Erdem & Demirel, 2007; Tschannen-Moran & Hoy, 2001). Complementary research in seminal reviews of the impact of teacher efficacy from Goddard, Hoy, and Hoy (2000); Labone (2004); Ross (1998); Wheatley (2005) each reveal consistent findings that teachers who report a higher sense of efficacy are most likely to create a school environment where there are positive student outcomes. Klassen and Tze (2014) found in a meta-analysis that teacher self-efficacy was strongly associated with teaching performance and modestly but significantly associated with achievement levels of students. It is clear that a significant amount of research has indicated that student achievement is enhanced by self-efficacious teachers. The teacher who has high levels of self-effiacy beliefs not only have positive effects on student achievement, they have positive effects on their own mental health within the school environment. In their meta-analysis, Zee and Koomen (2016) reported that self-efficacious teachers may suffer less from stress, emotional exhaustion, depersonalisation and overall burnout. They also found that self-efficacious teachers also experience heightened levels of personal accomplishment, commitment and job satisfaction. It would then follow that teachers who see themselves as possessing a very high belief in their ability as pedagogical professionals also possess greater levels of overall job satisfaction and personal achievement. However, it is also likely that the effectiveness of teachers on student outcomes is directly associated with years of teaching experience (Staiger & Rockoff, 2010). This leads to further questions about the type of teachers who may take that special interest in their students when it comes to career development learning and teaching. Essentially, what kind of teacher would take the time for career planning discussions? Do ordinary classroom teachers do this or do these teachers differ somehow more than by the amount of teaching experience they possess?

2.12.2 Developing Self-Efficacious Career Teachers

When looking to make a difference in the outcomes for student achievement, research identified that teachers account for approximately 30% of the variance (Hattie, 2003). Hattie added that teacher effectiveness is the second highest variance after the student (50%) when it comes to the relative influences of student success. Peer effects, schools, the principal and home make up the other 30% of the variance with each at around 5-10% (Hattie, 2003).

Other researchers have quantified the influence an effective teacher has on student achievement. Marzano (2007b) cites the research of Nye et al. (2004) where their findings suggest that teacher effects are real and that there are substantial differences in the ability of teachers to produce gains in students. The difference in achievement gains by effective teachers is one-third of a standard deviation in reading and almost one half a standard deviation in mathematics (Nye et al., 2004, p. 253). Further research found differences in teacher effectiveness to be the dominant factor affecting student gain (Pharis, Allen, Mahoney, & Sullivan, 2018; Sanders, Wright, & Horn, 1997).

Contemporary research in pedagogical practices indicated that schools who use a pedagogical framework are providing an overview of the learning cycle. Essentially, education departments in Australia use pedagogical models to describe what effective teachers do in their classrooms (Department of Education, 2019b; Department of Education & Training, 2018; Queensland Government, 2019). Several schools in Queensland, for example, have implemented 'The Art and Science of Teaching' (Marzano, 2007a) or ASOT as it is commonly known. Marzano presented a framework of the three general characteristics of an effective teacher that includes; use of effective instructional strategies, use of effective classroom management strategies and effective classroom curriculum design. Developing these three characteristics of an effective teacher further, Marzano produced a comprehensive model in the form of 10 design questions. He argues that these design questions represent a logical planning sequence for effective instructional design.

The literature quite distinctly indicates that effective teachers do have a positive impact on student outcomes. What then are the qualities of an effective teacher? Surveying the literature of this question starts to reframe it by focussing on what makes a great teacher. There are several websites that are simply titled "What is the difference between a good teacher and a great teacher?" Each of these sites then breaks down the characteristics of a great teacher with each having similar themes discussed (Great Schools, 2018; Heinze, 2019; Killian, 2018; Strauss, 2011). Further, these characteristics of a great teacher have been refined by others including researcher Robert J Marzano into a pedagogical framework in his 'Art and Science of Teaching'(Marzano, 2007a; Marzano & ebrary Inc., 2004). Marzano's framework included ten design questions with the same themes of what makes a great teacher. Similarly, Hattie (2003) described students taught by an expert teacher as those who exhibit an understanding of the concepts targeted in instruction that is more integrated, more coherent and at a high level of abstraction than the understanding of other students.

Students who have teachers that can be described as a great teacher will be those teachers that can demonstrate on a regular basis the features of a pedagogical framework similar to Marzano's ASOT in the classroom or similarly those attributes that Hattie (2003) describes as expert teachers. It is argued that these great or expert teachers are the ones who have confidence in themselves and their ability to positively influence students. Teacher efficacy is context specific and teachers will feel more efficacious for teaching in their major subject areas. Teachers will assess their perceptions of teaching competence and their personal capabilities against personal weaknesses and liabilities (Tschannen-Moran et al., 1998). Further, there is likely to be a direct connection between a great teacher and a self-efficacious teacher who is willing to teach and mentor students with career development concepts. The cyclic nature of teacher efficacy (Tschannen-Moran et al., 1998) illustrates how the sources of self-efficacy will bring the outcome expectations similar to those of a great teacher (see Figure 2.3). Great teachers are likely to be self-efficacious teachers and possess the ability to transfer their pedagogical skills towards a career development context.

2.12.3 Teachers and Students in a Working Alliance

The relationship between a teacher and student is akin to a working alliance. A working alliance includes three features: an agreement on goals, an assignment of task or series of tasks and the development of bonds (Bordin, 1979). When reflecting on the general role description of a teacher, the three features of a working alliance become quite apparent. Education Queensland (Department of Education, 2018) define the role of a teacher as:

> Teachers play a key role in the delivery of quality education to students. Adhering to the Australian Curriculum, teachers plan, prepare and deliver effective learning programs, lessons and teaching materials for every student in their allocated classes. This involves working with students of differing ages and abilities, assessing student progress and liaising with non-teaching staff such as teacher aides and therapists.

Research has shown that effective teachers are a dominant factor with the second highest variance (50%) after the student themselves when it comes to student success (Hattie, 2003). Pedagogical researchers highlight the importance of a positive teacher-student relationship when it comes to positive outcomes for students (Hattie, 2003; Marzano, 2007a; Nye et al., 2004). This teacher-student relationship is a bond that forms consequently from great teachers who are efficacious in their pedagogical delivery. While it is arguable that students develop an agreement with their teachers about their expectations and goals of an

education, there is no doubt that parents and caregivers have a clear expectation of school education systems. The above definition of the role of a teacher also clearly outlines the processes in pedagogy that will occur to ensure students will receive a quality education.

The concept of a working alliance can be easily viewed from the context of a school system and the teacher-student relationships that develop. There is a commonality from what is seen as a high-quality education and with preparing students for the world of work. It has already been argued that teachers are in the best position to provide career advice to students (Hooley, 2015; House of Commons Education Committee, 2013; Teach First, 2015). The literature indicates that career counselling is most effective when individually facilitated in a working alliance (Masdonati, Massoudi, & Rossier, 2009; Milot-Lapointe, Savard, & Le Corff, 2018; Whiston, Rossier, & Barón, 2016). Career counselling in schools that are face to face in a one to one session should be and need to be facilitated by qualified career practitioners. The teacher's role then is to assist students think about their future selves and expose to them the many concepts of the world of work.

Classroom teachers can develop working alliances with class size groups of students effectively via the very nature of regular teacher-student contact and the consequential relationship building that occurs. Furthermore, teachers will make contact with students regularly with the potential to develop effective relationships spanning several years in some circumstances. There are additional benefits of a working alliance approach in the classroom for career development as there is the potential to educate students, parents and potential employers (Meara & Patton, 1994). Research has indicated that the quality of the working alliance between counsellor and client will contribute to the effectiveness of career counselling (Masdonati et al., 2009). Other research has found a significant relationship with the working alliance and career counselling outcomes (Meara & Patton, 1994; Whiston et al., 2016). This would suggest that a skilled teacher who is efficacious for career development teaching and learning, will be able to value-add to the career learning experiences of their students in the classroom. This could be in the form of teachers recognising and acting upon those teachable moments that occur in the classroom that can be related to career learning for students. While effective teachers have carefully developed lesson plans to cover the required content, sometimes unplanned for opportunities arise where teachers are able to digress slightly in a teachable career learning moment. For example, in a science lesson on weather where the teacher explains what a meteorologist is and types of work that they do This could include talking to students about the type of qualifications required and career

pathways. In all key learning areas, there are opportunities for classroom teachers to integrate career awareness in those teachable moments that occur.

The success of teachable moments is based upon the premise of an *intentional teacher*. This requires classroom teachers to act with specific outcomes or goals in mind for the children's development and learning (Epstein, 2014). An intentional teacher with an interest in career development will include career learning content that is integrated into the curriculum when those learning moments arise. It will require teachers to have the interest and intent to care about student's growth beyond the standard curriculum content. The teachers who are prepared to look for those learning moments in an intentional manner will be able to enhance the working alliance where teacher-student relationships can play an important part in supporting students with the career learning.

2.12.4 Discussion

From the Melbourne Declaration on Education Goals for Young Australians (MCEECDYA, 2008) it was recognised that the link for Australia to compete in a global economy was education. Further, it is our schools who will play a major part in how education must be shaped in the future. With direction from the Organisation for Economic Development (2004a), Australia began a journey that recognised the need for career guidance in education, training and employment. Several systems came into place to progress the need for career development as a national agenda particularly in schools (COAG, 2009). There have been attempts to include career development in our schools through the Australian Curriculum (Australian Curriculum Assessment & Reporting Authority, April 2013). Yet, 11 years on from the MCEECDYA, there has been very little progress towards ensuring career development is fully embedded within the curriculum in Australia. A National Career Development Strategy (DEEWR, 2012) has been developed and reviewed (Department of Education & Training, November 2016) but as yet, there is little evidence of how schools are to be supported with the human resources required. The OECD in their latest working paper (Musset & Kurekova, 2018) remind us that schools play a critical role in preparing young people for the critical skills required in future career planning. Further, others including Hooley (2015) iterate that classroom teachers are in the best position to provide support with career advice to students.

It is apparent that career education in schools will need to be driven by classroom teachers from a variety of subject area specialisations. These teachers will draw upon their pedagogical experience and develop a working alliance with students as they ponder their

future selves and explore career education activities. What is currently known is that there have been some extra financial resources for schools to upskill their teachers with qualifications in career development (e.g., Victoria). However, mostly it will be our teachers who need to develop the belief that they can be effective in supporting students with their career explorations. These self-efficacious teachers will draw upon the four sources of self-efficacy that (Bandura, 1986) introduced that develops an individual's capacity to develop high levels of performance. For teachers, the outcome consequences in turn will influence teacher performance and student learning (Tschannen-Moran et al., 1998). This research seeks to understand the levels of self-efficacy they possess for career development learning and teaching.

Teachers are reluctant to teach outside their subject specialisation because of their lack of experience or even a lack of interest. The response data may provide a different view of teachers' perspectives on levels of willingness to facilitate career education classes. Interestingly, research in Australian schools indicates that *newbies* (1 - 2 years' experience) are more likely to be teaching in areas outside their subject specialisation (Weldon, 2016). Yet the concern was whether these teachers possessed enough skills and experience to be highly effective outside their specialisation. In his report, Weldon (2016), stated that 25% of teachers who have at least five years of teaching experience are teaching outside their subject specialisation. It appears likely that new graduates will be allocated a career education class instead of the teachers who have greater than five years of experience. Does this have implications for the quality of career education program delivery? It has been identified that teachers are on the frontline who will play a significant part in value-adding to a student's career development. However, what is unknown are the levels of interest, motivation and self-efficacy teachers possess for career education when it comes right down to it in the classroom. On the basis of the theoretical framework discussed across the literature, the following research questions were proposed.

1. What is the overall level of perceived self-efficacy for career development teaching and learning by secondary school teachers in Australia?

2. What are the differences, if any, in Australia's secondary school teacher' levels of perceived self-efficacy for teaching career development in the three subfactors of Student Engagement, Instructional Strategies, and Classroom Management?

3. What levels of content knowledge do Australian secondary school teachers have in the eleven competencies of the Australian Blueprint for Career Development?

4. What levels of general occupational self-efficacy to Australian school teachers have generally in fulfilling their duties and being able to cope in the workplace.

5. Can any correlations be drawn from Australian secondary school teachers' self-efficacy beliefs in their specialist teaching area, school location, gender, age, years of teaching experience with teaching career education concepts?

CHAPTER 3: METHODOLOGY

3.1 Introduction

The intent of this chapter is to explain the philosophical foundations of this research project and to explain the overall methods used. In particular, the paradigms or systems of beliefs and assumptions that are not confined are discussed to provide an understanding of the approaches used in this systematic inquiry. Researchers are guided by a paradigm that is characterised by a set of common understandings of the phenomenon being studied (Ponterotto, 2005). This includes the kind of questions that are useful about the phenomenon, the structure of their approach and how the results are interpreted (Kuada, 2012). These paradigmatic stances provide direction to the theories, questions and methodological choices that underpin the processes used in the research (L. Cohen, 2017). Schwandt (2001) defines a paradigm as a shared view of the world that represents the beliefs and values in a discipline and that guides how problems are solved.

3.2 Philosophical Orientation of the Research Design

Research epistemology guides what we can say about the data and informs how we theorise meaning (Braun & Clarke, 2006). This research used a mixed-methods approach where data was collected using a qualitative and a quantitative procedure. When defining mixed methods, Tashakkori and Teddlie (2010) explain that it is a research design in which both qualitative and quantitative approaches are used in types of questions, research methods, data collection and analysis procedures. They add that the philosophical orientation most often associated with mixed methods is pragmatism, which is the approach used in the present research. The premise of pragmatism is that the value of an inquiry can be best judged by its practical consequences (Beaudry & Miller, 2016). Further, its approach is able to respond to broad-based questions that are not adequately addressed by either a qualitative or quantitate methods and that the value of inquiry can be judged by practical consequences (Beaudry & Miller, 2016). L. Cohen (2017) further describes pragmatism as eclectic in its designs, methods of data collection and analysis that is driven by the fitness of the purpose of the research.

Thus, the research used firstly a qualitative approach (Study 1a and 1b) and then a quantitative approach (Study 2). This methodological choice of mixed methods for this research was to ensure content validity of a proposed measure of teachers' self-efficacy (via qualitative focus group study) and to then establish the measurement model of teachers' self-efficacy (via quantitative survey study).

For Study 1, an essentialist/realist approach was used to be able to theorise meaning in a straightforward way. This is based upon the assumption that meaning and experience and language is unidirectional (Braun & Clarke, 2006). The strength of thematic analysis is that it is characterised by independence from any particular epistemological and ontological base and its flexibility that partly what makes it distinct from other qualitative analyses (Terry, Hayfield, Clarke, & Braun, 2017). They add that thematic analysis offers something specific that is advantageous for qualitative researchers which is the methodology for ensuring rigorous and systematic engagement with data. Further, it develops a robust and defensible analysis that is independent from any predetermined theoretical framework or cluster of other design considerations. Importantly, it offers the novice researcher a foundation in the basic skills needed to engage with qualitative research (Clarke & Braun, 2013). Javadi and Zarea (2016) summarise the benefits of thematic analysis as a clear, uncomplicated study that does not needs some of the theoretical and technical knowledge of other qualitative methods. As a novice researcher, it was determined that thematic analysis would provide a methodology that was simpler than other qualitative methods with a high level of flexibility (Javadi & Zarea, 2016).

The flexibility of thematic analysis and the ease of use of its processes have also been questioned for not being a particular or distinctive method but rather a process for identifying patterns (Terry et al., 2017). The main concern for the use of thematic analysis in relation to other qualitative methods is the comparative lack of substantial literature about the process. (Nowell, Norris, White, & Moules, 2017). This causes further concern for the novice researcher that there is little in the literature on how to conduct a rigorous thematic analysis. The potential for bias is an issue with thematic analysis where an unprofessional and simplistic view sometimes destroys its value and validity in the way that the result becomes desired and positive (Javadi & Zarea, 2016). Further issues have noted the question of whether researchers reach what the data is actually telling in the explored subject. Thematic analysis should not be an exception to any scientific study and refrain from personal inferences and specific prejudgements by the researcher. (Braun & Clarke, 2006; Javadi & Zarea, 2016; Terry et al., 2017).

Thematic analysis organises and describes data in rich detail. An inductive bottom-up approach was used that sought to link the data to the themes that are strongly identified (Braun & Clarke, 2006; Clarke & Braun, 2013; Javadi & Zarea, 2016). The inductive approach was determined to be the most appropriate approach as there had been no previous

studies dealing with the phenomenon of the data gained from the focus group (Braun & Clarke, 2006; Vaismoradi, Turunen, & Bondas, 2013).

Further, a semantic approach was used where the themes were identified within the explicit or surface meaning of the data. In this part of the research, the focus was on what the participants had said and nothing beyond this (Javadi & Zarea, 2016; Terry et al., 2017).

For Study 2, a conventional quantitative design was deployed with the assumptions of post-positivism, that constructs can be measured using manifest indicators (i.e., items) of latent factors (i.e., self-efficacy).

3.3 Researcher-as-Instrument

In alliance with Morrow (2005), it is necessary for researchers to reveal relevant personal background that leads to their engagement and motivation in a research project. What follows is a summary of my professional experiences that drew my interests towards teachers' self-efficacy for career development teaching and learning.

My interest in career development began after completing my initial teacher training through Griffith University where I gained the qualification of a Bachelor of Adult and Vocational Teaching majoring in adult literacy and, adult and vocational education. My first teaching position was with the then Southern Queensland Institute of TAFE at their Roma College as their adult literacy teacher in 1998. I facilitated a program that included basic career advice, assisting with resume writing and job application letters delivered through the Certificate I in Vocational Access (15051QLD). Two years later, I gained employment with Education Queensland as a support teacher at Maryborough State High School. I carried my knowledge of vocational access into the school for students needing learning support and ran these programs for a further seven years. When the Vocational Access certificate expired, it was replaced by the Work Education certificates (30626QLD & 30627QLD). In 2008, my developing expertise in Work Education changed from a single teacher to a coordinator role where all year 10-12 students participated in a new subject on a weekly basis simply called *Work Education*. My role as coordinator of Work Education meant that I would develop the lesson plans, resources and assessment for each teacher to facilitate. The new Queensland Certificate of Education (QCE) was introduced and Work Education certificates provided an opportunity for students to earn extra credits to gain their QCE.

It was at this time that I became acutely aware of the barriers to the delivery of career education in secondary schools. Teachers who were asked to take a Work Education class were hesitant and some would provide the argument that they were subject specific teachers

and not trained in career development. Alternatively, other teachers would embrace the Work Education subject and were prepared to devote time developing more resources and refining assessment. Work Education evolved with hand-picked teachers to facilitate the program. These were the teachers who had demonstrated an enhanced level of self-efficacy for career development teaching and learning. In 2011, I qualified as a Guidance Officer (GO) with a Master of Education Guidance and Counselling. Guidance Officers in Queensland have numerous roles in their job description including providing career counselling, particularly for years 10-12 students, and to provide advice for career education programs within schools. I worked in several secondary schools in my first few years as a GO and noticed that each school had varying levels of career education in the curriculum from basic Year 10 Senior Education Training plans (SETP) to the inclusion of certificate programs. However, each school had the same issues in the delivery of career education as I had experienced when I was coordinating Work Education. There were teachers who would refuse to teach career education and a lacklustre effort would result if they were pressured by the Administration to take the class. Conversely, there were teachers who would embrace the opportunity to take on these career education classes and seek to promote best practice in their pedagogy.

For me, my research topic became quite clear. My studies in career development revealed the importance of career development for the citizens of Australia (Organisation for Economic Development, 2004b). I learnt more about Australia's journey and in particular the role of schools providing effective career development for students (ACARA, May 2013; COAG, 2009; DEEWR, 2012; McMahon & Tatham, 2008; MCEECDYA, 2008; MCEECDYA, 2010). These are just a few references sourced to reflect on that journey. The one thing that has been neglected in this master plan for career development is the human resources that will be required to facilitate effective programs in secondary schools in Australia. My own experiences have highlighted the challenges to gain the support of teachers to facilitate career development concepts. Also, my experiences have observed teachers emerge who have the belief that they can become an effective career development practitioner in secondary schools. Researchers have already identified that it is our classroom teachers that can play a valuable role and inform a young person's career building (Hooley, 2015). It is apparent that it will need to be the classroom teachers from a variety of subject area specialisations that will drive career learning in schools.

Thus, with this professional quandary before me, I sought answers and solutions to my questions about how to engage teachers in career learning in the classroom. I decided to

address this challenge by enrolling in a professional research degree, the Doctor of Education. What transpired after reviews of the literature in preparatory coursework in the degree was my initial research question: "What is the overall level of perceived self-efficacy for career development teaching and learning by secondary school teachers in Australia?"

3.4 An Overview of the Research Studies

The research design used a mixed-method approach that involved two studies. Study 1 was viewed as two separate phases (Study 1a and Study 1b) to draft the items of the new instrument to measure school teacher's self-efficacy for career education to be known as the Career Education Teachers' Self-Efficacy Scale (CETSES). Study 2 was the implementation of this new instrument in an online survey and used quantitative data analysis to test the CETSES factor structure. Figure 3.1 provides a visual overview of the studies and the key elements involved.

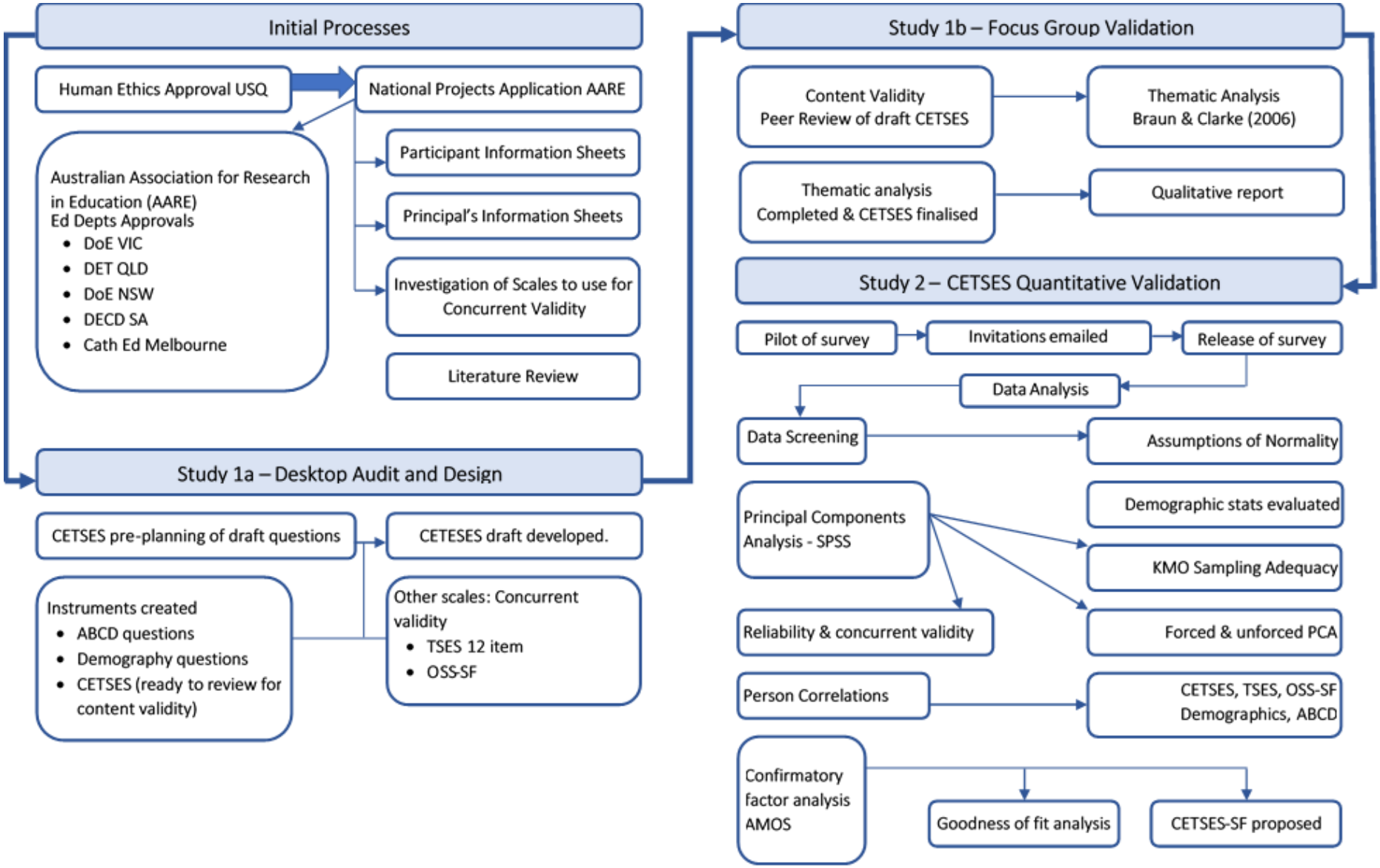

Figure 3.1 Research design overview

3.5 Study 1a and 1b – Design and Content Validation

The focus for Study 1a was the development of a new domain specific instrument. This study involved a review of relevant documents and measures about teacher self-efficacy and career education. The original Teacher Self-Efficacy Scale short form (Tschannen-Moran & Hoy, 2001) was used as template for potential items. In addition, the Australian Blueprint for Career Development (ABCD) was used to design a bespoke index. This index would use the same specific wording that the *competency was mainly about* for each of the 11 competencies to assist participants fully understand the question and what is being asked of them. Thus, Study 1a produced a list of potential CETSES items.

For Study 1b, the planning towards finalising the CETSES instrument focussed on ensuring content validity of the draft items developed. A focus group approach was decided upon as it is able to draw out the respondent's attitudes, feelings, beliefs, experiences and reactions (Gibbs, 1997). This was important in the context of seeking to gain content validity. An important advantage of using a focus group was the ability to collect data from multiple individuals simultaneously in a non-threatening environment (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009). Additionally, the use of a focus group was an efficient method for obtaining data from multiple participants. The goal effectively was to use the synergy that would occur between the participants to contribute in some manner to the discussion (Parker & Tritter, 2006). Ideally, the discussions that were to unfold would provide clarity and direction into how best to refine and finalise the CETSES items. The next part of the process was to search for common themes that respondents had expressed during the focus group. This qualitative data was then analysed in a bottom-up approach using thematic analysis (Braun & Clarke, 2006).

3.6 Study 2 – CETSES Quantitative Validation

Study 2 involved a survey of teachers and comprised the CETSES and other standard measures of career related variables. The aim of Study 2 was to test the factor structure of the new CETSES and its relationship with other variables (e.g., occupational self-efficacy). In this approach, the goal was to describe and analyse the data gathered from an objective perspective and then generalised to teachers and schools.

3.7 Ethical Considerations and Administrative Issues

With the research proposal finalised, the first two processes to complete were the USQ Human Ethics approval which was granted and permissions to conduct research in

schools from education departments Australia wide. A national application to conduct research in secondary schools in Australia was submitted through the Australian Association for Research in Education (AARE). An application to conduct research was also sent to Catholic Education. It was thought initially that the application was for Catholic Educations schools across Australia. However, the application was only sent to the Melbourne region and not nationwide. This was only realised when the approval was gained. Timelines were a concern and it was decided that it would take too long to resubmit the research application to access further Catholic Education schools in Australia. All states and territories were approached to gain consent to conduct research in schools. The Northern Territory Education Department declined to participate from the onset stating that the research was of no value to the department and that the Northern Territory was too small a jurisdiction. They added that the non-government sector in the Northern Territory could be considered to participate instead. The Tasmanian Department of Education also declined to participate citing that the department is in the early stages of implementing the *My Education* approach in all schools.

Negotiations between the education departments of Queensland, New South Wales, Victoria, South Australia and Catholic Education Melbourne were successful and approvals to conduct research in schools in these States were gained. There were two main concerns that emerged from my original request to conduct research in each of the State schools that required altering. Firstly, each asked that no incentives be made to participants. Initially, the offer of a chance to win one of several vouchers was made for participants. This had to be removed from the participant information sheets. The other concerns were related to how the demographic information would be used. Each education department did not want individual schools to be identified or any correlations with demographic data gathered (e.g., education regions compared in their State or nationally and teacher self-efficacy levels compared between regions and States). Meeting all required undertakings, final approvals for each of these States was finally attained.

The application to conduct research in Western Australian schools resulted in lengthy negotiations and required very pointed clarifications. Each of the concerns by the coordinator for research applications was addressed except one. They required assurances for data security from the CreateSurvey platform that became increasingly difficult to address. The CreateSurvey servers were based in Canada and concern was that the data was not protected by Australian Privacy Legislation. Subsequently, the application to conduct research in Western Australian schools was withdrawn. Very little progress was made in the assurances for data security and deadlines were looming to launch the survey.

