An Exploration of the Study Engagement of Trainee Accountants in Ireland

Thesis Submitted for the award of

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By

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DECLARATION

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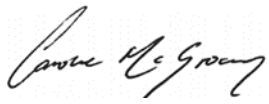

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DEDICATION

My Parents and James Anthony

Together you instilled in me the importance of education, the virtues of hard work and perseverance, and encouraged me to never give up on this goal. Thank you for everything.

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LIST OF ABBREVIATIONS

Abbreviation	Full Title
AAA	American Accounting Association
ACCA	Association of Chartered Certified Accountants
AECC	Accounting Education Change Commission
AIC	Akaike Information Criterion
ANOVA	Analysis of Variance
ASI	Approaches to Studying Inventory
ASSIST	Approaches and Study Skills Inventory for Students
AUSSE	Australian Survey of Student Engagement
BIC	Bayesian Information Criterion
CAI	Chartered Accountants Ireland (also referred to as “the Institute”)
CAP	Chartered Accountancy Proficiency
CCSSE	Community College Survey of Student Engagement
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CIMA	Chartered Institute of Management Accountants
CLF	Common Latent Factor
CMV	Common Method Variance
COR	Conservation of Resources
COVID-19	Coronavirus
CPA	Certified Public Accountant
CPD	Continuing Professional Development
CSEQ	College Student Experiences Questionnaire
DCU	Dublin City University
DF	Degrees of Freedom
DV	Dependent Variable
EFA	Exploratory Factor Analysis
FAE	Final Admitting Examination
FIML	Full Information Maximum Likelihood
GPA	Grade Point Average
GRAMMS	Good Reporting of a Mixed Methods Study
HOL	Higher Order Learning
IAASA	Irish Auditing and Accounting Supervisory Authority
IAESB	International Accounting Education Standards Board
ICAEW	Institute of Chartered Accountants in England and Wales
ICAI	Institute of Chartered Accountants Ireland
ICAS	Institute of Chartered Accountants of Scotland
IEO	Input-Environment-Output
IFAC	International Federation of Accountants
IPD	Initial Professional Development
ISSE	Irish Survey of Student Engagement

Abbreviation	Full Title
IV	Independent Variable
JD-R	Job Demands-Resources
MAR	Missing at Random
MBI-GS	Maslach Burnout Inventory - General Survey
MBI-SS	Maslach Burnout Inventory - Student Survey
MCAR	Missing Completely at Random
MNAR	Missing not at Random
MSLQ	Motivated Strategies for Learning Questionnaire
NSS	National Student Survey
NSSE	National Survey of Student Engagement
OECD	Organisation for Economic Co-operation and Development
PAB	Professional Accounting Body
PhD	Doctor of Philosophy
QUAL/qual	Qualitative
QUAN/quan	Quantitative
RMSEA	Root Mean Square Error of Approximation
SCT	Social Cognitive Theory
SEM	Structural Equation Modelling
SIG	Significance
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized Root Mean Square Residual
Std.Dev.	Standard Deviation
TLI	Tucker-Lewis Index
UK	United Kingdom
US	United States (of America)
UWES	Utrecht Work Engagement Scale
UWES-S	Utrecht Work Engagement Scale - Student
VIF	Variance Inflation Factor
$\chi 2$	Chi-square

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ABSTRACT

Caroline McGroary

An Exploration of Study Engagement of Trainee Accountants in Ireland

While the concept of study engagement has been the focus of much research in the higher education literature, it has received little attention in professional education research. To address this gap, this research investigates the study engagement of trainee accountants preparing for the qualifying exams of a professional accountancy body (PAB). The study applies the Job Demands-Resources (JD-R) theory and explores, firstly, the mediating role of behavioural, cognitive and affective study engagement in the relationship between study resources (e.g. effective teaching practices), personal resources (academic self-efficacy), demands (work exhaustion) and the outcome variable of exam performance. Secondly, the moderating role of study resources in the relationship between personal resources, demands and study engagement is explored. The study adopted a mixed methods research design, with a dominant quantitative approach. Firstly, structural equation modelling was used to test the study hypotheses, based on a sample of 1,201 respondents. Secondly, interviews were undertaken to provide supplementary insights to the quantitative findings. The results reveal that study engagement is a mediating variable in the motivational process between resources, demands and exam performance. Furthermore, some support was found for the propositions that: 1) resources (personal and study) positively influence the motivational process leading to study engagement and exam performance, and 2) demands negatively influence this process. Additionally, there was limited evidence regarding the moderating role of study resources in the relationship between personal resources, demands and study engagement. From a theoretical perspective, the use of JD-R theory to explore resources and demands from different domains (work and study) is a notable contribution of this research. From a conceptual perspective, the use of a multidimensional definition of engagement is novel and significant. The practical implications of the findings for professional accounting education are also considered in the thesis and directions for future research are outlined.

CHAPTER ONE: INTRODUCTION

1.1 Overview of the Research

> Your primary goal is to get your qualification, but your primary energy is devoted to your job, so that is your focus. It is hard, […] you are using your spare time to do your study […] you are wrecked.
>
> P2, 2015 Cohort

This opening quote highlights the challenges that trainee accountants face when balancing the demands of both working and studying, and how this can potentially impact on their engagement in their professional studies, as well as the quality of learning at the pre-qualification stage. Recognising the importance of well-educated members to the future of the accountancy profession, and the potential of study engagement as an intervention to help improve the quality of education in any educational setting (McCormick, Kinzie, & Gonyea, 2013), this study aims to gain a deeper understanding of the study engagement of trainee accountants. Using a mixed methods approach, this research explores the process of study engagement along with the factors that can potentially contribute to (resources), and impede (demands), this process, and ultimately exam performance. This research was motivated by the researcher's personal experience of learning within a professional educational environment, as well as an identified research opportunity, both of which are discussed below.

1.1.1 Personal Experience

In advance of starting my academic career, I qualified as a Chartered Accountant with the Institute of Chartered Accountants Ireland (ICAI), now known as Chartered Accountants Ireland (CAI). I had also completed undergraduate and postgraduate degrees in accountancy, and at the time of qualification as a Chartered Accountant, was employed as a trainee accountant with one of the "Big Four" international accountancy firms. To qualify and gain membership to CAI, I had to successfully complete a three-year training contract and pass the final qualifying examination, known as the Final Admitting Examination (FAE). A distinct memory from this qualification period was the pressure

of passing the FAE, as well as trying to balance the demands of both working long hours and studying in the evenings and at weekends.

Another notable memory from my experiences studying for the FAE was the variation in how trainee accountants dealt with these challenges and approached their learning. Some trainees attended the majority of lectures, engaged in careful preparation of study notes, and intensive study throughout the FAE year. In contrast, other trainees attended few lectures and tended to leave the majority of their study until *study leave*. Study leave is typically a three-month period in advance of the FAE exams, where trainee accountants are given a leave of absence from work to focus on their studies. My observations of these different approaches to FAE preparation triggered my personal interest in understanding more about how students learn. However, it was not until I moved to my current role, as a university lecturer, that I got an opportunity to reflect on this topic in more detail. Through both my experiences in the classroom, and my increasing interest in research literature, I developed deeper appreciation for the complexity of student learning. Consequently, I became more informed about the variety of ways in which students' engage in learning, the range of factors which can influence study engagement and the relationship between study engagement and learning outcomes. Drawing on these experiences and knowledge, I identified an opportunity to explore fully these issues in a professional accounting education context.

While my personal experiences were informative, care was taken to ensure that this research focused on the experiences of the participants in the study. To ensure clarity, throughout the remainder of this thesis I will refer to myself as "the researcher", with the exception of Section 7.6, where I reflect on this research journey.

1.1.2 A Research Opportunity

For the last number of decades, the role of pre-qualification accounting education programmes in preparing trainee accountants for a career in accounting, has been the subject of much consideration. A range of themes have emerged within this debate, including, the challenges of dealing with an ever-increasing knowledge base (e.g. Evans, Juchau, & Wilson, 2014; Paisey & Paisey, 2006, 2014; Sundem, 2014), the nature of the knowledge and skills being developed (e.g. Boyce, Narayanan, Greer, & Blair, 2019; Chaffer & Webb, 2017; Evans et al., 2014; Flood, 2014; Flood & Wilson, 2009; Pierre

& Rebele, 2014; Rebele & Pierre, 2019; Sangster et al., 2014), as well as the socialisation experiences of trainee accountants, and how they progress through the various stages of professional development from novice to expert (e.g. Anderson-Gough, Grey, & Robson, 1998/2018, 2001, 2002; Grey, 1998; Hamilton, 2013; Murphy & Hassall, 2020; Paisey & Paisey, 2014). Many stakeholders, including the academic community, prominent professional accountancy bodies (PABs) and accountancy training firms, have claimed that accounting education, whether offered by higher education institutions or by PABs, is inadequate (e.g. Accounting Education Change Commission [AECC], 1990; Albrecht & Sack, 2000; American Accounting Association [AAA], 1990; Arthur Andersen et al., 1989; Behn et al., [The Pathways Commission] 2012). For example, a number of reports published by these stakeholders highlighted concerns regarding the balance of technical and soft-skill development, claiming that there was an overemphasis on technical content in accounting education curricula. Interestingly, a more recent perspective highlighted by Rebele and (St.) Pierre is that the changes to embrace soft skills may have gone too far and is at the expense of developing the technical knowledge and skills considered important for a career as an accountant (e.g. Pierre & Rebele, 2014; Rebele & Pierre, 2019). There is also evidence of trainee accountants failing to see the linkage between their professional studies and their work (Anderson-Gough et al., 1998/2018; Evans et al., 2014; Flood, 2014; Flood & Wilson, 2009). These findings have consequences for the accountancy profession, as the International Federation of Accountants (IFAC), the global organisation for the accountancy profession, outlines the important role of the Initial Professional Development (IPD) stage, also known as the pre-qualification stage, in preparing future accountants for complex roles in a rapidly changing business environment (International Accounting Education Standards Board [IAESB], 2019; IFAC, 2020).

In addition to challenges with the curriculum, there are also concerns that pre-qualification education is viewed by trainee accountants as an endurance test, and something which they just need to "get through" in order to become a professional (e.g. Anderson-Gough et al., 1998/2018, 2001, 2002; Hamilton, 2013; Paisey & Paisey, 2014). Therefore, questions are raised about the quality of learning that takes place at the IPD stage, and whether the engagement habits formed at this stage may influence accountants' longer-term work engagement and professional development after qualification, as well as their long-term well-being. These questions are informed by research highlighting the

interlinkages between the various stages of professional development of accountants (e.g. Murphy & Hassall, 2020), as well as research highlighting that engagement patterns remain relatively stable over time (e.g. Maslach & Leiter, 2008; Salmela-Aro, Tolvanen, & Nurmi, 2009, 2011; Schaufeli & Bakker, 2010). Therefore, engagement experiences early in one's career may act as early predictors of future engagement in work and learning tasks.

Despite the importance of the IPD stage to the "making of an accountant" and the future of the accounting profession, with the exception of a small number of studies (e.g. Anderson-Gough et al., 1998/2018; Flood & Wilson, 2008; Grey, 1998; Hassall & Joyce, 2001), there is a notable dearth of research rigorously examining trainee accountants experiences of professional education. The need for further research in this area was also highlighted through specific calls for empirical research exploring the educational experiences of trainee accountants (e.g. Apostolou, Dorminey, & Hassell, 2020; Tharapos & Marriott, 2020; Wilson, 2014). Recognising this research opportunity, the researcher consulted the higher education literature and explored a number of theories and concepts in this field to determine how they could be used to better understand the process of learning in a professional accounting education setting. In doing so, the concept of study engagement emerged as a useful way to explore the learning of trainee accountants. Consequently, a number of specific research aims and objectives were constructed which are outlined in the section below. Included in this section is an overview of the theoretical framework used to frame this research, along with a brief description of the study variables selected.

1.2 Aims and Objectives

The overall objective of this research is to gain a better understanding of the study engagement of trainee accountants as they prepare for the final qualifying exams of one of the PABs in Ireland. In doing so, this study aims to address some of the gaps in the literature identified above. Using the Job Demands-Resources (JD-R) theory to frame this research, this study explores the mediating role of behavioural, cognitive and affective study engagement in the relationship between study resources (e.g. effective teaching practices), personal resources (academic self-efficacy), demands (work exhaustion) and the outcome variable of exam performance. The potential moderating role of study

resources between demands, personal resources and study engagement is also explored. This overall research objective is summarised in diagram format in Figure 1.1 below, followed by a brief introduction to JD-R theory and the variables explored in this study.

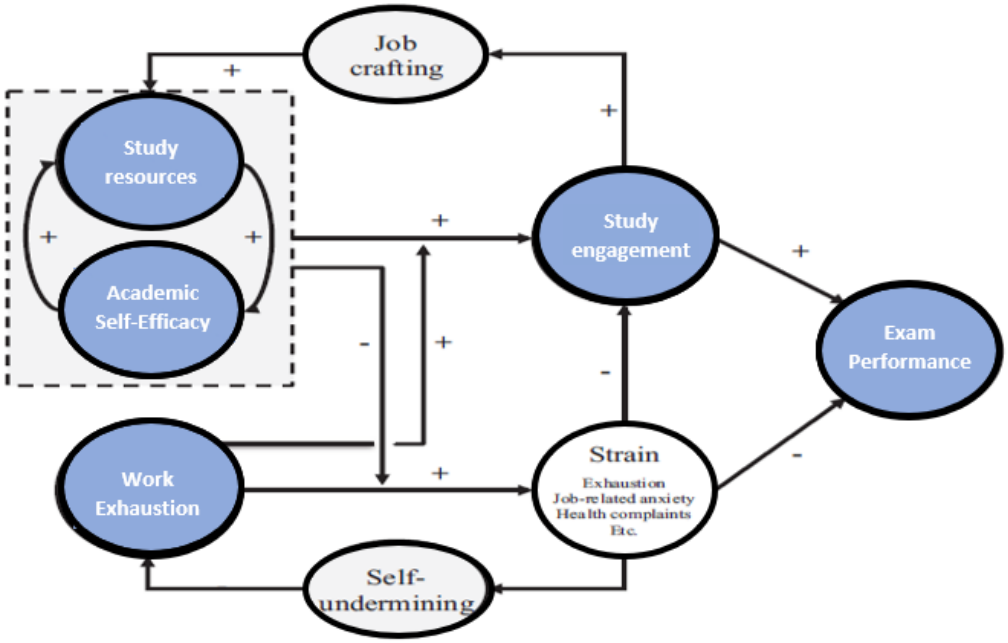


Figure 1.1: Hypothesised research model

(Adapted from: Bakker & Demerouti, 2017, p.275)

***Note*.** The variables highlighted in blue above are explored in this study.

Job Demands-Resources Theory. The Job Demands-Resources (JD-R) theory was used to frame this research. In the engagement literature, this theory has gained significant empirical support as a theory to explain the role of demands and resources in the engagement process (Bakker & Demerouti, 2017). The theory is explained in detail in Chapter Three (Section 3.3.2) followed by an overview of the key reasons as to why it was chosen in this research (Section 3.3.3).

Study engagement. In the education literature study engagement is often considered to have three main dimensions, behavioural, cognitive and affective, whereby all three types are distinct, yet interrelated (Boykin & Noguera, 2011; Fredricks, Blumenfeld, & Paris, 2004; Kahu, 2013). Behavioural study engagement conveys the presence of "on-task behaviour" (Boykin & Noguera, 2011, pp. 52-53), including lecture attendance and active learning. As trainee accountants are expected to attend and actively engage in lectures, this was considered an important dimension of engagement to include

in this study. Similarly, cognitive engagement was considered important in this research context as it refers to activities aimed at comprehending complex concepts and conveys deep (rather than surface) processing of information, where the aim is to gain critical or higher-order understanding of the subject matter (Boykin & Noguera, 2011, p. 53). Finally, affective study engagement was included as it captures an individual's emotional reactions related to task investment, including interest level, positive affect and attitude (Boykin & Noguera, 2011, p. 53). By exploring all three dimensions, the comparative value of each can be captured, which is often not explored in the engagement literature. The concept of study engagement is further explored in Chapter Three (Section 3.2).

Antecedent variables. As outlined in Figure 1.1. above, the antecedent variables chosen in this study were study resources (e.g. effective teaching practices), academic self-efficacy as a personal resource and work exhaustion as a demand. Some of the reasons for choosing these variables are outlined below.

Study resources. In the study engagement literature there is widespread support for the role of study resources in the engagement process. For example, in the higher education literature it is widely reported that study resources including effective teaching practices, support from the professional body and enriching educational experiences are important in promoting study engagement (e.g. Kuh, 2001). As the study resources provided by the professional body in this study largely fall into these three categories, they were included as variables of interest in this study. These resources are further explored in Chapter Three (Section 3.5.1).

Academic self-efficacy (personal resource). The role of self-efficacy in the engagement process is well documented in the education literature (e.g. Kahu, 2013; Pintrich, 2004). In an academic setting self-efficacy refers to a student's confidence in his/her abilities to successfully perform academic tasks at a designated level (Schunk, 1991; Schunk & Mullen, 2012). Furthermore, self-efficacy is considered a personal resource as it is an internal resource which is malleable and the source of personal growth and development, rather than being a personality trait (Schaufeli & Taris, 2014). It was also considered important to distinguish general self-efficacy beliefs from domain specific beliefs. There is a strong case made in the field of social learning theory that self-efficacy beliefs in one domain may not transfer across to another domain (e.g. Bandura, 1977). For example, one may have high efficacy beliefs regarding their work tasks but

may have lower efficacy beliefs regarding study tasks. Therefore, the distinction between academic and general self-efficacy beliefs was considered important in this study. This personal resource is further explored in Chapter Three (Section 3.5.2).

Work exhaustion (demand). Work exhaustion, albeit often considered an outcome of hindrance demands in the psychology literature (e.g. Demerouti, Bakker, Nachreiner & Schaufeli, 2001), was chosen as a demand in this study. This was based on the view that once an individual changes domain, which in the case of this research was the work domain to the study domain, exhaustion became a hindrance demand. This choice was based on the education literature where demands are commonly defined "as the sum of all the pressures in a student's life including, employment, needs of dependents, finances and health" (Kahu, 2013, p. 767). As trainee accountants are expected to work long hours while at the same time study for their professional exams, it was expected that they would likely experience exhaustion, which in turn would spillover and have a negative impact on their study engagement. This demand is further explored in Chapter Three (Section 3.5.3).

Exam performance. Exam performance was considered the outcome variable of interest in this research setting. This was due to performance in the final qualifying exams being considered an important milestone in the career progression of a Chartered Accountant. The relationship between study engagement and exam performance is further explored in Chapter Three (Section 3.4).

1.3 Research Methodology

This study followed a two-stage sequential mixed methods research design, as outlined in Figure 1.2 below.

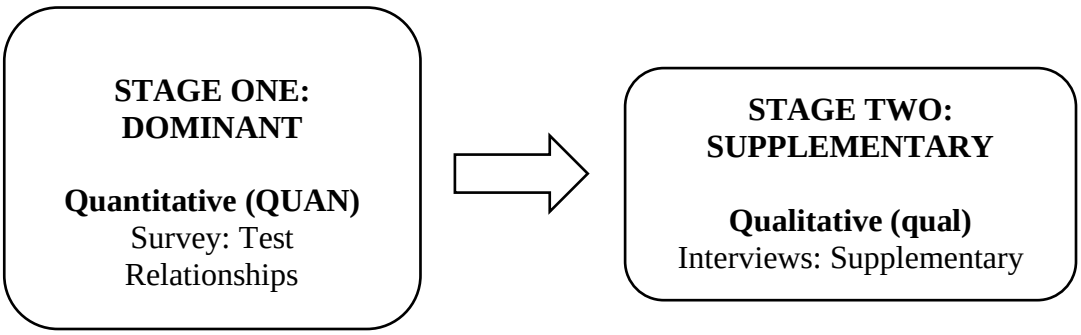


Figure 1.2: Research design

The first stage adopted a quantitative approach and was the dominant research phase. It involved testing the relationships in the hypothesised model using structural equation modelling (SEM) via Mplus version 8 (Muthén, Muthén, & Asparouhov, 2017). This was done using a sample of 1,201 respondents. The second stage adopted a qualitative approach to obtain enhanced description, understanding and explanation of the results obtained at stage one. The qualitative stage was executed through 26 semi-structured interviews. Together, these findings provide some support for the mediating role of behavioural, cognitive and affective study engagement in the relationships between resources, demands and exam performance. However, the findings provide limited support for the moderating role of study resources. This research makes a number of research contributions, which are summarised below and discussed in depth in Chapter Seven (Section 7.3).