In this study, a total of 1525 secondary school principals were approached via email seeking their support to approach teachers to participate in the survey (see appendix H). The timing of administering the main study was carefully considered. School terms in Australia are generally 10 weeks in length. Term four is the last term before a six-week summer vacation. It was determined that week six of the fourth school term would be a time where teachers and schools would be more inclined to participate while managing their daily obligations. School principals were requested to forward the email on to teachers in their schools which had attached all the information about the survey including the participant information sheet and a hyperlink to survey on CreateSurvey.com. A limited response rate was experienced with 72 responses returned when the email invitations were sent to the principals. The survey was re-sent to school principals in February 2018 (week four of term one) and an additional 81 responses were gained. A total of 153 responses was obtained for this research project. The response rate is estimated to represent less than 1% of the teacher population targeted for this research.

The decisions and processes used to target teachers via their principals were in hindsight ineffective. While the potential sample group was vast, the reality of a teacher getting the email with the invitation to participate was low and at the discretion of the school principal who would make the decision whether to forward on the invitation to teaching staff. Compounding the limited response rate was that teachers were only likely to participate in the survey if they had time right at that point to participate when they read their email. They would be unlikely to return to their email and follow through at a later stage. Incentives for participants were not permitted by any of the education departments which was a barrier to attracting more teachers.

Retrospectively, it was thought that the response rate would have been increased if the support of principals was gained previously. For example, if support from nine school principals was gained with three schools each representing metropolitan, regional and rural districts in each State. This could have amassed a potential sample group of perhaps 2000 participants. An arrangement could me made where teaching staff were allocated time to complete the survey. This could have been achieved for example in an allotted staff meeting as the amount of time to complete the survey was approximately 15-20 minutes.

3.8 Ethical Considerations – Bias

Study 2 being a quantitative in nature was felt to be less threatened by the influences of bias due to the nature of the analysis. However, Study 1 being qualitative in its approach

had the potential for research bias. It is acknowledged that the researcher's perspective can influence how the data was collected. The data collection concentrated on gaining rich data from the participants of a focus group and the researcher was positioned as a facilitator of the groups. This positioning was because of the researcher's familiarity with the subject matter (Onwuegbuzie et al., 2009). It is acknowledged that there was the potential for bias to occur in the focus group however, it was felt that the researcher adopted the role of a facilitator/moderator that would seek to negate any influence on discussions. There was a heightened awareness that the researcher's perspective on the draft CETSES items that may influence the data collection and the biases could be passive or active and had the potential to influence data collected from the dialogue that occurred from the participants (Onwuegbuzie & Leech, 2007). Probst and Berenson (2014) describe this awareness as reflexivity where the researcher makes a conscious effort to understand the amount of influence that can be placed on the field researcher. In the focus group, the researcher facilitated the group discussion between participants and dialogue with the researcher was minimised to the occasional clarification of concepts if asked. This approach differs from interviews where the researcher takes a peripheral role rather than a central role in the focus group discussion (Bloor, Frankland, Robson, & Thomas, 2001; Onwuegbuzie & Leech, 2005). The key feature of the focus group is the spontaneity that arose from the social context that provides the thoughts, feelings from the participants own frame of reference (Ritchie, Lewis, Nicholls, & Ormston, 2013). Additionally, the focus group provided an environment that sought to minimise bias through the naturally occurring interactions between participants without the interactions of the researcher. Another aspect that has the potential for bias is whether the researcher is able to glean effectively what the data is telling them and whether the researcher has refrained from personal inferences and specific prejudgments (Braun & Clarke, 2006; Javadi & Zarea, 2016; Terry et al., 2017).

CHAPTER 4: STUDY 1 DESIGNING THE CETSES

4.1 Study 1a: Desktop Design

Study 1 involved two phases: the desktop design of the CETSES (Study 1a) and then content validation by way of a focus group (Study 1b).

Preparations for Study 1a for the research project were being completed while the permission to conduct research in Australian schools was being finalised. Study 1a focused on the development of the Career Education Teacher's Self-Efficacy Scale (CETSES). The CETSES is based upon the Teacher Self Efficacy Scale (TSES) developed by Tschannen-Moran and Hoy (2001). The TSES was adapted with a focus on measuring teacher self-efficacy to deliver career education lessons in secondary schools in Australia. The TSES instrument underwent significant research where 24 items were included that were based upon three factors; *student engagement*, *classroom management* and *instructional strategies*. The development of the CETSES would be adapted upon the TSES, looking at the three factors from the perspective of teachers facilitating career development concepts.

The process of item development for the CETSES firstly sought to locate other researchers who have adapted the TSES for teacher self-efficacy for a specific teaching area. This was to appreciate how researchers may have adapted the wording for each of the items to suit their research. Two instruments were located that were thought to be useful as a relatable point on how the wording was altered for their specific teaching area. The Teacher Self-Efficacy to Instruct Character Education developed by Toney (2012) and the Teacher Sense of Efficacy Scale in Literature (Mills, 2011) were selected as each were felt to be able to provide a basis to work from along with the original TSES. Next, it needed to be determined what other considerations would provide further direction as to how best to develop draft questions for each item of the CETSES. It was concluded that a pedagogical framework may also provide some influence in the development of draft items. The Art and Science of Teacher (ASOT) developed by Marzano (2007a) was selected as it is a well-researched and respected framework in education. Finally, the competencies of the Certificate IV in Career Development (SkillsIQ, 2018) and the National Training Framework for Career Coordinators (National Board of Employment Education and Training, 1992) were selected to ensure consideration was given to the minimum competencies required as career practitioners. The goal was to develop draft questions to inform the development of the CETSES that considered many of the concepts in career development and pedagogical practices (see Table 4.1 p. 61). The considerations for the first item of the CETSES are depicted below in Figure 3.2.

The process to develop the draft CETSES items followed a procedure to identify key concepts, terms or words that could assist in the wording of each item. The use of a table to consider all aspects needed for the drafting of CETSES items provided a useful way of displaying all the information clearly. Firstly, the corresponding items from the scales developed for teacher self-efficacy in Literature teaching (Mills, 2011) and Character education (Toney, 2012) were tabled together. Comparisons were made with the original TSES and it was noted how the wording for each item was altered to suit each particular research area. Next, the relevant design question/s (Marzano, 2007a) and career development competencies (Career Industry Council of Australia, 2013) were reflected upon to provide further context into how the items could be worded. This contextualisation enabled concepts to be noted and key words that needed to be considered in the draft items. Finally, possible CETSES items were drafted with each considering the concepts that emerged bearing in mind item wordiness and clarity.

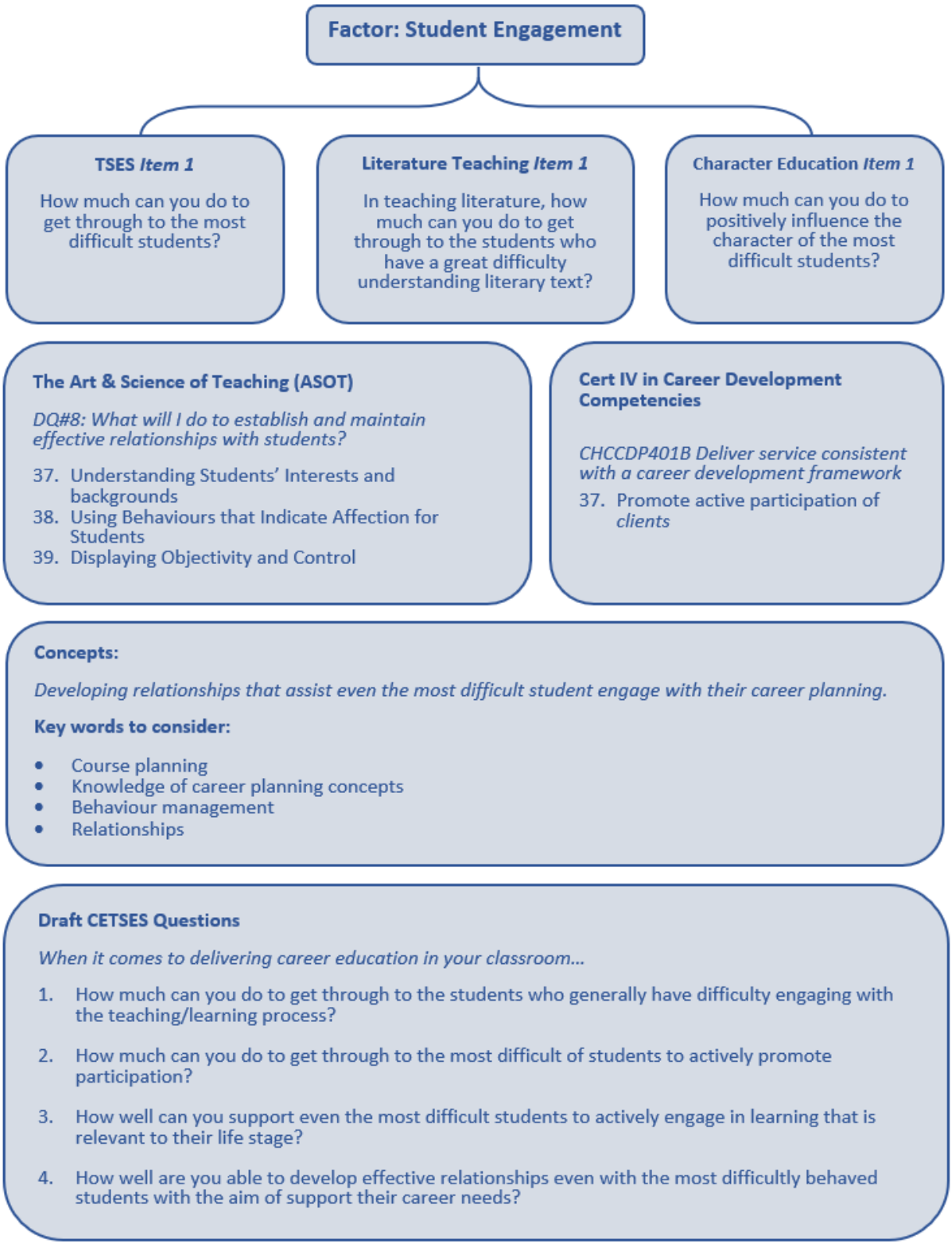

Figure 4.1 Development process of the draft items for question one of the CETSES

A further index was created focussing on teacher's knowledge of the 11 career management competencies. The questions created were taken directly from the ABCD (MCEECDYA, 2010). Each question also included further detail of what each competency was about that was detailed in the ABCD. This was to ensure participants received an overview and gained clarity about each question before they responded. The crafting of the demographic questions focussed on collecting data that could be used for correlations with the CETSES, TSES, OSS-SF and the ABCD index. In total, 12 questions came under the title of *About Me* in gaining an understanding of the demographics of the participants. Additionally, four questions were included that asked teachers about their beliefs regarding career education that were essentially self-efficacy related. The list of draft items was the focus of Study 1b.

4.2 Study 1b: Focus Group

A peer review through a focus group approach was selected to improve the content validity of the draft items developed for the CETSES. Feedback was sought from the focus group and a thematic analysis was then conducted to provide rich data in being able to select, adapt or vary the draft CETSES items. A focus group approach was decided to upon as it was able to draw out the respondent's attitudes, feelings, beliefs, experiences and reactions (Gibbs, 1997). This was important in the context of seeking to gain content validity.

Therefore, the aim of this thematic analysis was to ensure the draft items developed for the Career Education Teachers Self-Efficacy Scale (CETSES) is measuring the latent concepts intended in the instrument. Specifically, the content validity of the CETSES instrument was being scrutinised so that confidence can be gained about the content of the manifest variables to confirm that it is measuring what was intended (Muijs, 2004, p. 3). The research question that guides Study 1a can be stated as: "What is the best wording for each item that reflects the intent of each factor being measured in the CETSES?"

The CETSES is based upon the Teacher Self Efficacy Scale (TSES) developed by Tschannen-Moran and Hoy (2001). The TSES was adapted with a focus on measuring teacher self-efficacy to deliver career education lessons in secondary schools in Australia. The TSES instrument underwent significant research where 24 items were included that were based upon three factors; student engagement, classroom management and instructional strategies. The development of the CETSES will build upon the TSES in the three factors from the perspective of teachers facilitating career development concepts.

A panel of experienced professionals/practitioners in career development was selected to provide feedback on questions drafted for each item of the CETSES. The benefits of assembling a panel of experts in career development in schools for a focus group is the diversity of opinions brought forward (Shuttleworth, 2009) in the quest to improve the content validity. The discussions of the participants produced a large amount of qualitative data that required further analysis to understand the patterned meaning across the dataset. A thematic analysis was selected as the method of providing insights into the patterns of themes that emerged from the peer review. As Braun, Clarke, Hayfield, and Terry (2019) iterate, thematic analysis allow the researcher to see and make sense of collective or shared meanings and experiences.

The procedure to develop the CETSES instrument used the following steps:

1. Consideration of the sources of information needed to develop draft questions
2. Tabling all information/sources to gain a holistic perspective of each draft item
3. Assembling career development experts for a peer review of the draft items
4. Facilitating a peer review of draft questions
5. Dialogue from the peer review recorded to enable a thematic analysis
6. A thematic analysis conducted (Braun & Clarke, 2006)
7. The final CETSES instrument completed ready for a pilot study

4.3 Method

The methodology used to develop the CETSES contemplated the sources of information required that would assist in drafting items for each question. Firstly, it was determined that examples of other teacher self-efficacy instruments that adapted the TSES would provide relatable reference points. Two scales were selected ‘Teacher Self-Efficacy to Teach Character Education (Toney, 2012) and ‘Teacher Assistant’s Self-Efficacy in Teaching Literature’ (Mills, 2011). These scales were chosen to examine how each researcher modified the wording from the original TSES. It was concluded that a pedagogical framework may also provide some influence on the development of draft items. The Art and Science of Teacher (ASOT) developed by Marzano (2007a) was selected as it is a well-researched and respected framework in education. Finally, the competencies of the Certificate IV in Career Development (SkillsIQ, 2018) and the National Training Framework for Career Coordinators (National Board of Employment Education and Training, 1992) were selected to ensure consideration was given to the minimum competencies required as career practitioners. The goal was to develop draft questions to inform the development of the

CETSES that considered many of the concepts in career development and pedagogical practices (see Table 4.1).

4.4 Participants

A purposeful sample of Guidance Officers who work in secondary schools from Education Queensland in the Bundaberg region and a private practitioner in career counselling was invited to participate in an expert review of the CETSES items that had been drafted. In total, ten Guidance Officers accepted the invitation. Guidance Officers in Queensland are experienced educators with teacher registration, hold a Bachelor's Degree in Education and possess Masters level postgraduate qualifications in Guidance and Counselling and/or Educational Psychology (Queensland Guidance and Counselling Association, 2018). The Guidance Officers had a range of experience from three to 20 years' service in the role. The average experience was approximately eight years. The private practitioner had amassed 25 years as a member of the Career Development Association of Australia and possessed a variety of formal qualifications including a Bachelor of Education and a Master of Career Development. The job description of a Guidance Officer in Education Queensland is vast that primarily supports students in many ways including and not limited to accessing the curriculum, counselling for social/emotional needs and behaviour support. Career development is a core course in the Master of Education (Guidance and Counselling). A key role that is undertaken is to support students in the management of career development processes, future pathway options counselling and senior education training planning. Each of the Guidance Officers invited to participate in the focus group were well respected practitioners in their schools. Therefore, these participants can be regarded as *experts* in career development and how this relates to career education delivery in secondary schools. The private practitioner in career development had gained a plethora of experience working within the career education field including working with schools. The use of experts within the field of career development in schools to review the draft questions assists in improving content validity (Muijs, 2004; Vogt, King, & King, 2004).

4.5 Procedure

Each potential participant was provided with an overview of the whole research project at a Guidance Officer meeting and provided with a participant information sheet for the expert review. Each potential participant was contacted by email to gain their confirmation of their participation in the focus group. The participants met in the training

room at the local District Office (Education Queensland) and separated into four groups of between two and three persons. A timeframe of two hours was established for the review. Each group was asked to review eight questions from the stimulus document that proposed twenty-four draft questions of the CETSES. That is, group one reviewed questions 1 - 8, group two reviewed questions 9 - 16 and group three reviewed questions 17 - 24. The approach was used to maximise the amount of feedback that could be gained from all the draft CETSES items within a short time-frame. The prime consideration was the impact upon each participant that balanced their time commitment with the ability to gain quality data. The focus group was held after work hours and organising additional focus groups would have proved difficult due to the each having other obligations. The purpose of the focus group was to improve the content validity of the draft CETSES questions and to gain feedback from the participants on the wording of the items. This feedback was the key element that would provide the basis for reflection after the bottom up approach used in the thematic analysis (Braun & Clarke, 2006). It was never expected that each group would provide concisely re-written items for the CETSES rather that feedback was produced which could be used to understand the themes and codes that would emerge from the rich data. Therefore, it was felt that feedback gained from the three focus groups would provide sufficient rich data to explore the final themes that would emerge. Certainly, further data could have been collected with each focus group providing feedback for each of the 24 items of the draft CETSES. However, a decision was made due to time limitations and the availability of the participants to limit the focus group to one only.

At the beginning of the meeting, the researcher provided further background information about the research and discussed how the draft questions of the CETSES were obtained for consideration. Table 4.1 below depicts the process that was used to develop the draft items for the CETSES. Firstly, the original item from Tschannen-Moran and Hoy's (2001) Teacher Self-Efficacy Scale (TSES) was placed in a column with the corresponding items from two other scales that were based on the TSES (Mills, 2011; Toney, 2012). This assisted in examining how the wording was altered in each scale that aligned with the original factors. For the purposes of developing the CETSES, it was determined that other elements needed to be considered for item generation as discussed previously. Further, the concepts of each of the factors were noted together with key words that may prove useful in the generation of draft items for the CETSES.

Table 4.1

CETSES Developmental Framework

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 1 **TSES** How much can you do to get through to the most difficult students? **Character Education** How much can you do to positively influence the character of the most difficult students? **Literature Teaching** In teaching literature, how much can you do to get through to the students who have a great difficulty understanding literary text?	**CHCCDP401B Deliver service consistent with a career development framework** 1. Promote active participation of *clients*	**DQ#8: What will I do to establish and maintain effective relationships with students?** 36) Understanding Students' Interests and Backgrounds 37) Using Behaviours that Indicate Affection for Students 38) Displaying Objectivity and Control	**Concept:** Developing relationships that assist even the most difficult student engage with their career planning. **Key words to consider:** • Course planning • Knowledge of career planning concepts • Behaviour management • Relationships • **Factor: Student Engagement**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to get through to the students who generally have difficulty engaging with the teaching/learning process? 2. How much can you do to get through to the most difficult of students to actively promote participation? 3. How well can you support even the most difficult students to actively engage in learning that is relevant to their life stage? 4. How well are you able to develop effective relationships even with the most difficultly behaved students with the aim of support their career needs?
Question 2 **TSES** How much can you do to help your students think critically? **Character Education** How much can you do to help your students think critically about their character? **Literature Teaching** How much can you do to help your students think critically about a literary text?	**CHCCDP401B Deliver service consistent with a career development framework** 1. Promote active participation of *clients* **CHCCDP402B Assist clients to plan and access career pathways** 2. Identify client requirements to achieve career goals 3. Identify career opportunities and resources	**DQ#4: What will I do to help students generate and test hypotheses about new knowledge?** 21) Organizing Students for Cognitively Complex Tasks 22) Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generating and Testing 23) Providing Resources and Guidance	**Key words to consider:** • Self-directed thinking • Self analysis • Self correction • Self disciplined • Pathways • Personal circumstances • Skills & abilities **Concepts:** Student is able to reflect on personal circumstances eg available opportunities either locally with: • Apprenticeships • traineeships • Local economic growth areas • Family circumstances **Factor: Student Engagement**	***When it comes to delivering career education in your classroom…*** 1. How well can you assist students to reflect on their personal, family, social and environmental factors to guide critical thought for possible career pathways 2. How much can you do to assist your students to think critically about their career planning?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 3 **TSES** How much can you do to control disruptive behaviour in the classroom? **Character Education** How much can you do to control disruptive behaviour in the classroom? **Literature Teaching** No Item		**ASOT DQ#7: What will I do to recognize and acknowledge adherence and lack of adherence to Classroom rules and procedures?** 33) Demonstrating "Withitness" 34) Applying Consequences 35) Acknowledging Adherence to Rules and Procedures **Essential Skills for Classroom Management**	**Concepts:** • Teacher "withitness" of student engagement • Effective program to engage student interest • Essential Skills for Classroom Management **Key words to consider:** • Behaviour management • Career Education **Factor: Classroom Management**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to control disruptive behaviour by engaging students with interesting lessons? 2. How much can you do using the Essential Skills for Classroom Management to control disruptive behaviour by ensuring students are on task? 3. How much can you do using the Essential Skills for Classroom Management to control disruptive behaviour by ensuring students are on task? 4. How much can you do using the Essential Skills for Classroom Management to control disruptive behaviour and deliver effective career education lessons?
Question 4 **TSES** How much can you do to motivate students who show low interest in school work? **Character Education** How much can you do to motivate students who show low interest in developing a more positive character? **Literature Teaching** How much can you do to motivate students who show low interest in engaging in the text(s)?	**CHCCDP401B Deliver service consistent with a career development framework** 1. Promote active participation of *clients* **CHCCDP402B Assist clients to plan and access career pathways** 2. Identify client requirements to achieve career goals 2.1 Work with client to identify skills needed to effectively manage identified career development pathway 2.2 Assist client to understand the nature of employability skills and their importance in relation to achieving identified career goals 2.3 Assist client to identify decisions and actions required to pursue and achieve identified career goals 2.4 Work with client to identify their existing career competencies and employability skills and gaps to be addressed	**DQ#9: What will I do to communicate high expectations for all students?** 39) Demonstrating Value and Respect for Low Expectancy Students 40) Asking Questions of Low Expectancy Students 41) Probing Incorrect Answers with Low Expectancy Students	**Concepts:** • Display interest in student's lives and goals • Promote self-efficacy for low achieving students that effective career planning will be rewarding • Effective lessons that will engage low achieving students **Key words to consider:** • Student participation • Relationships/trust • Interesting lessons • Tolerance **Factor: Student Engagement**	***When it comes to delivering career education in your classroom…*** 1. How much can you promote belief within your low achieving students that effective career planning will be rewarding? 2. How much can you develop interesting and engaging career education lessons to promote participation by low achieving students?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 5 **TSES** To what extent can you make your expectations clear about student behaviour? **Character Education** To what extent can you make your expectations clear about student behaviour? **Literature Teaching** **No Item**		**ASOT DQ#6: What will I do to establish and maintain classroom rules and procedures?** 4) Establishing Classroom Routines 5) Organizing Physical Layout of the Classroom for Learning **Consider ESCM**	**Concepts:** • School-wide positive behaviour support (SWPBS) • Agreed classroom rules **Key words to consider:** ESCM **Factor: Classroom Management**	***When it comes to delivering career education in your classroom…*** 1. To what extent can you make your expectations clear about student behaviour that promotes an environment that is conducive for career planning? To what extent can you implement effective classroom behaviour management practices that promotes student engagement in career planning?
Question 6 **TSES** How much can you do to get students to believe they can do well in school work? **Character Education** How much can you do to get students to believe they can do well in school? **Literature Teaching** How much can you do to get students to believe they can do well in a literature class?	**CHCCDP402B Assist clients to plan and access career pathways** 5. Assist clients in marketing their skills to employers	**ASOT DQ#5: What will I do to engage students?** 24) Noticing and Reacting when Students Are Not Engaged 25) Using Academic Games 26) Managing Response Rates 27) Using Physical Movement 28) Maintaining a Lively Pace 29) Demonstrating Intensity and Enthusiasm 30) Using Friendly Controversy 31) Providing Opportunities for Students to Talk about Themselves 32) Presenting Unusual or Intriguing Information	**Concepts:** • Engaging lessons • Teacher enthusiasm • Promotion of a positive attitude • School to work • Learn about themselves • Post school options **Key words to consider:** • Encouragement • Student self-efficacy **Factor: Student Engagement**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to encourage student belief that engagement in career planning is vital 2. How much can you do to nurture student self-efficacy with career planning that stimulates student engagement to learn about themselves and the transitions towards post school options? 3. How much can you do to get students to believe that **positive** participation in Career Education will enhance their knowledge towards post-school options? 4. How much can you do to get students to believe that positive participation in Career Education at school will increase opportunities for post school options?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 7 **TSES** How well can you respond to difficult questions from your students? **Character Education** How well can you respond to difficult questions about character from your students? **Literature Teaching** How well can you respond to difficult questions from your students when discussing a literary text?	**TAEDEL401A Plan, organise and deliver group-based learning** 3.1 Contextualise existing learning materials to meet the needs of the specific learner group **Careers Coordinator** **Level 1 -** NTF for career Coordinators 1992 • Develop & maintain recognised teaching competencies in: teaching methodologies; curriculum implementation processes; addressing individual student needs; recognition of prior learning; assessment, evaluation and reporting in academic and non-academic areas; and age appropriateness in a K-12 context • Maintain awareness of various social, economic, political and industrial factors impacting on education in general and career education in particular. • Acknowledge the rights of individuals in the education process e.g., for self-determination, self fulfilment	**ASOT Domain 3: Reflecting on Teaching** Evaluating Personal Performance 50) Identifying Areas of Pedagogical Strength and Weakness	**Concepts:** • Teacher has current content knowledge of career ed. • Follow through with locating information/answers or referrals to GO • Knowledge of social, economic, political and industrial factors • Job growth areas **Key words to consider:** • Professionalism • Knowledge **Factor: Instructional Strategies**	***When it comes to delivering career education in your classroom…*** 1. How well can you draw upon your professionalism, knowledge and awareness of factors influencing career planning to be able to respond to difficult questions from your students? 2. How well can you use your skills and knowledge in career development to respond to difficult questions from your students?
Question 8 **TSES** How well can you establish routines to keep activities running smoothly? **Character Education** How well can you establish routines that stress good character in your classroom? **Literature Teaching** **No Item**		**ASOT DQ#6: What will I do to establish and maintain classroom rules and procedures?** 4) Establishing Classroom Routines 5) Organizing Physical Layout of the Classroom for Learning	**Concepts:** • Knowledge of Career Ed • Planning and prep • Teacher "withitness" of student engagement • Effective program to engage student interest • ESCM **Key words to consider:** • Behaviour management • Career Education **Factor: Classroom Management**	***When it comes to delivering career education in your classroom…*** 1. How well can you use your knowledge of career development to develop effective planning that keeps activities running smoothly?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 9 **Tschannen& Moran** How much can you do to help your students value learning? **Character Education** How much can you do to help your students value learning? **Literature Teaching** How much can you do to help your students value learning about literature?		**ASOT DQ#3: What will I do to help students practice and deepen their understanding of new knowledge?** 14) Reviewing Content 15) Organizing Students to Practice and Deepen Knowledge 16) Using Homework 17) Examining Similarities and Differences 18) Examining Errors in Reasoning 19) Practicing Skills, Strategies, and Processes 20) Revising Knowledge **ASOT DQ #1: What will I do to establish and communicate learning goals, track student progress, and celebrate success?**	**Concepts:** • Engaging lessons • Teacher enthusiasm • Promotion of a positive attitude • Learn about themselves • Goal setting • Tracking of set goals **Key words to consider:** • Encouragement • Student self-efficacy **Factor: Student Engagement**	***When it comes to delivering career education in your classroom…*** 1. How much do you do to work with students individually in your class to promote goal setting and tracking of goals set in career planning? 2. How much can you do to facilitate effective lessons in career education to promote student engagement? 3. How much can you do to help students reflect and deepen their understanding in a career education program?
Question 10 **TSES** How much can you gauge student comprehension of what you have taught? **Character Education** How much can you gauge student comprehension of character lessons you have taught? **Literature Teaching** **Q8**. How much can you gauge student comprehension of what you have taught?		**DQ#2: What will I do to help students effectively interact with the new knowledge?** 6) Identifying Critical Information 7) Organizing Students to Interact with New Knowledge 8) Previewing New Content 9) Chunking Content into "Digestible Bites" 10) Processing of New Information 11) Elaborating on New Information 12) Recording and representing Knowledge 13) Reflecting on Learning	**Concepts:** • Knowledge of critical information • Explicit teaching • ASOT strategies **Key words to consider:** • Knowledge • Professionalism **Factor: Instructional Strategies**	***When it comes to delivering career education in your classroom…*** 1. How much can you gauge student comprehension of the concepts and critical information in career planning that you have taught? 2. How much can you do to evaluate student comprehension of career planning concepts you have taught?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 11 **TSES** To what extent can you craft good questions for your students? **Character Education** To what extent can you craft good questions that examine character for your students? **Literature Teaching** To what extent can you craft good questions about a text for your students?	**TAEDEL401A Plan, organise and deliver group-based learning** 2.3. Use knowledge of learning principles and theories to generate ideas for managing session delivery	**ASOT Domain 3: Reflecting on Teaching** Evaluating Personal Performance 50) Identifying Areas of Pedagogical Strength and Weakness	**Concepts:** • Knowledge of career development • Teacher Training • ASOT strategies **Key words to consider:** • Pedagogical practices • Flexibility • Progress Tracking **Factor: Instructional Strategies**	***When it comes to delivering career education in your classroom…*** 1. To what extent can you use ASOT principles to develop questions involving career planning for your students? 2. To what extent can you use your general teaching competencies to develop craft good questions to your students involving career planning? 3. To what extent can you craft good questions involving career planning for your students?
Question 12 **TSES** How much can you do to foster student creativity? **Character Education** How much can you do to foster student creativity? **Literature Teaching** How much can you do to foster students' creativity and analytical skills when teaching literature?	**CHCCDP402B Assist clients to plan and access career pathways** 3. Identify career opportunities and resources	**ASOT DQ#5: What will I do to engage students?** 24) Noticing and Reacting when Students Are Not Engaged 25) Using Academic Games 26) Managing Response Rates 27) Using Physical Movement 28) Maintaining a Lively Pace 29) Demonstrating Intensity and Enthusiasm 30) Using Friendly Controversy 31) Providing Opportunities for Students to Talk about Themselves 32) Presenting Unusual or Intriguing Information	**Concepts:** • Student's self-efficacy • Students undertake own research **Key words to consider:** • Protean • Career planning **Factor: Student Engagement**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to empower students to become creative in their career planning?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 13 **TSES** How much can you do to get children to follow classroom rules? **Character Education** How much can you do to get students to follow classroom rules? **Literature Education** **No Item**	How much can you do…classroom expectations set. See ASOT Marzano. Check design questions	**ASOT DQ#6: What will I do to establish and maintain classroom rules and procedures?** 4) Establishing Classroom Routines 5) Organizing Physical Layout of the Classroom for Learning **ASOT DQ#8: What will I do to establish and maintain effective relationships with students?** 36) Understanding Students' Interests and Backgrounds 37) Using Behaviours that Indicate Affection for Students 38) Displaying Objectivity and Control **ASOT DQ#7: What will I do to recognize and acknowledge adherence and lack of adherence to Classroom rules and procedures?** 33) Demonstrating "Withitness" 34) Applying Consequences 35) Acknowledging Adherence to Rules and Procedures	**Concepts:** • Withitness • Student Engagement **Key words to consider:** • Behaviour • Disruptive • Expectations • Routines **Factor: Classroom Management**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to get your students engaged in their career planning thereby minimising disruptive behaviours in the classroom? 2. How much can you do to establish and maintain classroom rules and procedures?
Question 14 **TSES** How much can you do to improve the understanding of a student who is failing? **Character Education** How much can you do to improve the understanding of a student who is failing to grasp the importance of good character? **Literature Teaching** How much can you do to improve the understanding of a student who cannot understand the nuances of a text?	**CHCCDP402B Assist clients to plan and access career pathways** 2.1 Work with client to identify skills needed to effectively manage identified career development pathway **TAEDEL401A Plan, organise and deliver group-based learning** 2.1. Refine existing learning objectives according to program requirements and specific needs of individual learners	**DQ#9: What will I do to communicate high expectations for all students?** 39) Demonstrating Value and Respect for Low Expectancy Students 40) Asking Questions of Low Expectancy Students 41) Probing Incorrect Answers with Low Expectancy Students	**Concepts:** • Low expectancy students • ASOT DQs • Explicit Teaching **Key words to consider:** • Checking for understanding • ASOT • ESCM **Factor: Student Engagement**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to communicate high expectations for low expectancy students? 2. How much can you do to improve outcomes of low expectancy students in their career planning? Check Mills wording for usefulness

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 15 **TSES** How much can you do to calm a student who is disruptive or noisy? **Character Education** How much can you do to calm a student who is disruptive or noisy? **Literature Teaching** **No Item**		**ASOT DQ#8: What will I do to establish and maintain effective relationships with students?** 36) Understanding Students' Interests and Backgrounds 37) Using Behaviours that Indicate Affection for Students 38) Displaying Objectivity and Control **Consider ESCM**	**Concepts:** • Use of ESCM to reengage a disruptive student • Relationships **Key words to consider:** • Disengaged • ESCM **Factor: Classroom Management**	***When it comes to delivering career education in your classroom…*** 1. How well do you know and use the Essential Skills for Classroom Management to re-engage a disruptive student? 2. How well can you use the Essential Skills for Classroom Management to re-engage a disruptive student? 3. How could you use the essential skills for classroom management to reengage a student into their career planning? 4.
Question 16 **TSES** How well can you establish a classroom management system with each group of students? **Character Education** How well can you establish a classroom management system with each group of students? **Literature Teaching** How well can you coordinate small group discussions of a literary text?	**TAEDEL401A Plan, organise and deliver group-based learning** 5.1 Monitor and document learner progress to ensure outcomes are being achieved and individual learner needs are being met	**ASOT DQ#6: What will I do to establish and maintain classroom rules and procedures?** 4) Establishing Classroom Routines 5) Organizing Physical Layout of the Classroom for Learning	**Concepts:** • Accommodating different learning styles • Inclusive practice for learning difficulties and SWDs • Monitoring outcomes for different learners • Individual student plans?? **Key words to consider** Transfer your teaching skills towards establishing effective classroom management systems that promotes effective student learning Is conducive to best practice in career education. **Factor: Classroom Management**	***When it comes to delivering career education in your classroom…*** 1. How well can you effectively plan career education content to ensure inclusive teaching practices? 2. How well can you monitor student progress in their career planning in your classroom

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 17 **TSES** How much can you do to adjust your lessons to the proper level for individual students? **Character Education** How much can you do to adjust your character lessons to the proper level for individual students? **Literature Teaching** How well can you assess the understanding of your students when teaching literature?	**CHCCDP401B Deliver service consistent with a career development framework** 1.1 Support *clients* to actively engage in *learning* relevant to their needs and *life stage* **TAEDEL401A Plan, organise and deliver group-based learning** 5.2. Adjust the delivery sessions to reflect specific needs and circumstances	**ASOT DQ#9: What will I do to communicate high expectations for all students?** 39) Demonstrating Value and Respect for Low Expectancy Students 40) Asking Questions of Low Expectancy Students 41) Probing Incorrect Answers with Low Expectancy Students **ASOT DOMAIN 2: Planning & Preparing** Planning and Preparing for the Needs of Students Receiving Special Education 48) Needs of Students Receiving Special Education Planning and Preparing for the Needs of Students Who Lack Support for Schooling 49) Needs of Students Who Lack Support for Schooling	**Concepts:** • *Supporting all students learning needs* • *Gifted & Talented* • ASOT **Key words to consider:** • Differentiation **Factor: Instructional Strategies**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to differentiate your career education classes to cater for the different learning abilities of your students? 2. How much can you do to adjust your lessons in your career education class to support students with a variety of learning needs?
Question 18 **TSES** How much can you use a variety of assessment strategies? **Character Education** How much can you use a variety of character assessment strategies? **Literature Teaching** How much can you do to adjust your literature lessons to the proper level for individual students?	**CHCCDP401B Deliver service consistent with a career development framework** **TAEDEL401A Plan, organise and deliver group-based learning** 5.2. Adjust the delivery sessions to reflect specific needs and circumstances	**ASOT DQ#1: What will I do to establish and communicate learning goals, track student progress, and celebrate success?** 1) Providing Clear Learning Goals and Scales to Measure those Goals 2) Tracking Student Progress 3) Celebrating Student Success **ASOT DQ#3: What will I do to help students practice and deepen their understanding of new knowledge?** 14) Reviewing Content 15) Organizing Students to Practice and Deepen Knowledge 16) Using Homework 17) Examining Similarities and Differences 18) Examining Errors in Reasoning 19) Practicing Skills, Strategies, and Processes 20) Revising Knowledge	**Concepts:** • Lesson plans that provide opportunity for students to exhibit understanding in a variety of ways • Assess for different learning styles • Support student learning • Delivery content to allow students to interact with knowledge and display understanding **Key words to consider:** • Flexibility • Progress tracking **Factor: Instructional Strategies**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to assess students' knowledge of career planning in a variety of ways? 2. How much can you use your knowledge of career planning to assess students' knowledge in a variety of ways? 3. How much can you do deliver your lessons to allow students to interact with new knowledge and display their understanding using good practices in assessment? 4. How much can you do to help students explain their knowledge of career planning? 5. How much can you do to help students show how much they have learnt about their career planning?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 19 **TSES** How well can you keep a few problem students from ruining an entire lesson? **Character Education** How well can you keep a few problem students form ruining an entire lesson? **Literature Teaching** How much can you do to control a student who is dominating a literary discussion?	**CHCCDP401B Deliver service consistent with a career development framework** 1.1 Support *clients* to actively engage in *learning* relevant to their needs and *life stage*	**ASOT DQ#7: What will I do to recognize and acknowledge adherence and lack of adherence to Classroom rules and procedures?** 33) Demonstrating "Withitness" 34) Applying Consequences 35) Acknowledging Adherence to Rules and Procedures **ASOT DQ#5: What will I do to engage students?** 24) Noticing and Reacting when Students Are Not Engaged 25) Using Academic Games 26) Managing Response Rates 27) Using Physical Movement 28) Maintaining a Lively Pace 29) Demonstrating Intensity and Enthusiasm 30) Using Friendly Controversy 31) Providing Opportunities for Students to Talk about Themselves 32) Presenting Unusual or Intriguing Information	**Concepts:** • ESCM – redirect to learning • Re-engage students who have lost focus • Include all students • Minimise disruptive influences **Key words to consider:** • Redirection • ESCM strategies **Factor: Classroom Management**	***When it comes to delivering career education in your classroom…*** 1. How well can you manage your career education class using a variety of strategies to keep all students engaged? 2. How well can you engage all the students in your career education class using a variety of strategies to minimise disruption. 3. How much can you do to minimise disruptive influences in your career education class? 4. How well can you engage students in your career education class to minimise disruptive influences?
Question 20 **TSES** To what extent can you provide an alternative explanation or example when students are confused? **Character Education** To what extent can you provide an alternative explanation or example when students are confused about lessons involving character? **Literature Teaching** To what extent can you provide an alternative explanation or example when students are confused about a text?	**TAEDEL401A Plan, organise and deliver group-based learning** 2.1 Contextualise existing learning materials to meet the needs of the specific learner group	**ASOT DQ#3: What will I do to help students practice and deepen their understanding of new knowledge?** 14) Reviewing Content 15) Organizing Students to Practice and Deepen Knowledge 16) Using Homework 17) Examining Similarities and Differences 18) Examining Errors in Reasoning 19) Practicing Skills, Strategies, and Processes 20) Revising Knowledge	**Concepts:** • Deep knowledge of Career Development • Repertoire of skills **Key words to consider:** • Skills & knowledge • ASOT strategies • ESCM strategies **Factor: Instructional Strategies**	***When it comes to delivering career education in your classroom…*** 1. To what extent can you use your knowledge and skills in career development to help students who may be confused with their career planning? 2. To what extent can you rely upon your knowledge and skills in career development to provide students with variety of examples and explanations? 3. To what extent can you use your skills and knowledge in career development to assist students who may be confused?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 21 **TSES** How well can you respond to defiant students? **Character Education** How well can you respond to defiant students? **Literature Teaching** **No Item**		**ASOT DQ#7: What will I do to recognise and acknowledge adherence and lack of adherence to Classroom rules and procedures?** 33) Demonstrating "Withitness" 34) Applying Consequences 35) Acknowledging Adherence to Rules and Procedures **ASOT DQ#6: What will I do to establish and maintain classroom rules and procedures?** 4) Establishing Classroom Routines 5) Organizing Physical Layout of the Classroom for Learning	**Concepts:** • Re-engage defiant student • Relationships building • Professionalism in instructional design • Engaging lessons **Key words to consider:** • Strategies **Factor: Classroom Management**	***When it comes to delivering career education in your classroom…*** 1. How well can you use strategies to re-engage students with difficult and defiant behaviours? 2. How well can you use strategies to re-engage students with difficult and defiant behaviours to focus on their career planning?
Question 22 **TSES** How much can you assist families in helping their children do well in school? **Character Education** How much can you assist families in helping their children practice good character in school **Literature Teaching** **No Item** ?	**CHCCDP401B Deliver service consistent with a career development framework** 1.5 Assist clients to identify a range of personal, family, social and environmental factors impacting on their career development	**ASOT Domain 4: Collegiality and Professionalism** 56) Promoting positive interactions about students and parents Element IV.2: The teacher forges partnerships with families to promote student learning at home and in the school.	**Concepts:** • Include families in child's career planning • Home/school relationship • Promotion of career pedagogy with home **Key words to consider:** • Family **Factor: Student Engagement**	***When it comes to delivering career education in your classroom…*** 1. How much can you do to include a student's family in their career planning? 2. How much can you do to promote family involvement as part of your student's career planning? 3. How much can you do to promote positive interactions with parents in their child's career planning processes? 4. How much can you do to forge partnerships with families to assist in a student's career planning?

Self-Efficacy Question	Cert IV in Career Development Competencies	ASOT The Art & Science of Teaching	Concepts	DRAFT CETSES Questions
Question 23 **TSES** How well can you implement alternative strategies in your classroom? **Character Education** How well can you implement alternative character education strategies in your classroom? **Literature Teaching** How well can you implement alternative or innovative strategies in teaching literature?	**TAEDEL401A Plan, organise and deliver group-based learning** 4.3. Employ a range of delivery methods as training aids to optimise learner experiences	**ASOT DQ#2: What will I do to help students effectively interact with the new knowledge?** 6) Identifying Critical Information 7) Organizing Students to Interact with New Knowledge 8) Previewing New Content 9) Chunking Content into "Digestible Bites" 10) Processing of New Information 11) Elaborating on New Information 12) Recording and representing Knowledge 13) Reflecting on Learning **ASOT DQ#5: What will I do to engage students?** 24) Noticing and Reacting when Students Are Not Engaged 25) Using Academic Games 26) Managing Response Rates 27) Using Physical Movement 28) Maintaining a Lively Pace 29) Demonstrating Intensity and Enthusiasm 30) Using Friendly Controversy 31) Providing Opportunities for Students to Talk about Themselves 32) Presenting Unusual or Intriguing Information	**Concepts:** • Responding to different learner styles • Alternative education programs • Relationship building • Pedagogical approach • Explicit teaching **Key words to consider:** • Adaptation **Factor: Instructional Strategies**	***When it comes to delivering career education in your classroom…*** 1. How well can you implement career development programs to students in alternative programs? 2. How well can you implement career development programs to students with alternative needs? 3. How well can you teach career development programs to students in alternative contexts?
Question 24 **TSES** How well can you provide appropriate challenges for very capable students? **Character Education** How well can you provide appropriate character challenges like service learning and volunteerism for very capable students? **Literature Teaching** How well can you provide appropriate challenges for very capable students when teaching literature?	**CHCCDP401B Deliver service consistent with a career development framework** 2. Provide an environment to facilitate client learning	**ASOT DQ#4: What will I do to help students generate and test hypotheses about new knowledge?** 21) Organizing Students for Cognitively Complex Tasks 22) Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generating and Testing 23) Providing Resources and Guidance	**Concepts:** • Knowledge and skills in Career Development • Students to reflect on current career plans to consider alternatives **Key words to consider:** • Teacher knowledge **Factor: Instructional Strategies**	***When it comes to delivering career education in your classroom…*** 1. How well can you use your skills and knowledge in career planning to challenge students? 2. How well can you use your skills and knowledge in career planning to provide appropriate challenges for capable students? 3. How well can you use your skills and knowledge in career planning to challenge very capable students?

Rich data was sought from the focus group participants and all were asked to speak freely and reflectively. Each participant was encouraged to express any concerns or provide encouraging feedback if warranted. The dialogue between the participants in each group was recorded and later transcribed using a professional transcription service. The three transcripts were combined in order of the questions being addressed by the focus group into a Microsoft Word document for data analysis.

4.6 Data Analysis

4.6.1 Thematic Analysis Background

A thematic analysis was conducted using the research model of Braun and Clarke (2006). They state that thematic analysis provides theoretical freedom, flexibility and a useful tool that can provide potentially rich and detailed data. Further thematic analysis still allows the provision of a complex account of the data (Braun & Clarke, 2006, p. 5). The thematic analysis method outlined in Braun and Clarke (2006) consists of six phases:

Phase 1: Familiarising yourself with the data by reading the whole data set and noting down initial ideas

Phase 2: Generating initial codes, with codes being the most basic segment of the raw data that can identify a feature of the data that appears interesting.

Phase 3: Searching for themes by sorting different codes into potential themes and collating all data extracts within identified themes.

Phase 4: Reviewing themes and refining them further (at the level of coded data extracts, and the entire data set) and producing a thematic map showing relationships between themes and subthemes.

Phase 5: Defining and naming themes, making sure they give the reader an immediate sense of what the theme is about.

Phase 6: Producing a report to convince the reader of the merit and validity of the analysis (within and across themes), using data extracts embedded within an analytic narrative to make an argument in relation to the research question

The data extracted from the peer review followed the six phase procedure outlined by Braun and Clarke (2006). In the first phase, the transcript of the peer review was read several times to gain familiarity with the depth and breadth of the content. Initial notes were recorded in the *comments* column of the Microsoft Word document. The notes taken were of any thoughts or features that were of interest that could be somehow related to the structure

of the draft items of the CETSES that were provided in the stimulus document. Further, any comments about how there may be better ways to word the items were also noted. Figure 4.1 illustrates from an extract of the transcript how the notes and potential codes were initially generated.

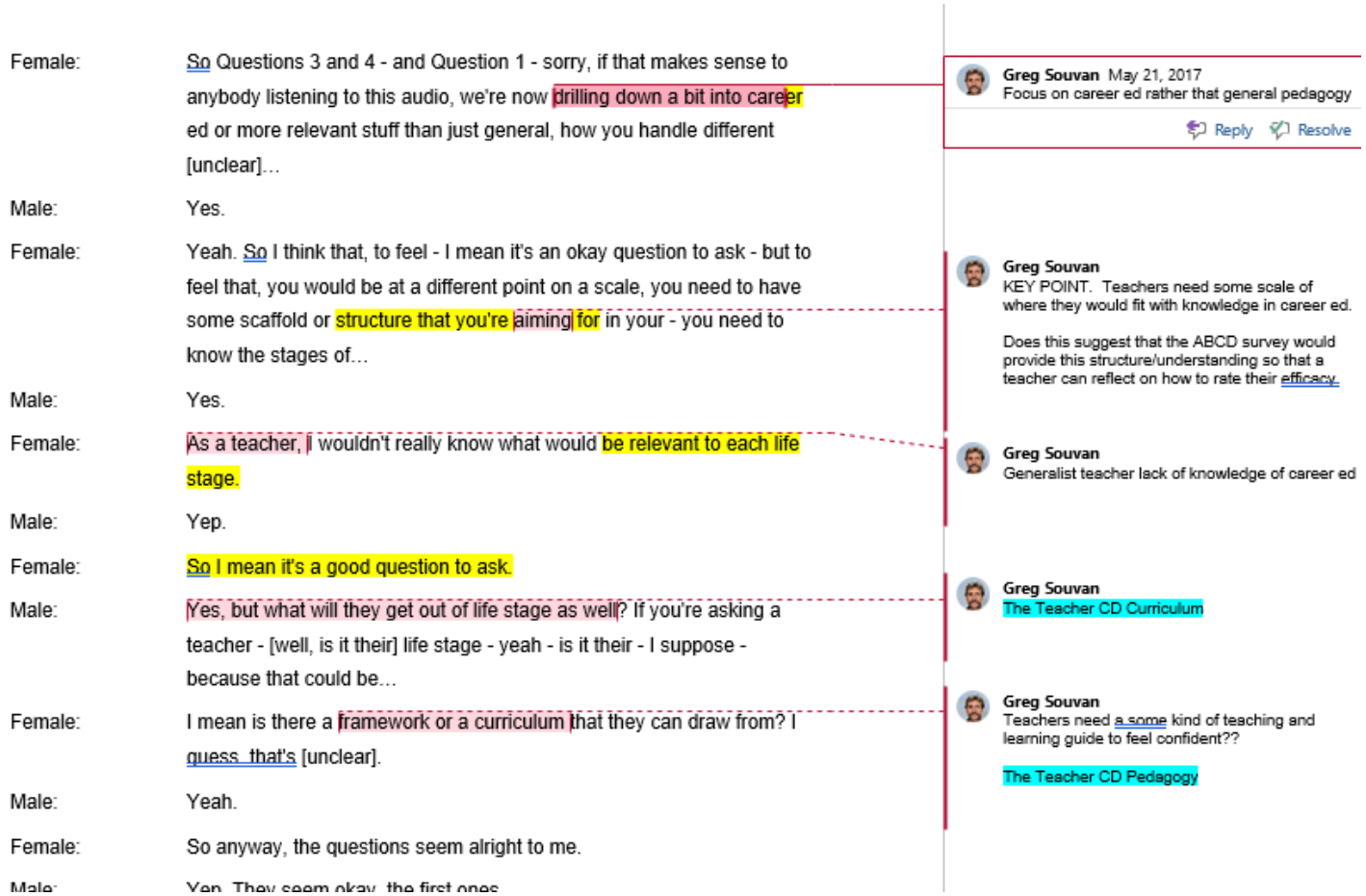

Figure 4.2 An Extract from the Peer Review Transcription

Once the familiarisation process was completed and all the initial codes were identified, each of the codes was then collated by identifying the recurring patterns of semantic and latent content that had emerged. The latent content was data or comments identified that was implied in the focus group. The semantic content was data that revealed several codes but having the same meaning. The next phase entailed collating the initial codes into potential themes and the coded data extracts identified. These were firstly sorted into possible themes with codes dot pointed under each apparent theme. Figure 4.2 depicts eight possible themes that initially emerged during the second phase of the thematic analysis

together with the coded data extracts in dot point form under each theme. These themes included:

1. Career Development Curriculum
2. The Teacher
3. Defining Terms
4. Student Participation
5. The Questions
6. Quality Teaching
7. Pedagogy
8. The Students

A review of the third phase of the thematic analysis sought to develop a thematic map showing the relationships between the themes and the subthemes. It became apparent that there were two main themes. The focus of the conversation from the focus group concentrated in two main areas; ostensibly *The Questions* and *The Teacher*. To enable a visual representation, a preliminary thematic map was generated using the initial codes and sub-themes identified and the associations to the two potential themes.

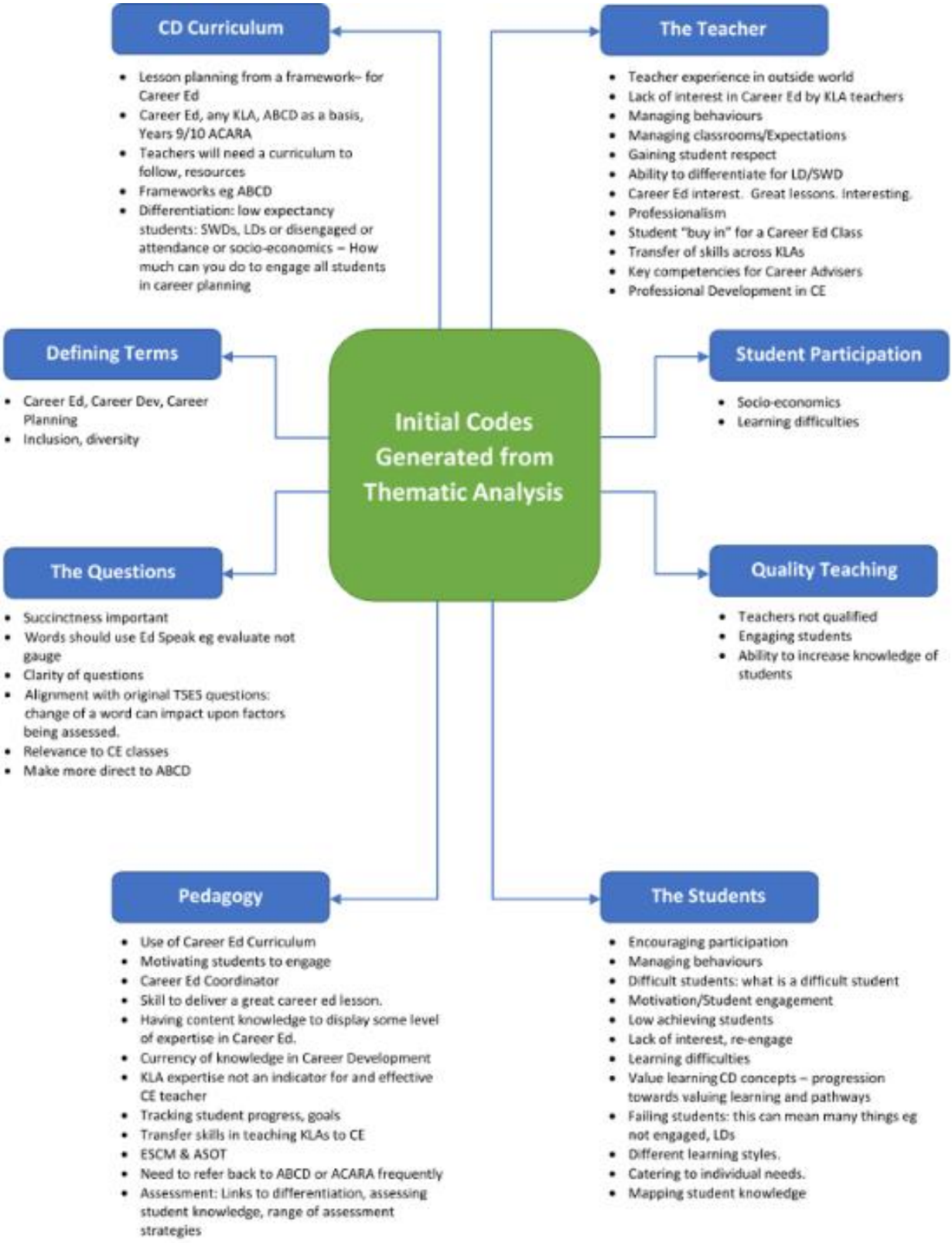

Figure 4.3 Initial Codes Generated in the Second Phase of the Data Analysis

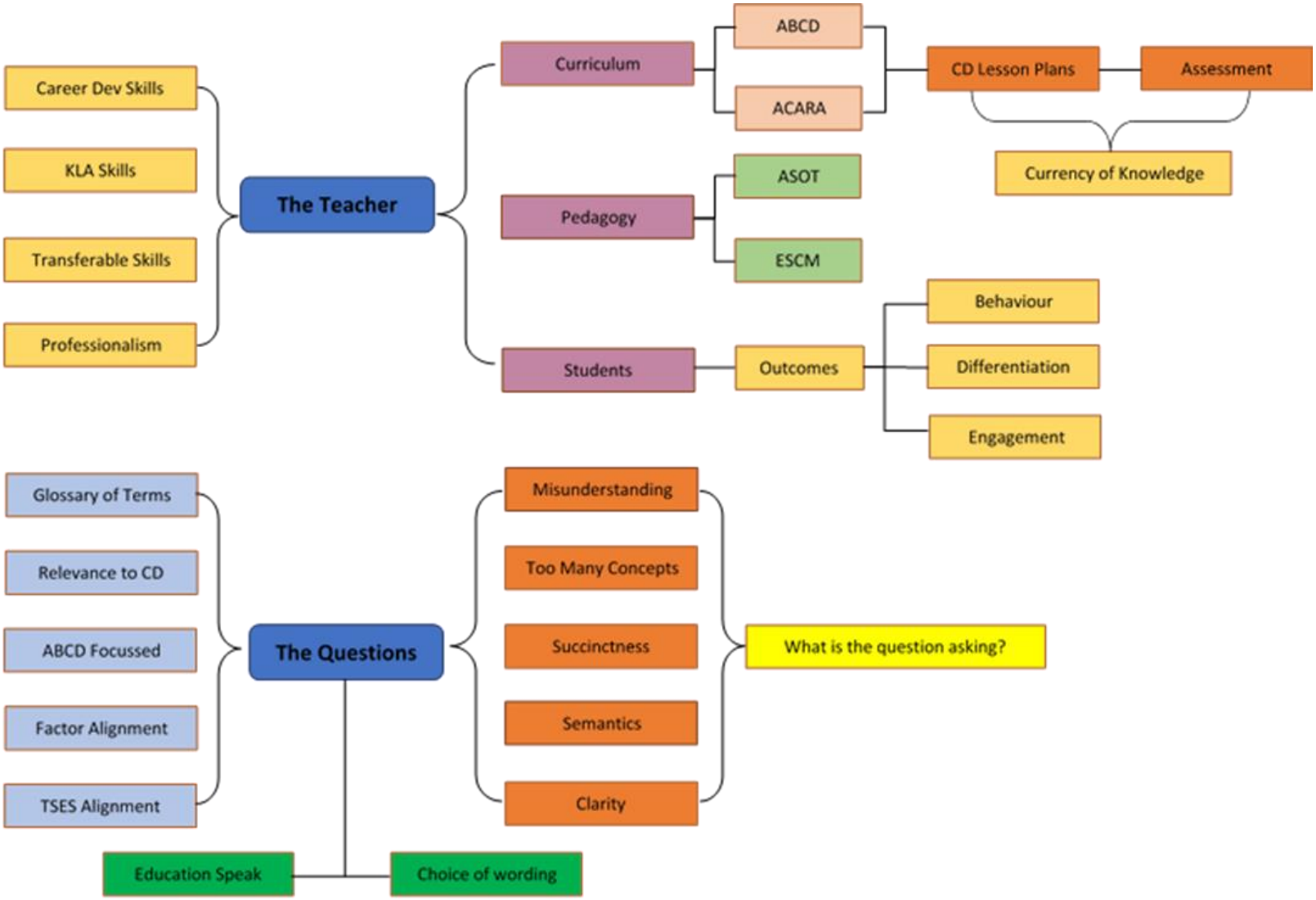

Figure 4.4 Preliminary Thematic Map developed as a Visual Representation

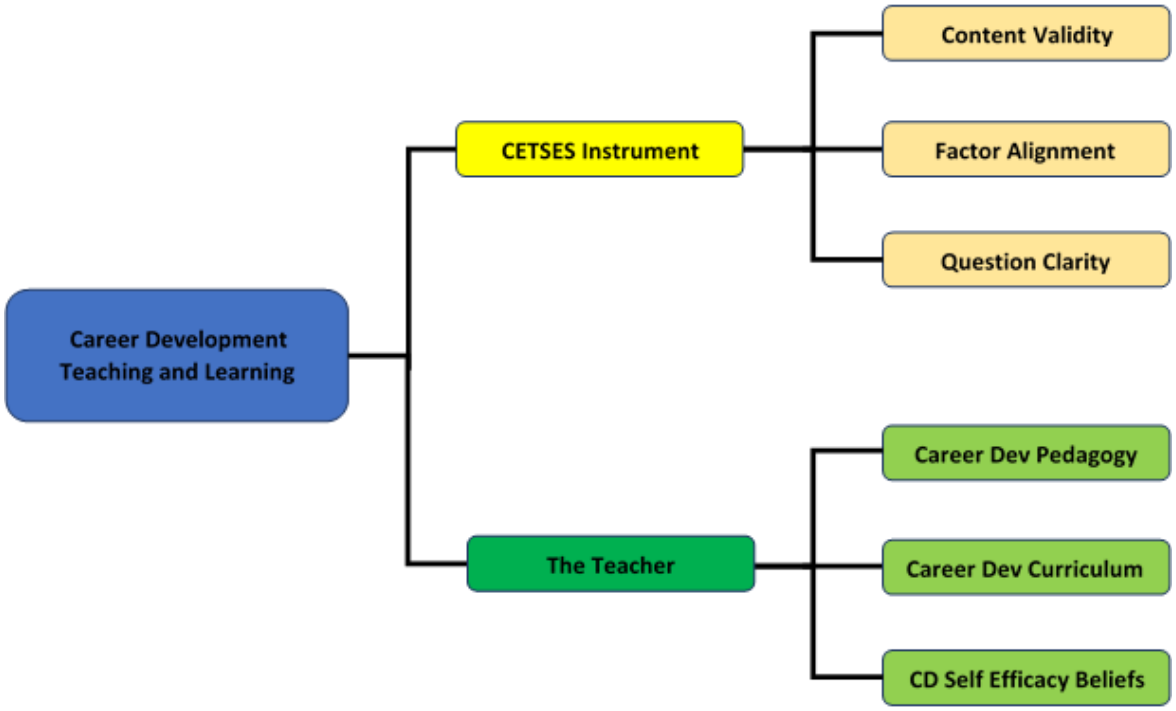

Figure 4.5 Visual Representation of the Thematic Map

The refinements made in the fifth phase of the thematic analysis gave further consideration to the initial theme of The Questions. It was perceived that it was the research instrument itself that encompassed all that was the initial theme of the questions and the associated codes that were identified. Therefore, two themes were finally settled upon: *The Teacher* and *The CETSES*. The associated codes for each theme were then organised into subthemes relating to each of the main themes. Figure 4.4 illustrates the final thematic map developed.