1.4 Research Contributions and Practical Implications

This is the first piece of research to comprehensively explore the concept of study engagement in a professional accounting education setting. In doing so, it makes contributions to four main areas; the accounting education literature; the study engagement literature; the JD-R theory literature; and there are also practical implications of this work.

Accounting education literature. In the accounting education literature this study builds on the current body of research which seeks to understand more about how trainee accountants learn at the IPD stage (e.g. Flood & Wilson, 2008; Gammie, 2000; Hassall & Joyce, 1997, 2001). It does so by exploring the behavioural, cognitive and affective study engagement patterns of trainee accountants, as well as some of the factors which contribute both, positively (e.g. academic self-efficacy), and negatively (e.g. work exhaustion), to the engagement process, and how study engagement impacts on performance in the qualifying exams. It also builds on the work which explores the socialisation experiences of trainee accountants (e.g. Anderson-Gough et al., 1998/2018, 2002; Grey, 1998; Hamilton, 2013). It does so by highlighting how aspects of this socialisation process, for example, the culture of working long hours, can spillover and impact on the learning experiences of trainee accountants. Together, this adds to the debate about the knowledge and skills being developed at the IPD stage (e.g. Boyce et

al., 2019; Chaffer & Webb, 2017). Furthermore, as the IPD stage is considered to lay the foundations for lifelong learning, the engagement patterns identified have implications for the quality of learning, as well as work and study engagement post-qualification, and thus, the future of the accountancy profession.

Study engagement literature. In the study engagement literature this research firstly provides support for a multi-dimensional definition of study engagement which comprises behavioural, cognitive and affective dimensions. Secondly, it provides support for the use of JD-R theory as the theoretical framework to explore the process of study engagement, as well as highlighting how different antecedent variables interact with the various types of engagement. These are important contributions to this literature as there has been ongoing debate about; 1) the best way to define engagement (e.g. Fredricks et al, 2004); 2) the most appropriate theory to explore the process of engagement (Kahu, 2013); and 3) the factors influencing engagement (e.g. Boykin & Noguera, 2011).

JD-R theory literature. In the JD-R theory literature, the majority of studies define engagement as having one-dimension, affective engagement (e.g. Bakker & Demerouti, 2017; Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). The findings of this study support the inclusion of three dimensions, behavioural, cognitive and affective engagement, when applying JD-R theory. Furthermore, this research finds support for the exploration of demands and resources from two different domains - demands from the work domain and resources from the study domain - as well as the spillover effects of demands from the work domain on the study engagement process. This is a notable contribution as the majority of studies explore demands and resources in the same domain (e.g. Crawford, LePine, & Rich, 2010; Mauno, Kinnunen, & Ruokolainen, 2007). Furthermore, there are limited studies exploring spillover effects from the work to the study domain.

Practical implications. There are also practical implications of this research for a number of stakeholders including, PABs, accounting training firms, accounting educators and trainee accountants. Firstly, this research supports previous studies which found that trainee accountants, while engaging in self-directed learning, are primarily exam focused (e.g. Flood & Wilson, 2008). Therefore, this research highlights important questions about their intrinsic interest in their studies and their future careers as accountants. Secondly, this study highlights that even when experiencing exhaustion,

trainee accountants balance the demands of working and studying to do what it takes to pass the qualifying exams and complete work tasks. This not only has implications for the quality of learning at the IPD stage but it also has implications for their long-term well-being. Thirdly, academic self-efficacy emerged as the only antecedent variable in this study to positively impact on all three dimensions of study engagement. As self-efficacy can be influenced through interventions, if the goal of PABs or training firms is to increase study engagement, it may be possible to do so through self-efficacy interventions. Finally, the results of this study highlighted that the study resources provided by the PAB were in some cases greatly valued by the students (e.g. case study lectures) but in other cases were less valued (e.g. lectures focusing on technical material). These insights will be useful to PABs when reflecting on their education programmes.

1.5 Thesis Outline

This thesis consists of seven chapters. Chapter One introduces the study. It also outlines the overall aims and objectives of this research, the research methodology, as well as a summary of the research contributions and practical implications. Chapter Two presents the research context including an overview of the concept of professional education and professional accounting education. Chapter Three presents the concept of study engagement and explores the conceptual and theoretical frameworks shaping this concept, as well as the empirical research from the higher education and the work and study psychology fields. This chapter also identifies the gaps in the literature and the resulting hypotheses. Chapter Four describes the research methodology for both the quantitative and qualitative stages. Chapter Five presents the results from the quantitative analysis. Chapter Six presents a discussion of the quantitative results in light of the theoretical and empirical work underlying the study hypotheses, as well as providing further insights from the qualitative data. Finally, Chapter Seven discusses the achievement of the research objectives, the contributions and practical implications of this research, along with the limitations of this study and suggested areas for future research. This chapter closes with the reflections of the researcher and the overall conclusion to this study.

CHAPTER TWO: PROFESSIONAL ACCOUNTING EDUCATION

2.1 Introduction

The objective of this study, as stated in Chapter One, is to gain a better understanding of the study engagement of trainee accountants as they prepare for the final qualifying exams of one of the PABs in Ireland. The successful completion of the qualifying exams is a critical hurdle to becoming a member of the PAB (completion of a minimum of three years appropriate training is the other key requirement). Additionally, passing the qualifying exams is like a "rite of passage" in the socialisation process of trainee accountants, as they seek to integrate successfully into the organisational culture and professional norms of the training firm. To fully understand this research context, this chapter firstly explores the professional education element of this qualification and socialisation process. This includes a discussion of the concept of education, the nature of professions, the concept of professional competence and the structure of professional education systems. This is followed by an exploration of professional accounting education, which includes a discussion of the accountancy profession, with a specific focus on the professional education system at the pre-qualification stage. The chapter concludes by considering the cultural and organisational aspects of the socialisation process and how these factors potentially impact on trainee accountants study engagement, their future careers and the future of the accountancy profession.

2.2 Professional Education

Professional education is generally understood as the formal mandated education of trainees which enables them to develop the specialised knowledge and skills required for entry to their chosen profession. Taylor (1997) describes the core ideology of professional education as the development of reflective, critical and self-directed learners who have a strong technical knowledge base, with the skills to adapt their knowledge to a changing professional environment (Taylor, 1997, p. 10). Shulman (2005) adds to this view outlining that "professional education is not education for understanding alone; it is preparation for accomplished and responsible practice in the service of others" (Shulman, 2005, p. 53). In order to fully comprehend the meaning of professional education, it is necessary to firstly explore the concept of education and profession separately. From this

discussion the concept of professional competence emerges as the ultimate goal and objective of any professional education system, and is discussed in Section 2.2.3.

2.2.1 The Concept of Education

Greek philosophers including Socrates, Plato and Aristotle outlined that the general role of education was central to the moral fulfilment of individuals and the wellbeing of society, a view which is still relevant today (Organisation for Economic Co-operation and Development [OECD], 2019). However, other researchers focused on alternative ways to understand the concept. For example, Peters (1966) introduced the concept of the "educated person", cautioning that education involves more than transmitting facts and skills; instead, an educated person must have knowledge and a conceptual scheme to understand a collection of disjointed facts. Furthermore, he contended that education systems need to encourage a broad understanding of the world, and not just the development of knowledge through specialised training (Peters, 1966, pp. 7-8).

Jarvis (1983) built on this work by proposing another definition of education which captured the process of learning, outlining that "education is any planned series of incidents, having a humanistic basis, directed towards the participants' learning and understanding" (Jarvis, 1983, p. 5). He claimed that by highlighting the notion of "intention" (planned series of incidents), this definition distinguishes education, which takes place in a formal setting, from experiential learning, which takes place through life experiences, including work. This is particularly important in the context of professional education given the significant role of both education and training in the development of professional competence. In advance of exploring the concept of professional education, it is necessary to comprehend the nature of professions, as outlined below.

2.2.2 The Nature of Professions

While many researchers contend that the task of defining a profession is a sterile activity, as the concept is constantly changing (e.g. Johnson, 1972), others argue that it is worthwhile, as it forms the root of our understanding of the profession (e.g. Saks, 2012). There are three main approaches to understanding the sociology of professions: the functionalist, the interactionist, and the critical approach (Willmott, 1986). The

functionalist approach describes the chief distinguishing feature of a profession as "special competence, acquired as the result of intellectual training" (Carr-Saunders & Wilson, 1933, p. 307). The interactionist approach describes how professions seek to demonstrate their legitimacy through a series of interactions over time, where they try to convince others of their worthiness of professional status (Freidson, 1988; MacDonald, 1995; Willmott, 1986). The critical approach to understanding professions highlights how power and control is negotiated (Willmott, 1986). Larson (1977), through the "professional project", outlined that power is built on the notion of gaining a monopoly as a result of expertise in a specialised area, which results from market control and social mobility (Larson, 1977, p. 558). Abbott (1988/2014) further developed this work claiming that the work of professionals is linked directly to a system of knowledge that formalises the skills from which professional work proceeds (Abbott, 1988/2014, p. 52). Therefore, the ability of a profession to distinguish itself "lies partly in the power and prestige of its academic knowledge" (Abbott, 1988/2014, p. 54). He further explained this notion of power through the concept of *jurisdiction*. He described this as the system which regulates entry and examinations as a means of upholding standards and limiting access.

While there are other theoretical perspectives regarding the study of professions, an in-depth study of the literature on professions is outside the scope of this study. However, this discussion highlights that the nature of professions is centered around the development of specialised knowledge and skills, as well as the acceptance of the values, norms and behaviours of the professional body. The following section explores the development of specialised knowledge and skills, which are considered the foundations of professional competence.

2.2.3 Professional Competence

Professional competence is regarded as the cornerstone of any profession as it is considered the key to public confidence in that profession (Jarvis, 1983). Jarvis (1983) based his model of professional competence on Bloom's (1956) taxonomy of educational objectives, which describes competence as having three interrelated, yet distinct, components - knowledge, skills and attitudes - as presented in Figure 2.1.

Knowledge and Understanding of:	Skills to:	Professional Attitudes:
- Academic discipline(s) - The psycho-motor elements - Interpersonal relationships - Moral values	- Perform psycho-motor procedures - Interact with others	- Knowledge of professionalism - Emotive commitment to professionalism - Willingness to perform professionally

Figure 2.1: The elements of professional competency (Jarvis, 1983, p. 35)

Knowledge. Jarvis (1983) describes professional knowledge as "that selection from the overall body of knowledge considered by members of the profession to be the foundation of their practice" (Jarvis, 1983, p. 74). Eraut (1992) further categorises professional knowledge as: propositional knowledge (knowledge that - factual knowledge), process knowledge (knowledge how - application of knowledge) and personal knowledge.

Propositional knowledge. Propositional knowledge includes discipline-specific theoretical knowledge, as well as experience, which together are regarded as the knowledge base of the profession. Theoretical knowledge is usually communicated in a formal manner, and thus, forms an integral part of the syllabi and examinations for entry into the profession. In contrast, practical experience is described as subjective knowledge, as it has been internalised by the human mind, and is objective in nature. The challenge with propositional knowledge is that theoretical knowledge can quickly become obsolete, can sometimes cause learners to uncritically accept ideas and typically includes well defined problems, which don't always reflect reality (Caliskan & Ergun, 2012; Eraut, 1992; Evans et al., 2014; Paisey & Paisey, 2014; Taylor, 1997; Velayutham & Perera, 1993).

Process knowledge. Process knowledge is commonly defined as "knowledge how", and refers to "how to conduct the various processes that contribute to professional action" (Eraut, 1992, p. 105). In the accounting profession, process knowledge relates to the ability to apply the appropriate propositional knowledge, and to engage with all stakeholders in an appropriate manner. Eraut (1992) ranks process knowledge above propositional knowledge, as he claims it transforms knowledge into effective action.

Personal knowledge. Personal knowledge often referred to as professional or tacit knowledge, refers to the internalised knowledge that a professional acquires over the course of his/her work-life experiences. This knowledge can be gained through both formal and informal interactions, but in many cases, it can occur without an intended educational goal (Eraut, 1992). This knowledge is usually internalised, and therefore exists at the "impression level" which is difficult to define, extract and understand (Taylor, 1997).

Understanding. Jarvis (1983) brings all three types of knowledge together through the concept of *understanding*, whereby he considers understanding to be the link between knowledge of facts and application. He states that "it is essential for the practitioner to understand the theoretical basis to the skills involved in the performance of professional practice" (Jarvis, 1983, p. 34). He also asserts that, through engaging in the process of understanding, knowledge becomes internalised, is reflected upon, and is assimilated to become "true knowledge" (Jarvis, 1983, p. 67).

Skills. The second component in Figure 2.1 is *skills*, which deals exclusively with "performing the occupation rather than the theory" (Jarvis, 1983, p. 35). This includes skills which are based on occupational standards (e.g. planning, implementing) and measured via job-specific outcomes, as well as social skills, including control over emotions and interpersonal skills (Cheetham & Chivers, 2000; Jarvis, 1983).

Professional attitudes. The third component in Figure 2.1 refers to the demonstration of professional attitudes which are behavioural, cognitive and affective in nature (Jarvis, 1983). Jarvis outlines that as knowledge and skills are constantly changing, professionals must adopt an attitude that acknowledges the importance of lifelong learning, as well as having the emotional commitment and willingness to perform professionally.

Reflective practitioner. While the above conceptions of professional competence focus on knowledge types, an alternative view was presented by Schön (1983) through the concept of the *reflective practitioner*. This concept is centred around the belief that reflection is the key professional competence and necessary in acquiring all other competencies. Schön (1983) explains that through reflection a professional can develop a repertoire of solutions and learn how to apply these solutions to solve complex problems, which he refers to as "knowledge in action". He further explains that reflection

can be used to develop rigour and relevance which helps bridge the gap between the uncertainty of practice and theory (Schön, 1983, p. 69). In educational settings, the case study method tends to promote the development of this type of knowledge through the application of technical knowledge and theory to ill-defined business scenarios, explaining why this method is favoured in accounting education (e.g. Boyce, Williams, Kelly, & Yee, 2001).

Model of professional competence. Recognising the merits of both knowledge and reflection in the development of professional competence, Cheetham & Chivers (1998) developed the "Model of Professional Competence", as outlined in Figure 2.2 below.

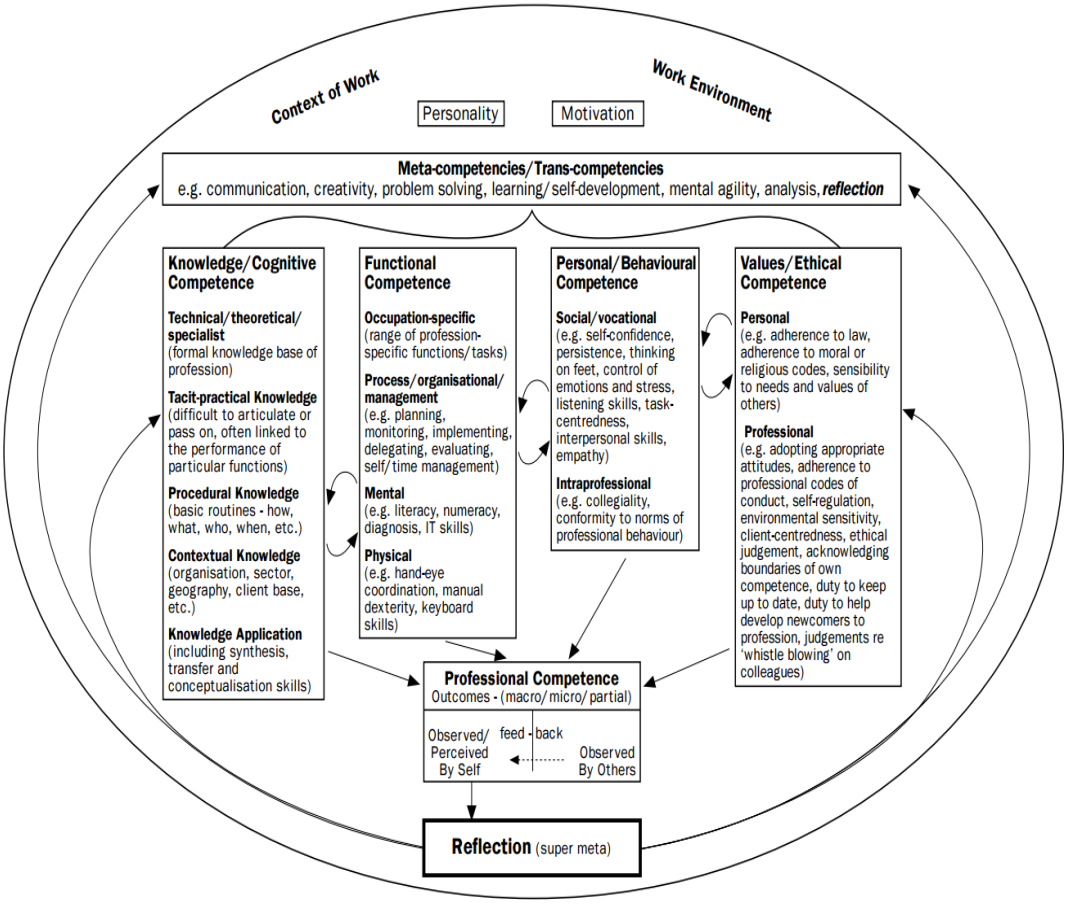


Figure 2.2: Model of professional competence (Cheetham & Chivers, 1998, p. 275)

Four core dimensions of competence. This model outlines four core dimensions of competence: 1) knowledge/cognitive competence (e.g. technical knowledge); 2) functional competence (e.g. literacy skills, IT skills); 3) personal/behavioural competence

(e.g. self-confidence); and 4) values/ethical competence (e.g. adherence to ethical codes). While presented separately, each dimension is interlinked by the meta-competencies, such as communication and self-development, as these act as an aid to the development of other competencies due to their transferrable nature. When brought together, the four core competencies and meta-competencies interact to produce specific outcomes (professional competence), while reflection "acts like a sort of gate keeper to certain kinds of development" (Cheetham & Chivers, 1998, p. 274) and encourages continuous improvement of the core and meta-competencies. There is recent research in the accounting education literature making a strong case for the development of competence in all these areas (e.g. Rebele & Pierre, 2019). The model presented by Cheetham and Chivers (1998) is also important in the context of this research as it highlights some of the factors (e.g. self-confidence) which may impact on the development of competence (study engagement and exam performance) in a professional accounting education setting.

Work context and the work environment. Another feature of this model is the influence of work context and the work environment on professional competence. The work context considers the particular situation in which a professional is required to work, while the work environment considers the physical, social and cultural structures in an organisation (Cheetham & Chivers, 1998, p. 273). In an accounting setting, the work context of a trainee accountant includes their role dealing with clients, while at the same time being a professional student. This model suggests that competence could be affected, either positively or negatively, where the individual moves between roles. For example, in the case of trainee accountants, the practical knowledge gained in a work setting could positively influence the development of competence in a professional education setting. As regards work environment, trainee accountants could be affected by the physical structure, for example, working on a client site and then trying to travel to lectures at a different location in the evenings. The social environment could also affect competence. For trainee accountants, this could include the pressure to engage in social activities which may detract from their study time. Finally, cultural structures can impact confidence and competence. In the case of trainee accountants, this could relate to the culture of working long hours, while also studying, something which is discussed further in Section 2.3.2.

Personality traits and motivation. This model also explicitly recognises that personality traits and motivation can either help or hinder the development of professional competence (Cheetham & Chivers, 1998, p. 274). For example, in a professional accounting education setting, personality could lead to students adopting a preference to learn on their own, instead of in group settings (e.g. lectures), which may influence how they engage in their studies. Furthermore, motivation could affect their willingness to engage in their professional studies.

These research contributions are frequently referred to in accounting education research, where researchers highlight the importance of knowledge being understood, reflected upon, and applied using a range of skills (Duff, 2014; Flood, 2014; Lucas & Mladenovic, 2014; Paisey & Paisey, 2014). These factors will be discussed in more detail in Section 2.3. The following section outlines how the education arm of a professional body typically works.