4.6.2 Theme Substantiation

The process of thematic analysis model (Braun & Clarke, 2006) revealed two main themes. I.e., the CETSES Instrument and The Teacher. The merit and the validity of the process to determine these themes were further scrutinised by applying a *backward*s mapping approach with the subthemes and key statements from the focus group. The purpose of the mapping exercise was to provide further assurance that the themes and subthemes were representative of the feedback gained during the focus group discussion (see Table 4.1). This is also viewed as being deductive in its approach to test the fit the data themes of the Thematic Analysis in comparing categories (Hsieh & Shannon, 2005).

4.7 Theme 1: The CETSES Instrument

Table 4.2

Theme 1 Substantiation and Mapping: CETSES Instrument

Content Validity
Yeah, so this one is about increasing their knowledge and this one is about increasing their opportunity, but apart from that they're the same words, pretty much. This one is… *I wonder if he has actually thought about this and has he done that? What's it like in the classroom? Is it really getting what Tschannen and Moran are trying to say here, with a career development focus?* *Yeah, so again I don't think either of these suggestions - because about classroom management systems - it's my understanding that's about your class rules.* *What would be the point of this question? What do we actually want to find out?* *It's a clunky sort of question but it kind of captures it, doesn't it? Because you're asking the teacher, what would they do - what are you trying to assess? Are you trying to assess the students' new knowledge? Are you trying to assess how they demonstrate their understanding? That's part of your assessment.* *[Unclear] engaged in [unclear]. I like the second column one, the career development framework questions. Because in the first one you're assuming kids are going to be disruptive, whereas in the second one you're talking about actively engaging which are two different things. If you actively engage first - so it's about making it relevant. So how well can you manage your career education [inaudible].*

Table 4.2

Theme 1 Substantiation: CETSES Instrument

Factor Alignment
Yeah, do you think it's all - I mean there's a lot of areas in one there, so it has got personal, family - so they're four fairly big areas.
...difficult students, so teasing that out a little bit maybe in the questions could be where it's going, which then brings it down to the next one, Question 4, how much can you do to motivate students who show low interest?
...professionalism, knowledge and awareness, which seem to be three pretty big areas and then down here you've got, skills and knowledge again - the difference between - and what do you mean by professionalism? There's to be different interpretations of what that looks like to different people and we had different ideas
Yeah, do you think it's all - I mean there's a lot of areas in one there, so it has got personal, family - so they're four fairly big areas.
It's funny though because this one is classroom management. The second one is classroom management. The third one seems quite left field. *But on the right hand column, the second one - how well can you monitor student progress? I think establishing classroom management is totally different to monitoring student progress. So I really don't like this second [scenario].*
Effectively plan for the educational content to ensure inclusive career practices? I don't think this is about classroom management of groups of students. The first one is more about engagement in content isn't it, rather than classroom management?
[It's around] learning abilities. Is that the differentiation we're talking about? Is that - is learning abilities - is that lining up with what Moran is saying over on the left hand side? Yeah. Look I get your last column. But that doesn't match the Moran intent I don't think. You're right. Those first three drafts there, they certainly miss the point.

Table 4.3

Question Clarity
It's difficult in that they're not separated, so maybe that question could be combined in some way? I don't know. It seems a little bit repetitive, maybe.
I mean here's another type of difficult student - one who has got low interest in schoolwork. So in Question 4 - I mean these are all difficult students. They're just different reasons, aren't they? So maybe you don't need the general question, but you go to the more specific … questions, because it's going to be different for a disruptive student.
So what do we mean by, your professionalism? Is that - I mean a word like professionalism - what does that really mean?
…professionalism, knowledge and awareness, which seem to be three pretty big areas and then down here you've got, skills and knowledge again - the difference between - and what do you mean by professionalism? There's to be different interpretations of what that looks like to different people and we had different ideas.
I mean they all say career education at the top, but I think we haven't seen this wording here before, about knowledge of career development and what does that mean? So is that different to career education - apparently?
Really wordy, isn't it?
Breaking that down - I think even words like, student self-efficacy would throw a lot of teachers.

4.8 Theme 2: The Teacher

Table 4.4

Theme 2 Substantiation: The Teacher - Career Development Pedagogy

As a teacher, I wouldn't really know what would be relevant to each life stage. Generalist teacher lack of knowledge of career development
…an expert in it might just be pointing people into the technological direction where they can find their own answers or something like that. I don't know. See, I don't know that you'd ever be an expert, but it's just your professionalism that handles curly questions - winging it.
But if you put constructivist approach to teachers who first reading it, might not understand what that means [laughs].

Table 4.5

Theme 2 Substantiation: The Teacher - Career Development Curriculum

Yeah. So I think that, to feel - I mean it's an okay question to ask - but to feel that, you would be at a different point on a scale, you need to have some scaffold or structure that you're aiming for in your - you need to know the stages of… Knowledge of competencies eg ABCD
Perhaps they'll be using what they call the Australian Blueprint for Career Development and they've got competencies.
So once again, to my mind it comes down to having frameworks and templates for the students to drill into it.
if they feel like they're able to put career education lessons together, because it's about developing. It's not about the delivery of it at this stage. It's about them coming up with the engaging curriculum. I wonder whether - is the word, develop - is that what the expectation is, that they have to develop the interesting and engaging lessons, or is there somebody else at school - there should be a whole school framework…

Table 4.6

Theme 2 Substantiation: The Teacher – Career Development Self-Efficacy Beliefs

But that's just what - they're asking about - I would be thinking something like, I want to be a computer programmer. What do I need to do?
Participant 1: I'm not quite sure what quite they mean by difficult questions. *Male: But that's just what - they're asking about - I would be thinking something like, I want to be a computer programmer. What do I need to do?* *Participant 1 Right, so it's the question where the teacher doesn't have the factual answer to it?*
Are you looking at your teaching ability, you as a teacher, you as a - draw upon your knowledge - so is that your career knowledge? I mean what sort of knowledge are you asking an awareness of - yeah - but professionalism [unclear].
I mean the only thing that was going into my head when I thought about professionalism, is not specific to career planning but in any situation, when you're asked curly questions, your professionalism is the fact that you respond rather than react to that curly question, that you've got a measured way of handling that doesn't drop your guard as a professional

4.9 Results

4.9.1 Theme 1: The CETSES Instrument

There were three codes that were connected to the theme of the CETSES instrument i.e., Content Validity, Factor Alignment, and Question Clarity. Participants were asked in the initial stages to provide an objective perspective on the draft questions (see appendix B) developed from the range of sources used in their development. The content validity of the CETSES instrument was referred to on a number of occasions during the focus group discussion. The participants were able to identify that several of the draft items were not necessarily relevant to the intent of original questions developed by Tschannen-Moran and Hoy (2001). In the discussions focussing on the drafts for item six of the CETSES, participants noted that two of the draft items were not consistent with the intent of the original TSES instrument.

Participant 3: Yeah, so this one is about increasing their knowledge and this one is about increasing their opportunity, but apart from that they're the same words, pretty much.

A discussion focussing on the drafts for item 16 is another example where concern was raised about consistency with the intent of the TSES instrument. The participants proceeded to discuss how the item could be better worded that was more relevant to the intent of the original TSES.

Participant 1: Yeah, so again I don't think either of these suggestions - because about classroom management systems - it's my understanding that's about your class rules.

Participant 2: Yeah, it's about do you - as they come in do you say hello? Do you line them up? Do you have your work on the board first?

Participant 3: Couldn't it be something about how well can you establish classroom management systems appropriate to each group of - oh I don't know. See I'm just...

Participant 1: No, you're right. I'm happy you've put - no no I think that's good - classroom management systems to - better word for help - engage students in their career planning lessons.

Participant 3: Consider the needs of each individual or something. I don't know.

Participant 1: How well can you establish systems and rules for your...

Participant 2: Classroom routines. Rules and procedures.

Participant 1: Rules and procedures for your career planning lessons.

Participant 2: How well can you establish rules and procedures for your career planning lessons...

Participant 2: Yeah, to help...

Participant 1:...for your career planning classes?

Participant 2: Yeah, to help.

Participant 3: It says something about each group. Should there be something for each of your classes or something?

Participant 1: For each of your career planning classes.

Participant 3: Specific to each...

Participant 1: How well can you establish rules and routines for each of your career planning classes?

The third group questioned all of the five drafts for Item 18 tabled. Firstly, when considering each of the drafts, they concluded that the third draft tabled was usable but needed further refinement.

Participant 4: Oh I'm just - yeah I'm just taking my own interpretation. What would be the point of this question? What do we actually want to find out?

Participant 5: Yup, so the bottom line, we're trying to assess how much the students have learned and applied. I think that's the idea of this one?

Focusing in on the draft Item three, Participant 4 stated:

Participant 4: It's a clunky sort of question but it kind of captures it, doesn't it? Because you're asking the teacher, what would they do - what are you trying to assess? Are you trying to assess the students' new knowledge? Are you trying to assess how they demonstrate their understanding? That's part of your assessment.

The development of Item 19 referred to the original item from Tschannen-Moran and Hoy (2001) and then compared this to the adapted items of the same question from other self-efficacy research that included *Literature Teaching* (Mills, 2011) and *Character Education* (Toney, 2012). It was noted that these adapted items did not change the wording to a great extent. The first draft item tabled did not vary to a great extent from the original item of the TSES.

Participant 5: Where they've adapted Tschannen and Moran - underneath there's - a character education one. So someone has adapted Moran's for a character ed. Someone has adapted one for literature teaching. Not a lot of changing in words.

Participant 5: Some of the feedback I'm getting is that the first one of the draft questions is pretty close.

Participant 4: Yeah. I actually like the first one because if you have a range of strategies and - how can you manage your career education - using a variety of relevant strategies and relevant information - I don't know I just - I think you've got to have more relevant strategies.

The second code that clearly emerged within the theme of the CETSES Instrument was that some of the draft items tabled were asking very different concepts and confusion arose. This became obvious that the original factors that were aligned to each of the items overall were not clearly considered in the draft items tabled that were to lead to the final version.

Participant 5: Yeah, do you think it's all - I mean there's a lot of areas in one there, so it has got personal, family - so they're four fairly big areas.

Participant 7: Yeah.

Participant 5: Should they be four separate areas, rather than…

The drafts tabled for Item seven for example clearly caused concern for the many concepts suggested. This also drifted from the original intent of the TSES.

Participant 3: …professionalism, knowledge and awareness, which seem to be three pretty big areas and then down here you've got, skills and knowledge again - the difference between - and what do you mean by professionalism? There's to be different interpretations of what that looks like to different people and we had different ideas.

Participant 5: It's funny though because this one is classroom management. The second one is classroom management. The third one seems quite left field.

Participant 7: But on the right hand column, the second one - how well can you monitor student progress? I think establishing classroom management is totally different to monitoring student progress. So I really don't like this second [scenario].

Participant 8: The first one is more about engagement in content isn't it, rather than classroom management?

Participant 7: Yeah. Look I get your last column. But that doesn't match the Moran intent I don't think. You're right. Those first three drafts there, they certainly miss the point.

Several questions raised discussion on the clarity of the draft questions and whether those could be misinterpreted by teachers undertaking the survey. For example, question four was targeting the factor of Student Engagement.

Participant 9: I mean here's another type of difficult student - one who has got low interest in schoolwork. So in Question 4 - I mean these are all difficult students. They're just different reasons, aren't they? So maybe you don't need the general question, but you go to the more specific … questions, because it's going to be different for a disruptive student.

Participant 5: commented about what some terms may mean to one teacher may be very different to another. For example, question seven raised some discussion on professionalism, knowledge and awareness.

Participant 5: So what do we mean by, your professionalism? Is that - I mean a word like professionalism - what does that really mean?
Participant 5: …professionalism, knowledge and awareness, which seem to be three pretty big areas and then down here you've got, skills and knowledge again - the difference between - and what do you mean by professionalism? There's to be different interpretations of what that looks like to different people and we had different ideas.

The participants reviewing the draft questions tabled often remarked about 'wordy questions'.
Participant 3: Yeah. The other one we were just looking at, you seem to - I mean there seems to be a number of words, so in some places they should just call it career education and then you call it career planning and then over here, right at the end, it then introduced - Number 8, was it - no, that's right, [unclear].

4.9.2 Theme 2: The Teacher

Three codes that were uncovered that connected the theme of the *Teacher*. Each of these codes was all linked to the context of career development. Each of these three codes all focussed on the skills and knowledge teachers would need to possess to be effective in the delivery of career education programs in the school environment. Specifically, discussions occurred on whether teachers had skills in the practice of teaching career education programs or were able to transfer their pedagogical skills from their major subject teaching areas. Essentially, could teachers rely upon their skills in other curriculum key learning areas to deliver high quality lessons that focussed on career education?

Pedagogical practices towards career education in the classroom created snippets of dialogue during the peer review. Each was either expressing or alluding to concerns about teachers possessing the skills and knowledge to effectively teach career development concepts based on their current knowledge of the topic.

> *Participant 9:* …an expert in it might just be pointing people into the technological direction where they can find their own answers or something like that. See, I don't know that you'd ever be an expert, but it's just your professionalism that handles curly questions - winging it.
>
> *Participant 7:* But if you put constructivist approach to teachers who first reading it, might not understand what that means [laughs].
>
> In discussing the drafts tabled for question one, the group determined that some career development background knowledge in theoretic approaches was needed.
>
> *Participant 8:* Yeah. So I think that, to feel - I mean it's an okay question to ask - but to feel that, you would be at a different point on a scale, you need to have some scaffold or structure that you're aiming for in your - you need to know the stages of… wouldn't really know what would be relevant to each life stage.

The code of *Curriculum* emerged in a number of areas in the discussions. In particular, the focus group expressed concerns about teachers having any knowledge of a career development framework or curriculum.

> *Participant 3:* There are frameworks. They certainly will have a curriculum.
>
> *Participant 5:* So you've got to have a way of assessing it so you'd have to - first of all you need to know what it is that you want to assess.
>
> *Participant 4:* If you provide the framework and the exercises that help them explore, and the resources to help them link to the information that they need at that point in time… I think that's still about a teacher's knowledge and skills and resources to provide students with a variety of examples, explanations
>
> *Participant 8:* It's about them coming up with the engaging curriculum. I wonder whether - is the word, develop - is that what the expectation is, that they have to develop the interesting and engaging lessons, or is there somebody else at school
>
> *Participant 4:* So by asking them how much are you able to use the career blueprint competencies to assess and evaluate - because you keep bringing them back to the blueprint otherwise they won't look at it.

The final code to emerge within the theme of *The teacher* was centred around the self-efficacy that teachers appeared to possess of their own abilities. Members of the focus group commented that teachers have a belief that they have the skills to teach career development concepts just because they themselves have been part of career planning themselves or through a relative/friend. Further, there was much discussion that teachers may feel that they possess the professional skills to transfer pedagogical skills from their major teaching area towards teaching career education. Specific discussion also emerged on career development frameworks to inform pedagogical practices e.g., The Australian Blueprint for Career Development (ABCD).

> *Participant 4:* We're actually asking people about their teaching capacity, effective teaching. But the other subjects to that - or in parallel - we're also asking them about their capacity to teach career education. So you would hope that you would have someone with great teaching skills and great knowledge of what is good career education as opposed to someone who has either or. Do you know what I mean?
> *Participant 5:* Yes, you're right. That's the dilemma we've got. We've got great teachers out there. Can they do - can they adapt that sort of career education classroom? Have they got the competence and skills to do that?
> *Participant 4:* So if we were to use the words - or if you were to use the word - you would think that people would be using the blueprint with the competencies listed there to - they would be using those. If you look at, like any TAFE work, you always look at your competencies and then you do your assessment against your competencies.
> So by asking them how much are you able to use the career blueprint competencies to assess and evaluate - because you keep bringing them back to the blueprint otherwise they won't look at it.
> Yeah, look I did a lot of work a number of years ago in promoting the career blueprint to lots of different schools and people at the schools. I was amazed at how many people didn't know it existed. To me that's the starting point.

4.9.3 Discussion

The purpose of the focus group of professional experts was to gain feedback and insights into the draft questions developed for the CETSES. Initially, it was hoped that the focus group would not only discuss the draft questions for suitability, but also put forward

suggestions for better worded and usable questions. The draft questions elicited significant discussion in the peer review and many concerns were raised for each of the draft questions that were posited. While there were some suggestions for the re-wording of the draft questions, the major outcome of the expert discussion was that all the draft questions may have concerns for content validity. That is, the draft questions may not be measuring what was intended.

The aim of the thematic analysis was to then focus on identifying patterns that may provide meanings to the dataset gathered that could then inform how best to improve the CETSES questions for stronger content validity. Upon examination, two themes emerged from the qualitative data gained in the transcriptions from the peer review: The Teacher and The CETSES.

The theme of the Teacher was underpinned by several codes that indicated teachers have a significant amount of differences in their perceptions of career development pedagogy. This included content knowledge of career development concepts, curricula available and effective teaching practices. Each of these codes appeared to question how a teacher could have a high level of self-efficacy to teacher a career education class.

However, it was the codes for the theme of the CETSES instrument that informed how best to redraft each question of the CETSES. The theme of the CETSES instrument suggested draft questions did not have alignment with the three factors of the original TSES. Also, The Teacher theme revealed within its codes that there were uncertainties with question clarity as different interpretations emerged of what was being asked.

The thematic analysis of the focus group's data set indicated that all of the draft questions tabled for the CETSES would likely compromise content validity. The participants in the focus group provided valuable feedback on how some questions may be interpreted and offered suggestions for better wording of questions. The focus group participants also provided feedback that indicated throughout the thematic analysis that there were concerns for factor alignment in the draft CETSES questions. The CETSES questions needed to strongly focus on the wording of the three factors that were intended to be measured: student engagement, classroom management and instructional strategies.

The key outcome from the thematic analysis was that there were concerns for content validity of the draft CETSES items and none were retained as originally presented. Each question of the CETSES was then carefully edited to reflect a career development focus without varying greatly from the original item questions from TSES instrument. This was achieved by refocussing on the TSES and comparing the Teaching Assistants' Self-Efficacy

in Teaching Literature (Mills, 2011) and The Perceived Self-Efficacy Of West Virginia Public Elementary School Teachers To Teach Character Education (Toney, 2012). Additional attention was given to using the feedback from the focus group participants for each question to ensure meaning, succinctness and clarity was considered.

The final CETSES items crafted after the process of the thematic analysis are listed below in following tables (table 4.8. 4.9, 4.10) grouped by the factors that they address. The final CETSES instrument is presented alongside the TSES in table 4.11.

Table 4.7

Final CETSES Items - Factor: Student Engagement

Q1.	How much can you do to positively influence career planning for the most difficult students?
Q2.	How much can you do to assist your students to think critically about their career planning?
Q4.	How much can you do to motivate students who show low interest in their career planning?
Q6.	How much can you do to get students to believe that participation in career education will enhance their post-school options?
Q9.	How much can you do to help your students value career planning and learning?
Q12.	How much can you do to empower students to become creative and analytical in their career planning?
Q14.	How much can you do to improve the understanding of students who are not grasping the concepts being taught in career planning?
Q22.	To what extent can you support family involvement in their children's career planning?

Table 4.8

Final CETSES Items - Factor: Classroom Management

Q3.	How much can you do with your skills in classroom management to control disruptive behaviour in a career education class?
Q5.	To what extent can you make your expectations clear about student behaviour?
Q8.	How well can you establish routines to keep career education activities running smoothly?

Q13.	How much can you do to get students engaged in their career planning thereby minimising disruptive behaviours within the classroom?
Q15.	How much can you do to calm and reengage a student who is disruptive or noisy in a career education class?
Q16.	How well can you establish rules and routines for each of your career planning classes?
Q19.	How well can you manage your career education class using a variety of strategies to keep all students engaged?
Q21.	With your current level of expertise of career development, how confident are you that you have the strategies to reengage students with difficult and defiant behaviours?

Table 4.9

Final CETSES Items - Factor: Instructional Strategies

Q7.	How well can you use your skills and knowledge in career development to respond to difficult questions from your students?
Q10.	How much can you do to evaluate student comprehension of the career planning concepts you have taught?
Q11.	To what extent can you use your teaching competencies to develop good questions to engage your students in career planning?
Q17.	How much can you do to differentiate your career education classes to support students with a variety of learning abilities?
Q18.	How much can you use a variety of assessment strategies to gauge student learning in a career education class?
Q20.	To what extent can you rely upon your knowledge and skills in career development to provide confused students with a variety of examples and explanations?
Q23.	To what extent can you innovate your teaching strategies in career education to optimise student learning?
Q24.	How well can you use your skills and knowledge in career planning to challenge very capable students?

Table 4.10

Wording comparisons between the TSES and CETSES

Item	**Teacher Beliefs – TSES** **Teacher Self-Efficacy Scale** (Tschannen-Moran & Hoy, 2001)	**Teacher Beliefs - CETSES** **Career Education Teacher Self-Efficacy Scale** (Souvan, 2019)
1	How much can you do to get through to the most difficult students?	How much can you do to positively influence career planning for the most difficult students?
2	How much can you do to help your students think critically?	How much can you do to assist your students to think critically about their career planning?
3	How much can you do to control disruptive behaviour in the dassroom?	How much can you do with your skills in classroom management to control disruptive behaviour in a career education class?
4	How much can you do to motivate students who show low interest in schoolwork?	How much can you do to motivate students who show low interest in their career planning?
5	To what extent can you make your expectations clear about student behaviour?	To what extent can you make your expectations clear about student behaviour?
6	How much can you do to get students to believe they can do well in schoolwork?	How much can you do to get students to believe that participation in career education will enhance their post-school options?
7	How well can you respond to difficult questions from your students?	How well can you use your skills and knowledge in career development to respond to difficult questions from your students?
8	How well can you establish routines to keep activities running smoothly?	How well can you establish routines to keep career education activities running smoothly?
9	How much can you do to help your students value learning?	How much can you do to help your students value career planning and learning?
10	How much can you gauge student comprehension of what you have taught?	How much can you do to evaluate student comprehension of the career planning concepts you have taught?
11	To what extent can you craft good questions for your students?	To what extent can you use your teaching competencies to develop good questions to engage your students in career planning?
12	How much can you do to foster student creativity?	How much can you do to empower students to become creative and analytical in their career planning?
13	How much can you do to get children to follow classroom rules?	How much can you do to get students engaged in their career planning thereby minimising disruptive behaviours within the classroom?
14	How much can you do to improve the understanding of a student who is failing?	How much can you do to improve the understanding of students who are not grasping the concepts being taught in career planning?
15	How much can you do to calm a student who is disruptive or noisy?	How much can you do to calm and reengage a student who is disruptive or noisy in a career education class?
16	How well can you establish a classroom management system with each group of students?	How well can you establish rules and routines for each of your career planning classes?
17	How much can you do to adjust your lessons to the proper level for individual students?	How much can you do to differentiate your career education classes to support students with a variety of learning abilities?
18	How much can you use a variety of assessment strategies?	How much can you use a variety of assessment strategies to gauge student learning in a career education class?
19	How well can you keep a few problem students form ruining an entire lesson?	How well can you manage your career education class using a variety of strategies to keep all students engaged?
20	To what extent can you provide an alternative explanation or example when students are confused?	To what extent can you rely upon your knowledge and skills in career development to provide confused students with a variety of examples and explanations?
21	How well can you respond to defiant students?	With your current level of expertise of career development, how confident are you that you have the strategies to reengage students with difficult and defiant behaviours?
22	How much can you assist families in helping their children do well in school?	To what extent can you support family involvement in their children's career planning?
23	How well can you implement alternative strategies in your classroom?	To what extent can you innovate your teaching strategies in career education to optimise student learning?
24	How well can you provide appropriate challenges for very capable students?	How well can you use your skills and knowledge in career planning to challenge very capable students?

CHAPTER 5: STUDY 2

5.1 Introduction

The OECD continues to reinforce to us that career guidance is vital for both the individual and social good. Their latest education working paper (Musset & Kurekova, 2018) is a constant reminder that schools are in the best position to assist in the preparation of young people in developing the critical thinking skills required in future career planning. Within our schools, many students will have informal conversations with their teachers about their career ideas (Hooley, 2015). Additionally, students see their teachers as trusted adults who are experienced in making career decisions. The classroom teacher from any subject-specific major teaching area can play a valuable role in supporting a young person's career development (Hooley, 2015). Essentially, these teachers must have a strong sense of self-efficacy for teaching effectively in career development concepts. Teacher self-efficacy research has sought to understand and explain the beliefs human beings have in their own ability and capacity to take action and be successful (Bangs & Frost, 2012).

Throughout the literature, there is much agreement that teachers with increased levels of efficacy are more likely to learn and use innovative strategies for teaching (Silverman & Davis, 2009). Research has also indicated that teachers who develop a heightened sense of self-efficacy for teaching a particular key learning area (KLA) are more effective at influencing positive outcomes for students (Bandura, 1997; Erdem & Demirel, 2007; Tschannen-Moran & Hoy, 2001). Complementary research in seminal reviews of the impact of teacher efficacy from Goddard et al. (2000); Labone (2004); Ross (1998); Wheatley (2005) each reveal consistent findings that teachers who report a higher sense of efficacy are most likely to create a school environment where there are positive student outcomes.

The primary focus of this research is to investigate mainstream teachers' beliefs about their self-efficacy for teaching career development concepts within their classes in secondary schools in Australia. An extensive search of the literature revealed that a scale did not exist for measuring the self-efficacy of mainstream teachers to teaching career development concepts in schools. The term mainstream teacher is referring to all qualified teachers employed to teach in any subject area within the secondary school who are not specifically trained in career development. Essentially, do mainstream teachers possess sufficient levels of self-efficacy to transfer their current teaching skills into a career education classroom? The five main research questions to be investigated include:

1. What is the overall level of perceived self-efficacy for career development teaching and learning by secondary school teachers in Australia?

2. What are the differences, if any, in Australia's secondary school teacher' levels of perceived self-efficacy for teaching career development in the three subfactors of Student Engagement, Instructional Strategies, and Classroom Management?

3. What levels of content knowledge do Australian secondary school teachers have in the eleven competencies of the Australian Blueprint for Career Development?

4. What levels of general occupational self-efficacy do Australian school teachers have generally in fulfilling their duties and being able to cope in the workplace.

5. Can any correlations be drawn from Australian secondary school teachers' self-efficacy beliefs in their specialist teaching area, school location, gender, age, years of teaching experience with teaching career education concepts?

To answer these questions, a new domain specific scale was developed to measure teachers' self-efficacy for career development teaching and learning. The Career Education Teaching Self-Efficacy scale (CETSES) was conceived initially upon the Teacher Self-Efficacy Scale (TSES) by Tschannen-Moran and Hoy (2001). Scales of perceived self-efficacy must be tailored to the particular domain of functioning that is the object of interest (Bandura, 2006). The development of the CETSES went through a validation process via a focus group of expert career development professionals who considered and re-worded items from the TSES that reflected teacher self-efficacy from the perspective of teachers facilitating career education concepts within a school environment. The CETSES instrument was constructed following a qualitative research approach using thematic analysis (Braun & Clarke, 2006).

Validation of the CETSES in this research involved the administration of two other well-regarded self-efficacy scales that included the Occupational Self-Efficacy Scale Short Form (OSS-SF, Rigotti, Schyns, & Mohr, 2008) and the 12-item Teacher Self-Efficacy Scale (TSES, Tschannen-Moran & Hoy, 2001). Further, a bespoke index was created based upon the Australian Blueprint for Career Development that asked respondents to rate their content knowledge to teach students the eleven Career Management competencies.

Statistical analyses using Statistical Package for Social Sciences (SPSS 26) were conducted to validate the CETSES and a one-sample t-test was used to assist in answering

specific research questions. Further statistical analysis was conducted using a principal components analysis approach (PCA) to test the factor models of the CETSES. The initial analysis was set to allow SPSS to extract the number of components (unforced) rather than specify the amount to extract. Then, the second test forced a three-component model as the CETSES was modelled on the TSES measure which had an established three-factor model. This was to see if the same subscales were valid for the CETSES. Following the PCA, a short form of the CETSES was explored using a confirmatory factor analysis (CFA) to determine whether the hypothesised statistical model fits the actual data set and if parsimonious versions of the CETSES could be proposed. Two short forms of the CETSES would be tested (9 item & 12 item versions) using the highest loading items for each component in the pattern matrix.

5.2 Method

5.2.1 Participants

A total of 153 participants responded to the survey. The invitation to participate in the survey targeted registered teachers from secondary schools in Australia from all key learning areas. The survey targeted all teachers who facilitate curriculum content in all subject areas within a secondary school's curriculum. The demographic data gained from the overall survey indicated that 66% of the sample were female with most respondents coming from metropolitan and regional schools. Table 5.1 provides an overview of the sample displaying gender/age and school location data. The mean age of the teachers who disclosed their age was 49.

Table 5.1

Participant Gender, Age & School Location

Gender/Age	Metropolitan	Regional	Rural	Total	Percentage
Female	36	52	11	99	66%
30-39	3	10	2	15	10%
40-49	14	13	3	30	19%
50-59	8	17	4	29	19%
Above 60	5	4	1	10	7%
Not Disclosed	6	8	1	15	10%
Male	19	31	2	52	34%
30-39	4	4	-	8	5%
40-49	3	12	-	15	10%
50-59	5	7	1	13	9%
Above 60	3	2	1	6	4%
Not Disclosed	4	6	-	10	7%
Total	55	83	13	151	

Note. Metropolitan: (a capital city with 100 000 or more inhabitants), Regional: (generally defined as in a centre with a population above 1 000 but not a capital city), Rural: (generally defined as those centres with less than 1 000 persons).

The teachers who participated in the survey nominated their age in category ranges of 10 years (see table 5.1). The respondents ranged in age from 30 to greater than 60 years of age. The survey attracted beginning teachers to teachers who had over 26 years of experience. 87% of the participants had greater than five years of teaching experience. Of interest, no teachers younger than aged 30 participated in the survey.

Table 5.2

Years of Teaching Experience Compared to Participant Age

	Age Groupings						
	30-39	40-49	50-59	>60	Not Indicated	Total	Percentage
1 - 2 years	-	2	-	-	2	4	3%
2 - 3 years	-	1	-	-	4	5	3%
3 - 4 years	1	-	-	-	1	2	1%
4 - 5 years	1	1	-	-	6	8	5%
5 - 10 years	6	3	5	1	9	24	16%
11 - 15 years	10	10	10	-	-	30	20%
16 - 20 years	3	13	2	1	-	19	13%
21 - 25 years	-	12	6	2	-	20	14%
> 26 years	-	3	19	13	-	35	24%
Total	21	45	42	17	22	147	
	14%	31%	29%	12%	15%		

Further demographic data collected indicated that approximately half of the teachers who participated in this survey were unaware if their school had a career development program in place (see Table 5.3). 28 respondents provided details of other courses/programs that their school were using. Of these, five were using a certificate course with mentions of the Certificates in Skills for Work and Vocational Pathways, Workplace Practices and Foundation Skills. Four participants listed Personalised Learning Plans while the remaining used a variety of programs including the Beacon Foundation, School to Work, My Future, Job Jump and curriculum-based adaptations that involve Senior Education Plans.

Table 5.3

Participant Responses for Awareness of School Career Development Program

DQ 7. What career education program does your school use?	*n*	*%*
A program based upon the Australian Blueprint for Career Development	21	14%
ACARA Work Studies Years 9-10	26	17%
I have no idea!!!	77	51%
Other course: please provide some details	28	18%

One of the prerequisites for the participants in this research was that they did not hold any formal qualifications in career development. 26 participants indicated that they held formal qualifications (see Table 5.4). This does provide opportunity in future research to perform correlation analyses of their self-efficacy for career development teaching and learning and compare with those participants who did not hold qualifications. Of the eleven participants who indicated *other*, several mentions were made that their life experiences were a qualifying factor in having the necessary prerequisite to be effective in the facilitation of career education programs. Two other participants were currently studying towards a qualification. Three of these participants indicated a formal qualification that was not in Career Development.

Table 5.4

Participant Qualifications in Career Development

DQ 8. Your qualifications in Career Development	*n*	*%*
No qualifications in Career Development	114	75%
Certificate IV in Career Development	4	3%
Graduate Certificate in Career Development	12	8%
Master of Education e.g., Guidance & Counselling	10	7%
Other, please specify e.g., any specific professional development:	11	7%

Table 5.5 displays the demographic data that focused on questions to understand how participants felt about being involved with career education in their school from differing perspectives. In demographic question 9, approximately 57% responded positively towards being the one to teach career education if they had a choice. Whereas, in demographic question 10, 90% of the respondents would embrace the opportunity to embed careers into their subject areas. It is important to understand that these questions differ with asking about directly teaching career education as a subject and embedding career education. It would seem that teachers are far more comfortable with the notion of an integrated approach to career education within key learning areas rather than as a standalone subject. However, these teachers have indicated that they would expect support and professional development. Demographic question 11 sought to understand teacher reflections on whether thought it was important to include career education in some manner in their pedagogical practices. The results suggest that only 9% of teachers stated that career education is not considered as what

they would teach as part of their pedagogy. It could then be gleaned that 91% of teachers have reflected and felt they have included aspects of career education in their classrooms to some degree. Question 12 was included as direct question of self-efficacy about to what extent that teachers felt they were or could be effective teachers of career education. 91% of the respondents rated their effectiveness positively as a someone who does or could teach career education.

Table 5.5

Participant Demographical Data Continued

DQ 9. If you had a choice would you be the one to teach Career Education	*n*	*%*
Definitely no	10	7%
Probably no	34	22%
Not sure	21	14%
Probably yes	55	36%
Definitely yes	32	21%

DQ 10. If you were allocated a career education class or asked to embed careers into your subject curriculum, you would	*n*	*%*
Embrace the opportunity	71	47%
Teach the class happily but would expect support/professional development	66	43%
Teach the class with some reluctance	12	8%
Teach the class under much duress	2	1%
Reject or decline	1	1%

DQ 11. Compared to the minimum amount of time I should spend teaching Career Education, I spend:	*n*	*%*
I don't teach or embed any aspect of careers in any class	14	9%
A lot less than required	27	18%
A bit less	19	13%
Enough	59	39%
A bit more	20	13%
A lot more	12	8%

DQ 12. Please rate how you view your own effectiveness as a teacher who may need to or already teaches Career Education	*n*	*%*
Superior	9	6%
Above Average	60	39%
Average	69	45%
Below Average	12	8%
Low	2	1%

5.3 Procedure

Prior to the main survey, six secondary school teachers were invited to participate in the pilot administration of the complete survey. The intent of the pilot of the survey was to test the online survey platform of CreateSurvey and ensure that data generated from the items were in a useable format for statistical analysis in the software package SPSS version 25. Further, the intent of the pilot survey was to gain feedback from the participants on any aspects of the survey that they felt were difficult to understand, concerns with layout or issues that were noted that could improve the main survey. Feedback indicated a few grammatical errors and some inconsistencies with layout. The responses from the pilot study were not included in the final administration of the survey

A national application to conduct research in secondary schools in Australia was submitted through the Australian Association for Research in Education (2016). It was planned to obtain consent from all state education departments in Australia for teachers to participate in this research. The Education Departments in the Northern Territory and Tasmania declined to participate from the outset. The Department of Education in Western Australia made further demands that were extremely difficult to meet and the application was subsequently withdrawn due to time constraints.

Soon after, approvals were gained from the state education departments of Queensland, New South Wales, Victoria and South Australia. An application was also submitted to include Catholic Education and was successful in gaining approval for secondary schools in the Melbourne region. The development of the CETSES instrument, the questionnaire seeking teachers understanding of the Australian Blue for Career Development and the demographic questionnaire were then finalised. The survey instrument also included the 12 item TSES (Tschannen-Moran & Hoy, 2001) and the Occupational Self-Efficacy Scale Short Form (OSS-SF; Rigotti, Schyns, & Mohr, 2008). The five measures for the total survey were then presented online in the survey platform of CreateSurvey.com.

Overall, a total of 1525 secondary school principals were approached via email seeking their support to approach teachers to participate in the survey (see appendix H). The timing of contacting schools to participate in the survey was carefully considered. It was determined that week six of term four of 2017 (November) would be a time where teachers and schools would be more inclined to participate when managing their daily obligations. School principals were requested to forward the email on to teachers in their schools which had attached all the information about the survey including the participant information sheet and a hyperlink to survey on the CreateSurvey.com. A poor response rate was experienced

with 72 responses returned when the email invitations were sent to the principals. The survey was re-sent to school principals in February 2018 (week four of term one) and an additional 81 responses were gained. A total of 153 responses was obtained for this research project. The response rate is estimated at much less than 1% of the teacher population targeted for this research.

5.3.1 Measures

Participants received an email via their school principal and were directed to a link on CreateSurvey.com that contained three scales and two questionnaires. The complete survey comprising of all the measures is included in Appendix I in the order that they were administered.

Career Education Teacher's Self-Efficacy Scale (CETSES). Study 1 described the development of the CETSES based upon the 24 item Teacher Self-Efficacy Scale (TSES) scale originally developed by Tschannen-Moran and Hoy (2001). The TSES is a measure of teacher's evaluations of their own likely success in teaching. The intent of the scale was to measure the three dimensions of teacher's sense of self-efficacy from a career development perspective that includes Student Engagement, Classroom Management, Instructional Strategies. The scale included three eight-item subscales. Respondents rated the 24 questions using a nine-point response scale with anchors at 1 *(Not at all),* 3 *(Very Little),* 5 *(Some Degree),* 7 *(Quite a Lot)* and 9 *(A Great Deal).* High scores indicated a higher sense of self-efficacy for teaching career development in schools. Sample items representative of each scale are: for Instructional Strategies, "How much can you do to differentiate your career education classes to support students with a variety of learning abilities?"; for Classroom Management, "How much can you do with your skills in classroom management to control disruptive behaviour in a career education class?"; and for Student Engagement, How much can you do to improve the understanding of students who are not grasping the concepts being taught in career planning?"

Teacher Self-Efficacy Scale short version (TSES). Latent teaching efficacy will be measured using the 12-item short form of the Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001). The TSES measures latent self-efficacy of teachers across three subscales; instructional strategies (IS), student engagement (SE), and classroom management (CM). Instructional strategies capture efficacy for developing and implementing instructional strategies (Chang & Engelhard, 2016). Student engagement self-efficacy is engaging and motivating students (Chang & Engelhard, 2016). Classroom

management describes self-efficacy as maintaining order in the classroom (Chang & Engelhard, 2016). The scale incorporated three four-item subscales. Respondents rated the 12 questions using a nine-point response scale with anchors at 1 *(Not at all),* 3 *(Very Little),* 5 *(Some Degree),* 7 *(Quite a Lot)* and 9 *(A Great Deal)*. High scores indicated a heightened perception of general self-efficacy. Tschannen-Moran & Hoy (2001) reported that the TSES had an overall measure of internal consistency in the 'excellent' range (α=0.90) with each of the individual factors of the TSES (IS α=0.86, CM α=0.86, SE α=0.81) were in the 'good' range. Sample items representative of each factor are: for Instructional Strategies, "To what extent can you craft good questions for your students?"; for Classroom Management, "How much can you do to control disruptive behaviour in the classroom?"; and for Student Engagement, "How much can you do to motivate students who show low interest in School? In this sample, coefficient alpha reliabilities for the instructional strategies (α = .77), student engagement (α = .80), and classroom management (α = .85) subscale scores were acceptable.

Occupational Self-Efficacy Scale – Short Form (OSS-SF). Developed by Rigotti et al. (2008), the OSS-SF seeks to measure the perceptions of an individual's abilities to effectively perform their work tasks. The OSS-SF has a one-factor structure consisting of six items with satisfactory Cronbach's alpha coefficients (α = .90) (Rigotti et al., 2008). The OSS-SF has a number of advantages to other scales assessing occupational self-efficacy due to its small size and is easily included as part of other measures without overloading participants (Damásio, de Freitas, & Koller, 2014). Respondents rated the six questions using a five-point response scale with anchors at 1 *(Strongly Disagree),* 3 *(Neutral – Neither Agree or Disagree),* 5 *(Strongly Agree).* High scores indicated a participant possessed a heightened perception of occupational self-efficacy. A sample from the scale (see page 5 of appendix I) includes "When I am confronted with a problem in my job, I can usually find several solutions."

Australian Blueprint for Career Development. A series of questions were developed to be included in this research that asks respondents to rate their content knowledge to teach students the 11 Career Management competencies of the Australian Blueprint for Career Development (ABCD) – 11 questions. This bespoke index served as a source of validity information to appraise the CETSES. Respondents rated the 11 questions using a five-point response scale with anchors at 1 *(Limited),* 3 *(Acceptable),* 5 *(Excellent).* High scores indicated a heightened belief of a teacher's content knowledge to teacher career development concepts. A sample from the questionnaire includes: *How would you rate your content knowledge to*: 'Teach students how to participate in lifelong learning supportive of

career goals". The questions were presented individually with further detail about what the career management competency is "mainly about".

Teacher demographics. A series of questions were included to gain demographic data from participants of the survey (12 questions). Questions sought to gain data about participants and their characteristics including: school location, gender, age, years of teaching experience, main teaching area, cohort of students that they teach, knowledge of career development programs within their school, qualifications in career development and four questions how teachers see themselves when it comes to teaching career education programs (see page 6 of appendix I). This information was gathered to assist in describing the research sample group and for exploration of any correlations with the CETSES.

5.4 Results

5.4.1 Data Screening

The data were screened in SPSS for univariate outliers to meet the assumption of normality. The missing values totalled 1% from the data set initially and were treated as missing in SPSS. Histograms were initially created to view the shape of the data, to visualise frequencies and any potential concerns with the CETSES, TSES and OSS-SF. The data gained from the TSES scale indicated that the result for the kurtosis was significantly different from a normal distribution and outside the range of -1.96 and 1.96 (Field, 2017). The initial results indicated a skewness of -1.42 (SE=0.20) and a kurtosis of 5.15 (SE=0.4) from the TSES data overall. Further, the kurtosis results of the three factors of the TSES ranged from 1.63 to 6.61. The values for kurtosis deviated markedly from zero indicating non-normality. Boxplots of the TSES data were then produced to identify if any outliers may have affected the assumption of normality. The boxplots identified that case 41was an outlier in each of the three factors. A visual inspection of the responses provided by case 41 in the SPSS output file indicated that the participant rated each of the items of the TSES a value of 1 *(Strongly Disagree).* This was contradictory to the responses that were made by case 41 in the CETSES and the OSS-SF items indicating that the participant did not engage with the TSES when completing the whole survey. A further visual inspection of the data set without case 41 suggested that the missing values were random and no pattern of missingness had occurred. Case 41 was removed from the whole data set and a retest of the data was conducted to evaluate if the assumption of normality could be achieved. A skewness of -0.65 (*SE* = .20) and a kurtosis of .87 (*SE* = .40) were returned without case 41 for the TSES overall. The values returned from the retest of the skewness and kurtosis were between the

values of between -1.96 and 1.96 and met the first criterion for the assumption of normality (Field, 2017) The kurtosis and the skewness values for the three factors (.84 - 1.74) were also within an acceptable range. Subsequent analysis of the data was undertaken with 152 cases (i.e., without case 41) to eliminate any possible response issues in other items.

5.4.2 Preliminary Analysis

Descriptive statistics were used for a preliminary analysis to answer the first four research questions.

1. What is the overall level of perceived self-efficacy for career development teaching and learning by secondary school teachers in Australia?

2. What are the differences, if any, in Australia's secondary school teacher' levels of perceived self-efficacy for teaching career development in the three subfactors of Student Engagement, Instructional Strategies, and Classroom Management?

3. What levels of content knowledge do Australian secondary school teachers believe they possess in the eleven competencies of the Australian Blueprint for Career Development?

4. What levels of general occupational self-efficacy do Australian school teachers have generally in fulfilling their duties and being able to cope in the workplace.

A one-sample t-test was run on the CETSES, TSES, OSS-SF and the ABCD index to determine if their means were different to the theoretical mean. The theoretical mean is the actual mean value of the Likert scale . For example the CETSES had response values on the Likert scale between 1 and 9 and the theoretical mean would be calculated as (1+2+3+4+5+6+7+8+9)/9 = 5 (Laerd Statistics, 2018). The theoretical mean for the CETSES and TSES = 5, and the OSS-SF and the ABCD = 3. Each of the scales was distributed normally, as assessed by Shapiro-Wilk's test ($p > .05$). The mean CETSES score ($M = 6.67$, $SD = 1.19$) was higher than the theoretical mean score of 5.0, a statistically significant mean difference of 1.67, 95% CI [1.48 to 1.87], $t(139) = 16.68$, $p = < .0001$. The t-test result for the TSES indicated a mean score ($M = 7.31$, $SD = 1.06$) was higher than the mean score of 5.0, a statically significant mean difference of 2.23, 95% CI [2.13 to 2.48], $t(145) = 26.29$, $p = < .0001$. Next, a one-sample t-test was also run on the ABCD index to determine if the mean score was different to the theoretical mean, defined as a mean score of 3.0. The mean

ABCD index score (M = 3.64, SD = .79) was higher than the theoretical mean score of 3.0, a statistically significant mean difference of .64, 95% CI [.51 to .77], $t(146) = 9.82$, $p = <$ .0001. Lastly, a one-sample t-test was also run on OSS-SF. The mean OSS-SF score (M = 4.2, SD = .64) was higher than the theoretical mean score of 3.0, a statistically significant mean difference of 1.20, 95% CI [.1.10 to 1.30], $t(150) = 23.00$, $p = < .0001$. The results obtained from the participants in this research indicated that:

1. Teachers possess a higher than average amount of self-efficacy for career development teaching and learning. Further, it can be qualitatively described as approaching the level of *Quite a Bit* (M = 6.67, SD = 1.19).
2. Comparatively, they rated their overall teaching self-efficacy marginally higher than the CETSES and within the *Quite a Bit* range (M = 7.31, SD = 1.06).
3. This result indicates that the participants in this research felt they had an *Acceptable* level of content knowledge of the 11 career management competencies (M = 3.64, SD = .79).
4. This result indicates that the participants in this research felt their perceptions of their ability to effectively perform their work tasks were *Very Good* (M = 4.2, SD = .64).

Table 5.6

Qualitative descriptions of the CETSES, TSES, OSS-SF and the ABCD

	Qualitative Descriptors		
Likert Scale Rating	CETSES & TSES	OSS-SF	ABCD
1	Not at All	Strongly Disagree	Limited
2	-	Disagree	Emerging
3	Very Little	Neither disagree or agree	Acceptable
4	-	Agree	Very Good
5	Some Degree	Strongly Agree	Excellent
6	-		
7	Quite a Bit		
8	-		
9	A Great Deal		

Table 5.7

Descriptive statistics for all scales

n = 152	Likert Scale Range	Mean	Std. Error	Std. Deviation
CETSES Total	1 - 9	6.67	0.10	1.19
TSES Total	1 - 9	7.31	0.09	1.06
CETSES_SE	1 - 9	6.30	0.11	1.33
TSES_SE	1 - 9	6.80	0.10	1.26
CETSES_CM	1 - 9	6.91	0.10	1.21
TSES_CM	1 - 9	7.50	0.10	1.22
CETSES_IS	1 - 9	6.81	0.11	1.30
TSES_IS	1 - 9	7.58	0.09	1.05
OSS_SF Total	1 - 5	4.20	0.05	0.64
ABCD Total	1 - 5	3.64	0.07	0.79

The mean scores of the TSES obtained in this research were compared to the original data presented by Tschannen-Moran and Hoy (2001). When comparing the mean score responses overall from each of the scales, it was noted that teachers who participated in this research had a slightly higher level of self-efficacy for teaching generally. Of interest is that the teachers who participated in this research had a lower level of self-efficacy for ensuring student engagement than was found in the original data set from the short and long forms of the TSES. Whereas, teachers who participated in this research had much higher levels of self-efficacy to manage their classrooms and slightly higher levels self-efficacy with their abilities with their instructional skills than did the teachers in the original research. Perhaps teachers have become better equipped to manage their classrooms as a result of advances in pedagogical practices flowing from a significant amount of research that has influenced professional development in education. However, the lower result in a teacher's self-efficacy to engage students compared to the data gained from Tschannen-Moran and Hoy (2001) is outside the parameters for this research. All three results of the self-efficacy factors would warrant further investigation in another study.

Table 5.8

Comparison of Means

TSES from CETSES and Original Data Long & Short Forms of TSES

	TSES from CETSES *n* = 152		Original TSES Data from Long Form		Original TSES Data from Short Form	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
TSES_Total	7.31	1.06	7.1	.94	7.1	.98
TSES_SE	6.80	1.26	7.3	1.1	7.3	1.2
TSES_CM	7.50	1.22	6.7	1.1	6.7	1.2
TSES_IS	7.58	1.05	7.3	1.1	7.2	1.2

Note. Original TSES data from Tschannen-Moran, M., & Hoy, A. W. (2001*). Teacher efficacy: capturing an elusive construct. Teaching and teacher education*, 17(7), 783-805. doi:10.1016/S0742-051X(01)00036-1

5.5 Principal Components Analysis

A principal components analysis (PCA) approach was selected as a data reduction method for the CETSES. The components are computed without regard to any underlying structure caused by latent variables. Theoretically, there are three components that contribute to teacher self-efficacy. An efficacious teacher is an outcome of their strong self-beliefs in student engagement, classroom management and instructional strategies. Therefore, principal factor analysis was not selected as it seeks to reveal latent factors that are already known. While PCA requires a large sample size to stabilise, it was determined that a sample size of 152 was sufficient for the purposes of this research. Field (2017) cites Guadagnoli and Velicer (1988) and explains that a sample size greater than 150 was reliable with loadings greater than .60 on 10 or more factors.

The Kaiser-Meyer-Olkin Measure verified the sampling adequacy for the analysis, KMO = .936 ('marvellous' according to Kaisier & Rice, 1974), and all KMO values (see table 5.1) for individual items were greater than 0.89 or in the range of 'meritorious' to 'marvellous' (Kaiser & Rice, 1974). Bartlett's Test of Sphericity indicated that the correlation matrix was not random, x^2 (276) = 2718, p <.0005. Therefore, it was determined that the correlation matrix was appropriate for principal component analysis.

Table 5.9

CETSES Items Individual Kaiser-Meyer Olkin Measures

Variable	KMO	Variable	KMO
Q1	.942	Q13	.959
Q2	.935	Q14	.956
Q3	.928	Q15	.945
Q4	.948	Q16	.905
Q5	.890	Q17	.935
Q6	.932	Q18	.945
Q7	.917	Q19	.937
Q8	.965	Q20	.919
Q9	.932	Q21	.934
Q10	.914	Q22	.944
Q11	.898	Q23	.949
Q12	.938	Q24	.960

A PCA was conducted on the 24 items of the CETSES with oblique (direct oblimin). The initial analysis was set to allow SPSS to extract the number of components (unforced) rather than specify the amount to extract. The initial PCA revealed four components that had eigenvalues greater than one and which explained 52.9%, 8.1%, 5.8%, 4.4% of the total variance, respectively. The four factors accounted for 71.2% of the total variance. The results indicated that the components that loaded on the fourth factor had higher loadings to the first factor.

The CETSES was modelled on the TSES measure which had an established three-factor model. The PCA analysis was undertaken a second time to see if the same subscales were valid for the CETSES. Further, the fourth factor in the initial PCA extraction only explained a small amount (4.4%) of the total variance. On the second occasion, the PCA was using the same procedure except for a forced three-factor model on the 24 items of the CETSES. The three components explained 51.4%, 6.5% and 4.3% of the total variance and accounted for 62.2% of the total variance.

As shown in the pattern matrix of the three-factor model in Table 5.9, the 24 items of the CETSES loaded mostly in their expected components. However, two items did not load with the expected factor of Classroom Management. Item 8: *How well can you establish routines to keep career education activities running smoothly?,* crossloaded more strongly in the factor of Instructional Skills (.604) than it did in the anticipated factor of Classroom Management (.355). Item 13: *How much can you do to get students engaged in their career planning thereby minimising disruptive behaviours within the classroom?* did not load in its correct factor of Classroom Management but rather loaded strongly in the factor of Student Engagement. Item 15: *How much can you do to calm and reengage a student who is disruptive or noisy in a career education class?*, crossloaded quite equally in its expected factor of Classroom Management (.534) and with Student Engagement (.509). Item 21 . *With your current level of expertise of career development, how confident are you that you have the strategies to reengage students with difficult and defiant behaviours?* crossloaded poorly on the factors of Instructional Skills (.394) and Student engagement (.432) but not on the expected factor of Classroom Management. Item 22: To what extent can you support family involvement in their children's career planning?, loaded much stronger in Instructional Skills (.565) than it did in the expected factor of Student engagement (.336). All other items loaded from .598 to .846 on their expected factors.