2.2.4 Structure of Professional Education Systems

In a professional setting, training and education typically takes place at two stages. The first stage is the initial professional development (IPD) stage, prior to admission to the profession. The second stage is the continuing professional development (CPD) stage, after admission to the profession. The IPD stage, which is the focus of this research, may take place in both a higher education and professional education setting, known as the dual qualification system, or solely in the higher education system, which is popular in the United States (US). For example, in the accountancy profession (and chartered accountancy bodies, particularly), the dual qualification system typically requires prospective members to initially complete a primary or postgraduate degree. If this degree is in accounting, they will likely receive certain exemptions from professional exams. This is followed by a training contract, which consists of practical training and formal education, under the control of their chosen professional body. In contrast, the higher education route incorporates practical and theoretical training into the higher education programme, requiring students to pass an entrance exam to gain admission to the profession. More recently, there are also alternative professional education systems that do not fall into either category, such as corporate universities (Sidaway, DeLange,

Bouilheres, & Sangster, 2013). However, despite the structure of the professional education system, the goals of the IPD stage are the same, as discussed below.

2.3 Professional Accounting Education

2.3.1 The Accountancy Profession

The overall vision of the International Federation of Accountants (IFAC) is for the global accountancy profession to be recognised as essential for strong and sustainable organisations, financial markets and economies (IFAC, 2019, p. 4). This vision has been at the heart of the accountancy profession for many centuries resulting in accountants often being described as the gatekeepers of public trust in our institutions (Pierce, 2007), a fundamental pillar of social and economic life, and highly influential (Hopwood & Miller, 1994; IFAC, 2019). This emergence of power and prestige can be traced back to the 12th and 13th centuries, when bankers in Florence, Italy, under the strict control of the Bankers Guild, devised the system of double entry bookkeeping, which saw accountancy emerge as a skilled craft (Sangster, 2016).

While double entry bookkeeping still has its place in the accountancy profession today, as a result of globalisation and consistent changes in the economic, political and professional climate, the role of the accountant has evolved considerably (Association of Chartered Certified Accountants [ACCA], 2018; McKinsey, 2019; Needles, 2010; Sangster et al., 2014). Accountants are now engaged in providing a wide range of services, including, financial reporting, auditing, tax, management consulting, corporate finance and treasury, across a diverse range of sectors. Therefore, accountants require the ability to apply their knowledge, skills and expertise to a range of professional pursuits which puts many demands on their time, and contributes towards the view that the accounting profession is a very demanding and stressful profession (Buchheit, Dalton, Harp, & Hollingsworth, 2016; Chong & Monroe, 2015; Collins & Killough, 1989; Fogarty, Singh, Rhoads, & Moore, 2000; Haskins, Baglioni, & Cooper, 1990; Ozkan & Ozdevecioglu, 2013; Sweeney & Summers, 2002).

In line with Abbott's work on the system of professions, this diversity of roles suggests that the accountancy profession can distinguish itself based on the power and prestige of its academic knowledge, and the work that it does. However, in light of the most recent

global economic crisis and many corporate scandals, it has become more difficult for the accountancy profession to defend its position as the gatekeepers of public trust (Humphrey, 2005; Sikka, Haslam, Kyriacou, & Agrizzi, 2007; Sundem, 2014). In addition, the appropriateness of the nature and content of professional accounting education systems in preparing its members for their roles as accountancy professionals, has been questioned. Debate concerning the role of education in the making of an accountant, and for the future of the accountancy profession, is not new (Anderson-Gough et al., 1998/2018; Boritz & Stoner, 2014; Needles, 2014; Paisey & Paisey, 2014; Rebele & Pierre, 2019; Tharapos & Marriott, 2020). It has been ongoing for the last 50 years and has not only been prevalent amongst the academic community globally, but has also been heavily influenced by a number of stakeholders, including the accountancy profession itself and the major accountancy firms (e.g. Accounting Education Change Commission [AECC], 1990; Albrecht & Sack, 2000; American Accounting Association [AAA], 1990; Andersen et al., 1989; Behn et al., [The Pathways Commission] 2012; Cappelletto, 2010; Evans, Burritt, & Guthrie, 2010; Hancock et al., 2009). This debate led to the issue of a number of reports focused mainly on the overemphasis on technical content in accounting education curricula, at the expense of the development of soft-skills and competencies, including communication skills, critical thinking skills and ethical awareness (Boyce et al., 2019; Chaffer & Webb, 2017; Evans et al., 2014; Flood, 2014; Sangster et al., 2014; Sundem, 2014).

There is some concern that the changes to embrace soft skills may have gone too far, and may be at the cost of developing the technical skills and knowledge that are considered the foundation of the accountancy profession (Pierre & Rebele, 2014; Rebele & Pierre, 2019). Consequently, there has been calls to refocus on the development and application of technical skills. Rebele and Pierre (2019, p. 14) outlined that "without being technically competent in accounting, students cannot think critically about their discipline, nor can they communicate effectively about technical accounting issues". Furthermore, there has been calls for accounting education to develop a broader knowledge base through helping students better understand the role of accounting in serving society, as well as encouraging them to question deeply, and challenge ideology, when engaging with accounting issues (Boyce et al., 2019). While these views are supported by the International Accounting Education Standards Board (IAESB), the independent standard-setting board for professional accounting education, there are still

questions as to whether trainee accountants are being adequately prepared for careers as accounting professionals. These concerns, as well as the objectives and structure of professional accounting education programmes, are discussed further below.

2.3.2 Professional Accounting Education

The IAESB describes professional accounting education as "education and training that build on general education, and develop a) technical competence, b) professional skills, and c) professional values, ethics, and attitudes" (IAESB, 2019, p. 12). The Initial Professional Development (IPD) stage describes "the learning and development through which aspiring professional accountants first develop professional competence leading to performing a role of a professional accountant, which includes professional accounting education, practical experience and assessment" (IAESB, 2019, p. 7). In addition, the IPD stage seeks to provide the foundation for lifelong learning to ensure members continue to develop the knowledge and skills required to effectively carry out their jobs (IFAC, 2020). While the objectives of the IAESB and IFAC are clear, like the five decade long accounting education debate outlined briefly above, there are concerns as to whether the objectives of the IPD stage are in fact being achieved. In order to fully understand these concerns, it is useful to explore the model of professional education and training of Chartered Accountants Ireland (CAI), as it is the setting for this study.

Professional accounting education (Chartered Accountants Ireland [CAI]). Similar to many of the PABs, CAI has updated its professional education programmes over the last number of years. Many of the changes that have taken place at the IPD stage relate to entry route, the curriculum and exam structure. For example, in addition to the *traditional training contract route*, prospective students now have a number of entry route options including the *school leavers route*, where they can enter the profession directly from school, or the *chartered business flexible route* where students can stay in their current jobs and study with CAI. While these changes resulted in more people entering the profession, the more notable changes related to the exam structure and the curriculum.

Changes in the CAI exam structure and curriculum were announced in 2007 and phased in over the period from 2008 to 2010. This new examination structure was centred around the attainment and development of a number of competencies, including, core

professional values, business competencies and functional competencies. These are summarised in Figure 2.3.

Figure 2.3: Competency-based education model (CAI, 2020b)

The examination system currently in place in CAI is based on this competency model and the new structure consists of three levels of exams, namely Chartered Accountancy Proficiency 1 (CAP 1), Chartered Accountancy Proficiency 2 (CAP 2) and the Final Admitting Examination (FAE), with a number of subjects examinable at each level (see Table 2.1). The number of exam levels to be completed is dependent on an individual's prior qualifications. Those entering the profession with non-relevant degrees must complete all three levels of exams, while those with an accounting-related degree potentially receive some exemptions. However, regardless of the exemptions granted, all students must successfully complete the FAE exams before admission to membership (they must also have completed at least two years of work experience in advance of sitting these exams). This is one of the reasons why the FAE exams of CAI are the focus of this study, as they are the only set of exams which are compulsory for all students. The other reasons for choosing CAI as the setting for this study are discussed in Chapter Four.

Table 2.1

CAI exam structure

Programme	Subjects
Chartered Accountancy Proficiency 1 (CAP 1)	Finance Management Accounting Financial Accounting Law for Accountants Taxation I
Chartered Accountancy Proficiency 2 (CAP 2)	Strategic Finance and Management Accounting Financial Reporting Audit and Assurance Taxation II
Final Admitting Examination (FAE)	FAE Core Comprehensive and FAE Core Simulations (case study including all the below) 1) Financial Reporting 2) Strategic Management and Leadership 3) Data Analytics, Artificial Intelligence and Emerging Technologies 4) Risk Management and Sustainability FAE Elective (students choose one of the below): 1) Advanced Auditing and Assurance 2) Advisory 3) Advanced Taxation 4) Financial Services 5) Public Sector

Note. Adapted from (CAI, 2020b)

When considering this structure in the context of the objectives of a professional education programme, CAP 1 and CAP 2 clearly focus on gaining critical comprehension of the key technical subject areas (CAI, 2020b). The FAE is split into two papers, core and elective, examined through interim assessments and final exams, with both papers using case study learning. Case-studies are described as scenarios involving contentious accounting issues, which are set in a context that encapsulates the ambiguities of accounting practice. This in turn requires the student to use a combination of professional judgement, along with technical, analytical and communication skills, to draft a professional answer, in a specific format, to a particular target audience (Boyce et al.,

2001). The FAE Core consists of several case-studies which integrate knowledge, skills and expertise across all technical disciplines, while FAE Elective requires students to specialise in one of the following five subject areas: Advanced Auditing and Assurance, Advisory, Advanced Taxation, Financial Services or Public Sector. The interim assessments (15% core paper and 15% elective paper) take place during the FAE year, when students are working, and the final exams (85% core paper and 85% elective paper) are held at the end of study leave. The FAE assumes a baseline level of technical knowledge, and it examines the depth and breadth of understanding and the application of knowledge in a real business-type scenario. Therefore, in order to succeed, FAE students need to think like professionals, in an integrated manner, and give the professional analysis and advice expected of a chartered accountant (CAI, 2020b). To help achieve these goals, CAI also provide a range of resources to all students at the IPD stage, including lectures, workshops, mock examinations and student support services.

CAI outlines that this syllabus, and the resources provided, encourages active study engagement which it considers vital to achieve the required level of professional competence (CAI, 2020a). Upon review of this course structure, its overall objectives are aligned with the main propositions of Cheetham and Chivers (1998) Model of Professional Competence. For example, this syllabus emphasises the development of technical knowledge through case study learning, with case study learning being considered the preferred pedagogical approach to promote synthesis, evaluation of content and the development of professional skills (e.g. Ballantine, Duff, & Larres, 2008; Boyce et al., 2001; Hassall, Lewis, & Broadbent, 1998; Healy & McCutcheon, 2008; Kember, Jamieson, Pomfret, & Wong, 1995). As a result, this syllabus intends to foster a deeper understanding of technical knowledge, as well as helping students develop the skills to deal with the ambiguities of accounting practice, which aligns with the concept of the reflective practitioner outlined by Schön (1983).

While this syllabus is comprehensive, it must be questioned as to whether this PAB, or other PABs, have actually achieved the objectives set out by the IAESB, and whether they have addressed some of the concerns emerging from the accounting education literature, as outlined in Section 2.3.1 above. Furthermore, while claiming that this syllabus encourages active engagement and requires a deep understanding of technical knowledge, as cautioned by Hassall and Joyce (2001), students may not interact with the body of knowledge taught in the way expected by the professional body. This is a

particular risk in this context as professional education takes place at a time when trainee accountants are simultaneously training in the workplace, where they are required to navigate the demands of both studying and working. There are also concerns that the main focus of trainee accountants is the goal of qualification rather than developing the skills of lifelong learning. Together, these concerns pose further important questions regarding the quality of learning that takes place at the IPD stage and its implications for the future careers of accountants, and the future of the accountancy profession (e.g. Tharapos & Marriott, 2020). While some of these questions have already been explored, there is a need to conduct further research. The current body of research in this field is summarised below.

Key themes in the professional accounting education literature. Upon review of the key studies in the professional accounting education literature, the following themes emerge. The first body of research, much of which is discussed above, explores the concerns around accounting education curricula and the competencies being developed by accounting students (e.g. Boritz & Stoner, 2014; Needles & Powers, 1990; Paisey & Paisey, 2006; Rebele & Pierre, 2019). This research makes many recommendations for accounting education reform and is therefore the overarching theme in most strands of professional accounting education research.

***Predictors of exam success*.** The second body of research relates to predictors of exam success in the final qualifying exams, with a specific focus on the review of pre-selection criteria and whether this is a good determinant of passing the qualifying exams (e.g. Gammie, 2000; Gammie, Cargill, & Gammie, 2004; Gammie & Kirkham, 2008; Harvey-Cook & Taffler, 2000). For example, Gammie (2000) developed a series of statistical models predicting students ability to pass the professional accountancy exams at first attempt in a Scottish PAB. The results revealed that the classification of undergraduate degree performance was the most valid predictor, ahead of engagement in experiential activities (e.g. job experience related to chartered accountancy) and school performance. While useful, these studies provided little insights into the learning activities of trainee accountants. To address this gap, a body of research related to the learning approaches adopted by professional accounting students emerged (e.g. Flood & Wilson, 2008; Hassall & Joyce, 1997, 2001).

Learning approaches of trainee accountants. This topic has been researched at higher education level, providing a strong foundation for extending this research to a professional accounting education setting. Hassall and Joyce (1997, 2001) examined the learning approaches of professional students in the UK preparing for the qualifying exams of a global PAB. They found, over the course of four years, that students were more inclined to engage in deep learning as they progressed through the course. They also explored whether professional students experienced lack of direction and low academic self-confidence. The findings revealed that students suffered less from lack of direction, but in the early stages of their professional studies, those who tended to study alone, had lower academic self-confidence than those studying with a tutor. This study also noted that a high level of technical content may discourage students from engaging in deep forms of learning. Building on this work, Flood and Wilson (2008) conducted an extensive study exploring the learning approaches of trainee accountants from one PAB in Ireland. The findings revealed that while the nature of the qualifying exams required students to engage in deep learning activities, such as seeking meaning, integrating knowledge etc., students learning motives were centered around passing the exams, and less around educational enlightenment and the syllabus content. These findings were in line with the literature exploring the socialisation process of trainee accountants which highlighted that professional accountants often view the qualifying exams as something which they just needed to get through, whereby doing well was not particularly valued (Anderson-Gough et al., 1998/2018, 2001, 2002; Grey, 1998; Paisey & Paisey, 2014).

Socialisation process of trainee accountants. This literature provides useful insights into the various factors at play in the socialisation process of trainee accountants. While the exploration of all these factors is beyond the scope of this study, one important factor is the professional identity adopted by trainee accountants and how this is moulded throughout the course of their training contract. Professional identity typically derives from two sources. Firstly, the knowledge and skills gained through both education and formal training during the IPD stage. Secondly, the internalisation of the values, culture and norms of the training firm (Abbott, 1988/2014; Carr-Saunders & Wilson, 1933; Egan, 1997; Empson, 2004; Grey, 1998; Hamilton, 2013; Larson, 1977; Paisey & Paisey, 2014). While earlier research described education and training as the hallmarks of professional status (e.g. Abbott 1988/2014; Carr-Saunders & Wilson, 1933), later work challenged this view highlighting that "becoming" a professional sometimes led to the adoption of

the following: internalisation of demanding performance objectives, focusing on passing exams as the end goal rather than learning, reluctance to engage in critical questioning of accounting practices, peer group loyalty, commitment of personal time to client work, exam preparation and work-related socialising (Empson, 2004, p. 761). Upon reflection, the internalisation of these values and norms has major implications for how trainee accountants engage in their professional studies and work-related tasks, which in turn has implications for their future careers and well-being.

From a study engagement perspective, trainee accountants place significant value on passing the qualifying exams and are committed to the goal of qualification. These qualifying exams are viewed as a rite of passage to gain full membership to the profession and failure of these exams has serious consequences, not only for their future careers, but also their credibility and identity in the organisation (e.g. Anderson-Gough et al., 1998/2018; Coffey, 1994; Grey, 1998; Hamilton, 2013; Paisey & Paisey, 2014). For example, both Grey (1998) and Hamilton (2013) highlighted that some trainees viewed exam failure as the end of their career. However, as described by Hanlon (1994), despite this, they are equally committed to their jobs. He described the culture of accountancy firms as "an atmosphere of competitive individualism", which leads to trainees striving to give an impression of "doing their best" at all times. Therefore, there is an accepted culture of working long hours and juggling high workloads, which can detract from the amount of time that is available for study, family, friends and extracurricular activities, which may contribute to high levels of stress and anxiety. This view is consistent with other studies which have found that trainee accountants often experience high levels of stress in their jobs especially at certain periods during the year, including *busy season* - a period when most audits occur, tax returns are due and professional services are in high demand (e.g. Collins & Killough, 1989; Haskins et al., 1990; Ozkan & Ozdevecioglu, 2013; Sweeney & Summers, 2002). Furthermore, Anderson-Gough et al. (1998/2018) outline that trainees often view their training contract as a "trial of strength". Thus, the culture of "sacrifice" of personal time is accepted as the "done thing".

In the context of this study, this socialisation process has serious implications for learning at the IPD stage. Not only are there many factors which can impact on how trainee accountants engage in their professional studies (e.g. working long hours), but there are also concerns over the work practices being internalised, the knowledge and skills being

developed, and whether they are being adequately prepared for their future role as accountants. These concerns highlight the need for more research in the professional accounting education field exploring the study experiences of trainee accountants. As the concept of study engagement has emerged in the higher education literature as a way to understand how students learn, it provides great potential as a way to explore the experiences of trainee accountants when preparing for the qualifying exams of their PAB. Furthermore, the concept of study engagement is appealing as a research topic because it is malleable and responsive to changes in educational practices (Fredricks, Filsecker, & Lawson, 2016). Therefore, by exploring the study engagement process of trainee accountants this will provide necessary insights into whether the reforms to date in professional accounting education have achieved their desired results or if more needs to be done.

2.4 Chapter Summary

This chapter commenced with an exploration of the concept of professional education. Emerging from this discussion was the importance of professional education in the development of professional knowledge and competence. The nature of professional accounting education was then discussed. This began with an exploration of the role of the accountancy profession in serving society and how the profession has evolved over the years. This was followed by a discussion of the accounting education change debate and the perceived shortcomings of professional accounting education. The accountancy profession was then discussed, with a specific focus on education at the IPD stage. This discussion acknowledged that students engage in the professional accounting examination process in various ways and their engagement can be influenced by a variety of factors. This chapter concluded by summarising the current themes in the professional accounting education literature and the potential contribution of this study to this body of research. The concept of study engagement is discussed in detail in the following chapter.

CHAPTER THREE: STUDY ENGAGEMENT

3.1 Introduction

This chapter provides an in-depth discussion of the concept of study engagement. While there are many different perspectives of study engagement presented in the literature, this chapter organises the various literature themes focusing on three perspectives identified by Kahu (2013). These perspectives include, the sociological/behavioural perspective, the psychological perspective and the sociocultural perspective of engagement. Emerging from this review is the strength of the multidimensional definition of engagement comprising behavioural, cognitive and affective dimensions. The literature review also reveals that engagement is a complex process, influenced by a range of antecedents, and resulting in a number of outcomes. This chapter includes consideration of the theoretical and conceptual frameworks which have guided research on understanding the study engagement process, concluding with the theory that will be used to guide this research, the JD-R theory. This is followed by an exploration of the range of antecedent and outcome variables considered important in an educational setting, with a specific focus on the professional accounting education context. The variables of interest in this study are then explored in depth, with resulting hypotheses presented.

3.2 Study Engagement

Study engagement. *Study engagement*, also referred to as *student engagement*, is an overarching term used to describe a diverse range of ideas rooted in understanding the student experience and its effect on learning and development. The influences on study engagement research date back to the 1930s and span a range of topics and disciplines including college impact theory, learning theory, sociology and psychology (McCormick et al., 2013). Consequently, study engagement is a complex, multidimensional construct that does not have a single agreed definition or conceptual/theoretical framework. Many attempts have been made to organise the literature into engagement perspectives (e.g. Blakey & Major, 2019; Hu & McCormick, 2012; Kahu, 2013; Redmond, Abawi, Brown, Henderson, & Heffernan, 2018; Zepke & Leach, 2010). While these various perspectives can help shape our understanding of the concept of study engagement, the exploration of all these perspectives is beyond the

scope of this study. As the engagement perspectives outlined by Kahu (2013) capture many of the recurring themes emerging in the literature, this framework is used to help define the term study engagement, in this research.