Table 5.10

Principal Component Analysis of the 24-item CETSES (Unforced)

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.702	52.926	52.926	12.702	52.926	52.926
2	1.946	8.108	61.034	1.946	8.108	61.034
3	1.398	5.827	66.861	1.398	5.827	66.861
4	1.044	4.352	71.213	1.044	4.352	71.213
5	.779	3.244	74.457			
6	.733	3.052	77.509			
7	.608	2.532	80.041			
8	.589	2.453	82.494			
9	.481	2.003	84.497			
10	.460	1.917	86.414			
11	.380	1.582	87.996			
12	.356	1.485	89.481			
13	.335	1.394	90.876			
14	.296	1.233	92.109			
15	.276	1.150	93.259			
16	.259	1.080	94.338			
17	.224	0.935	95.273			
18	.214	0.891	96.165			
19	.194	0.809	96.973			
20	.182	0.760	97.733			
21	.164	0.685	98.418			
22	.150	0.623	99.041			
23	.125	0.522	99.563			
24	.105	0.437	100.000			

Extraction Method: Principal Component Analysis

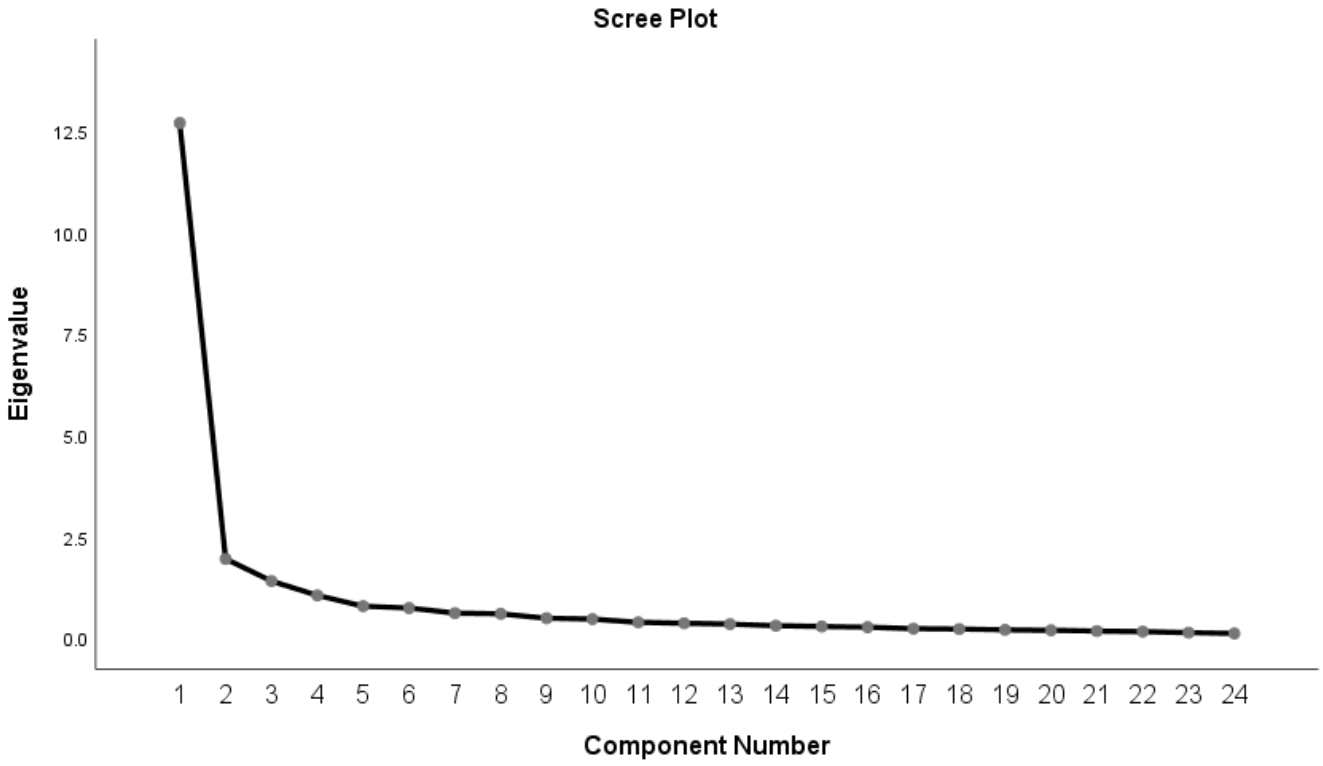

Figure 5.1 PCA CETSES Unforced Components

Table 5.11

CETSES PCA Unforced Component Pattern Matrix

	Component			
	1	2	3	4
Q1_SE	-.034	-.057	**-.627**	**.394**
Q2_SE	-.133	.004	**-.543**	**.562**
Q3_CM	.048	**.564**	**-.503**	-.217
Q4_SE	.079	.057	**-.779**	-.018
Q5_CM	-.101	**.874**	-.072	.096
Q6_SE	-.050	.127	**-.804**	.113
Q7_IS	.131	.107	.003	**.726**
Q8_CM	**.542**	.279	-.015	.219
Q9_SE	.167	.060	**-.651**	.100
Q10_IS	**.899**	-.009	-.029	-.034
Q11_IS	**.863**	-.009	.051	.037
Q12_SE	**.417**	-.162	**-.551**	.067
Q13_CM	.291	.111	-.633	-.076
Q14_SE	**.560**	.006	**-.424**	-.043
Q15_CM	.274	**.432**	**-.447**	-.147
Q16_CM	.236	**.815**	.169	.186
Q17_IS	**.624**	.227	.001	.116
Q18_IS	**.578**	.166	-.105	.022
Q19_CM	**.476**	**.368**	-.253	-.106
Q20_IS	.082	.107	-.035	**.808**
Q21_CM	**.397**	.104	**-.373**	.162
Q22_SE	**.465**	-.199	-.294	.291
Q23_IS	**.723**	-.028	-.026	.245
Q24_IS	**.379**	-.011	-.059	**.579**

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization

Table 5.12

Principal Component Analysis of the 24-item CETSES (Forced 3 Components)

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.702	52.926	52.926	12.702	52.926	52.926
2	1.946	8.108	61.034	1.946	8.108	61.034
3	1.398	5.827	66.861	1.398	5.827	66.861
4	1.044	4.352	71.213			
5	.779	3.244	74.457			
6	.733	3.052	77.509			
7	.608	2.532	80.041			
8	.589	2.453	82.494			
9	.481	2.003	84.497			
10	.460	1.917	86.414			
11	.380	1.582	87.996			
12	.356	1.485	89.481			
13	.335	1.394	90.876			
14	.296	1.233	92.109			
15	.276	1.150	93.259			
16	.259	1.080	94.338			
17	.224	.935	95.273			
18	.214	.891	96.165			
19	.194	.809	96.973			
20	.182	.760	97.733			
21	.164	.685	98.418			
22	.150	.623	99.041			
23	.125	.522	99.563			
24	.105	.437	100.000			

Extraction Method: Principal Component Analysis

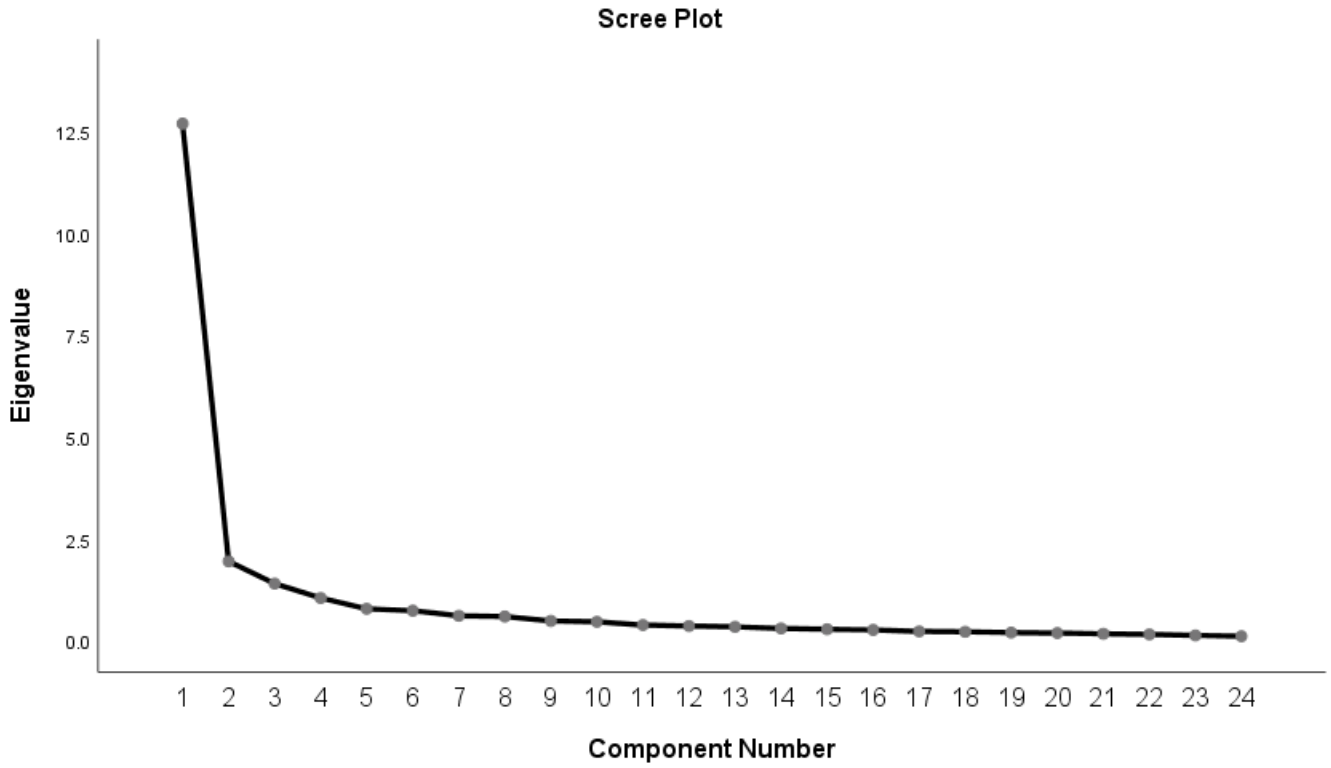

Figure 5.2 PCA Scree Plot CETSES Forced 3-Components

Table 5.13

CETSES PCA Forced 3- Component Pattern Matrix

	Component		
	1	2	3
Q1_SE	.229	-.222	**-.703**
Q2_SE	**.313**	-.269	**-.626**
Q3_CM	-.218	**.596**	**-.569**
Q4_SE	-.065	.081	**-.846**
Q5_CM	.004	**.695**	-.146
Q6_SE	-.051	.045	**-.885**
Q7_IS	**.734**	-.144	-.063
Q8_CM	**.604**	**.355**	-.066
Q9_SE	.123	.069	**-.719**
Q10_IS	**.650**	**.330**	-.048
Q11_IS	**.696**	.290	.033
Q12_SE	.297	-.022	**-.598**
Q13_CM	.067	.228	**-.692**
Q14_SE	**.328**	.222	**-.468**
Q15_CM	.021	**.534**	**-.509**
Q16_CM	**.372**	**.731**	.104
Q17_IS	**.578**	**.380**	-.039
Q18_IS	**.446**	**.346**	-.141
Q19_CM	.237	**.536**	**-.303**
Q20_IS	**.764**	-.193	-.109
Q21_CM	**.391**	.169	**-.432**
Q22_SE	**.565**	-.124	**-.336**
Q23_IS	**.760**	.140	-.061
Q24_IS	**.785**	-.100	-.116

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization

5.6 Reliability of the CETSES

The internal consistency of the 24-item CETSES scale, using total Cronbach alpha reliability (α) was found to be .96. The internal reliability coefficient for Instructional Skills α = .90, Classroom Management was α = .91 and α =.91 for Student Engagement. Overall, the CETSES scale had relatively high levels of reliability (Field, 2017).

5.7 Concurrent Validity

Pearson correlation coefficients were computed to examine the convergent validity of the CETSES with the TSES, the OSS-SF and the ABCD questionnaire that were included in the overall survey. These instruments were used in a correlation to determine the strength and direction of the linear relationships between the CETSES, TSES, OSS-SF and the factors of the CETSES and TSES. Further, the results of the ABCD questionnaire were included in the correlations as it sought to gain data from teacher perceptions of their content knowledge of career development concepts. The Pearson test generates a coefficient that measures the linear relationship between continuous variables and ranges from -1 for a perfect negative linear relationship to +1 for a perfect positive linear relationship. A score of $r = 0$ (zero) indicates no relationship between variables through to $r > 0.5$ where a large/strong correlation exists (J. Cohen, 1988; Laerd Statistics, 2018).

As expected, the total score of the CETSES scale was positively correlated with the TSES (r=.67, $p < 0.01$) as was the OSS-SF (r =. 55, $p < 0.01$) as each scale has existing evidence as a measure of self-efficacy. A positive strong correlation was also expected between the CETSES and the ABCD (r = .55, $p < 0.01$). It was predicted that a teacher would have higher efficacy for teaching career education if their perceptions of content knowledge of the ABCD is high. Of further interest was the small correlation that resulted between general teacher self-efficacy (TSES) with the ABCD (r = .27, $p < 0.01$). This was to be expected as teachers may not have specific content knowledge of the career development competencies.

5.8 Further Analysis of Correlations

A Pearson correlation analysis (see Table 5.11) was undertaken to gauge if there were correlations that the CETSES may predict that could answer the fifth research question. Can any correlations be drawn from Australian secondary school teachers' self-efficacy beliefs in their specialist teaching area, school location, gender, age, years of teaching experience with teaching career education concepts?

The results suggested that neither school location, gender, age, years of teaching experience, a specific teaching area or a teaching cohort area were able to predict if a teacher had a high level of self-efficacy to teach career education in schools. However, a correlation that was approaching the moderate range was found between the OSS-SF and the fourth demographic question (r =.28, $p < 0.01$). This would suggest there was a positive correlation between occupational self-efficacy and the amount of years of teaching experience a teacher possessed.

Table 5.14

Pearson correlation (r) between self-efficacy scales and the ABCD

N=152	CETSES Total	CETSES SE	CETSES CM	CETSES IS	ABCD Total	OSS-SF Total	TSES Total	TSES SE	TSES CM
CETSES SE	.931								
CETSES CM	.906	.759							
CETSES IS	.925	.796	.754						
ABCD Total	.553	.523	.432	.541					
OSS-SF Total	.547	.455	.537	.489	.568				
TSES Total	.668	.583	.745	.534	.270	.576			
TSES SE	.635	.627	.652	.477	.263	.484	.921		
TSES CM	.573	.460	.748	.417	.202*	.539	.903	.736	
TSES IS	.608	.468	.617	.587	.289	.564	.889	.730	.709

Correlation is significant at the 0.01 level (2-tailed).

Table 5.15

Pearson Correlation (r) between CETSES, TSES, OSS-SF and demographic questions

n=152	CETSES Total	TSES Total	OSS-SF Total	D1	D2	D3	D4	D5
TSES Total	.668**							
OSS-SF Total	.547**	.576**						
D1	-0.038	0.012	0.013					
D2	0.095	0.113	0.108	0.050				
D3	-0.063	0.056	0.004	-0.004	0.004			
D4	0.111	.186*	.283**	0.053	0.074	.503**		
D5	0.113	-0.076	0.117	0.078	-0.137	-0.061	0.134	
D6	-0.137	-0.011	-0.132	0.161	-0.051	0.035	-0.061	-0.027

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Note D1=Where is your school located?, D2=What gender do you identify with?, D3=Participant age group, D4=Years of teaching experience, D5=Main teaching area, D6=Cohort of student mostly taught.

5.9 Proposing the CETSES Short Form (CETSES-SF)

The 24-item CETSES indicated high reliabilities during the principal components analysis with 152 responses. The development of the CETSES is very much in its infancy and more data is required to further test the factor structures. With this in mind, two parsimonious versions were explored to assess their viability. A short form of any scale will hold a strong advantage towards the full version if the reliability of the instrument has a high level of internal consistency (Clark & Watson, 2019). Further, a short form of the instrument is more practical and useful to a researcher and much faster for the participant to complete.

Table 5.16

Proposed questions to create a 9 or 12 item CETSES-SF instrument

Item No.	CETSES-SF Questions	3 Item Factor	4 Item Factor
Q7_IS	How well can you use your skills and knowledge in career development to respond to difficult questions from your students?	-	.734
Q20_IS	To what extent can you rely upon your knowledge and skills in career development to provide confused students with a variety of examples and explanations?	.764	.764
Q23_IS	To what extent can you innovate your teaching strategies in career education to optimise student learning?	.760	.760
Q24_IS	How well can you use your skills and knowledge in career planning to challenge very capable students?	.785	.785
Q3_CM	How much can you do with your skills in classroom management to control disruptive behaviour in a career education class?	.596	.596
Q5_CM	To what extent can you make your expectations clear about student behaviour?	.695	.695
Q16_CM	How well can you establish rules and routines for each of your career planning classes?	.731	.731
Q19_CM	How well can you manage your career education class using a variety of strategies to keep all students engaged?	-	.536
Q1_SE	How much can you do to positively influence career planning for the most difficult students?	-	.703
Q4_SE	How much can you do with your skills in classroom management to control disruptive behaviour in a career education class?	.846	.846
Q6_SE	How much can you do to get students to believe that participation in career education will enhance their post-school options?	.885	.885
Q9_SE	How much can you do to help your students value career planning and learning?	.719	.719

5.10 Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was used to evaluate the validity of two proposed short forms of the CETSES by assigning the items to their respective components according to the teacher self-efficacy model in a 12-item model and a 9-item model. Each model sought the highest loading items for each component in the pattern matrix (see table 5.8). For example, the 12-item model used the four highest loading items for each of the three components and the 9-item model used the three highest items for each of the three components.

A confirmatory factor analysis was performed using the estimation method of the Maximum Likelihood over the variance-covariance matrix (Schreiber, Nora, Stage, Barlow, & King, 2006) for the three-factor model through the AMOS 26 statistical package. To achieve model identification, regression coefficients of the error terms over the endogenous variables were fixed to 1. The CFA was performed in order to determine whether the hypothesised statistical model fits the actual data set. A number of 'goodness-of-fit' statistics were used on the three-factor models derived by means of a PCA. According to Schreiber et al. (2006), "In general, if the vast majority of indexes indicate a good fit, then there is probably a good fit" (p. 6). The recommended results for goodness of fit are provided by (Clark & Watson, 2019) as a minimum for each index (see table 5.9). They add that a result of "excellent" would be if the CFI and TLI are .95 or greater and the RMSEA are .06 or less. The first higher order model conducted for both the 9 and 12 item CETSES-SF produced a poor fit. The nine-item CETSES-SF showed some promise with the CFI = .921 and the IFI = .923 which is above the .90 value recommended by Clark and Watson (2019).

Cronbach reliability for the CETSES-SF α = .88 (nine-item) and α = .91 (12 item) which indicates that both models of a proposed CETSES-SF have a high level of internal consistency.

Table 5.17

Results of goodness of fit for the CETSES-SF: 9 & 12 item versions

Fit Statistic	Recommended	9-Item CETSES=SF	12-Item CETSES-SF
x^2		77.66	175.69
df		24	51
x^2 sig	$p <= 0.05$	.000	.000
NFI	>.90	.893	.840
RFI	>.90	.799	.755
CFI	>.90	.921	.878
IFI	>.90	.923	.881
TLI	>.90	.852	.813
RMSEA	<.10	.122	.127

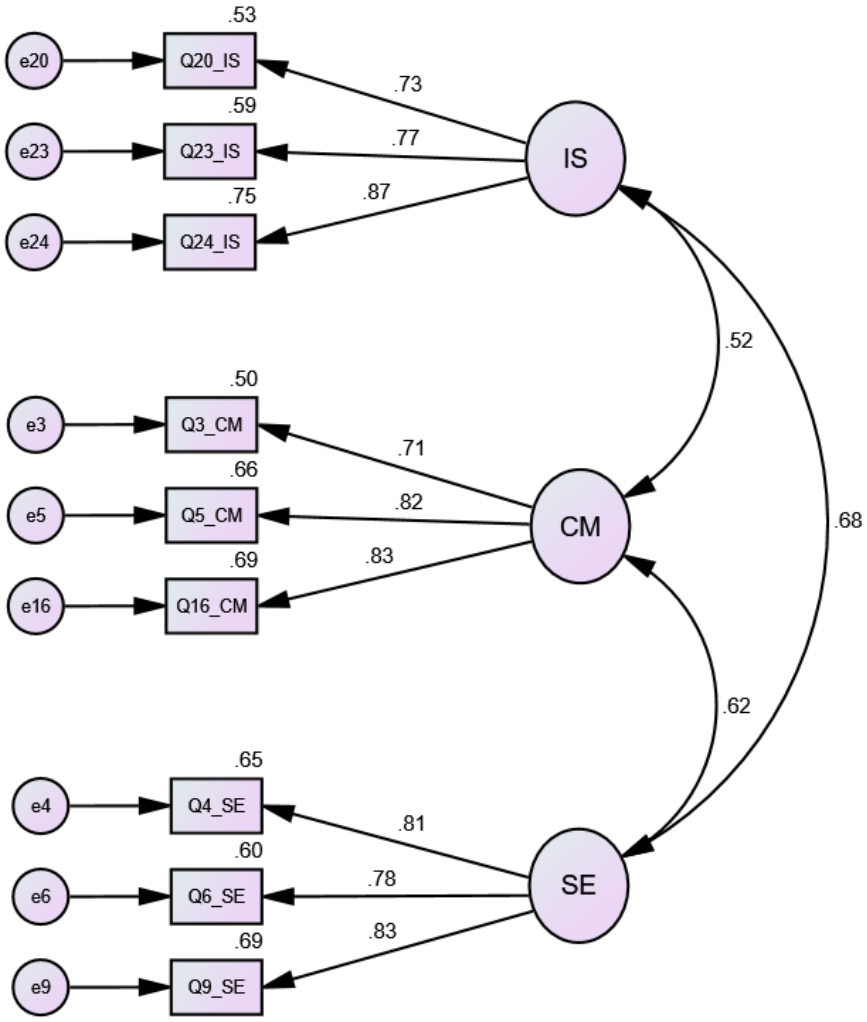

Figure 5.3 Measurement model of the 9-item short-form CETSES (N = 152)

Note. IS = instructional Strategies; CM = Classroom Management; SE = Student Engagement.

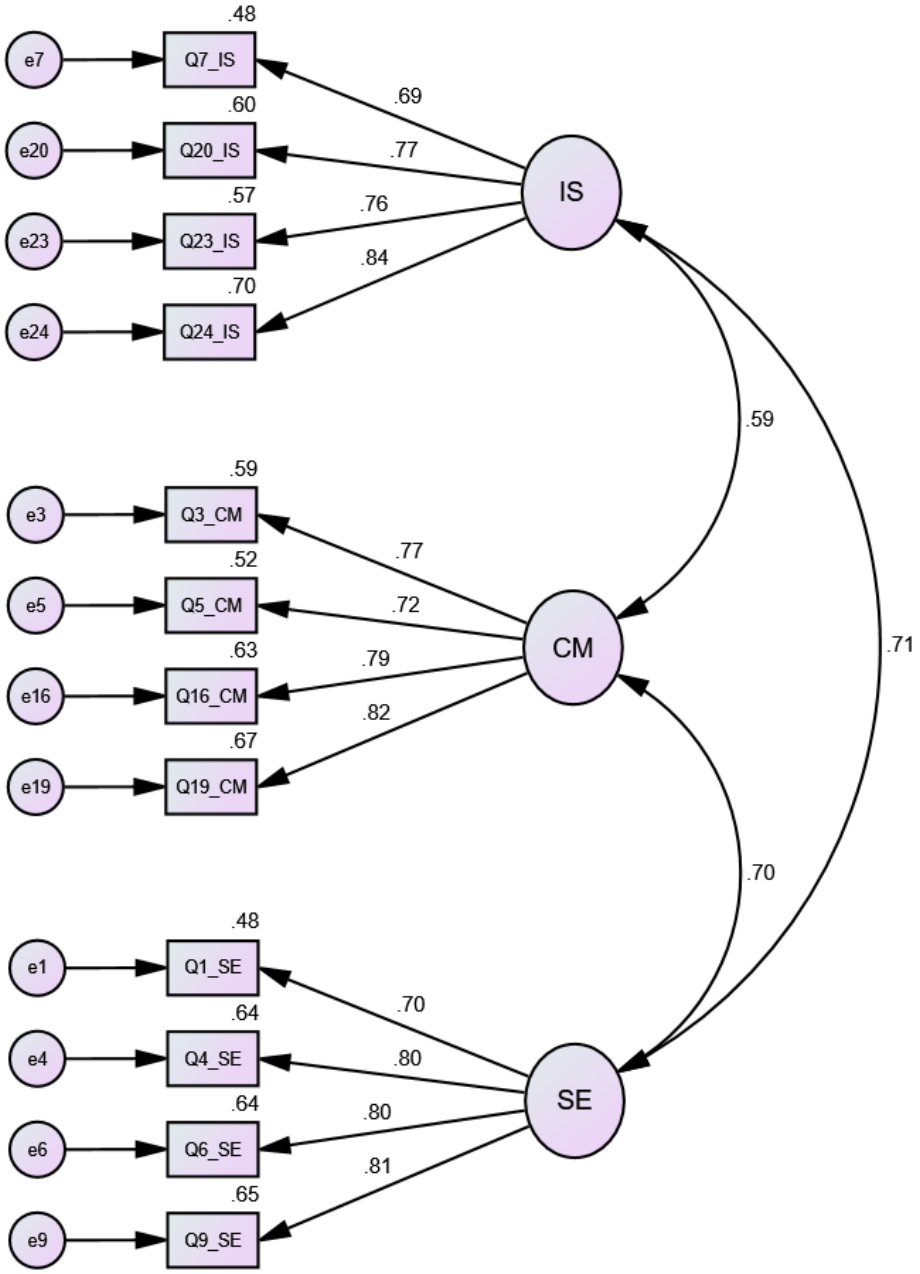

Figure 5.4 Measurement model of the 12-item short-form CETSES (N = 152).

Note. IS = instructional Strategies; CM = Classroom Management; SE = Student Engagement.

5.11 Discussion

The results of this study provided strong preliminary support to the validity of the CETSES scale and a proposed 9-item short form (CETSES-SF) of the scale. 153 responses were gained from the overall survey and after data screening, it was determined that case 41 was an outlier and it was removed so that the assumption of normality could be achieved. One-sample t-tests were run on the CETSES, TSES, OSS-SF and the ABCD index to determine if their means were different to the theoretical mean of each instrument. It was found that each of the scales' means was statistically significant ($p < .0001$) from the hypothesised population mean. The results of the one-sample t-tests indicated that teachers possess a higher than average amount of self-efficacy for career development teaching and learning. Further, it can be qualitatively described as approaching the level of *Quite a Bit* ($M = 6.67$, $SD = 1.19$). Comparatively, they rated their overall teaching self-efficacy marginally higher than the CETSES and within the *Quite a Bit* range ($M = 7.31$, $SD = 1.06$). When it came to the content knowledge of the 11 career management competencies, the participants in this research felt they had an 'Acceptable' level of content knowledge ($M = 3.64$, $SD = .79$). Teachers in the sample felt their perceptions of their ability to effectively perform their work tasks were *Very Good* ($M = 4.2$, $SD = .64$).

SPSS 25 was used to conduct a PCA on the CETSES with direct oblim. Initially, the analysis was set to allow SPSS to extract the components unforced. The initial unforced PCA revealed four components that had greater eigenvalues greater than 1 that explained 71.2% of the variance. The results also indicated that the components that loaded on the fourth factor had higher loadings to the first factor. A PCA was conducted a second time with SPSS and it was set to force three factors. This was because the CETSES was modelled on the TSES which has an established three-factor model. It was anticipated that the items would load more successfully if forced towards their respective components and that the same subscales were valid for the CETSES. The three components were extracted that explained 62.2% of the variance. Inspection of the scree plot indicated heavy loading upon component 1, being 52.93%. The three-component model was adopted as the CETSES was originally aligned with the TSES being a well-researched and established model. Further exploration in the future to will consider collapsing three components into one single component that measures teachers' self-efficacy for career development teaching and learning.

The reliability of the CETSES was found to have a relatively high level of reliability ($a = 96$). Concurrent validity was explored through Pearson Correlations with the CETSES,

OSS-SF and the TSES (12-item). Existing evidence indicated that the OSS-SF and TSES are measures of self-efficacy and had strong positive correlations with the CETSES.

Following the PCA, two short forms of the CETSES were explored through a CFA in AMOS 26. Firstly, it was determined that the hypothesised statistical model fitted the actual data set. Then, consideration of parsimonious versions of the CETSES would be explored. Using the highest loadings from each component in the pattern matrix, a 9-item and a 12-item version of the CETSES-SF were tested for goodness of fit. Initial testing indicated that the 9-item model showed some promise with goodness of fit results. However, it is acknowledged that further data collection would be required to test the robustness of the CETSES-SF.

CHAPTER 6: GENERAL DISCUSSION

6.1 Introduction

This research project set out to investigate the relationship between Australian secondary school teachers and their self-efficacy for career development teaching and learning. Understanding secondary school teachers' self-efficacy for career development teaching and learning is an area of study that appears to have had limited research. Despite extensive literature searches globally, no reports, or emerging research, or scales developed have sought to explore the self-efficacy perceptions of secondary school teachers facilitating career education programs. A mixed methods research design was adopted comprising of two sequential studies leading to the construction and implementation of a new scale titled the Career Education Teacher's Self-Efficacy Scale (CETSES). This research is unique in its design as it uses the same sample of participants to measure and compare teachers' general self-efficacy and their self-efficacy in a subject specific area (career development). The present research offers the CETSES as the first specific measure of teachers' self-efficacy for career education within mainstream school classes. This new measure is a significant contribution to the literature of career development and teacher education.

6.2 Responses to Original Research Questions

An overview of the main findings of the five research questions posed in this research are addressed as points of discussion. The original research questions of this research project were posited in terms of an Australian perspective. Whilst a representative national sample was an aim, the answers to the research questions reported in this section should be interpreted in light of the size of the sample of teachers who responded to the national survey. Although the responses to the survey are authentic and valid with respect to those who completed it, caution is taken in not alluding to the answers being generalizable to the entire nation's teacher workforce. What follows is a brief answer to each of the original research questions, which then leads into other points of discussion of the findings.

6.2.1 Research Question 1

What is the overall level of perceived self-efficacy for career development teaching and learning by secondary school teachers in Australia?