Four perspectives of study engagement. Kahu (2013) presented four, distinct, yet overlapping, perspectives of engagement, namely, (a) the sociological/behavioural perspective, (b) the psychological perspective, (c) the sociocultural perspective, and (d) the holistic perspective, three of which are discussed in this chapter.

a) The sociological/behavioural perspective is centered around the role of the educational institution in promoting engagement, as well as the behaviours that students typically engage in, including the time spent on learning tasks.
b) The psychological perspective builds on the sociological/behavioural perspective by adding two additional engagement dimensions, cognitive and affective engagement. While there is overlap with the sociological/behavioural perspective, this perspective develops the definition of engagement by further exploring "how" students engage, as well as acknowledging the emotional intensity attached to learning. It also succeeds in distinguishing between study engagement and its antecedents.
c) The sociocultural perspective moves away from defining engagement to offer insights into "why" students might become engaged or disengaged in their education (e.g. internal factors such as experiencing reality shock). Overall, the sociocultural perspective proposes that to fully understand the meaning of study engagement, students should be located at the heart of the educational experience, and that learning should be located within the wider political, social and cultural context.
d) The holistic perspective draws together the themes from the three perspectives above.

As the sociological/behavioural and psychological perspectives provide the foundation of the definition of engagement used in this study, these two perspectives, and the theoretical and empirical work shaping them, are the focus of the discussion in the following sections. The sociocultural perspective is also briefly discussed as it gives an insight into some of the antecedents influencing the study engagement process. A tabulated summary of the literature that shaped each of these perspectives is presented in Appendix A.

3.2.1 Sociological/Behavioural Perspective

Background and definitions. The sociological/behavioural perspective of study engagement has received significant attention in the higher education literature since the 1990s. This was driven by a US political initiative, *Goals 2000: Educate America Act*, which among other things, aimed to improve critical thinking, communication and problem-solving skills amongst college graduates. Alongside this political initiative, there was much public discontentment regarding the ranking of higher education institutions, highlighting the need to refocus on indicators related to educational effectiveness rather than reputation and input measures (Kuh, 2009b). Together, both agendas highlighted the value of assessing higher education institutions on the basis of *process indicators* which represent "behaviours associated with desired outcomes of college and estimate the extent to which students are engaged in these activities" (Kuh, Pace, & Vesper, 1997, p. 435). This culminated in a large taskforce conducting extensive research which resulted in the design and implementation of the National Survey of Student Engagement (NSSE). This survey was first administered in the US in 2000 and has since been adapted for use all over the world. It is considered the cornerstone of the sociological/behavioural perspective of study engagement, as it captures many of the behavioural activities that students engage with, both inside and outside the classroom, in addition to the role of the institution in fostering study engagement.

The definition of engagement which underpins the NSSE is as follows:

> The time and energy students devote to educationally sound activities inside and outside of the classroom, and the policies and practices that institutions use to induce students to take part in these activities. (Kuh, 2003, p. 25)

This definition gained significant support throughout the higher education literature and its influence is evident in other jurisdictions. For example, a similar theme was presented by Krause and Coates (2008), who are dominant researchers in this field in Australia, whereby they refer to the concept of study engagement as:

> ……a specific understanding of the relationship between students and institutions. Institutions are responsible for creating environments that make learning possible, and that afford opportunities to learn. The final responsibility for learning, however, rests with students. The nature and degree of learning is dependent on how the student makes use of his/her environmental resources. (Krause & Coates, 2008, p. 494)

Theoretical and conceptual models. The literature contributing to these definitions has its roots in the work of Tyler (1930) which focused on "time on task" and Pace (1984) which focused on "quality of effort". The college impact models/theories also contributed to these definitions (e.g. Astin 1970, 1984; Pascarella, 1985; Tinto, 1975), as well as the literature on the principles of good practice (Chickering & Gamson, 1987). These contributions are discussed below.

Time on task and quality of effort. Ralph Tyler's (1930) work was significant in highlighting that college outcomes were not only dependent on the hours spent on educational tasks, but on the entire college experience (Kuh, 2009a; McCormick et al., 2013). Robert Pace (1984) further developed this work outlining the importance of "quality of effort" for student success. He described quality effort as a behavioural activity which involved activities such as studying and interacting with peers and faculty (Pace, 1984, p. 6). Astin (1970, 1984) sought to provide the called-for theoretical perspective through the "Input-Environment-Output (IEO) model".

College impact model: Input-environment-output (IEO) model. In this model Astin (1970, 1984) proposed that input variables (e.g. prior academic performance) impact on output variables (e.g. exam performance) both directly, and indirectly, through the medium of engagement in the college environment (e.g. interaction with faculty), as outlined in Figure 3.1 below.

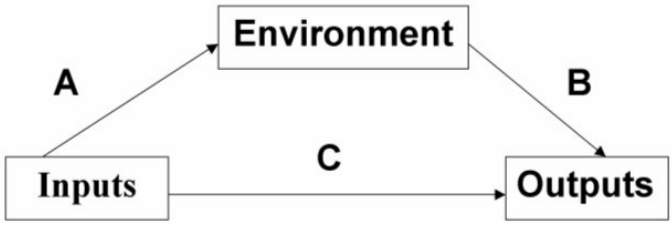


Figure 3.1: Astin's IEO model (Astin, 1970, p. 3)

Astin (1993) demonstrated the strength of his model through a four-year longitudinal study. This study revealed that students developed a greater sense of interpersonal and intellectual competence, and experienced substantial increases in knowledge and skills, when they were involved in activities with others. The key contribution of his work was in highlighting the important role of the institution in designing effective educational policy to increase engagement (McCormick et al., 2013). However, some researchers

criticised this work, outlining that the model did not explicitly distinguish between student experiences and the study resources influencing these experiences, making it difficult to understand what environmental factors impacted on student outcomes (Hu & Kuh, 2003; Kim, 2001; Pascarella, 1985; Pascarella & Terenzini, 2005). As this work gained significant attention and has strongly influenced the most widely used definitions of study engagement, including that of Kuh (2003) presented above, it has contributed to definitions of study engagement that fail to distinguish between the state of engagement, its antecedents and outcomes.

College impact model: Theory of integration. Firstly, it is important to note that while this work is not necessarily concerned with the state of study engagement, it does provide useful insights into the factors influencing engagement. Tinto (1975), through the concept of integration, outlined that all students come to the college environment with a set of individual characteristics, which influence their initial goals, intentions and institutional commitments. He further proposed that through a series of formal and informal interactions with academic and social activities, students become integrated into the new institutional environment. This will lead to either persistence and engagement in their studies, where they are more likely to achieve desired learning outcomes, or on the other hand, departure from their studies. These propositions are supported as factors influencing study engagement (e.g. Astin, 1993; Braxton, Sullivan, & Johnson, 1997; Gonyea, 2006; Milem & Berger, 1997; Pascarella & Terenzini, 2005; Wolf-Wendel, Ward, & Kinzie, 2009). Tinto's (1975) work also recognises both the role of the student and the institution in the educational process and is described as an interactionist theory (McCormick et al., 2013).

In the context of this current research, the integration process described in Tinto's model provides a useful perspective about the factors which could potentially influence the study engagement of trainee accountants. For example, when trainee accountants enter their accountancy training contract, they are expected to quickly adapt to the culture of working long hours, while still being expected to study for, and pass, the qualifying exams. This is a practical example of how individuals must adapt to the norms and culture of a new organisation and highlights the value of Tinto's theoretical work to help understand the complexity of the study engagement process.

College impact model: General causal model. Building on the work of Tinto, Pascarella (1985) introduced the "General Causal Model for Assessing the Effects of Differential College Environments on Student Learning and Cognitive Development", often referred to as the "General Causal Model" (Figure 3.2). This model included variables from earlier work such as "quality of effort" and theorised that organisational characteristics, student background, peer/faculty interaction, quality of effort and active participation in the learning environment, were the main predictors of learning and cognitive development (Pascarella, 1985). The strength of this framework was its ability to bring together the various themes in the literature up to that point into one cohesive model. As the propositions of this theory were verified in later studies (e.g. Astin, 1993; Kuh, Hu, & Vesper, 2000), it has led to significant support for this model in the study engagement literature.

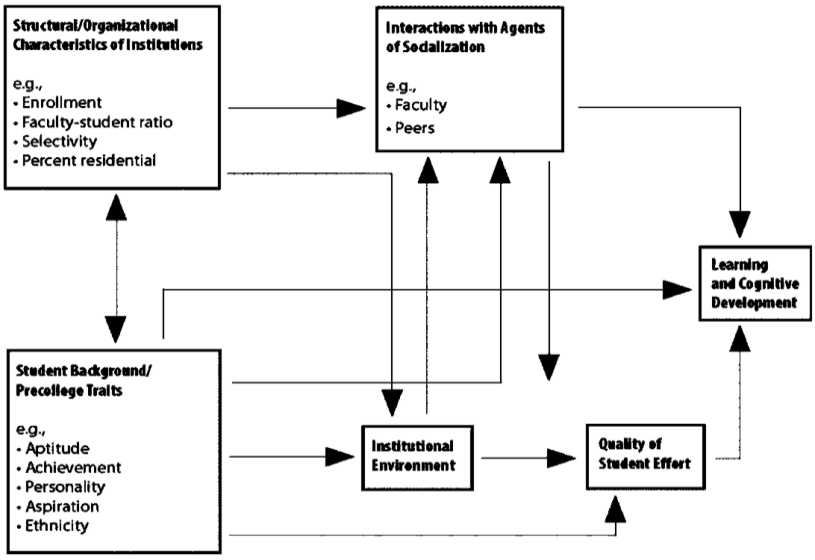


Figure 3.2: General causal model for assessing the effects of differential college environments on student learning and cognitive development (Pascarella, 1985, p. 50)

College impact model: Conceptual model of cognitive development. More recent attempts to build on this work were presented by Pike and Kuh (2005) through their "Conceptual Model of Cognitive Development", as outlined in Figure 3.3 below. This was the first model to specifically refer to the concept of engagement, even though the term had been referred to by other researchers and coined in earlier research, as outlined at the start of Section 3.2.1.

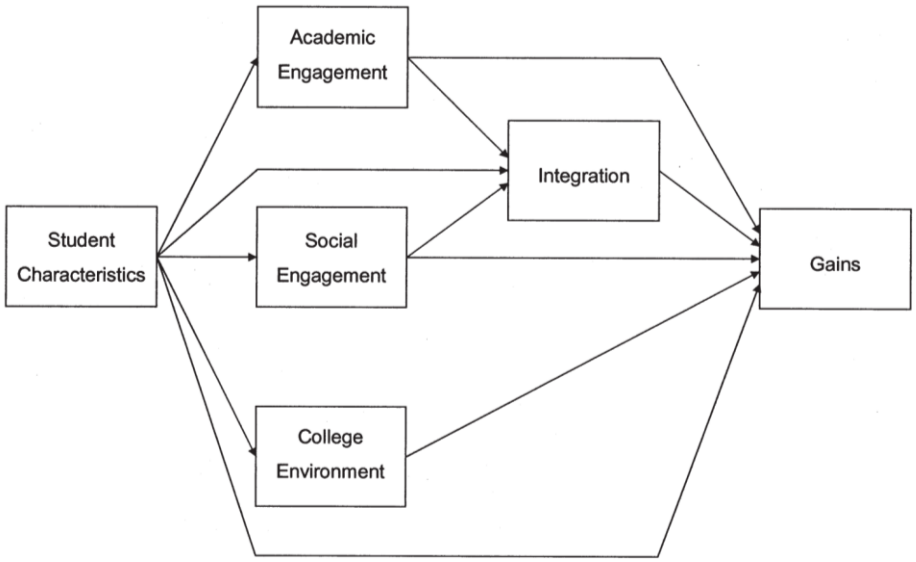


Figure 3.3: Conceptual model of cognitive development (Pike & Kuh, 2005, p. 280)

In this model, the concepts of academic and social engagement were defined separately. Academic engagement refers to the behavioural activities that lead to high quality learning (e.g. synthesising material), while social engagement describes the informal activities associated with learning (e.g. peer and faculty interactions). As outlined in Figure 3.3, both academic and social engagement are considered to impact on educational gains directly, and indirectly, through the mediating variable of integration. It is worth noting that in this model, unlike in Tinto's model, integration refers to bringing together (integrating) diverse ideas and concepts to develop knowledge and understanding, whereas Tinto described integration as the acceptance of institutional norms and values and acting accordingly. While the strength of Pike and Kuh's model is its specific reference to the concept of engagement, it has many similarities with the work of Astin (1970, 1984), Pace (1984) and Pascarella (1985). For example, all researchers highlight the importance of investing quality effort in educational activities and interactions with peers and faculty to achieve desired learning outcomes. As a result of these similarities, while Pike and Kuh's (2005) model is widely referenced in the literature, it does not add to the theoretical development of the concept of study engagement. It also further demonstrates the variety of different ways in which study engagement is defined, contributing to the difficulty in finding one useable definition.

Principles of good practice. The literature on effective teaching and learning is also a major contributor to the conceptualisation of study engagement. Chickering and

Gamson (1987) presented work on the "seven principles of good practice in higher education", which summarised 50 years of research on the teaching and learning activities most likely to contribute to high quality learning outcomes (Coates & Krause, 2005; Gonyea, 2006; Kuh, 2001; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; McCormick et al., 2013; Pascarella & Terenzini, 2005; Zepke, Leach, & Butler, 2014). These principles highlighted the importance of student/faculty interactions as well as the following activities: encouraging contact between students and faculty, reciprocity and cooperation among students, active learning, prompt feedback, communication of high expectations, time on task and respect for diverse talents and ways of learning (Chickering & Gamson, 1987). Influenced by this work, the "Inventories of Good Practice in Undergraduate Education" were designed to allow institutions and faculty assess how their educational and campus policies aligned with the original seven principles. Cruce, Wolniak, Seifert, and Pascarella (2006) found empirical support for the positive relationship between these practices and cognitive development, learning orientations and student aspirations during their first year of college. Informed by this research, the developers of the NSSE integrated a subscale of "high impact practices" into the NSSE. This subscale captured students' engagement in activities such as learning communities, internships, studying abroad, service learning and undergraduate research (McCormick et al., 2013; NSSE, 2018). As the nature of these practices required a high level of involvement with faculty and peers, applying learning in new situations and the application of deep approaches to learning, their role in aiding learning and personal development was supported (McCormick et al., 2013).

NSSE instrument. As already outlined, the NSSE instrument was developed at a time when the US Department of Education expressed the need for reliable information on the student experience and the need to assess the effectiveness of educational practices (Kuh, 2001). In essence, the NSSE framework was developed as a model of university quality, through the lens of student engagement. This instrument frames different aspects of the student experience, which prior research had linked conceptually and empirically with productive learning (Coates & McCormick, 2014). Since its introduction in 2000, the NSSE has undergone a number of revisions to reflect new research in the area, such as that outlined above on high impact practices. In its various forms, the most recent version of the NSSE, launched in 2013, captures behavioural data under five main categories: level of academic challenge; experiences with faculty; learning with peers;

campus environment experiences; and high impact practices. Each category is considered to be representative of high-quality educational practices (Kuh, 2001).

While the NSSE had not intended to represent theoretical constructs, it became the basis of much empirical research conducted on student engagement all over the world (e.g. Baron & Corbin, 2012; Carini, Kuh, & Klein, 2006; Coates & Krause, 2005; Coates & McCormick, 2014; Cruce et al., 2006; Gonyea, 2006; Kuh et al., 2006). It also became the foundation for some of the most widely used definitions of the sociological/behavioural perspective of engagement, including those presented at the beginning of Section 3.2.1. Due to its popularity and global reach, empirical data derived from the NSSE, and its equivalents, has resulted in a large body of research exploring the relationship between behavioural study engagement and learning. While many of these studies used self-reported gains to measure student learning, there is widespread support for the assumption that NSSE benchmarks lead to high quality educational outcomes (e.g. Kuh, 2001, 2003, 2009b; McCormick et al., 2013; Pascarella & Terenzini, 2005).

Criticisms of the sociological/behavioural perspective. While the sociological/behavioural perspective has made a significant contribution to the study engagement literature, this perspective has been criticised on a number of levels. Firstly, for failing to capture the complexity of the engagement process and to distinguish between the state of engagement, its antecedents and consequences (Kahu, 2013). Secondly, for failing to give a complete view of a student's experience of engagement. For example, some researchers claimed that it did not give adequate attention to the development of the student as a learner and the underlying psychological processes involved. Instead it placed greater emphasis on the activities of the educational institution (e.g. Kahu, 2013; Pike, 2013; Solomonides, 2013; Zepke & Leach, 2010; Zepke et al., 2014). Thirdly, it was criticised for failing to acknowledge the wider sociocultural influences on the learning process (Bryson, Cooper, & Hardy, 2010; Coates & Krause, 2005; Kahu, 2013; Kinzie & Kuh, 2017; Solomonides, 2013; Zepke et al., 2014).

The research instrument underpinning this perspective, the NSSE, was also the subject of many criticisms, despite its popularity as a research tool. For example, some studies found that NSSE benchmarks only modestly predicted educational outcomes such as grades (e.g. Carini et al., 2006; Pascarella, Seifert, & Blaich, 2010), while other studies found poor predictability (e.g. Campbell & Cabrera, 2011; Gordon Ludlum, & Hoey,

2008). In addition, the general nature of the survey was criticised, with researchers claiming that teaching and learning strategies, and student engagement activities, are very discipline specific, and therefore, the use of one instrument, across multiple disciplines, could reduce the value of the data collected (e.g. Laird, Shoup, Kuh, & Schwarz, 2008). However, one of the main issues with the instrument, which is also one of the main criticisms of the sociological/behavioural perspective, was that the NSSE captured information on both the state of engagement, as well as the antecedents to engagement, making it difficult to distinguish between the two (e.g. Kahu, 2013). Consequently, this highlighted the need for alternative perspectives which provided more clarity on the process of engagement. Some of these criticisms were addressed through the psychological perspective, discussed below.

3.2.2 Psychological Perspective

Background and definitions. As outlined in Section 3.2.1, there is conceptual overlap between (a) the sociological/behavioural and (b) the psychological perspectives of study engagement. While some of the literature in the psychological perspective defines engagement using one-dimension, affective (emotional) engagement (e.g. Schaufeli et al., 2002), there is also a broader definition evident within this perspective. This broader definition, which is multidimensional, typically refers to the behavioural, cognitive and affective dimensions of engagement (Boykin & Noguera, 2011; Fredricks et al., 2004; Kahu, 2013; Kahu & Nelson, 2018). As behavioural engagement is a dimension within this definition, the psychological perspective was able to build on the sociological/behavioural perspective of engagement, to address some of the shortcomings outlined in Section 3.2.1.

The multidimensional definitions of engagement, which shape this perspective, emerge from both the school and higher education literature, along with the work engagement literature. In the school literature, Fredricks et al. (2004) describe the three dimensions of engagement as follows:

> Behavioral engagement draws on the idea of participation; it includes involvement in academic and social or extracurricular activities and is considered crucial for achieving positive academic outcomes and preventing dropping out. Emotional engagement encompasses positive and negative reactions to teachers, classmates, academics, and school and is presumed to create ties to an institution

> and influence willingness to do the work. Cognitive study engagement draws on the idea of investment; it incorporates thoughtfulness and willingness to exert the effort necessary to comprehend complex ideas and master difficult skills. (Fredricks et al., 2004, p. 60)

Boykin and Noguera (2011) also provided similar definitions for the three dimensions of engagement, outlining that engagement is much more complex than a simple reaction of a student to a teacher-initiated action.

> Behavioural engagement conveys the presence of general "on-task behaviour". This entails effort and persistence along with paying attention, asking pointed questions, seeking help that enables one to accomplish the task at hand (rather than being given the answer), and participating in class discussions. Cognitive engagement connotes investment aimed at comprehending complex concepts and issues and acquiring difficult skills. It conveys deep (rather than surface-level) processing of information whereby students gain critical or higher-order understanding of the subject matter and solve challenging problems. Affective engagement connotes emotional reactions linked to task investment. The greater the student's interest level, positive affect, positive attitude, positive value held, curiosity, and task absorption (and the less the anxiety, sadness, stress, and boredom), the greater the affective engagement. (Boykin & Noguera, 2011, pp. 52-53)

Similarly, in the higher education literature, Kahu (2013) describes the three dimensions of engagement as follows:

> The behaviour dimension has three elements: positive conduct and rule following including attendance; involvement in learning, including time on task and asking questions; and wider participation in extracurricular activities […] the cognitive dimension refers to a student's self-regulation and effective use of deep learning strategies and also incorporates individual characteristics such as motivation, self-efficacy and expectations […] the affective dimension refers to a student's sense of belonging, interest and enjoyment in the task. (Kahu, 2013, pp. 761-762)

Support for this multidimensional definition is also evident in the work engagement literature. In particular, Kahn (1990) was a strong advocate. He outlined that "people become physically involved in tasks, whether alone or with others, cognitively vigilant, and empathically connected to others in the service of the work they are doing" (Kahn, 1990, p. 700).

There is also support for a two-dimensional definition of engagement including behavioural and affective dimensions (e.g. Finn, 1989) and cognitive and affective dimensions (e.g. Halverson & Graham, 2019). Some researchers have also added further dimensions such as agentic, collaborative, volitional, and social-behaviour engagement (e.g. Blakey & Major, 2019; Halverson & Graham, 2019; Redmond et al., 2018; Reeve,

2013). More recent research also shows evidence of expanding the cognitive dimension to distinguish between cognitive engagement inside and outside class (e.g. Burch, Heller, Burch, Freed, & Steed, 2015). While further research is needed to determine whether these additional dimensions are worthy of consideration, there is general consensus that a narrow definition of study engagement does not capture the complexity of the state of being engaged (Fredricks et al., 2016), and that the three-dimensional definition of study engagement offers more potential (Fredricks et al., 2004; Fredricks et al., 2016; Kahn, 1990; Kahu, 2013; Kahu & Nelson, 2018).

Theoretical and conceptual models. There are a number of theoretical models which underpin the development of these multidimensional definitions of engagement. For example, as described in Section 3.2.1, Tinto's (1975) theory of integration attempted to introduce the concept of both behavioural and affective engagement simultaneously. In the school literature, the multidimensional conceptualisations were more prevalent, and emerged from two distinct theoretical strands: motivational theories and student drop-out theories. While the motivational theories provide meaningful insights into the psychological dimensions of the learning process, many of these theories relate to factors influencing engagement, rather than the state of engagement. For example, social cognitive theory (SCT: Bandura, 1977) highlights the role of self-efficacy in the learning process. In contrast, the student dropout theories were more successful at depicting engagement as a multidimensional construct, as well as the process of learning, as discussed below.

The "participation-identification model" (Finn, 1989), outlined in Figure 3.4 below, was initially designed to understand the factors influencing student dropout and negative behaviour. Through later research, it was considered a useful way to understand the various dimensions of study engagement and academic achievement. This model recognises the fundamental importance of behavioural (participation) and emotional (identification) engagement. This model assumes that, where ability and appropriate instruction are evident, the more students participate (e.g. attend class, invest effort) in the educational environment, the more their levels of identification (e.g. sense of belonging) increase (Finn, 1989).

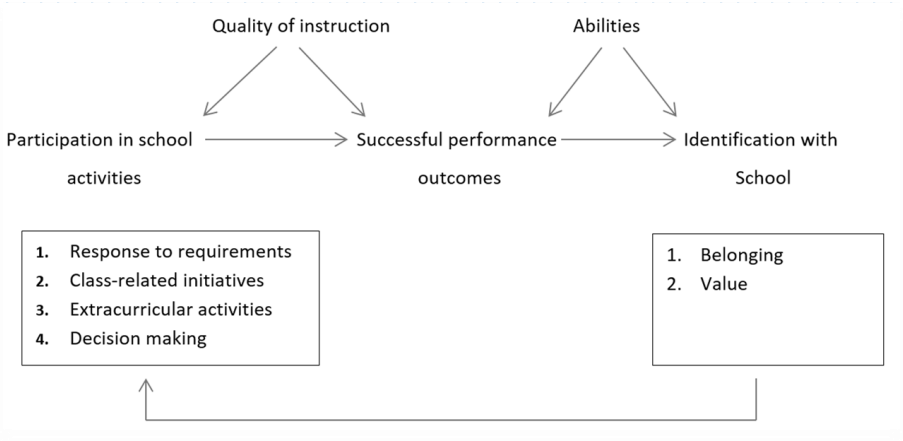


Figure 3.4: Participation-identification model (Finn, 1989)

While there are a number of dimensions of study engagement presented above, the psychological perspective primarily supports the inclusion of the three dimensions of behavioural, cognitive and affective study engagement. It is therefore necessary to draw together the various themes above and present a definition of each component. These definitions are outlined below.

Behavioural study engagement. In the theories and definitions presented in Section 3.2.1, behavioural study engagement is most commonly characterised by time on task, including class attendance and active participation in classroom and extracurricular activities (e.g. Boykin & Noguera, 2011; Finn, 1989; Fredricks et al., 2004; Kahu, 2013; Kuh, 2001). The concept of "time on task" while dating back to the work of Tyler (1930), received significant attention in the 1960s. In a seminal study by Carroll (1963), he outlined that five factors affect success in school learning and three involved time. Firstly, the time needed to learn the task under optimal learning instructions, secondly, the time the student is willing to spend learning, and thirdly, the time allowed for learning. This work was later coined "the Carroll model" and has gained significant attention in the literature and at policy level. For example, Bloom (1974) supports this work outlining that learning requires time, and competence is attained only after a series of learning experiences, that may take months or years to complete (Bloom, 1974, p. 682). Carroll's work has also been referenced in the Organisation for Economic Co-operation and Development (OECD) policy documents which state that everything else being equal, increasing the time that students invest in learning, will lead to higher academic performance (Gromada & Shewbridge, 2016). The importance of time spent in class has also been highlighted in the accounting education literature. For example, in the US,

guidance is provided to accounting educators outlining that candidates should complete 150 hours of lectures before they sit the professional accountancy exams (Needles, 2014; Needles & Powers, 1990).

In addition to coursework hours, accounting educators have also been looking for ways to broaden the curriculum to actively engage students (Adler & Milne, 1997; Blankley, Kerr, & Wiggins, 2017; Healy & McCutcheon, 2008; Riley & Ward, 2017). An active learning environment is described as one where students are the main agents in the learning process, where they engage in activities such as discussion, reading, writing etc. In contrast, a passive learning environment is one in which students are receivers of information (Riley & Ward, 2017). The importance of active learning has for many years been accepted as an important factor for student success in any academic setting (e.g. Irish Survey of Student Engagement [ISSE], 2016; Riley & Ward, 2017). In recent months this has also been the subject of much discussion as educational institutions around the world seek to find ways to ensure that students remain actively engaged in an online setting (e.g. Malan, 2020). Therefore, time invested in active learning activities is an important dimension of behavioural study engagement.

While it can be concluded that the concept of behavioural study engagement is distinct, it is evidently interrelated with cognitive study engagement (Fredricks et al., 2004; Kahu, 2013). For example, Kember et al. (1995) and Kember, Tse, Wong, and Pomfret (1996), in a study of undergraduate students, found that despite investing long hours in study tasks, either inside or outside class, students only gained higher performance when engaged in activities promoting higher order learning (e.g. achieving depth of understanding). Similarly, in the accounting education literature, while there has been a push towards integrating active learning into both higher education and professional curricula, there is acknowledgement that the purpose of this is to promote higher order learning (cognitive study engagement) (e.g. English, Luckett, & Mladenovic, 2004; Riley & Ward, 2017). The concept of cognitive study engagement is discussed below.

Cognitive study engagement. As outlined by Boykin and Noguera (2011) cognitive engagement captures efforts to comprehend complex concepts and issues through deep (rather than surface-level) processing of information, whereby students gain critical or higher-order understanding of the subject matter (Boykin & Noguera, 2011, p. 53). Similarly, Fredricks et al. (2004) refers to cognitive study engagement as the mastery

and comprehension of difficult ideas and skills which requires both investment in learning and self-regulation. The term self-regulation is used interchangeably with cognitive study engagement and is commonly measured as cognitive strategy use, metacognition, volitional and effort control (Fredricks et al., 2004). This is evident in the work of Pintrich and De Groot (1990) who referred to cognitive study engagement as cognitive strategy use and self-regulation. They defined cognitive strategy use as elaboration strategies (e.g. paraphrasing) and organisational strategies (e.g. further reading), while self-regulation was defined as metacognitive strategies (e.g. planning and comprehension) and effort management strategies (e.g. persistence and working diligently). These themes are evident throughout definitions of cognitive study engagement in the school literature (e.g. Green & Miller, 1996; Newmann, Wehlage, & Lamborn, 1992). Similarly, in the higher education literature, Kahu (2013) refers to cognitive study engagement as "students' self-regulation and effective use of deep learning strategies" (Kahu, 2013, pp. 741-742). Deep learning strategies describe activities that reflect a commitment to understanding the material such as reading widely, discussing ideas with others, synthesising ideas from various sources to gain a wider perspective (Laird et al., 2008).

Conceptually, there is some overlap between the two constructs of deep learning and self-regulation. Therefore, a case can be made for using only one concept to measure cognitive engagement in this study. For example, self-regulation has three components: 1) metacognitive strategies for planning, monitoring and modifying cognition, 2) students' management and control of their own efforts, and 3) the cognitive strategies that students use to learn, remember and understand material. The third component mirrors the definition of a deep approach to learning, as it exhibits the internal learning process where students' seek to demonstrate understanding (Entwistle, 2000; Entwistle & Ramsden, 1983).

The NSSE also captures behaviours that are indicative of deep learning. Informed by the approaches to learning literature, NSSE researchers modified their original instrument and included a deep learning scale in later versions of the instrument. This scale has three sub-scales: 1) higher order learning, 2) integrative practices, and 3) reflective learning (Laird et al., 2008). The higher order learning scale is indicative of cognitively intense learning that requires depth of understanding and comprehension to achieve mastery of knowledge. Integrative practices address the extent to which students can integrate

information from various sources, while reflective learning probes the extent to which students reflect on the learning process (Laird et al., 2008, p. 7). In the Irish and Australian versions of the NSSE, the higher order learning scale is the sub-scale that has received the most attention, as it captures participation in activities (e.g. deep thinking) which are considered important to achieve desired learning outcomes (ISSE, 2016).

Cognitive strategies, and in particular deep learning strategies, has also been extensively studied in the accounting education literature (e.g. Ballantine et al., 2008; Booth, Luckett, & Mladenovic, 1999; Byrne, Flood, & Willis, 2002; Duff & Mladenovic, 2015; Flood & Wilson, 2008; Hassall & Joyce, 1997, 2001; Jackling, 2005). Therefore, it is acceptable to conclude that measures of deep learning can be a good proxy of cognitive study engagement in this research setting. Furthermore, while it is acknowledged that many of these studies have been conducted in a higher education setting, Flood and Wilson (2008) found support for the use of a higher order (deep) learning scale to explore student learning in a pre-qualification professional accounting education context. This provides support for the use of this definition of cognitive study engagement in this research.

Affective study engagement. Similar to many definitions of affective engagement presented in the literature, Boykin and Noguera (2011) outline that this dimension of engagement captures emotional reactions linked to task investment. They define affective engagement as "the students interest level, positive affect, positive attitude, positive value held, curiosity, and task absorption" (Boykin & Noguera, 2011, p. 53). The emotional nature of this dimension of engagement is also noted by researchers who claim that creating a bond with the educational environment is a fundamental factor in learning (e.g. Baumeister & Leary, 1995; Finn, 1989).

Other popular definitions of affective engagement are evident in the work engagement literature, where there has been much debate about defining this dimension of engagement (e.g. Maslach & Leiter, 2016; Saks, 2006; Schaufeli, 2017; Schaufeli & Bakker, 2010). For example, there are four main themes of work engagement, as follows:

1) Kahn (1990) defined work engagement as the way in which people feel physically involved, cognitively vigilant and emotionally connected to others in their jobs.
2) Leiter and Maslach (2008) considered engagement (energy, involvement and efficacy) as the opposite to burnout (exhaustion, cynicism and reduced professional efficacy).

3) Schaufeli et al. (2002) considered burnout and engagement to be independent but negatively correlated constructs and defined it as "a positive, fulfilling, and work-related state of mind that is characterised by vigor, dedication and absorption" (Schaufeli et al., 2002, p. 22).
4) Macey and Schneider (2008) defined engagement as having three dimensions, state engagement (e.g. satisfaction), behavioural engagement (e.g. active citizenship) and trait engagement (e.g. personality attributes including positivity).

The definition of work engagement presented by Schaufeli et al. (2002) provides the foundation for the definition of affective study engagement used in this study. In an educational context, vigor is described as the energy invested in learning, mental resilience, persistence and the willingness to invest time in educational activities. Dedication relates to a sense of significance, enthusiasm, inspiration, pride and challenge, while absorption is described as being fully concentrated on, and happily engrossed, in one's study, where time passes quickly and where a student finds difficulty detaching from his/her work (Schaufeli et al., 2002). This definition acknowledges that engagement is an internal psychosocial process, a view which has emerged in the student engagement literature as an important consideration in the definition of engagement (e.g. Kahu, 2013). Secondly, this definition has received theoretical and empirical support in both the work and study engagement literature, including professional accounting work settings (e.g. Schaufeli et al., 2002; Yakin & Erdil, 2012). Finally, the psychological focus of the Schaufeli et al. (2002) definition is useful in professional accounting settings, as trainee accountants often suffer stress as a result of high workloads, which in turn can impact on their ability to psychologically engage in both work and study tasks (e.g. Grey, 1998).

In summary, while there has been variation in how each dimension of engagement is defined, there is some agreement that study engagement is a multidimensional construct, with the most common conceptualisation being that it consists of three distinct, yet interrelated, dimensions (Fredricks et al., 2004; Fredricks et al., 2016; Kahu, 2013; Kahu & Nelson, 2018). Consequently, this work has been the foundation of more recent research seeking to build robust scales to measure each of the three dimensions (e.g. Gunuc & Kuzu, 2015; Maroco, Maroco, Campos, & Fredricks, 2016). As there is support for the inclusion of each dimension in a professional accounting education setting, the multidimensional definition of engagement is used in this study.

Criticisms of the psychological perspective. Despite the strengths of this multidimensional definition within the psychological perspective, by focusing mainly on the internal processes of engagement, this perspective can fail to encapsulate the influence of the wider sociocultural context on the engagement process (Fredricks et al., 2016; Kahu, 2013), as well as failing to understand which antecedent variables are linked to each dimension of engagement (Boykin & Noguera, 2011). Furthermore, Kahu (2013) stated that "engagement is fundamentally situational - it arises from the interplay of context and individual" (Kahu, 2013, p. 763). The importance of this wider context is supported in the work and study engagement literature, as well as being a feature in the professional accounting education literature, outlined in Chapter Two. It is therefore useful to be aware of the sociocultural perspective of study engagement, as it presents important insights into possible antecedents to study engagement. This perspective is discussed below.

3.2.3 Sociocultural Perspective

Background. The (c) sociocultural perspective presents a wider view of study engagement than the psychological perspective by incorporating the broader social, cultural and political context. It seeks to understand "why" rather than "how" a student engages in his/her educational experience. This perspective emerged from concerns that earlier definitions of engagement lacked philosophical inquiry, resulting in a conceptualisation of study engagement that is rarely questioned, and narrowly focused (Bryson et al., 2010; McMahon & Portelli, 2004). To frame this discussion, this perspective explores the influence of institutional culture and the wider social and political context on study engagement under three themes: 1) the concept of alienation and disengagement (e.g. Hu & Kuh, 2002; Mann, 2001), 2) the constructivist view of education (e.g. Solomonides & Reid, 2009), and 3) the influence of societal and market-driven changes, including the commercialisation of education (e.g. McInnis, 2001).

Theme One: Alienation and disengagement. The concepts of alienation and disengagement emerged as useful ways to understand the powerful barrier to study engagement created by cultural differences. This is something that had been briefly introduced in the sociological/behavioural perspective through Tinto's (1975) work on integration. One of the most seminal contributors to this theme was Mann (2001), who

described alienation as "the state or experience of being isolated from a group or activity to which one should belong or in which one should be involved" (Mann, 2001, p. 8). The strength of Mann's work is that it provides a broader and potentially more critical analysis of the student learning experience than other theoretical perspectives. For example, she highlighted how postmodern educational policies which focus on performativity and functionality can cause students to pursue ideological goals set by their institution, rather than intrinsic interests. This is of particular relevance in this research context as past research has found that many trainee accountants see the professional accountancy exams as an obstacle to overcome and do not always view their learning as an enlightening educational experience (Flood & Wilson, 2008; Hanlon, 1994; Paisey & Paisey, 2014). There is also evidence of trainee accountants experiencing alienation in the form of "reality shock" due to the expectations of their jobs leading to difficulties "fitting in" to their new roles (Carcello, Copeland, Hermanson, & Turner, 1991).

Theme Two: The constructivist view of education. This view locates the student at the heart of the engagement process, through considering his/her "sense of being" and becoming a student. Solomonides and Reid (2009) captured these ideas through their "relational model of student engagement", where they described a sense of being as the way which students think of themselves and their study, one that supports confidence, happiness, imagination and self-knowledge, while a sense of transformation referred to how a student learns, understands and thinks about his/her study (Solomonides & Reid, 2009, p. 390). Most importantly, this study found that when learning tasks were set in the more general social, political and economic context, students took a more active rather than passive role when engaging with faculty. Consequently, this stimulated a critical approach to learning, characterised by debates and both personal and peer judgements, which facilitated the development of ethical, moral and cultural opinions (Solomonides & Reid, 2009, p. 395). This model helps explain the process of becoming an accountant and the sense of being an accountant, something which is often referred to in the professional accounting education literature (e.g. Grey, 1998; Paisey & Paisey, 2014). For example, Grey (1998) explored the role of "being a professional" in a large accountancy firm and found that knowing how to conduct oneself was just as important, if not more important, than the possession of technical knowledge.

Theme Three: The influence of societal and market-driven changes. The third theme seeks to understand the influence of the wider socio-political context on student

engagement, and in particular highlights how societal and political changes have redefined the meaning of study engagement. This is firstly explained through the impact of globalisation and marketisation on study engagement and how this has led to higher education being viewed more like a private good than a public good, where the provision of knowledge is akin to a commercial transaction (e.g. Adler & Harzing, 2009; Altbach, 2015; Hu & McCormick, 2012; Olssen & Peters, 2005). For example, the OECD explicitly outline that higher education institutions are responsible for helping students develop a broad range of skills and attitudes (e.g. critical thinking, problem solving), all of which are essential for the labour market (OECD, 2019). This has undoubtedly led to increased job opportunities, a more productive workforce and in turn economic growth, which is considered an important contribution to society (Adler & Harzing, 2009; Altbach, 2015; Olssen & Peters, 2005). However, it is argued that as a result of this commercialised approach to education many of the privileges of academic education, including the pursuit of knowledge and truth are being lost (Mann, 2001). These concerns are also expressed in professional accounting education settings, where trainees are more concerned with the goal of qualification rather than developing the skills of lifelong learning (e.g. Flood & Wilson, 2008; Hanlon, 1994; Paisey & Paisey, 2014).

Strengths and criticisms of the sociocultural perspective. Overall, the sociocultural perspective argues for the need to locate student engagement within an educational context which embraces the significant forces at play from a wider sociocultural context, and which acknowledges the multiple challenges faced by students today. Therefore, the strength of the sociocultural perspective is its discussion of the concept of engagement within the wider learning context, which acknowledges the myriad of factors that influence engagement in learning. As a result, this perspective is primarily associated with developing a deeper understanding of the antecedents of study engagement. However, its major weakness is that is does not capture the state of being engaged, which provides useful insights into understanding the overall process of study engagement.