The findings suggest that the teachers who participated in the research were not lacking in self-efficacy for career development teaching and teaching. Further, this research found that the participants were generally positive about their ability to teach career

development concepts in Australian secondary schools. The data indicated that the sample of respondents possessed a higher than average perception of self-efficacy for career development teaching and learning. This was qualitatively described as approaching the level of *Quite a Bit*, on the Likert-type rating scale of the measure of self-efficacy. These same teachers rated their general teaching beliefs slightly higher and at the *Quite a Bit* level. This same group's general teaching self-efficacy was slightly higher than the original research by Tschannen-Moran and Hoy (2001).

6.2.2 Research Question 2

What are the differences, if any, in Australia's secondary school teacher' levels of perceived self-efficacy for teaching career development in the three subfactors of Student Engagement, Instructional Strategies, and Classroom Management?

The findings indicate that the teachers who participated in the research rated themselves overall at the midpoint of the Likert-scale and qualitatively at a level of *Some Degree* in each of the subfactors of the CETSES. Moreover, these teachers rated their self-efficacy in Classroom Management (CM) and Instructional Skills (IS) more than half of a Likert-scale higher than they did in Student Engagement (SE) and very close to a level of *Quite a Bit*. This pattern occurred similarly when these teachers who participated in the research completed the TSES. Classroom Management and Instructional Skills were in the *Quite a Bit* range while Student Engagement was at a level of *Some Degree*. Interestingly, teachers who participated in the original research on the TSES (Tschannen-Moran & Hoy, 2001) rated CM lower than SE and IS. This could suggest that the teachers who participated in this research have perceptions of possessing better developed classroom management skills (e.g., behaviour management) and instructional skills (e.g., understanding of curriculum and delivery) but slightly lower levels of perceptions about engaging students with the curriculum.

6.2.3 Research Question 3

What levels of content knowledge do Australian secondary school teachers have in the eleven competencies of the Australian Blueprint for Career Development?

Teachers who participated in this research indicted overall that they had an *Acceptable* level of content knowledge of the Australian Blueprint for Career Development (ABCD). The majority of responses indicated levels of content knowledge of the ABCD between the levels of *Acceptable* and *Very Good*. These results were unexpected as it was

thought that not too many teachers would have knowledge of the ABCD. However, teachers were provided further information when answering each question about their content knowledge of the ABCD that would assist them with their selection. Their responses would suggest that teachers have a strong grasp of career development concepts but not necessarily have been exposed to a formalisation of each competency of the ABCD. This is a strong indicator among the sample of teachers surveyed that they possess quite high levels of understanding of career development concepts implicitly and a strong foundation of knowledge to build upon.

6.2.4 Research Question 4

What levels of general occupational self-efficacy do Australian school teachers have generally in fulfilling their duties and being able to cope in the workplace.

Overall, the teachers who participated in this research indicated that they have *Very Good* levels of occupational self-efficacy. There were five outliers below this level that represented 0.3% of the sample group. The overall result was expected as the OSS-SF is a measure of self-efficacy and there was a positive correlation between each of the measures used to measure self-efficacy.

6.2.5 Research Question 5

Can any correlations be drawn from Australian secondary school teachers' self-efficacy beliefs in their specialist teaching area, school location, gender, age, years of teaching experience with teaching career education concepts?

In the sample of teachers surveyed in this research, a correlation analysis of the results of the CETSES, TSES-SF, OSS-SF, the bespoke ABCD index, and the data collected in the demographic questions suggested that neither school location, gender, age, years of teaching experience, a specific teaching area or a teaching cohort area were able to predict if a teacher had a high level of self-efficacy to teach career education in schools. This result was unexpected as it was thought that some predictors may emerge that would indicate teachers' levels of self-efficacy for career development teaching and learning. However, the result is consistent with other research confirming that demographic variables have not been significant predictors of the efficacy beliefs of teachers (Tschannen-Moran & Hoy, 2007).

6.3 Theoretical Implications

This research found that teachers in the sample were not lacking in self-efficacy for career development teaching and learning. Further, this same sample of teachers indicated that they believed they possessed an acceptable level of skills and knowledge of the 11 career development competencies of the ABCD. Initially, these results appear to suggest that teachers in this sample possess a strong amount of self-efficacy towards career development teaching and learning. These positive indications may very well remain consistent and will become clearer when further data is collected and added to the data set.

Teachers already possess the pedagogical skills in their preferred key learning areas. It is also presumed that they would have gathered the person inputs and background experiences that Lent et al. (1994) described in the person, contextual and experiential factors that affect career related choice behaviour. The model (see figure 6.1) affecting career related choice by Lent et al. (1994) assists in understanding where teachers may be positioned within the SCCT model as they seek to add the learning experiences of career education and move towards developing self-efficacy and outcome expectations. The CETSES and the ABCD index provide extremely useful data when it is related to the model by Lent et al. (1994) to consider. Teachers will be exposed to new learning experiences of career education during the provision of professional development. Teachers will draw upon prior knowledge and pedagogical skills along with their current levels of self-efficacy in career development to build upon their self-efficacy expectations that will then lead to outcome expectations.

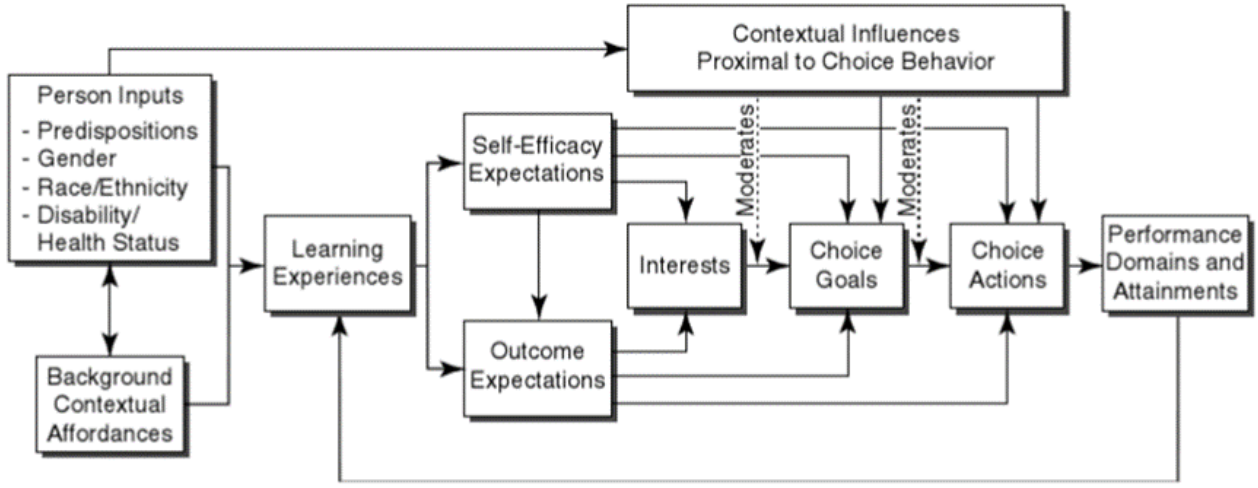

Figure 6.1 Model of Person, Contextual, and Experiential Factors Affecting Career Related Choice Behaviour

Note. Direct relations between variables are indicated with solid lines; moderator effects (where a given variable strengthens or weakens the relations between two other variables) are shown with dotted lines. Copyright 1994 by R.W. Lent, S.D. Brown, and G. Hackett.

When reflecting on the results in this sample of the CETSES and the TSES, the data indicated that teachers' self-efficacy for career development teaching and learning was lower than their general teacher self-efficacy. It is likely that many of the teachers in this sample may not have had exposure to the delivery of programs with a career education focus. This would suggest that mastery experience is the most powerful source for establishing an accurate self-efficacy belief.

6.4 Methodological Implications

6.4.1 The Validity of the CETSES

The content validity of the CETSES was carefully considered to ensure the wording for each item was not purely from the researcher's own perspective. The purpose of Study 1b was to enhance the content validity of the CETSES during its development by forming a focus group to review the questions drafted by the researcher. The focus group of experienced career development practitioners (who were statutory qualified Guidance Officers) in schools provided their opinions and thoughts to the draft questions and were asked to provide a critical review including recommending adjustments and suggesting of alternative workings for each item presented. A significant discussion was recorded from the focus groups and the qualitative data was later subjected to thematic analysis (Braun & Clarke, 2006). The use of thematic analysis provided two key advantages for the qualitative stage of this research. Firstly, thematic analysis proved to be versatile and provided the ability to collect data from multiple individuals simultaneously in a non-threatening environment (Onwuegbuzie et al., 2009). Additionally, the use of a focus group was a fast and efficient method for obtaining data from multiple participants. The thematic analysis provided the synergy between the participants to contribute to the content validity of the CETSES instrument (Parker & Tritter, 2006). During the five phases of the thematic analysis, it became apparent the original draft questions tabled were not consistent with the intent of TSES instrument (Tschannen-Moran & Hoy, 2001). This was compromising content validity as the wording used in items did not always align with the intent of each factor. Each item was then carefully edited to reflect a career development focus that did not vary too greatly in the wording of the original items of the TSES. This would ensure that content validity was optimised for the CETSES.

6.4.2 The Structure of the CETSES

The three-component model was adopted as the CETSES was originally aligned with the TSES, itself being a well-researched, established and accepted model of three factors: classroom management, instructional skills and student engagement. Principal Components Analysis (PCA) was conducted and found three components that were extracted and explained 62.2% of the variance. Finding three factors affirmed the original theoretical model of the TSES.

A short form of the CETSES was tested using AMOS 26. It is acknowledged that a greater sample is required to effectively conduct a CFA. Nonetheless, a CFA was conducted tentatively, with respect to sample size, to ascertain if a short form of the CETSES could be proposed. Two parsimonious versions were explored to assess their viability. A 9 item and 12 item model were tested despite a small sample size to date. The CFA indicated a nine-item CETSES-SF showed some promise with goodness of fit results. Again, this finding affirms the TSES's theoretical structure applied to a new domain of teachers' efficacy.

6.4.3 Confirmation of Established Measures

The additional psychometric measures used in the present research have been tested and reported extensively in the literature. The TSES (Tschannen-Moran & Hoy, 2001) and the OSS-SF (Rigotti et al., 2008) according to a literature search have not been exposed to teachers in the context of determining self-efficacy in the field of career development teaching and learning. Both measures are deemed to be reliable instruments and will assist in determining concurrent validity of the CETSES.

Significant studies were located about Australian pre-service teachers' general teacher self-efficacy. However, the measurement of in-service school teachers' self-efficacy for general teaching and learning in Australia appeared to be an under explored area. A literature search of Australian teacher self-efficacy research revealed significant studies conducted in subject specific areas (e.g., mathematics, science) but not in general teacher self-efficacy.

An Australian study of school climate which assesses the factors for improving schools (Aldridge & Fraser, 2016) has parallels with the measures used in this study. The study tested a research model of the relationships between the school climate, teacher's self-efficacy and job satisfaction. They found a significant positive relationship between leadership style, teachers' self-efficacy and job satisfaction. In this research, very strong positive correlations were also found between the CETSES, TSES and the OSS-SF.

6.4.4 Relationship with other measures

The CETSES is a measure of teachers' self-efficacy across the major domains of efficacy: classroom room management, instructional skills, student engagement (Tschannen-Moran & Hoy, 2001). The CETSES proved to be positively correlated with the TSES and the OSS-SF. This was expected as each of these scales have existing evidence as accepted measures of self-efficacy. The teachers who participated in this research indicated overall that they possessed significantly increased levels of self-efficacy in the general domain of teaching (TSES) and in their abilities to effectively perform work tasks (OSS-SF). It was predicted that teachers who possessed heightened levels of general self-efficacy would also have congruently heightened levels of occupational self-efficacy. This was hypothesised by Rigotti et al. (2008) in their original research in which occupational self-efficacy is positively related to performance. Specifically, teachers who have a high level of general self-efficacy in their pedagogy are likely to experience increased levels of the four sources of self-efficacy that include mastery experiences, vicarious experiences, verbal persuasion and physiological states (Bandura, 1994). The positive correlations between the TSES and the OSS-SF indicate that these same teachers feel able and confident concerning their ability to meet the demands of the job (Rigotti et al., 2008).

The positive correlations of the CETSES and the TSES and OSS-SF strengthen the validity of this new instrument. This would suggest that the CETSES was valid in gaining an understanding of self-efficacy from a career development perspective as it correlates strongly with both measures of the same construct.

6.5 Practical Implications

The Australian government has iterated policy that career development is a priority in schools in the current National Career Development Strategy (Australian Government, 2019; Ithaca Group, 2019). The Ithaca Group (2019), in their research of the current status of career development in schools across Australia, stated that there are insufficient qualified career practitioners in schools. More importantly, they added that it will be the teachers' role to interpret and implement career education syllabi in its various formats (e.g., ACARA: Work Studies, General Capabilities etc.). The literature also concludes that teachers are in the best position to provide support with career advice for students (Hooley, 2015; House of Commons Education Committee, 2013; Teach First, 2015).

The implications are that Australian education departments will need to start to consider the NCDS and how this affects school staffing and professional development. Not

all teachers will accept or be willing to include career education in their pedagogical practice. Further, there will be teachers who are willing to include career education as part of their pedagogy but may not have the knowledge and skills for providing effective support to students.

The practical implications of the CETSES and the bespoke index of the ABCD become clear. Firstly, as a measure for schools to understand the current skills and knowledge teaching staff possess in career development. Secondly, there are implications for gaining an understanding of teacher self-efficacy towards career development teaching and learning. Schools will need to know what professional development is required and where best to target the upskilling of staff. Transitioning these teachers from the prospect of requiring professional development (learning experiences) towards effective levels of career education performance will need to first start with the four sources of self-efficacy; mastery experiences, vicarious experiences, verbal persuasion and physiological states (Bandura, 1994) and the outcome expectations that Lent et al. (1994) describe in SCCT.

The CETSES and the ABCD index may provide school administrators with valuable data to understand their teacher's current perceptions of career development teaching and learning that will assist in determining how to inject professional development. However, a cautious approach is required in how these results are interpreted. For example, if a school was seeking to implement a whole school approach to career development, they may look towards the CETSES and the ABCD index for initial data gathering of their teacher's self-efficacy beliefs and content knowledge of the subject. If these results are consistent with the current findings of this research, administrators at the school may not invest as heavily in the professional development needs of teachers. One vital aspect that is not considered in self-efficacy research is a teacher's over-estimation of their knowledge, skills and abilities (Goddard et al., 2004). This could be detrimental when teachers are provided with classes outside their key learning areas with insufficient professional development (i.e., career education).

Implementing the CETSES and the ABCD index provides school administrators with useful data on teacher perceptions of their knowledge, skills and abilities in the delivery of career education programs in schools. Comparisons can be made with the data from the initial sample of respondents' sets and conclusions can be drawn as to their meaning. However, there are theoretical implications that need to be considered once new data is harvested and what direction school administers are contemplating in their planning to support teachers. Career education as a school subject should then be considered as a vocational area of interest

that teachers can embrace and attain high levels of performance in the classroom. It is then that a Social Cognitive Career Theory perspective (Lent et al., 1994) can be employed as a foundation to a whole school approach to providing professional development in career education pedagogy.

6.6 Policy Implications

Australia has been identified as one of the top five countries participating in the PISA research whereby the school was rated as a more important source for the acquisition of career development competence than sources outside of school (Sweet et al., 2014). Career development in schools in Australia has been touted as a priority since the Organisation for Economic Cooperation Development (OECD, 2004a) provided advice and guidance to assist in understanding the importance of career development. Further, the ELGPN (Vuorinen & Watts, 2012) consider schools as being in a unique position to ensure all citizens are equipped with the career management skills, given that students are a captive audience in the compulsory education sector. With momentum growing on the importance of career development over recent years, a further focus has been placed upon schools and their role in supporting students in gaining access to high quality career education (Australian Government, 2019).

This focus on career development in schools is not a recent phenomenon and has been discussed widely in the literature as previously outlined. At present, no Australian university has included career development in their pre-service teacher programs as a pre-requisite or as an elective. This was revealed in audits of teacher pre-service programs before and during this research. However, the Victoria University Curriculum team produced an Australian first career education elective for pre-service teachers (Cherednichenko et al., 2005). Unfortunately, the program did not become an elective in the Victoria University teacher education program and was ultimately abandoned. It would appear that classroom teachers graduating from Australian universities mostly likely have not gained the knowledge and skills to support students in their career development journey. These pre-service teachers will soon be on the frontline of supporting Australian school students to have access to high quality career education (Department of Education & Training, 2019b). The CETSES and the ABCD index could be useful instruments to be administered in teacher pre-service programs for student teachers to reflect on their current levels of knowledge and skills in career development. Further, the instruments will measure the levels of knowledge, interest,

motivation and self-efficacy pre-service teachers actually possess when it comes to career development teaching and learning.

Research has indicated that career development provides positive outcomes in a student's education including higher overall grades, being better prepared for their futures, the school having a positive climate, students feeling safe at school and having better relationships with teachers. (Brown & Ryan Krane, 2000; Hughes & Karp, 2004; Ryan, 1999; Whiston et al., 2017). The urgency for quality career development in schools is indisputable and there are implications for policy in how whole school curriculum reflects the changing nature of the world of work. Teachers will require professional development and career development practitioners and school administrators will need to consider how to increase teacher self-efficacy for career development teaching and learning that will in turn effectively influence positive career development for students.

There is an emerging argument that career education should be integrated in the primary school curriculum (Cahill & Furey, 2017; Hooley, 2015; Kashefpakdel, Rehill, & Hughes, 2018; NSW Department of Education and Communities, 2014; Welde, Bernes, Gunn, & Ross, 2016). The evidence is continuing to grow in Australia indicating that career education should be included in the primary school sector. For example, the Australian Curriculum & Assessment Reporting Authority (2019) in their illustrations of practice for career education in the general capabilities, suggests that there is a need for a national approach linking primary school to post-school through a *Pathways* program. There are indications emerging from Victoria, that career education programs will expand from year 7 to year 12 and include kindergarten (preparatory school level). At a recent New South Wales primary school's symposium, a case for career related learning in primary schools was showcased titled "Integrating career skilling through the curriculum…what has been learnt?" (NSW Department of Education and Communities, 2014).

As primary schools become more cognisant with the benefits of career related learning integrated with the curriculum, they will begin to understand that the evidence suggests that children become more engaged with their learning (Cahill & Furey, 2017; Hooley, 2015; Kashefpakdel et al., 2018; NSW Department of Education and Communities, 2014; Welde et al., 2016). The CETSES may become a tool that administrators could use to measure primary school teacher's self-efficacy for career development teaching and learning. The CETSES and the other instruments used in the research will provide additional information for school leaders to consider for professional development activities in their schools. Further, data collected from the CETSES from a sample that includes several

primary schools may assist policymakers in understanding current teacher perceptions of career development pedagogy.

6.7 Limitations and Future Research

6.7.1 Self-Efficacy and Perceptions of Locus of Control

A limitation of the CETSES may well be the perceptions the instrument is measuring locus of control rather than self-efficacy from the wording used in each item. While this is acknowledged, it must be understood that locus of control would focus on the degree by which a teacher believes that they have control or no control over the outcome of events in their classroom. Whereas self-efficacy is the belief a teacher has to act competently to influence positive outcomes for students. The items are specifically using phrasing from the TSES including for adapted for the CETSES for example, *How much can you* or *To what extent can you*. This then targets each factor with wording that clearly is asking about a teacher's belief to act competently and effectively and not how much they can control outcomes related to the behaviour of the teacher.

6.7.2 Recruitment Issues

This research project experienced difficulties in recruiting participants with the planned approach of seeking teachers to participate via firstly gaining principal approval. Invitations to participate were sent by email to secondary school principals throughout Australia including Queensland, New South Wales, Victoria and South Australia. However, the response rate was limited and unexpected. The method of data collection in this research was the main limitation. In hindsight, a more direct approach to principals may have been more effective rather than approaching principals by email. While the potential sample group was vast, the reality of a teacher getting the email with the invitation to participate was at the discretion of the school principal who would make the decision whether to forward on the invitation to teaching staff. Incentives to participate in the research were not permissible in the ethics application and this may also have affected the participation rate.

The main limitation of this research was the overall response rate gained. In total, 153 responses were gained which was disappointing. However, it was determined that the sample size was greater than 150 and therefore reliable as the loadings were greater than .60 on 10 or more of the factors (Field, 2017). The goal of developing the CETSES was to create a domain specific scale that could measure the self-efficacy beliefs of teachers for career

development teaching and learning. Additional data collection in the future will enable to CETSES to be explored further for stability in a CFA.

The data collection revealed demographic limitations with the participants in two areas. Firstly, 87% of the participants had indicated that they had gathered between five and 25 years of teaching experience. Therefore only 13% of the participants were in the beginning stages of their teaching careers (i.e., 1 - 5 years teaching experience). A further limitation in the demographic data collection revealed that most if not all the participants were above the age of 30. Of the sample of teachers in this research, 22 participants did not indicate their age and correlations were not able to be established.

6.7.3 Future Research

There are a number of avenues for future research that may extend the findings in this research project. Firstly, further development and validation of the CETSES is recommended with both pre-service and in-service teacher samples. Secondly, there is emerging recognition that career development needs to start in primary school (P-6) and opens up future prospective research. A possible future research inquiry could seek to understand if a whole school professional development approach to career development teaching and learning could be guided by the principles of collective self-efficacy.

An area for future research is administering the CETSES with pre-service teachers as it may reveal the level of readiness they possess to support Australian school students accessing high quality career education (Department of Education & Training, 2019b). This will assist universities to understand pre-service teachers' needs in their preparation when placed on the frontline of supporting student's career education awareness. The administration of the CETSES and the ABCD index could be useful for student teachers to reflect on their current levels of knowledge, skills and self-efficacy for career development pedagogy.

This research intentionally targeted secondary school teachers. There is a mounting argument in the literature towards career education being integrated into the primary school curriculum (Cahill & Furey, 2017; Hooley, 2015; Kashefpakdel et al., 2018; Welde et al., 2016). There is a growing evidence base in current pedagogy for career development with primary school children being integrated with the curriculum in the *World of Work* initiative being implemented in the Cajon Valley in Southern California (Hidalgo, 2017). This innovative whole of school district program will become a beacon for others to consider when it comes to the possibilities of how career education can be implemented in primary

school environment. Education Scotland in their strategy for Developing a Scotland's Young Workforce (Education Scotland, 2015) is another international example of the recognition that career development needs to commence in the early years of learning.

In Australia, there is evidence of career education in primary schools emerging in curriculum policy. ACARA appears to be exploring career development in the primary sector through the general capabilities (Australian Curriculum & Assessment Reporting Authority, 2019), the Victorian Curriculum and Assessment Authority is in the beginning stages of developing a curriculum for career education in primary schools (Dandolo Partners, 2017) and the New South Wales education department (NSW Department of Education and Communities, 2014) have also acknowledged the advantages of career development. Career development may become an essential key learning area in the primary school environment just as much as it is in the secondary school environment. This potentially opens an area of future research to include primary school teachers in the data collection using the CETSES and the ABCD index. Data collection using the CETSES from primary school teachers would add to the research and comparisons can be made between the primary and secondary school environments. The research into the self-efficacy beliefs of primary school teachers in career development teaching and learning will also inform how future professional development is designed.

Research has shown that collective teacher efficacy enhances teachers' overall self-efficacy beliefs (Donohoo, Hattie, & Eells, 2018; Goddard et al., 2004; Ross, Hogaboam-Gray, & Gray, 2004). Gaining an understanding of teachers' initial self-efficacy towards career development teaching and learning could be the beginning phase of any teacher or faculty (collective efficacy) in planning for professional development. This has implications for how professional development in career education could be planned in schools and initially needs to be linked back to how self-efficacy is formed. Further, a faculty of teachers who are upskilling with career development may well seize upon the collective efficacy beliefs. People's shared beliefs in their collective power to produce desired results is an extension of social cognitive theory (Bandura, 2000). A group's attainments are the product of not only shared knowledge and skills of its different members but also of the interactive, coordinative and synergistic dynamics of their transactions (Bandura, 2000). A collective belief of teachers has the potential to positively impact student learning. Collective teacher self-efficacy according to Donohoo et al. (2018), is the single largest factor influencing student achievement with an effect size of 1.57. A strong sense of collective efficacy enhances teachers' self-efficacy beliefs (Goddard et al., 2004). As a faculty, the professional

development for career education should refer to the four sources of self-efficacy; mastery experiences, vicarious experiences, verbal persuasion and physiological states (Bandura, 1994) in its overall plan. Future research may well focus on developing a new construct of collective teacher self-efficacy for career development teaching and learning.

Career education professional development will be enhanced by teachers working together as a faculty that are learning from a career development practitioner and consequently learning from each other. The research indicates that there is a link between collective efficacy beliefs and student achievement because of a robust sense of group capability that is able to establish expectations for success and encourages organisational members to work resiliently towards the desired outcome (Donohoo et al., 2018; Goddard et al., 2004). Australian research revealed that the creation of a supportive school community in which teachers can work and share ideas and practices is beneficial in terms of both teachers' self-efficacy and job satisfaction (Aldridge & Fraser, 2016). It is these contextual influences that will influence the teachers' behaviours towards the performance goals and attainments that Lent et al. (1994) described in their model of the factors that affect career related choice behaviour from a SCCT perspective.

A key area for future research must be the targeting the gaining of more data through the administration of the CETSES to a larger sample of teachers will allow for further testing of the factor structure through a CFA. This should include further exploration of a parsimonious version of the CETSES as a short form of the instrument may be more practical and useful for a researcher to use and participants to complete. Further exploration in the future could seek to explore if the three components of the CETSES can be collapsed into one single component that measures teachers' self-efficacy for career development teaching and learning. The re-administration of the CETSES to a larger sample (e.g., >500) would assist in further testing of the factor structure in a CFA. Results can be compared and added to the current data set.

Future research in validating the CETSES may benefit from a qualitative study using interviews with classroom teachers. The purpose would be to examine the perceptions and feelings of teachers and to explain the phenomenon of teacher's self-efficacy of their capacity support the career learning of students.

6.8 Significance of the Research

This research produced a measure of teacher self-efficacy in the domain of career development. This is the first known specific measure of teacher self-efficacy for career

education within mainstream school classes. Further, this new measure is a significant contribution to the literature of career development and teacher education. This is a major step forward in understanding the levels of self-efficacy Australian teacher's possess in career development teaching and learning. Currently, the Australian government has provided further impetus in ensuring all students receive the necessary career education to be equipped for the future of work. There is a National Career Education Strategy (Australian Government, 2019) that stated that all Australians require the knowledge and skills to manage their careers throughout life. This begins early with school students, through school where students are transitioning from school to further training education or work. The recommendations from the research on incorporating career education into the Australian Curriculum (Ithaca Group, 2019) have one common theme. That is, teachers will be interpreting and implementing career education syllabi in its various formats (e.g., ACARA, Work Studies) in classrooms across Australia. Additionally, it was recognised that teachers will need to be guided by the expertise from professionally qualified career educators (Australian Government, 2019).

The literature is clear that classroom teachers are in the best position to provide support with career advice for students (Hooley, 2015; House of Commons Education Committee, 2013; Teach First, 2015) and these teachers will need to be supported by professionally qualified career educators. Teachers of all key learning areas increasingly engage in casual conversations with students around career issues. Additionally, teachers are influential career educators by the way of their response to student's questions and how they engage with career development aspects of the key learning areas that they teach (Cherednichenko et al., 2005). Teachers will need professional development in supporting students with career education learning. The CETSES and the ABCD index will provide school administrators with very useful data on teacher perceptions of their knowledge, skills and abilities in the delivery of career education programs in schools.

6.9 Conclusion

This research extends the concept of general teacher self-efficacy to a previously unexamined area of teacher self-efficacy for career development teaching and learning. It was found that the teachers who participated in this research have self-efficacy levels approaching '*quite a bit'*. Teacher's perceptions of self-efficacy have shown to be powerfully linked to their motivations and behaviours in the classroom including producing positive outcomes for students. Teachers in secondary schools are not qualified career practitioners

however, they are in the best position to provide support to students with career advice. For career development to prosper in schools, teachers will need professional development and a high level of self-efficacy to support students in making their career decisions.

The goal of this research was to develop a reliable instrument that could measure school teachers' self-efficacy for career development teaching and learning. The CETSES was created along with a bespoke index to measure the skills and knowledge of career development through the competencies of the ABCD. The CETSES in its early development has shown significant promise but will need further research. Schools will need to collect data around teacher beliefs and the skills and knowledge they possess in career development to be able to identify how best to support school staff. The CETSES is in a good position to be developed further in the field with career development researchers where additional data can be collected and further statistical analysis can be undertaken.

CHAPTER 7: REFERENCES

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CHAPTER 8: APPENDICES

8.1 Appendix A: USQ Human Ethics Approval

OFFICE OF RESEARCH
Human Research Ethics Committee
PHONE +61 7 4687 5703| FAX +61 7 4631 5555
EMAIL human.ethics@usq.edu.au

UNIVERSITY OF SOUTHERN QUEENSLAND AUSTRALIA

22 December 2016

Mr Gregory Souvan

Dear Greg

The USQ Human Research Ethics Committee has recently reviewed your responses to the conditions placed upon the ethical approval for the project outlined below. Your proposal is now deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research (2007)* and full ethical approval has been granted.