In summary, the sociological/behavioural, psychological and sociocultural perspectives inform the multidimensional definition of engagement used in this study, as well as providing an understanding of the process of study engagement. However, despite these contributions there were a number of limitations noted in each perspective. Acknowledging these limitations, Kahu (2013) developed the "Conceptual Model of

Student Engagement". This model, along with other engagement frameworks outlining the process of engagement, are discussed in Section 3.3 below.

3.3 The Process of Engagement: Engagement Frameworks

3.3.1 A Conceptual Framework of Engagement

As is evident in the perspectives of engagement presented in Section 3.2, the student engagement literature has struggled to develop a robust understanding of the complexity of the engagement process, including the interactions between engagement dimensions, antecedents, outcomes and the wider sociocultural context. In an attempt to develop a better understanding of the engagement process, Kahu (2013) compiled a conceptual framework of engagement, as presented in Figure 3.5 below, which they later revised as outlined in Figure 3.6 below.

Original conceptual framework (Kahu, 2013). The original framework organised the main antecedents and outcomes of study engagement into two broad categories. Antecedents were categorised into structural and psychosocial influences, while outcomes were categorised into proximal and distal consequences. Kahu also adopted a multidimensional definition of engagement to acknowledge that, in addition to having behavioural and cognitive dimensions, engagement was an internal psychological process. This framework also located engagement within the wider sociocultural context (Kahu, 2013).

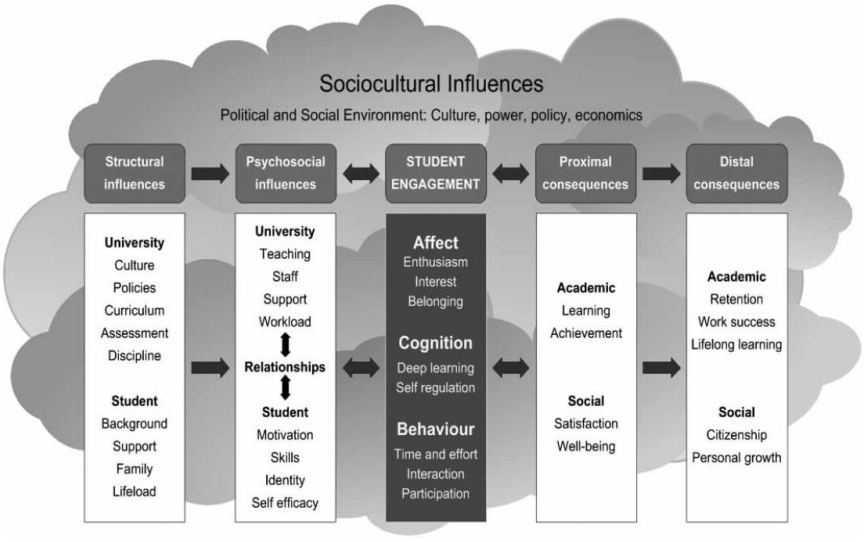


Figure 3.5: Conceptual framework of engagement, antecedents and consequences (Kahu, 2013, p. 766)

Kahu's integrative framework is one of the most comprehensive attempts to organise the study engagement literature, and while it has not been the subject of much empirical testing to date, it has become one of the most widely referenced frameworks in the study engagement literature (e.g. Bryson, 2014; Zepke et al., 2014). However, Kahu herself has criticised it for not illuminating how each factor interacts and for failing to elaborate on the underlying psychosocial mechanisms that influence student success, as well as the mediating mechanisms underlying the process of engagement.

Revised conceptual framework (Kahu & Nelson, 2018). Recognising these weaknesses, Kahu and Nelson (2018) further developed this initial framework by drawing on the propositions of transition theory. Transition theory is a higher education theory which aims to understand the main challenges which lead to withdrawal or failure in higher education, which has some similarities with Tinto's (1975) model of integration, presented in Section 3.2.1. Applying transition theory, Kahu and Nelson's (2018) framework specifically highlights that alignment or misalignment between the student and the institution is important for engagement and success, similar to the views of Mann (2001), presented in the sociocultural perspective of study engagement.

This alignment is also considered important in a professional accounting education setting, as outlined in Chapter Two. For example, while education plays an important role in the qualification process (e.g. attaining expert knowledge and studying for, and passing, qualifying exams), there is also a need to acknowledge that this formal disciplinary approach to learning needs to co-exist with other experiences of the learning context of trainees, including working long hours (Hoskin & Anderson-Gough, 2004, p. 74). Therefore, there must be an awareness of how the interaction of these two interfaces impacts on the learning experience.

Kahu and Nelson (2018) highlighted the need to reconceptualise the experience of learning, taking account of institutional culture and the lived experiences of students in the learning context. They did so by introducing the educational interface, defined as a "dynamic space at the intersection of the student and institution" (Kahu, Nelson, & Picton, 2017, p. 1). They outlined that, within this interface, self-efficacy, emotions, belonging and wellbeing mediate the relationship between the student and the institution, and between student engagement and success, as outlined in Figure 3.6 below.

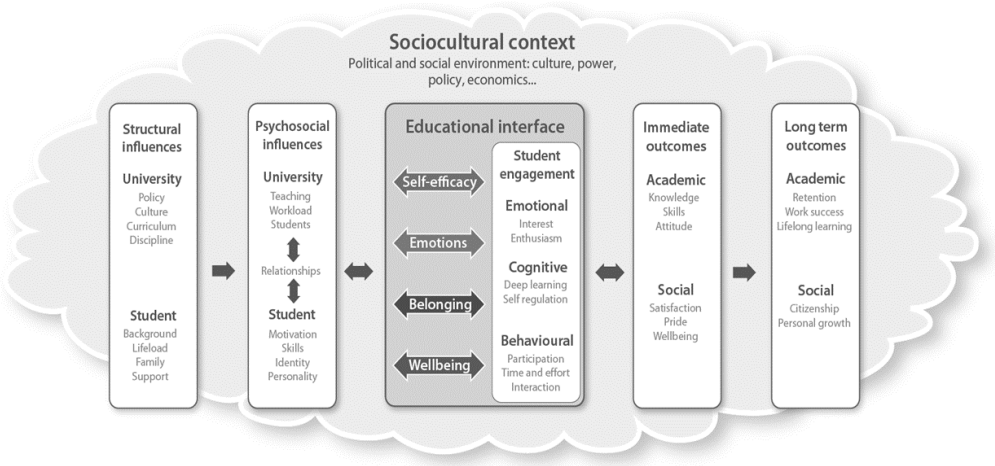


Figure 3.6: Conceptual framework of student engagement (Kahu & Nelson, 2018, p. 7)

It is important to note that, Kahu and Nelson's framework does not recognise the existence of other mediating variables. For example, in the study engagement literature in the psychology field, there is evidence of study engagement mediating the relationship between personal resources, organisational resources and exam performance (e.g. Salanova, Schaufeli, Martínez, & Bresó, 2010). Furthermore, in the work engagement literature, there is strong support for the mediating role of engagement in the work engagement process, as well as evidence of other mediating variables such as, job resources mediating the relationship between personal resources (e.g. self-efficacy) and work engagement (e.g. Schaufeli & Taris, 2014). In Kahu and Nelson's model there is also conceptual overlap between the term student engagement and wellbeing, as in the work engagement literature, engagement is considered a state of wellbeing (e.g. Bresó, Schaufeli, & Salanova, 2011), whereas in Figure 3.6, wellbeing is labelled as a mediator and outcome variable. Additionally, when Figure 3.6 is compared to Figure 3.5, the choice of mediating variables must be questioned. For example, in Figure 3.5 self-efficacy is categorised as a psychosocial influence but in Figure 3.6 it is relabelled as a mediating variable. As a result, it can be argued that other variables, for example, motivation, should have been included as a mediating variable in the revised model, as self-efficacy is a motivational construct.

While Kahu and Nelson's model provides some contributions to our understanding of the process of engagement, its lack of flexibility may limit its usefulness. Given these shortcomings, it was considered useful for the purposes of the current study to explore whether the process of study engagement could be better understood by drawing from

models/theories in the more developed work engagement literature, namely the JD-R theory.

3.3.2 A Theoretical Perspective of Engagement – Job Demands-Resources (JD-R) Theory

As outlined in Chapter One, JD-R theory is a widely used, and empirically supported, theory which depicts the role of demands and resources in the engagement and burnout process in a wide variety of settings. In advance of exploring the propositions of JD-R theory, it is necessary to define the meaning of demands and resources.

Demands. Demands are defined as "those physical, social, or organisational aspects of the job that require sustained physical or mental effort" (Demerouti et al., 2001, p. 501). Interestingly, later research highlighted difficulties with this definition of demands, outlining that depending on the situational context, demands could be either rendered "helpful" or "hindering" (Tims, Bakker, & Derks, 2013). Therefore, demands were further categorised into challenge and hindrance demands, whereby challenge demands are expected to foster engagement, as they are viewed as obstacles to be overcome (e.g. time pressure translating into better time management), and hindrance demands have been found to negatively impact on engagement (LePine, LePine, & Jackson, 2004).

Resources. In the work engagement literature job resources refer to those "physical, psychological, social, or organizational aspects of the job that are: (a) functional in achieving work goals; (b) reduce job demands and the associated physiological and psychological costs; or (c) stimulate personal growth, learning, and development", while personal resources are "the psychological characteristics or aspects of the self that are generally associated with resiliency and that refer to the ability to control and impact one's environment successfully" (Schaufeli & Taris, 2014, pp. 45-49).

JD-R theory propositions. The first phase of JD-R research was based on six propositions as follows (Bakker & Demerouti, 2017; Bakker et al., 2014):

1) That all job characteristics could be categorised as either demands or resources.

2) That job demands and resources are key triggers of two psychological processes, whereby demands trigger a health impairment process leading to burnout, and resources trigger a motivational process leading to engagement.
3) That job resources buffer the relationship between job demands and burnout.
4) That job resources influence the motivational process leading to engagement, especially when job demands are high.
5) That personal resources play a similar role to job resources in that they can positively influence the motivational process leading to engagement, buffer the negative effects of job demands on strain, and boost the desirable impact of challenge demands on motivation.
6) That the motivational process leading to engagement has a positive effect on job performance, while the health impairment process leading to burnout has a negative effect on job performance.

Over the first 10 years, these propositions gained significant empirical support (Bakker & Demerouti, 2017), with additional longitudinal research focusing on the reciprocal relationships between variables, adding further to the body of literature supporting JD-R theory. Based on this support, the second phase saw two additional propositions added as follows (Bakker & Demerouti, 2017):

7) That employees who are motivated by their work are likely to use job crafting behaviours (e.g. seeking out challenging experiences), which lead to higher levels of job and personal resources and even higher levels of motivation.
8) That employees who are strained by their work are likely to show self-undermining behaviours (e.g. poor communication, increased mistakes), which lead to higher levels of job demands and even higher levels of job strain.

Job crafting is defined as the self-initiated changes that employees make to their own job demands and job resources to attain and/or optimise their personal (work) goals, motives and passions. These changes include: 1) increasing job resources, 2) increasing challenging job demands, and 3) decreasing hindering job demands (Tims et al., 2013; Wrzesniewski & Dutton, 2001). In contrast, self-undermining behaviours relate to "behavior that creates obstacles that may undermine performance" (Bakker & Costa, 2014, p. 115). Given the recent nature of these additional propositions, they have been subject to less testing than the previous six propositions. However, their inclusion provides an important perspective regarding the reversed causal and reciprocal

relationships found in both the motivational process and the health impairment process. The main propositions of JD-R theory are summarised in Figure 3.7 below.

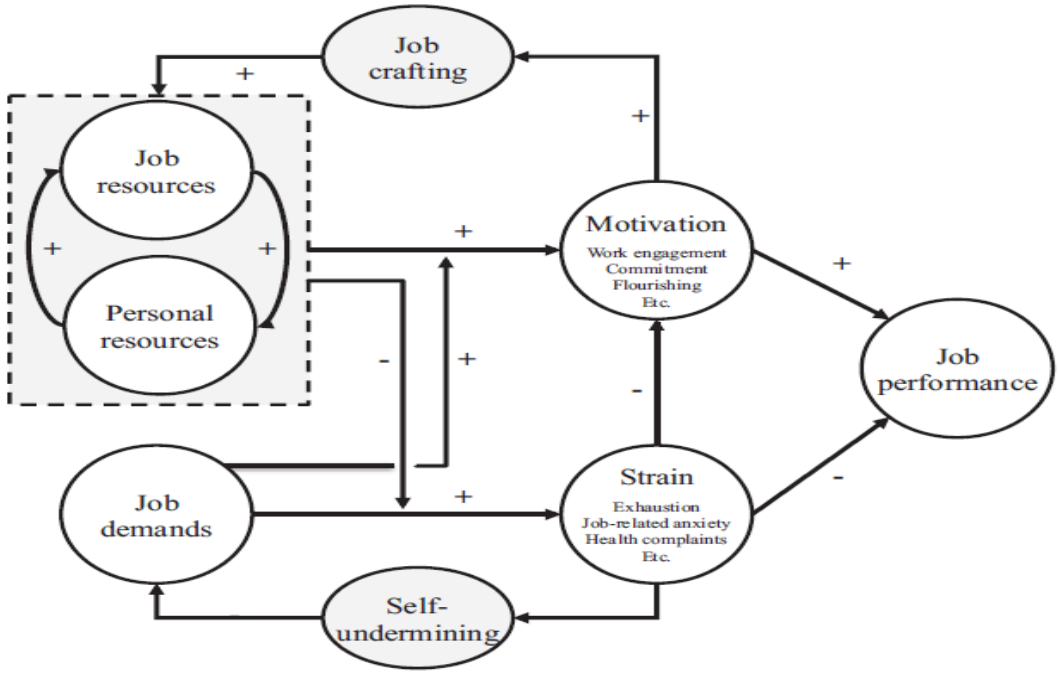


Figure 3.7: Job demands-resources (JD-R) theory (Bakker & Demerouti, 2017, p. 275)

JD-R propositions relevant in this study. While a number of JD-R propositions are applicable in this research, the one of most relevance in this current study is proposition two listed above, particularly the motivational process leading to engagement. This proposition outlines the role of demands and resources in both the health impairment process leading to burnout and the motivational process leading to engagement, and the impact of these two processes on performance. The health impairment process outlines how excessive job demands, and a lack of job and personal resources, lead to job strain and lower job performance (bottom half of the model in Figure 3.7), while the motivation-driven process outlines how job resources, personal resources and challenge demands (job demands denoted with +) lead to increased engagement and job performance (Bakker & Demerouti, 2007, 2017; Demerouti et al., 2001; Schaufeli & Bakker, 2004; Schaufeli & Taris, 2014). As the focus of this current study is the motivational process leading to study engagement and exam performance, and the factors influencing this, it is useful to firstly understand the role of resources in this process.

Resources and engagement. In the work engagement literature, job resources typically relate to those aspects of the job that are functional in achieving goals, stimulate personal growth, learning, and development, and reduce job demands and their associated physiological and psychological costs (Bakker & Demerouti, 2017, p. 274). In addition, personal resources refer to peoples beliefs about their ability to control and impact upon their environment successfully (Bakker & Demerouti, 2017, p. 275). In an education setting, study resources commonly relate to things such as quality lectures and course materials, adequate study support, while personal resources include factors such as self-efficacy, resilience and competence. Together, these resources not only enhance engagement and other outcomes including performance, but also reduce the negative effects of demands which lead to job strain and reduced performance (Schaufeli & Bakker, 2004; Schaufeli & Taris, 2014). While there is significant support for the role of resources in the engagement process, the earlier research on JD-R theory was accused of being overly parsimonious, as it did not attribute adequate attention to the relationship between demands and engagement (Crawford et al., 2010). The role of demands in the engagement process is discussed below.

Demands and engagement. In Figure 3.7, the demands with a positive effect on job strain (hindrance demands) are viewed as thwarting personal growth and goal attainment, therefore having a potentially negative effect on engagement and performance, through increased job strain. For example, interaction with an emotionally challenging colleague may cause increased strain, and thus lower engagement (Tims et al., 2013). However, the negative relationship between demands and engagement is not specifically addressed in the eight propositions of JD-R theory, despite there being evidence of this direct relationship being found in the literature (e.g. Bakker, Emmerik, & Euwema, 2006; Harter, Schmidt, & Hayes, 2002; LePine et al., 2004; May, Gilson, & Harter, 2004; Salanova et al., 2010; Xanthopoulou et al., 2007). For example, in the work engagement literature, research has found that people are less likely to be cognitively and affectively engaged if they encounter obstacles (e.g. not knowing what is expected from them), as they believe no reasonable amount of effort will sufficiently satisfy the demand (Harter et al., 2002).

In the education literature, LePine et al. (2004) found that hindrance demands (e.g. the degree to which your learning progression seems stalled) had a negative impact on motivation to learn (e.g. level of effort invested in learning). Similarly, Salanova et al.

(2010) used JD-R theory to explain the negative relationship between demands such as task overload (referred to as an obstacle in their study), study engagement and academic performance. This negative relationship is explained by outlining that resources consumed dealing with negative emotions, and the psychological threat of hindering demands, leads to decreased motivation, engagement and learning performance (LePine et al., 2004; May et al., 2004). These findings are particularly relevant in a professional accounting education setting, as the literature recognises that the work demands experienced by trainee accountants can negatively impact on their ability to engage in their professional study tasks (e.g. Hanlon, 1994; Sweeney & Summers, 2002).

In summary, the sections above have explored the engagement frameworks which best capture the process of study engagement. The next stage is to select the framework that will be used in this research.

3.3.3 Framework Selection

As outlined above, the engagement process is complex as it captures the relationships between the state of engagement, its antecedents and outcomes. It is therefore necessary to determine which framework, from those presented above, is most appropriate for the current study. This is done by comparing the strengths of JD-R theory to those of the conceptual frameworks presented by Kahu (2013) and by Kahu and Nelson (2018).

1) **Empirical support.** JD-R theory was introduced in 2001 and since then has undergone extensive testing which confirms its robustness as a theoretical framework. This was established through the many empirical studies supporting its main propositions (e.g. Bakker & Demerouti, 2017), including the work challenging these propositions leading to further development of the theory (e.g. Crawford et al., 2010). As Kahu and Nelson's work is more recent, while it has been widely referenced in the study engagement literature, it has not undergone the same level of empirical testing. Furthermore, while Kahu (2013) specifically outlined that the aim of her original work was to disentangle the strands in the student engagement literature and to present a conceptual model that could guide future research, unlike early JD-R research, she did not outline specific propositions that could be empirically tested. Instead, she made specific calls for single institution studies, which may be a reason why there is limited research supporting the use of Kahu and Nelson's conceptual

frameworks. On this basis, JD-R theory offers a more suitable theoretical framework for this study as it has received more empirical support.

2) **Context application.** Kahu and Nelson's frameworks are more limited as they specifically relate to an educational setting, particularly a higher education setting. In contrast, JD-R theory has been empirically validated in a range of organisational settings, including education (e.g. LePine et al., 2004; Salanova et al., 2010). This is of importance to this study as it is set in a professional education setting, which locates the student within both an educational and employment context. This suggests that JD-R theory is more suitable for this study context.

3) **Depiction of the process of study engagement.** On comparison of Kahu and Nelson's conceptual frameworks and JD-R theory, all are based on the view, albeit presented differently, that resources and demands influence the motivational process, leading to engagement and higher performance. While Kahu and Nelson's conceptual frameworks acknowledge the behavioural, cognitive and affective aspects of this process, JD-R theory gives significant attention to the motivational process leading to affective engagement (e.g. Bakker & Demerouti, 2017). As a result, JD-R theory provides a more robust understanding of the psychological process of engagement, above that of the conceptual frameworks presented by Kahu and Nelson. That said, Kahu and Nelson's frameworks support the inclusion of the behavioural and cognitive dimensions of study engagement, alongside the affective dimension, which allows a more in depth understanding of the concept. As this study aims to explore whether trainee accountants engage behaviourally, cognitively and affectively in their professional education programmes, it is considered important to include these three dimensions of engagement in the framework chosen.

4) **Theoretical propositions.** While Kahu and Nelson's conceptual frameworks recognise that engagement is influenced by a range of antecedent variables (e.g. structural and psychosocial influences), they do not clarify whether these variables will potentially have a positive or negative effect on the engagement process, and subsequent performance. In contrast, this is clearly evident in JD-R theory through the distinction between demands and resources, whereby demands (hindrance demands) are considered to have a negative impact on the engagement process

through job strain, while resources (job/study and personal) and demands (challenge demands) are expected to have a positive impact on engagement, as outlined in Figure 3.7. As a result, JD-R theory emerges as more useful when considering what variables are expected to either promote or inhibit engagement in any research setting, including a professional accounting education setting. As the list of antecedent variables outlined by Kahu and Nelson can in fact be categorised as either demands (e.g. lifeload), study resources (e.g. teaching practices) or personal resources (e.g. academic self-efficacy), it must be questioned whether these frameworks present an additional contribution to the study engagement literature, above that already made by JD-R theory.

5) **Conceptual clarity.** In Kahu and Nelson's (2018) framework, wellbeing is labelled as a mediator variable and an outcome variable. However, in the work engagement literature, engagement is considered a state of wellbeing (e.g. Bresó et al., 2011). Similarly, in Kahu and Nelson's (2018) framework, self-efficacy is included as a mediating variable, whereas in JD-R theory it is categorised as a personal resource. These differences in the treatment of mediating variables are further discussed below.

6) **Mediating role of study engagement.** JD-R theory adopts a flexible approach to determining which variables can act as mediators in both the motivational and health impairment process. It does so by recognising the range of reverse causal, reciprocal and mediating relationships between variables, whereby the labelling of variables, while guided by empirical research, is the choice of the researcher. While the JD-R literature has found support for many mediating variables, it has found significant support for the mediating role of engagement between a range of antecedent and outcome variables (e.g. Salanova & Schaufeli, 2008; Salanova et al., 2010). In contrast, Kahu and Nelson (2018) specifically outlined only four mediating variables (e.g. self-efficacy), as outlined in Figure 3.6. These four variables were considered to be critical factors in explaining the relationship between student and institutional characteristics and student engagement and success. For example, instructor feedback (antecedent) leads to higher engagement and exam performance (outcome) as a result of higher self-efficacy beliefs (mediator). However, by including only four mediating variables, this not only limits the flexibility of the framework, but it also questions its value, given that engagement itself has been found to be an important mediating

variable in the JD-R literature. The key objective of this study is to explore the mediating role of behavioural, cognitive and affective study engagement between demands, resources and exam performance. As Kahu and Nelson's conceptual frameworks do not support the testing of this hypothesis, this makes a strong case for the use of JD-R theory to explore the process of study engagement in this research context.

Theory selection. In light of all of the points discussed in this section, and summarised in Table 3.1 below, JD-R theory is chosen as the theoretical framework to frame this research. However, it is important to acknowledge that while JD-R theory helps explain relationships between variables, it is a descriptive theory which does not provide psychological explanations (Schaufeli & Taris, 2014). Therefore, while this is a noted limitation, it is something that can be remedied by drawing on other theories to provide additional explanatory insights, a practice which is very common in research applying JD-R theory. This approach is also adopted in this research and is evident in the following sections which explain the relationship between engagement, its antecedents and outcomes, with a specific focus on those deemed most important in a professional accounting education setting. The discussion below commences by exploring the relationship between study engagement and its outcomes, as this is the relationship common to all mediating hypotheses in this study. This is followed by a discussion of the relationship between the antecedent variables and study engagement. The main literature contributing to each of these sections is summarised in tabulated form in Appendix B.

Table 3.1

Frameworks of Study Engagement

	Conceptual frameworks of student engagement (Kahu, 2013; Kahu & Nelson, 2018)	Job demands-resources (JD-R) theory (Demerouti et al., 2001)
1) Empirical support	Limited studies supporting the relationships between variables in these frameworks.	Extensive empirical support for its main propositions in both work and educational settings.
2) Context application	Educational context	Work and educational context
3) Depiction of the process of study engagement	A range of antecedent variables contribute towards behavioural, cognitive and affective study engagement and a range of outcomes.	Resources and demands contribute towards an underlying psychological process, leading to engagement (affective study engagement) and/or burnout, and other outcomes.
4) Theoretical propositions	Presents an extensive range of antecedents variables (structural and psychosocial) specific to an educational context. It is not clear whether these variables are intended to have a positive or negative influence on the engagement process.	Presents an extensive range of antecedent variables which are relevant to both work and educational contexts. These antecedent variables are categorised as resources and demands and their intended role in either promoting or inhibiting engagement is clear.
5) Conceptual clarity	There is conceptual overlap between variables (e.g. wellbeing is a mediator and an outcome variable).	Greater conceptual clarity amongst variables as there is no evidence of overlap between variables in each category.
6) Mediating role of study engagement	These frameworks do not support the role of engagement as a mediating variable in the engagement process.	The labelling of mediating variables and reciprocal relationships are not pre-determined and instead are the choice of the researcher. It supports the role of engagement as a mediating variable in the engagement process.

3.4 The Outcomes of Study Engagement

Engagement is part of a process which leads to a host of outcomes, of which academic performance is considered one of the most important, in an educational setting (e.g. Entwistle & Ramsden, 1983; Kuh, 2001; Pascarella et al., 2010; Pascarella & Terenzini, 2005; Pike & Kuh, 2005). In advance of discussing why academic performance was chosen as the outcome variable of interest in a professional education setting, it is also important to acknowledge the range of outcome variables relevant in the study engagement literature. As outlined in Figure 3.5 and 3.6 above, Kahu (2013) and Kahu and Nelson (2018) summarise outcome variables as proximal (immediate) and distal (long-term) consequences. Proximal consequences include two categories: academic (e.g. learning and development) and social (e.g. satisfaction and wellbeing). Distal consequences also include two categories: academic (e.g. retention, work success and lifelong learning) and social (e.g. citizenship and personal growth). However, the exploration of all of these is outside the scope of this study, with many of these outcomes only being relevant to a higher education setting.

In professional accounting education, the objective of the initial professional development (IPD) stage is to enable the trainee accountant to develop professional competence through education and training. The educational component of IPD is the focus of the current study and culminates in the final qualifying exam. Thus, performance in this qualifying exam is chosen as the outcome variable of interest in this study. Furthermore, as outlined in Chapter One, the purpose of this study is to explore the mediating role of study engagement in the relationship between antecedent variables (resources and demands) and exam performance. It is useful to firstly explore the relationship between each dimension of study engagement and exam performance, as this relationship is common to all mediating hypothesis presented in Section 3.5. This relationship is discussed in the following section.

3.4.1 Study Engagement and Exam Performance

There is a large body of theoretical and empirical literature examining key aspects of the student learning process, including the learning and study engagement activities influencing exam performance. These strands of research are drawn on in the sections

below to help understand the proposed positive relationship between behavioural, cognitive and affective study engagement, and exam performance.

Behavioural study engagement and exam performance. There is strong evidence in the education literature that time spent studying, including lecture attendance, where students are actively engaged in learning, is an important factor in achieving desired learning outcomes, including exam performance (e.g. Bloom, 1974; Carroll, 1963; Healy & McCutcheon, 2008; Kember et al., 1995; Kember et al., 1996; Riley & Ward, 2017; Tyler, 1930). While JD-R theory does not specifically hypothesise the positive relationship between behavioural study engagement, as defined in this study, and exam performance, there are many strands of education research which provide useful insights into this relationship. For example, as outlined in Section 3.2.2 there is a body of work presented by Carroll (1963), and developed by other researchers, that provides a solid foundation for understanding the relationship between time invested in active learning and academic achievement.

Time and active learning. Carroll (1963) in his model of school learning outlined the theoretical importance of time as a resource for student learning. He conceptualised that student learning was a direct result of the ratio of time spent on learning, to the time needed to learn. He further outlined that the time spent learning was dependent on the time allocated for learning and a student's perseverance and engagement in learning (e.g. class attendance). In contrast, time needed to learn was based on other factors such as student aptitude and teaching instruction. A key principle of this work was the importance of allocating adequate time to learning tasks to ensure students had the time they needed to achieve their desired learning outcomes. This principle became the foundation of many other learning models. For example, Bloom (1956, 1974), in his work on the concept of *mastery learning* outlined that all students could achieve mastery in learning if attention was given to either increasing the amount of time spent (e.g. additional classes), or reducing the time needed (e.g. quality instruction). In doing so, Bloom located time spent studying as a mediating variable in the relationship between antecedent and outcome variables in the learning process. Bloom therefore became a strong advocate of the view that time is the central variable in school learning, and if the necessary time is provided, then all students who are motivated to use the time they need, will achieve their desired learning outcomes. There was empirical support found for these propositions. For example, Wiley and Harnischfeger (1974) found that a 24% increase in time allocation

led to gains of more than a third in mathematics and verbal skills amongst high school students. Similarly, Walberg (1988) in his review of over 100 studies found that 88% of these showed the positive influences of time on learning.

However, despite the strength of the concept of time, Carroll and Bloom both acknowledged that "time as such is not what counts but what happens during that time" (Carroll, 1989, p. 27). Wiley and Harnischfeger (1974) had also acknowledged this and after testing the main propositions of Carroll's original model, they set out to develop a refined model that highlighted the importance of active learning. The key proposition of the revised model was that academic achievement was the direct result of the ratio of the total time a student actively spends on a task (total allocated exposure time X percent of active learning time X percent of usable exposure time) to the time needed to learn.

Support and criticisms. Over the following years this body of work was the subject of further expansion and adaption, as well as criticism. For example, the model was developed further by exploring the antecedent variables influencing the amount of time required to learn, as well as attributing more attention to active learning, and highlighting the importance of learning activities that were tailored to the needs of the student (e.g. Carroll, 1989). However, in another strand of research this work was criticised for being too simplistic and for failing to recognise the complexities of the learning process, such as the social and psychological aspects of learning (e.g. Shulman & Carey, 1984). Despite these criticisms, the principles of this work are still considered important today. For example, as outlined in Section 3.2.2, the OECD, in some of their education policy documents, refer specifically to this body of research and the importance of allocating adequate instruction time to achieve student learning (e.g. Gromada & Shewbridge, 2016). These principles are also evident in accounting education policy. For example, in the US, the professional accountancy education guidance outlines that students need to attend at least 150 hours of lectures before they can sit the professional accountancy exams (Needles, 2014; Needles & Powers, 1990). Therefore, this guidance suggests that lecture attendance will improve chances of success in the qualifying exams. Similarly, in other jurisdictions, such as Ireland, the PABs specifically state that "there is a clear correlation between course attendance and exam success" (CAI, 2020a, p. 1).

Theory of deliberate practice. Other education research has sought to explain the relationship between time spent on active learning tasks and academic performance,

through the principles of the theory of deliberate practice (e.g. Plant, Ericsson, Hill, & Asberg, 2005). This theory proposes that increased performance in any setting is the result of investing cumulative effort in deliberate activities (e.g. time allocation to study tasks), where the goal is to improve particular aspects of performance (Ericsson, Krampe, & Tesch-Romer, 1993; Plant et al., 2005). This is similar to what Walberg (1988) outlined when he introduced the concept of *productive time,* which he referred to as the time spent on suitable lessons adapted to the learner (Walberg, 1988, p. 80). He explained this using the example of a student who already has had exposure to the material being taught, outlining that they might benefit more from independent study, instead of classroom attendance. Therefore, by taking deliberate action to engage in tasks that are best suited to the individual learner, students achieve higher academic performance.

Link with cognitive study engagement. While the discussion above supports the positive relationship between behavioural study engagement (in the form of time spent studying and active learning) and exam performance, there is also widespread support for the view that behavioural study engagement, is not enough in isolation, and that students must also cognitively engage in their learning to achieve desired learning outcomes (e.g. Kember et al., 1995; Kember et al., 1996; Kuh, 2001, 2009a; Pace, 1984; Plant et al., 2005). The relationship between cognitive study engagement and exam performance is discussed below.

Cognitive study engagement and exam performance. As outlined in Section 3.2.2, in this study, cognitive study engagement is defined as the use of higher order (deep) learning strategies. These types of learning strategies are typically characterised by intentional efforts to achieve mastery such as analysing information, synthesising ideas, making judgements about ideas and applying theories (Laird et al., 2008; NSSE, 2018), and have consistently been found to lead to higher quality learning outcomes, including higher exam performance (e.g. Booth et al., 1999; Carini et al., 2006; Davidson, 2002; Entwistle & Entwistle, 1991; Pascarella et al., 2010; Pintrich & De Groot, 1990). While JD-R theory does not specifically hypothesise the positive relationship between cognitive study engagement and exam performance, there are a number of other literature streams which help explain this relationship. For example, Bloom's (1956) taxonomy of educational objectives outlines that where students achieve mastery in each of the following - knowledge, comprehension, application, analysis, synthesis and evaluation - they are more likely to achieve desired learning outcomes (Krathwohl, 2002). The main

body of research supporting this relationship emerges from both the approaches to learning and the study engagement literature, some of which is discussed below.

Approaches to learning literature. The approaches to learning literature emerged from the need to understand more about the quality of student learning, as opposed to the quantity of student learning, and its impact on learning outcomes. In the early 1970s, a number of groups of researchers set about conducting research in this area. One such group, from Gothenburg university (e.g. Roger Säljö, Ference Marton), conducted important work focusing on how students learn in real settings. This group were the first to use the terms surface and deep approaches to learning, which succeeded in distinguishing between the learning strategies that were most likely to lead to higher exam performance (Marton & Booth, 1997). Around the same time, Biggs (1978) set about understanding the motives and strategies of higher education students. He simplified student learning into three processes which became known as the 3P model of student learning, a model which is widely referenced in the education literature. In this model he outlined that presage (personal factors such as previous experiences of learning and the learning context, such as teaching quality) influence both the process (learning approach - how a student sets about a study task) and the product (learning outcomes). This model also outlined that the process (learning approach) could directly influence the product (exam performance). Focusing on the direct relationship between the learning process (e.g. cognitive study engagement - higher order [deep] learning) and the product (e.g. exam performance), Biggs (1978) explained that this positive relationship is due to behaviours such as processing material in a meaningful manner, synthesising ideas from a range of sources and examining the logic of arguments. Consequently, students adopting these approaches are more likely to achieve higher exam performance.

Study engagement literature. Given the support for the propositions of this model, and the approaches to learning literature regarding the impact of deep learning strategies on learning outcomes, the deep learning scale became integrated into the large-scale surveys in the study engagement literature. As a result, the influence of deep learning (commonly referred to as higher order learning in the study engagement literature) on student learning, has been the subject of much empirical work. For example, Pascarella et al. (2010) found that students who invested more time in higher order learning (e.g. synthesising information from different sources, complex interpretations), either inside or outside class, scored higher on a range of learning outcomes, including

critical thinking and problem solving. Similarly, Carini et al. (2006), in a study testing the relationship between time spent on a range of tasks, including higher order thinking, led to significant increases in a range of outcomes, including critical thinking ability, especially for weaker-ability students. Laird et al. (2008) also found that higher order learning was the strongest predictor of self-reported gains.

Assessment methods. Another consideration when exploring the relationship between cognitive study engagement and exam performance is the assessment method used. Many researchers have found that where the assessment method encourages engagement in higher order (deep) learning strategies and quality learning, this will result in higher academic performance (e.g. Beattie, Collins, & McInnes, 1997; Davidson, 2002; Entwistle & Entwistle, 1991; Jackling, 2005; Plant et al., 2005). For example, Davidson (2002), in a study of accounting undergraduate students in a Canadian university, found that students were more likely to adopt deep approaches to learning when preparing for complex examination questions. Similar results were found in other accounting education research emphasising the merits of case study learning as a method to promote deep learning and understanding (e.g. Ballantine et al., 2008; Boyce et al., 2001; Hassall et al., 1998; Healy & McCutcheon, 2008; Kember et al., 1995). Boyce et al. (2001) describes case-studies as scenarios involving contentious accounting issues, which encapsulate the ambiguities of accounting practice, requiring students to draw on professional judgement, technical, analytical and communication skills, to draft a professional answer. Engagement in case study learning is particularly relevant in a professional accounting education setting, as many of the qualifying professional exams are case-based exams (CAI, 2016; Flood & Wilson, 2008). As a result, preparation for these exams is considered to elicit the type of learning activities that foster understanding, rather than memorisation, and is therefore representative of deep approaches to learning (Flood & Wilson, 2008).

Critical perspective. While there is both theoretical and empirical support for the positive relationship between cognitive study engagement and exam performance, it is also important to acknowledge that some research has challenged this relationship. For example, in the higher education literature, Gordon et al. (2008) found that higher order thinking (deep learning) was a poor predictor of student grade point average (GPA). Flood and Wilson (2008) in a study of trainee accountants also challenged this positive relationship. Similar to the discussion above, they outlined that the case-based nature of

the qualifying exams creates an expectation that students who pass are more likely to have engaged in deep learning activities. However, in their study these expected results were not supported, as they found no significant differences on the deep learning scale between those who passed and failed. These studies therefore highlight the need for more research in this area. Consequently, this current study can make an important contribution to this body of research by further exploring the relationship between higher order (deep) learning and exam performance in the study engagement process.

Link with affective study engagement. It is also important to note, that both the empirical and theoretical literature outlined above, supports the view that higher order (deep) learning is psychological in nature because it describes activities that reflect a personal commitment to understanding material, driven by motivation and interest (Biggs, 1978; Laird et al., 2008). Therefore, it is likely that this emotional commitment to study tasks (affective study engagement) is also expected to positively influence exam performance. This relationship is considered in the following section.

Affective study engagement and exam performance. The positive relationship between affective engagement (vigor, dedication and absorption) and outcomes such as performance has received extensive theoretical and empirical support in the work and student psychology literature (e.g. Bakker & Demerouti, 2017; Cotton, Dollard, & De Jonge, 2002; Pekrun, Goetz, Titz, & Perry, 2002; Salanova et al., 2010; Schaufeli et al., 2002). Bakker and Demerouti (2017) consider this one of the main propositions of JD-R theory and explain this relationship through the view that motivation helps individuals to be goal-oriented and focused on tasks, leading to higher performance. Furthermore, Siu, Bakker, and Jiang (2014) explain that motivation implies the direction and intensity of an individual's energy and vigor, whereby positive motivational states tend to be favourable towards engagement and performance (Ryan & Deci, 2000; Siu et al., 2014).

Theoretical and empirical support. According to Fredrickson's (2001) broaden and build theory these positive emotions will broaden individuals thoughts and actions, leading to higher performance. For example, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2009) explained that individuals who experience positive emotions around their job, such as feelings of being interested and well supported, tend to be more intrinsically motivated, affectively engaged (experience vigor, dedication and absorption), and are more likely to achieve their goals. The literature also presents

evidence that engagement has a contagious effect, whereby being surrounded by engaged individuals who are proactive, positive, optimistic and hard-working, can result in a more proactive team (Bakker, Demerouti, & Schaufeli, 2005; Demerouti, Bakker, & Schaufeli, 2005).

There is also empirical support for this relationship in the education literature (Pekrun et al., 2002; Salanova et al., 2010; Schaufeli et al., 2002). For example, Schaufeli et al. (2002) found that all three elements of affective study engagement are positively related to academic performance, with vigor having the strongest influence. They contended that this relationship existed because vigorous and dedicated students are energetic and immersed in their studies, and therefore, are likely to achieve higher performance. Salanova et al. (2010) used a similar explanation to explain why affective study engagement mediated the relationship between performance obstacles, facilitators and academic performance. Pekrun et al. (2002) also found that academic emotions (e.g. enjoyment of learning, pride) are significantly positively associated with academic achievement.

In the professional accounting education literature, there is also evidence of how affective study engagement amongst trainee accountants can lead to enhanced performance. While there is a culture of working long hours in many training firms, which can have negative consequences (e.g. exhaustion), it seems that many trainees perceive the long working hours as a necessary part of becoming a professional accountant, an outcome which is highly desirable to them. Therefore, instead of this being associated with negative connotations, there is some evidence of these workplace pressures being viewed positively (Anderson-Gough et al., 1998/2018). For example, the positivity and enthusiasm around qualifying could lead to some trainees being more affectively engaged, and thus, achieving higher performance in the accountancy exams. This positive relationship can also be explained through Fredrickson's (2001) broaden and build theory, whereby when trainee accountants experience positive emotions, this broadens their thoughts and actions towards their study tasks. Therefore, through this increased study engagement it leads to higher performance in their professional exams.