Approval No.	**H16REA256**
Project Title	School teachers' self-efficacy for career development learning and teaching
Approval date	22 December 2016
Expiry date	22 December 2019
HREC Decision	**Approved**

The standard conditions of this approval are:

(a) Conduct the project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments made to the proposal required by the HREC
(b) Advise (email: human.ethics@usq.edu.au) immediately of any complaints or other issues in relation to the project which may warrant review of the ethical approval of the project
(c) Make submission for approval of amendments to the approved project before implementing such changes
(d) Provide a 'progress report' for every year of approval
(e) Provide a 'final report' when the project is complete
(f) Advise in writing if the project has been discontinued, using a 'final report'

For (c) to (f) forms are available on the USQ ethics website:
http://www.usq.edu.au/research/support-development/research-services/research-integrity-ethics/human/forms

8.2 Appendix B: Approval to Conduct Research – QLD Government DET

Queensland Government

Department of Education and Training

13 January 2017

Mr Greg Souvan
University of Southern Queensland
7 Glacstone Stree:
MARYBOROUGH QLD 4650

Dear Mr Souvan

Thank you for your application seeking approval to conduct research in Queensland state schools titled *School Teachers' Self-Efficacy for Career Development Learning and Teaching*. I wish to advise that your application to invite research participants to be involved in your study has been approved. This letter gives you approval to approach potential research participants only.

You may approach principals of the schools nominated in your application and invite them to participate in your research project. In the first instance, please provide principals of those schools with the attached letter which provides important information to help inform their decision about whether they wish to participate in this study. Your approval is conditional upon provision of this letter to each of the school principals you have nominated (you may need to photocopy the attached letter to provide sufficient copies for all principals).

As detailed in the Department's research guidelines the following applies to the study:

- You need to obtain consent from the relevant principals before your research project can commence.
- Principals have the right to decline participation if they consider that the research will cause undue disruption to educational programs in their schools
- Principals have the right to monitor any research activities conducted in their facilities and can withdraw their support at any time.

This approval has been granted on the basis of the information you have provided in your research proposal and is subject to the conditions detailed below.

- Adherence to the Department's *Terms and Conditions of Approval to Conduct Research* in Departmental sites is required as outlined in the document at: http://education.qld.gov.au/corporate/research/terms_conditions.pdf
- Any changes required by your institution's ethics committee must be submitted to the Department of Education and Training for consideration before you proceed. Conversely, any changes required by the Department must be submitted to your institution's ethics committee to ensure you are not in breach of your ethics approval.
- Any variations to the research proposal as originally submitted, including changes to the research team, changes to data collection, additional research undertaken with the data, or publication based on the data beyond what is normally associated

Education House
30 Mary Street Brisbane 4000
PO Box 15033 City East
Queensland 4002 Australia
Telephone 07 3034 5109
Website www.deta.qld.gov.au
ABN 76 337 613 647

8.3 Appendix C: Approval to Conduct Research – NSW DoE

Education
Public Schools

Mr Greg Souvan
7 Gladstone Street
MARYBOROUGH QLD 4650

DOC17/290362
SERAP 2016657

Dear Mr Souvan

I refer to your application to conduct a research project in NSW government schools entitled *School Teachers' Self-Efficacy for Career Development Learning and Teaching*. I am pleased to inform you that your application has been approved.

You may contact principals of the nominated schools to seek their participation. **You should include a copy of this letter with the documents you send to principals.**

This approval will remain valid until 30-Mar-2018.

As this research does not involve face-to-face contact with children, no researchers or research assistants have been screened to interact with or observe children.

I draw your attention to the following requirements for all researchers in NSW government schools:

- The privacy of participants is to be protected as per the NSW Privacy and Personal Information Protection Act 1998.
- School principals have the right to withdraw the school from the study at any time. The approval of the principal for the specific method of gathering information must also be sought.
- The privacy of the school and the students is to be protected.
- The participation of teachers and students must be voluntary and must be at the school's convenience.
- Any proposal to publish the outcomes of the study should be discussed with the research approvals officer before publication proceeds.
- All conditions attached to the approval must be complied with.

When your study is completed please email your report to: serap@det.nsw.edu.au
You may also be asked to present on the findings of your research.

I wish you every success with your research.

Yours sincerely

Dr Robert Stevens
Manager, Research
30 March 2017

School Policy and Information Management
NSW Department of Education
Level 1, 1 Oxford Street, Darlinghurst NSW 2010 – Locked Bag 53, Darlinghurst NSW 1300
Telephone: 02 9244 5060 – Email: serap@det.nsw.edu.au

8.4 Appendix D: Approval to Conduct Research – Victoria State Government DET

Department of
Education & Training

2 Treasury Place
East Melbourne Victoria 3002
Telephone: 03 9637 2000
DX210083

2016_003268

Mr Greg Souvan
7 Gladstone Street
MARYBOROUGH QLD 4650

Dear Mr Souvan

Thank you for your application of 2? December 2016 in which you request permission to conduct research in Victorian government schools titled *School Teachers' Self-Efficacy for Career Development Learning and Teaching*.

I am pleased to advise that on the basis of the information you have provided your research proposal is approved in principle subject to the conditions detailed below.

1. The research is conducted in accordance with the final documentation you provided to the Department of Education and Training.
2. Separate approval for the research needs to be sought from school principals. This is to be supported by the Department of Education and Training approved documentation and, if applicable, the letter of approval from a relevant and formally constituted Human Research Ethics Committee.
3. The project is commenced within 12 months of this approval letter and any extensions or variations to your study, including those requested by an ethics committee must be submitted to the Department of Education and Training for its consideration before you proceed.
4. As a matter of courtesy, you advise the relevant Regional Director of the schools or governing body of the early childhood settings that you intend to approach. An outline of your research and a copy of this letter should be provided to the Regional Director or governing body.
5. You acknowledge the support of the Department of Education Training in any publications arising from the research.
6. The Research Agreement conditions, which include the reporting requirements at the conclusion of your study, are upheld. A reminder will be sent for reports not submitted by the study's indicative completion date.

VICTORIA
State
Government

8.5 Appendix E: Approval to Conduct Research – Catholic Education Melbourne

From: Research
To: Greg Souvan
Cc: Brennan, Jonathan; Prendergast, Shani
Subject: FW: Research Application 0581: Outcome (Approved)
Date: Wednesday, 25 January 2017 7:25:44 AM

Dear Mr Souvan

Congratulations, your research application, 0581 - 'NAF - School Teachers' Self-Efficacy for Career Development Learning and Teaching', has been approved by Catholic Education Melbourne.

I am pleased to advise that your research application is approved in principle subject to the eight standard conditions outlined below.

1. The decision as to whether or not research can proceed in a school rests with the school's principal, so you will need to obtain their approval directly before commencing any research activity. You should provide the principal with an outline of your research proposal and indicate what will be asked of the school. A copy of this email of approval, and a copy of notification of approval from your organisation's/university's Ethics Committee, should also be provided.

2. A copy of the approval notification from your institution's Ethics Committee must be forwarded to this Office (if not already provided), together with any modifications to your research protocol requested by the Committee. You may not start any research in Catholic schools until this step has been completed.

3. A Working with Children (WWC) check – or registration with the Victorian Institute of Teaching (VIT) – is necessary for all researchers visiting schools. Appropriate documentation must be shown to the principal before starting the research in the school.

4. No student is to participate in the research study unless s/he is willing to do so and consent is given by a parent/guardian.

5. Any substantial modifications to the research proposal, or additional research involving use of the data collected, will require a further research application to be submitted to Catholic Education Melbourne.

6. Data relating to individuals or the school are to remain confidential and protected in line with the Privacy Act 1988 (Commonwealth).

7. Since participating schools have an interest in research findings, you should consider ways in which the results of the study could be made available for the benefit of the school community.

8. At the conclusion of the study, a copy or summary of the research findings should be forwarded to Catholic Education Melbourne. It would be appreciated if you could submit this via email to research@cem.edu.au.

I wish you well with your research study. The information provided in your proposal is now closed for further changes. If you have any queries concerning this matter or need to make amendments in the future, please contact Ms Shani Prendergast at research@cem.edu.au.

Yours sincerely

Mr Jim Miles
DIRECTOR ENTERPRISE SERVICES
Catholic Education Melbourne

8.6 Appendix F: Approval to Conduct Research – Government of SA DECD

Government of South Australia
Department for Education and Child Development

Strategy and Performance

Level 8
31 Flinders Street
Adelaide SA 5000
GPO Box 1152
Adelaide SA 5001
DX 541
Tel: 8226 0809
Fax: 8226 1605

DECD CS/16/00069-1.11

Mr Greg Souvan
University of Southern Queensland
7 Gladstone Street
Maryborough QLD 4650

Dear Mr Souvan,

Your research project, *'School Teachers' Self-Efficacy for Career Development Learning and Teaching"*, has been reviewed by a senior officer within our department.

I am pleased to advise you that your application has been approved, subject to the following conditions:

- That a copy of any final reports, presentations or manuscripts accepted for publication be submitted to the DECD.ResearchUnit@sa.gov.au mailbox 30 days prior to publication.
- That DECD is provided with a copy of any modifications of the teacher survey during the course of the study prior to it being distributed.

Please contact Jessica Newport in the Business Intelligence Unit for any other matters you may wish to discuss regarding your application (Tel. (08) 8226 0809 or email: DECD.ResearchUnit@sa.gov.au).

I wish you well with your research.

Ben Temperly
EXECUTIVE DIRECTOR, SYSTEM PERFORMANCE

8.7 Appendix G: Participant Information Sheet

University of Southern Queensland

Participant Information Sheet for USQ Research Project

School Teachers' Self-Efficacy for Career Development Learning and Teaching

Introduction:
You are invited to take part in research I am conducting for the Doctor of Education degree through the University of Southern Queensland. Please read the following information carefully.

The Purpose of the Study
The purpose of the study is to explore teacher self-efficacy beliefs when it comes to teaching career education in secondary schools in Australia. Through this research, I aim to heighten education departments' awareness of career development learning in schools. The results of the research will inform professional development for teachers in the future.

Target Participants
The participants targeted for this research are secondary school teachers who do not possess formal qualifications in career development, regardless of whether they teach a career education class or have never taught a career education class. It is anticipated to include all secondary school teachers in this research as with many school policies, any teacher may be drawn upon from any curriculum area to teach a career education class. The approximate number of participants will 400.

Timelines
The survey will open on 16th October 2017 and will close midnight on 28th March 2018. However, the principal researcher reserves the right to extend the timelines to provide extra time to attract further participants.

What is asked of you
It is asked that you complete an online survey that should take no longer than around 5-10 minutes. You will be able to save your incomplete online survey and resume at a later point without losing your input data. An email reminder will be sent to you if you have an incomplete survey. However, this survey is voluntary and you are under no obligation to participate and you can withdraw at any time with no consequence occurring. The imposition to you is purely your time to complete the online survey.

Will your taking part in this study be kept confidential?
All data collected during the research will remain confidential and will be stored on the secure cloud storage network used by USQ (NECTAR). The data will be stored for five years and may be used again to publish papers in academic journals. At the end of the storage period, the data will be deleted from the network and cloud storage within the stipulated time period. As per QLD State Archives University Sector Retention and Disposal Schedule.

What will happen to the results of the research study?
The results will be published as a thesis with aggregate data being published and may be shared at academic conferences and in academic and education journals. Your name will not be associated with any of the results that may appear in the publications so you are assured of complete anonymity. At the end of the study, if you are interested, please email me and I will send you a summary of the findings. The overall research findings will also be sent to the Principal.

Who has reviewed the study?
The study has been reviewed by the University of Southern Queensland's Human Research Ethics Committee and will be carried out in accordance with the National Statement on Ethical Conduct in Human Research.

Contact for Further Information
If you are now willing to participate in this research study, please sign the consent form and either deliver it in person or email it back to me. You will be given a copy of this information sheet and the signed consent form to keep. If on the other hand you have decided not to participate, thank you for your time.

Should you require further information, please feel free to contact me or one of my supervisors.

Greg Souvan (Principal Investigator)
gregory.souvan@usq.edu.au
Mobile: 0407 194 457

Dr Peter McIlveen (Principal Supervisor)
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Dr Stephen Hughes (Associate Supervisor)
stephen.hughes@usq.edu.au

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au. The Ethics Coordinator is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

8.8 Appendix H: Letter to Principal – Consent for Teachers to Participate in Survey

University of Southern Queensland

7.2 Letter to Principal
Principal's Anonymous Online Survey Consent

The teachers within your school are invited to participate in a research project entitled *"School Teachers' Self-Efficacy for Career Development Learning and Teaching"* is designed to investigate the extent to which teachers feel they can teach career education in secondary schools in Australia. The research I am conducting is towards my Doctor of Education degree through the University of Southern Queensland.

I am requesting your assistance in conducting this study. Would you please forward this email to teachers within your school. Attached in this email is a Participant Information Sheet that will provided details of the project to yourself and your teachers.

The purpose of the study is to explore teacher self-efficacy beliefs when it comes to teaching career education in secondary schools in Australia. Through this research, I aim to heighten education departments' awareness of career development learning in schools. The results of the research will inform professional development for teachers in the future.

The participants targeted for this research are secondary school teachers who do not possess formal qualifications in career development, regardless of whether they teach a career education class or have never taught a career education class. It is anticipated to include all secondary school teachers in this research as with many school policies, any teacher may be drawn upon from any curriculum area to teach a career education class.

It is asked that teachers complete an online survey that includes 64 questions. The questions are all part of five separate questionnaires that should take no longer than around 10 minutes. The questionnaires include: 11 demographic items,12 items designed to assess teacher self-efficacy in general, 24 items to assess teacher's self-efficacy to teach a career education class, 11 items to ascertain teaches current knowledge of career education competencies and 6 items to assess self-efficacy of staff in any organisation about their performance, job satisfaction and commitment in general. The link to the survey on will open on October 16 2017 and will close March 31 2018 or earlier when the minimum number of participants required have submitted their responses.

There are no known risks involved with this study. Participation is completely voluntary and there will be no penalty or loss of benefits if you or your teaching staff chooses not to participate in this research study or to withdraw. Forwarding this email to your teaching staff indicates your agreement to share this research.

All data collected during the research will remain confidential and will be stored on the secure cloud storage network used by USQ (NECTAR). The data will be stored for five years and may be used again to publish papers in academic journals. At the end of the storage period, the data will be from network and cloud storage within the stipulated time period. As per QLD State Archives University Sector Retention and Disposal Schedule.

The results will be published as a thesis with aggregate data being published and may be shared at academic conferences and in academic and education journals. Your school's name will not be associated with any statements that may appear in the publications so you are assured of complete anonymity. At the end of the study, if you are interested, I can send you or individual teachers a summary of the findings.

The study has been reviewed by the University of Southern Queensland's Human Research Ethics Committee and will be carried out in accordance with the National Statement on Ethical Conduct in Human Research.

Should you require further information, please feel free to contact me or one of my supervisors.

Greg Souvan (Principal Investigator)
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Dr Stephen Hughes (Associate Supervisor)
stephen.hughes@usq.edu.au

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au. The Ethics Coordinator is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

8.9 Appendix I: CreateSurvey Survey Items Reproduced

Online survey powered by CreateSurvey

School Teachers' Self-Efficacy for Career Development Learning and Teaching

School Teachers' Self-Efficacy for Career Development Learning and Teaching Survey

This is a confidential and anonymous online survey for secondary school teachers who are currently employed in Australian schools.

By submitting this online survey, you are indicating that you:

1. Have read and understood the **Participant Information Sheet** regarding this project that was attached in the email with the link to this survey.
2. Have had any questions about the project answered to your satisfaction.
3. Understand that you can contact the University of Southern Queensland (USQ) Research Ethics Committee.

Agree to participate in the project

Should you require further information, please feel free to contact me or one of my supervisors.

Greg Souvan (Principal Investigator)
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Dr Peter McIlveen (Principal Supervisor)
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Dr Stephen Hughes (Associate Supervisor)
stephen.hughes@usq.edu.au

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au. The Ethics Coordinator is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

Submit Later | Next

Item 1 - Teacher Beliefs - CETSES

Career Education Teacher Self-Efficacy Scale

(Souvan, G. 2019)

This part of the survey is designed to help us gain a better understanding of the kinds of challenges for teachers who either teach a career education class or may be expected to teach a career education class sometime in the future.

Directions: Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.

Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.	**Not at All**		**Very Little**		**Some Degree**		**Quite a Bit**		**A Great Deal**
1. How much can you do to positively influence career planning for the most difficult students?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
2. How much can you do to assist your students to think critically about their career planning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
3. How much can you do with your skills in classroom management to control disruptive behaviour in a career education class?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
4. How much can you do to motivate students who show low interest in their career planning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
5. To what extent can you make your expectations clear about student behaviour?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
6. How much can you do to get students to believe that participation in career education will enhance their post-school options?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
7. How well can you use your skills and knowledge in career development to respond to difficult questions from your students?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
8. How well can you establish routines to keep career education activities running smoothly?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
9. How much can you do to help your students value career planning and learning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
10. How much can you do to evaluate student comprehension of the career planning concepts you have taught?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
11. To what extent can you use your teaching competencies to develop good questions to engage your students in career planning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
12. How much can you do to empower students to become creative and analytical in their career planning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
13. How much can you do to get students engaged in their career planning thereby minimising disruptive behaviours within the classroom?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
14. How much can you do to improve the understanding of students who are not grasping the concepts being taught in career planning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
15. How much can you do to calm and reengage a student who is disruptive or noisy in a career education class?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
16. How well can you establish rules and routines for each of your career planning classes?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
17. How much can you do to differentiate your career education classes to support students with a variety of learning abilities?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
18. How much can you use a variety of assessment strategies to gauge student learning in a career education class?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
19. How well can you manage your career education class using a variety of strategies to keep all students engaged?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
20. To what extent can you rely upon your knowledge and skills in career development to provide confused students with a variety of examples and explanations?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
21. With your current level of expertise of career development, how confident are you that you have the strategies to reengage students with difficult and defiant behaviours?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
22. To what extent can you support family involvement in their children's career planning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
23. To what extent can you innovate your teaching strategies in career education to optimise student learning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
24. How well can you use your skills and knowledge in career planning to challenge very capable students?	①	②	③	④	⑤	⑥	⑦	⑧	⑨

Item 2 -Teacher Beliefs (TSES)

Teacher Beliefs (Tschannen-Moran, M. and A. W. Hoy 2001)

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for teachers. Your answers are confidential.

Directions: Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.

Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.

	Not at All		Very Little		Some Degree		Quite a Bit		A Great Deal
1. How much can you do to control disruptive behaviour in the classroom?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
2. How much can you do to motivate students who show low interest in school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
3. How much can you do to calm a student who is disruptive or noisy?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
4. How much can you do to help your students value learning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
5. To what extent can you craft good questions for our students?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
6. How much can you do to get children to follow classroom rules?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
7. How much can you do to get students to believe they can do well in school work?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
8. How well can you establish a classroom management system with each group of students?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
9. To what extent can you use a variety of assessment strategies?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
10. To what extent can you provide an alternative explanation or example when students are confused?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
11. How much can you assist families in helping their children to well in school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
12. How well can you implement alternative teaching strategies in your classroom?	①	②	③	④	⑤	⑥	⑦	⑧	⑨

Item 3 - The Australian Blueprint for Career Development

The Australian Blueprint for Career Development (ABCD) details the 11 competencies that students will need to possess in differing stages of their lifespan.

As a teacher who is or may be required to teach in a career education program, you will need to have sufficient content knowledge in the 11 competencies.

Directions: The following questions ask you how you would your rate your current knowledge of the following 11 career management competencies.

How would you rate your content knowledge to teach students how to...	Limited	Emerging	Acceptable	Very good	Excellent
1. "Build and maintain a positive self-concept"	①	②	③	④	⑤

This career management competency is mainly about:

- Knowing who we are (in terms of interests, skills, personal qualities, etc)
- Being aware of our behaviours and attitudes
- Understanding what influences our behaviours and attitudes
- Adopting behaviours that reflect a positive attitude about ourselves
- Understanding how our self-concept has an impact on achieving our personal, social, educational and professional goals and decisions
- Understanding the importance of and being able to give and receive feedback

2. "Interact positively and effectively with others" ① ② ③ ④ ⑤

This career management competency is mainly about:

- Understanding and demonstrating interpersonal and group communication skills that enable us to help or collaborate with others
- Knowing how to deal with peer pressure, and understanding how our behaviours and those of others are interrelated
- Respecting diversity
- Being honest with others
- Understanding the importance of positive relationships in our personal and professional lives
- Being able to express personal feelings, reactions and ideas in an appropriate manner
- Knowing how to solve interpersonal problems

3. "Change and grow throughout life" ① ② ③ ④ ⑤

This career management competency is mainly about:

- Understanding that our motivations and aspirations change, and that we all go through physical and psychological changes
- Being aware of how change and growth might impact upon our mental and physical health
- Demonstrating good health habits
- Knowing how to manage stress
- Being able to express our feelings
- Being able to ask for help
- Being aware of how mental and physical health impact life, learning and work decisions
- Being aware of how changes related to work can impact on our lives and may require commensurate life changes
- Knowing how to adapt to changes in all areas of our lives

How would you rate your content knowledge to teach students how to...	Limited	Emerging	Acceptable	Very good	Excellent
4. "Participate in lifelong learning supportive of career goals"	①	②	③	④	⑤

This career management competency is mainly about:

- Understanding how skills can be transferable
- Knowing what influences life and work successes
- Understanding how to improve our strengths, skills and knowledge
- Knowing about learning opportunities
- Understanding the relationship between educational levels and the learning or work options that are open to us
- Demonstrating behaviours and attitudes that contribute to achieving our personal and professional goals
- Having personal and professional learning plans
- Undertaking continuous learning activities

5. "Locate and effectively use career information" ① ② ③ ④ ⑤

This career management competency is mainly about:

- Knowing where and how to access reliable career information
- Knowing how to use various sources of career information
- Knowing how to use school and community settings and resources to learn about work roles and alternatives
- Knowing how to interpret and use labour market information
- Knowing what working conditions we want for ourselves
- Understanding the realities and requirements of various education, training and work settings

6. "Understand the relationship between work, society and the economy" ① ② ③ ④ ⑤

This career management competency is mainly about:

- Understanding how work can satisfy our needs
- Understanding how work contributes to our community and society in general
- Understanding how society's needs and functions affect the supply of goods and services
- Understanding how economic and social trends affect our work and learning opportunities
- Understanding the effect of work on people's lifestyles
- Determining the value/importance of work for ourselves
- Understanding how organisations operate
- Understanding the nature of the global economy and its impact on individuals and society
-

7. "Secure/create and maintain work" ① ② ③ ④ ⑤

This career management competency is mainly about:

- Understanding the importance of personal qualities in creating/getting/keeping work
- Demonstrating creative ways of performing work activities
- Articulating one's skills to others
- Understanding that skills and experiences are transferable to various work settings
- Being able to work/collaborate with people who are different from ourselves
- Developing work search tools and skills
- Knowing how to locate, interpret and use labour market information
- Demonstrating employability skills
- Knowing about services or initiatives that support people's transition from high school to work or further education and training
- Understanding the value of volunteer work from a work search perspective

How would you rate your content knowledge to teach students how to...	Limited	Emerging	Acceptable	Very good	Excellent
8. "Make career-enhancing decisions" *This career management competency is mainly about:* • Understanding how choices are made • Understanding how our personal beliefs and attitudes affect our decisions • Being aware of what might interfere with attaining our goals and developing strategies to overcome these • Knowing how to apply problem-solving strategies • Being able to explore alternatives in decision-making situations • Understanding that our career path reflects a series of choices • Demonstrating the skills, knowledge and attitudes required to assess work and learning opportunities • Being able to develop a range of creative scenarios supportive of our preferred future • Being able to evaluate the impact of our decisions on ourselves and others					
9. "Maintain balanced life and work roles" *This career management competency is mainly about:* • Being aware of the various roles we may have • Being aware of the responsibilities linked to each of our roles • Understanding how these different roles require varying amounts of energy, participation, motivation, and so on • Understanding how our various life and work roles impact upon our preferred future or lifestyle • Determining the value of work, family and leisure activities for ourselves • Being able to determine the kind of work, family and leisure activities we feel might contribute to a balanced life	①	②	③	④	⑤
10. "Understand the changing nature of life and work roles" *This career management competency is mainly about:* • Understanding the changing life roles of men and women in work and family settings • Understanding how contributions, both inside and outside the home, are important to family and society • Exploring non-traditional life and work scenarios and examining the possibility of considering such scenarios for ourselves • Being aware of stereotypes, biases and discriminatory behaviours that limit women and men in certain work roles • Demonstrating attitudes, behaviours and skills that help to eliminate gender bias and stereotyping	①	②	③	④	⑤
11. "Understand, engage in and manage the career-building process" *This career management competency is mainly about:* • Being able to define our preferred future and revisit it on a constant basis • Being able to build career scenarios in step with our preferred future • Understanding the importance of setting goals • Being able to set career goals reflective of our preferred future • Being able to develop career plans in step with our preferred future and to pursue them • Being able to create and maintain a career portfolio • Understanding how risk taking and positive attitudes are important to our career-building process • Knowing how to plan for and apply coping strategies or new career scenarios during transitional periods (e.g., starting a family, retirement, or losing a job)	①	②	③	④	⑤

Item 4 - Occupational Self-Efficacy Scale (OSES)

(Rigotti, Schyns, & Mohr, 2008)

The OSES is a proven instrument to measure employee's occupational self-efficacy. That is, how an individual thinks about their general abilities to fulfil their duties and cope in the workplace.

Directions: Rate your responses to the questions about your occupational self-efficacy below.

		Strongly Disagree	Disagree	Neutral (neither disagree or Agree	Agree	Strongly Agree
1.	I can remain calm when facing difficulties in my job because I can rely on my abilities.	①	②	③	④	⑤
2.	When I am confronted with a problem in my job, I can usually find several solutions.	①	②	③	④	⑤
3.	Whatever comes my way in my job, I can usually handle it.	①	②	③	④	⑤
4.	My past experiences in my job have prepared me well for my occupational future.	①	②	③	④	⑤
5.	I meet the goals that I set for myself in my job.	①	②	③	④	⑤
6.	I feel prepared for most of the demands in my job.	①	②	③	④	⑤

Item 5 - About you

1. Where is your school located?

☐ **Metropolitan:** (a capital city with 100 000 or more inhabitants)

☐ **Regional:** (generally defined as in a centre with a population above 1 000 but not a capital city)

☐ **Rural:** (generally defined as those centres with less than 1 000 persons)

2. What Gender do you identify with?

☐ Male ☐ Female ☐ Other

3. Please select your age group from the drop down menu.

☐ 20-29
☐ 30-39
☐ 40-49
☐ 50-59
☐ Above 60

4. How many years of teaching experience do you have? *Please select from the drop down menu.*

☐ 0 - 1 years ☐ 1 - 2 years ☐ 2 - 3 years ☐ 3 - 4 years
☐ 4 - 5 years ☐ 5 - 10 years ☐ 11 - 15 years ☐ 16 - 20 years
☐ 21 - 25 years ☐ Greater than 26 years

5. What is your main teaching area?

☐ Mathematics ☐ English ☐ Performing Arts ☐ Science
☐ Visual Arts (Including VET Certificates) ☐ Humanities
☐ Health & Physical Education (Including VET Certificates)
☐ Hospitality & Home Economics
☐ Manual Arts (Including VET, Engineering and Furnishing)
☐ VET area (Other) ☐ Business Studies (Including VET Certificates)

6. Which cohort of students do you *mostly* teach?

☐ Junior Secondary: Years 7-9
☐ Senor Secondary: Years 10-12
☐ Both Junior and Senior Secondary: Years 7-12

7. What career education program does your school use?

☐ A program based upon the Australian Blueprint for Career Development
☐ ACARA Work Studies Years 9-10
☐ I have no idea!!!
☐ Other course: please provide some details

_____

_____

8. Your qualifications in Career Development

☐ No qualifications in Career Development
☐ Certificate IV in Career Development
☐ Graduate Certificate in Career Development
☐ Master of Education e.g., Guidance & Counselling
☐ Other, please specify e.g., any specific professional development:

9. If you had your choice, would you choose to be the one to teach Career Education to your students?

☐ Definitely no
☐ Probably no
☐ Not sure
☐ Probably yes
☐ Definitely yes

10. If you were allocated a career education class or asked to embed careers into your subject curriculum, you would:

☐ Embrace the opportunity
☐ Teach the class happily but would expect support/professional development
☐Teach the class with some reluctance
☐ Teach the class under much duress
☐ Reject or decline

11. Compared to the minimum amount of time I should spend teaching Career Education, I spend:

☐ I don't teach or embed any aspect of careers in any class
☐ A lot less than required
☐ A bit less
☐ Enough
☐ A bit more
☐ A lot more

12. Please rate how you view your own effectiveness as a teacher who may need to or already teaches Career Education

☐ Superior
☐ Above average
☐ Average
☐ Below average
☐ Low