Measurement of exam performance. In light of the studies presented above, it is important to acknowledge that exam performance can be measured, for research purposes, in alternative ways which could lead to a lack of consistency and comparability

between results. For example, while some studies outlined above, use objective measures of exam performance (e.g. Carini et al., 2006; Flood & Wilson, 2008; Pascarella, et al., 2008; Plant et al., 2005), others use self-reported measures of exam performance (e.g. Astin, 1993), with many using engagement as a proxy for learning (e.g. Kuh, 2009b; Laird et al., 2008). Given that studies using objective measures of performance are considered more reliable than self-reported measures, there is a call to conduct more studies of this nature, a gap which this research intends to address.

Summary. The theoretical and empirical evidence presented above supports the positive relationship between behavioural, cognitive and affective study engagement and exam performance. As study engagement is expected to occupy a mediating role in the engagement process, the hypothesised relationships between study engagement and exam performance are best considered in the context of the demands and resources impacting on the engagement process. These relationships are explored in the sections below.

3.5 The Antecedents of Study Engagement

As outlined in Section 3.3.2, the antecedents of study engagement can be categorised as study resources, personal resources and demands. The role of each category of antecedent variable in the engagement process is discussed below, with a specific focus on their role in a professional accounting education context.

3.5.1 Study Resources

As outlined in Section 3.3, the role of resources in the engagement process has gained significant theoretical and empirical support. The study resources most common in education literature fall into two main categories: 1) structural characteristics of institutions (e.g. policy, culture, curriculum and discipline) and 2) psychosocial resources (e.g. teaching practices and institutional support) (Kahu, 2013; Kahu & Nelson, 2018). While some structural resources have been found to influence engagement, including curriculum design (e.g. Hill, Lomas, & MacGregor, 2003) and discipline (e.g. Beattie et al., 1997), psychosocial resources are considered to have a more profound impact (e.g. Kahu, 2013, 2014; Kuh, 2001, 2003, 2009a; McCormick et al., 2013; Trowler, 2010). Consequently, psychosocial resources have received more attention in the student

engagement and general education literature. Psychosocial resources are commonly categorised into three sub-categories: 1) effective teaching practices, 2) a supportive educational environment and 3) enriching educational experiences (NSSE, 2018). According to Chickering and Gamson (1987), while each of these resources can stand alone and influence engagement independently, when combined, they exert a powerful force on undergraduate education (McCormick et al., 2013).

Study resources provided by CAI. The study resources provided by CAI to trainee accountants are two-fold: 1) mandated support as part of the training contract (in the form of tuition and exam fees, study leave, relevant professional experience and mentorship from a senior chartered accountant), and 2) support from the professional body in the form of lectures, course material, and support services for both personal/work and academic issues (CAI, 2020b). These study resources provided by the professional body can be divided into the same three categories of study resources presented in the higher education literature, namely: 1) effective teaching practices (e.g. quality lectures), 2) supportive educational environment (e.g. support from the professional body for both personal and academic issues), and 3) enriching educational experiences (e.g. quality course material to aid learning). As there is limited evidence of how these resources contribute to the study engagement and learning of trainee accountants, this highlights an important gap in the literature. In order to address this gap, it is necessary to explore the mediating role of study engagement in the relationship between study resources and exam performance in a professional accounting education setting.

Study resources and behavioural study engagement. The relationship between study resources and behavioural study engagement (e.g. time spent in class and active learning) is supported both theoretically and empirically in the literature. While the literature applying JD-R theory, does not specifically address the relationship between study resources, behavioural study engagement and exam performance, it provides a useful perspective into the relationships between the variables. For example, research applying this theory has found support for the positive relationship between study resources, a student's intention to attend class and exam performance (Salanova et al., 2010; Smithikrai, Homklin, Pusapanich, Wongpinpech, & Kreausukon, 2018). As one of the dimensions of behavioural study engagement in this study captures the time spent in lectures, it is likely that if the "intention" to attend class exists, students are more likely to actually attend class. A common theme in these studies outlined above, is that students

are encouraged to attend class where they believe they will have access to quality teaching.

The conservation of resources (COR) theory (Hobfoll, 1989) also helps explain this positive relationship, outlining that where resources are abundant (for example, support from good lecturers), students may want to increase their exposure to this resource, thereby encouraging higher engagement in tasks, such as lecture attendance. The propositions of effort-recovery theory (Meijman & Mulder, 1998) also shed light on this relationship. This theory highlights that abundant resources foster individuals' willingness to dedicate their efforts and abilities to a work task. Therefore, resources play an extrinsic motivational role as they initiate a willingness to spend compensatory effort. For example, according to the propositions of this theory, if students believe they have been provided with abundant study resources (e.g. good quality lectures), to help in the achievement of their study goals, they are likely to be extrinsically motivated to dedicate increased effort, such as attending lectures (behavioural study engagement).

The education models from the school and higher education literature also support the role of study resources in predicting behavioural study engagement, as well as the mediating role of behavioural study engagement in the engagement process. For example, Finn's (1989) participation-identification model presented in Figure 3.4 (Section 3.2.2), acknowledges the role of study resources (e.g. quality of instruction) in activities such as participation in class activities (behavioural study engagement). Similarly, in the higher education literature, Astin's IEO model (Astin, 1970), as presented in Figure 3.1, (Section 3.2.1), supports the mediating role of environmental activities (e.g. behavioural study engagement in the form of lecture attendance) in the engagement process. While these models have evolved over time, and have become more refined, they serve as the foundation of other student engagement models and theories which largely support the role of study resources in promoting engagement and other educational outcomes (e.g. Kahu, 2013; NSSE, 2018; Pascarella, 1985; Pike & Kuh, 2005; Tinto, 1975). However, as cautioned by Kahu (2013), these models sometimes fail to clearly distinguish between the antecedents of engagement, the state of engagement and the outcomes of engagement. Therefore, it is important in this study to acknowledge the role of study resources as an antecedent variable in the engagement process.

There is a large body of empirical work in the education literature which helps explain why study resources are likely to have a positive influence on behavioural study engagement. For example, Friedman, Rodriguez, and McComb (2001) in their study titled "Why Students Do and Do Not Attend Classes", found a range of reasons for class attendance (e.g. personal values, access to course content, teacher influence and peer influence). Focusing on the influence of teachers on attendance, the results showed that students were encouraged to attend if: 1) the teacher was interesting, 2) because they liked participating in class and engaging in discussions with the teacher and peers, and 3) were encouraged to attend if the teacher noticed and cared if they were there, with the last point ranking as the most significant factor. When asked how lecturers contributed to their absence from classes, students explained that they were less likely to attend if the teacher did not notice or care that they were there, if the course content was available from another source (e.g. peers, online), and if the lectures were badly organised, repetitive and not stimulating.

It is also useful to draw on the work of Carroll (1963), presented in Section 3.4.1, when understanding the role of study resources in the engagement process. Carroll specified that the quality of instruction greatly determined the minimal time required in class for each student to reach their desired learning outcomes. Therefore, if quality of instruction was poor, students would be less likely to attend class, and would have to reach their desired learning outcomes through other means. For example, Kelly (2012) in a study on the factors influencing lecture attendance in an Irish university, found that lecture quality was one of the most frequently cited reasons for non-attendance at lectures. Hill et al. (2003) also explored the relationship between study resources and behavioural study engagement. Using a grounded theory approach, through the use of focus groups, they reported that students considered instructor factors (e.g. enthusiasm, expertise and teaching style, social/emotional support systems) more critical for engagement and lecture attendance than physical factors (e.g. classroom, curriculum and library facilities).

In a professional accounting education setting, active engagement in the professional education programme is a critical part in the training contract of a trainee accountant. This education programme, which is mainly delivered through lectures, runs for approximately one year prior to the qualifying exam. Drawing on the theoretical and empirical work presented above, it is expected that the study resources provided by the professional body will lead to higher lecture attendance and active learning in a

professional education setting. As it is also expected that behavioural study engagement will have a positive influence on exam performance, as outlined in Section 3.4.1, it is therefore hypothesised that:

> *Hypothesis 1a: Behavioural study engagement mediates the relationship between study resources and exam performance.*

Study resources and cognitive study engagement. There is also strong theoretical and empirical support for the positive relationship between study resources and cognitive study engagement. From a theoretical perspective, theories such as JD-R theory, while not explicitly testing the relationship between study resources and cognitive study engagement (higher order learning), has found that students who have access to resources such as quality teachers, are more likely to engage in study activities such as exploring and learning new information (e.g. Smithikrai et al., 2018). As these activities are likely to be concerned with developing an understanding of the material being studied and achieving mastery in that area, this supports the positive relationship between study resources and cognitive study engagement.

Similar to the relationship explained in the section above between study resources and behavioural study engagement, effort-recovery theory (Meijman & Mulder, 1998) helps explain how abundant resources plays a motivational role in fostering workers willingness to dedicate their efforts and abilities to work tasks (Schaufeli & Taris, 2014). Applying this theory to this research context, study resources such as effective teaching, provide students with the tools needed to engage in independent study and to master difficult content (cognitive study engagement). COR theory also supports this positive relationship by explaining that individuals will strive to protect current resources and acquire new resources (Hobfoll, 1989). For example, in an educational setting, access to study resources (e.g. good lecturers) will help foster cognitive study engagement, which in turn will build further resources (e.g. mastery).

There is also a large body of empirical research in the education field which supports the positive relationship between study resources and cognitive study engagement (e.g. Biggs, 2011; Kuh et al., 2006; Laird et al., 2008; Steele & Fullagar, 2009; Trigwell & Prosser, 1991; Trigwell, Prosser, & Waterhouse, 1999). For example, in the study engagement literature, studies adopting the NSSE framework have found that when faculty emphasise the importance of engaging in activities such as critical thinking and

synthesising ideas (higher order learning), students are more likely to participate in these activities (e.g. Kuh et al., 2006). Furthermore, Laird et al. (2008) outline that context is critical to fostering deep learning, and because faculty are the designers and facilitators of learning approaches within each discipline, they have a key role to play in shaping approaches to learning, including higher order learning. Similarly, Ryan and Deci (2000) highlight the important role of teachers in encouraging autonomy amongst students (e.g. self-directed learning). This view is also widely supported in the accounting education literature, and in particular in studies applying Biggs 3P model, which specifically outlines the importance of resources such as quality teaching and the learning context (e.g. Beattie et al., 1997; Davidson, 2002; Jackling, 2005). Furthermore, in their paper titled "Issues for the Classroom from Luca Pacioli", Sangster, Stoner, and McCarthy (2007), highlighted the role of instructors in encouraging students to engage in deep learning strategies, and strategies that connects student learning with real world experiences, to ensure the relevance of the material being learned. They further highlighted the importance of this approach through reference to the work of Hanson and Philips (2006) which outlined that "building a course around a textbook does not, in itself, engage students with the material they need to absorb and internalise" (Hanson & Philips, 2006, p.13). Together this work highlighted the important role of instructors in ensuring that students engage in worthwhile learning activities.

The learning approaches literature is also a useful resource when exploring the relationship between study resources and cognitive study engagement (e.g. higher order/deep learning). In particular, the empirical work and theories on the conceptions of teaching are helpful in understanding the role of effective teaching practices, support and enriching experiences in the engagement process. As outlined in Figure 3.8, a teacher's conception of teaching can be categorised as either teacher-focused/content-oriented or student-focused/learning-oriented. This in turn influences a student's approaches to studying (engagement) and levels of understanding (Entwistle, 2000; Ramsden, 1979).

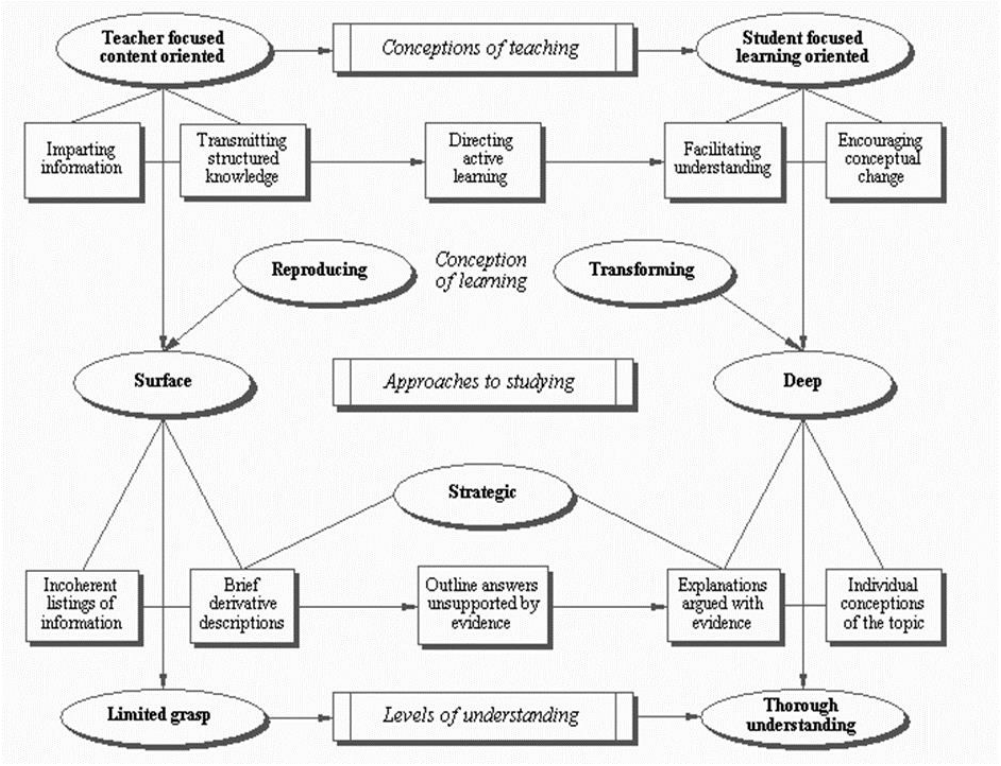


Figure 3.8: Influences of conceptions of teaching on approaches to studying and outcomes of learning (Entwistle, 2000, p. 3)

Drawing on the model outlined in Figure 3.8, it is likely that quality study resources would fall under the category of a student-focused/learning-orientated approach. Lecturers adopting this approach seek to engage students in active learning, facilitate understanding and encourage conceptual change, which facilitates a transformative educational experience, where students engage in deep learning and achieve a thorough understanding of the content. The main propositions of this model have been both theoretically supported (e.g. Biggs, 2011) and empirically supported (e.g. Laird et al., 2008; Trigwell, Prosser, & Taylor, 1994).

In the professional accounting education literature, there are limited studies to date exploring the relationship between study resources and cognitive study engagement (e.g. Hassall & Joyce, 2001). In light of the theoretical and empirical work supporting the positive relationship between study resources and cognitive study engagement, it is expected that the study resources provided by the professional accountancy body will have a positive influence on cognitive study engagement. Furthermore, given the support for the positive relationship between cognitive study engagement and exam performance, as outlined in Section 3.4.1, it is therefore hypothesised that:

Hypothesis 1b: Cognitive study engagement mediates the relationship between study resources and exam performance.

Study resources and affective study engagement. There is also an extensive body of theoretical and empirical research that supports the positive relationship between study resources and affective study engagement (vigor, dedication and absorption), as well as the mediating role of affective study engagement in the overall engagement process. These relationships are considered a central proposition of JD-R theory and have been empirically supported in education studies which have found that the availability of resources (e.g. quality teaching) contribute to a motivational process leading to positive outcomes (e.g. high performance), through increased study engagement (e.g. Salanova et al., 2010; Smithikrai et al., 2018). The theories underlying JD-R theory also help explain this positive relationship. For example, as previously outlined, effort-recovery theory (Meijman & Mulder, 1998) highlights the role of abundant resources in fostering both extrinsic and intrinsic motivation, whereby individuals are more motivated to invest effort where they have been provided with adequate resources. COR theory also explains how study resources (e.g. enthusiastic and well experienced lecturers) can promote positive emotions and optimism in students about their studies, in turn this motivational process promotes affective study engagement, and builds further resources (e.g. competence). While it is not expected to test the reciprocal relationships between resources and engagement in this study, this theory serves as a way to understand why resources play a motivational role in the engagement process.

Fredrickson's (2001) broaden and build theory also helps explain this positive relationship. It outlines that positive emotions increase an individual's thought-action repertoire and encourage them to engage in a wider range of activities, with negative emotions having the opposite effect. When applied to an educational setting, past research has found that positive emotions, such as enjoyment, positively correlated with students motivation to learn, as they found the material interesting (e.g. Pekrun et al., 2002). Other empirical research has found similar results. For example, Salanova et al. (2010) found that a range of study resources (e.g. feedback from lecturers) had a significant positive effect on emotions and the motivational process leading to affective study engagement (vigor and dedication), as well as finding support for the mediating role of affective study engagement in the relationship between study resources and future academic performance. Similarly, Smithikrai et al. (2018) found support for the role of study

engagement (vigor, dedication and absorption) as a mediator between study resources (e.g. teaching quality) and academic success. They outlined that satisfaction with teaching quality influences study engagement because it generates positive emotions such as joy and interest. They further explained that joy enhances creativity, while interest encourages students to explore and learn new information, therefore contributing towards higher performance.

Support for the positive relationship between study resources and affective study engagement is also evident in the engagement literature. For example, Mann (2001), through her work on alienation (considered the opposite to engagement by some researchers [e.g. Kahu, 2013]), highlighted the seminal role of the institution in ensuring that students who may be suffering alienation are integrated into the learning community. She outlined that resources (e.g. effective teaching practices) encourage meaningful purpose, pursuit of knowledge and empower students to develop a sense of ownership of their learning. In turn this creates positive emotions around the study experience facilitating increased dedication and enthusiasm (affective study engagement).

In the professional accounting education literature, there are no studies to date exploring the relationship between study resources and affective study engagement. In light of the theoretical and empirical support for the positive relationship between these two variables, and the expected positive relationship between affective study engagement and exam performance, as outlined in Section 3.4.1, it is therefore hypothesised that:

> *Hypothesis 1c: Affective study engagement mediates the relationship between study resources and exam performance.*

Potential negative role of resources. The literature presented to date outlines the positive relationship between study resources and the three dimensions of engagement. However, it is also necessary to consider alternative perspectives regarding the role of resources. For example, it is possible that the more support that students receive from instructors, the more complacent they can become. The work of Biggs (2011) helps explain this point, whereby it was found that too much support from teachers can sometimes reduce a student's propensity to engage in independent learning. Other research found that in some cases resources are only significant when individuals are experiencing high levels of stress (Bakker et al. 2007). Equally, in the work engagement literature, Halbesleben, Neveu, Paustian-Underdahl, and Westman (2014) acknowledge

that more than one resource can compete to achieve a common goal, something they refer to as "equifinality". For example, it is possible that learning communities, whereby peers actively form groups where they can learn from each other, can act as substitutes for, or reduce, the importance of the role of teachers. Furthermore, as outlined above, Friedman et al. (2001) found that students often will not attend classes if they can obtain the course content elsewhere, including online or from a peer. This is particularly relevant in the current climate, as nearly 90% of educational institutions, globally, now engage in online delivery (Malan, 2020). Therefore, while students may be expected to engage in synchronous online lectures, if this content is available in an asynchronous form, this might act as a competing study resource.

These studies, while questioning the much-supported positive role of study resources in the engagement process, highlight what was first outlined at the start of this section, that resources vary in nature and are experienced by people in different ways. Therefore, while not discounting the important role of study resources in the engagement process, these studies highlight the need to learn more about the role of study resources in professional accounting education, something which this research seeks to do. In addition to the above hypotheses, study resources can also play a moderating role in the engagement process. The potential moderating role of study resources is discussed below.

Moderating role of study resources. One of the propositions in JD-R theory, as outlined in Section 3.3.2, is that job resources can buffer the impact of job demands on engagement and burnout (Demerouti & Bakker, 2011). The buffering role of job resources was based on the view that control or support over the execution of tasks reduces the negative effect of high demands (e.g. workload) on job strain (burnout). Furthermore, where individuals expend effort, the rewards received for that effort reduces any negative effects (Demerouti & Bakker, 2011; Van der Doef & Maes, 1999). While there was some support for these propositions (e.g. Van der Doef & Maes, 1999), JD-R theory further highlighted that different types of demands and resources could interact to predict both burnout and engagement (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Demerouti & Bakker, 2011). Although a lot has been written about the potential of this buffering hypothesis in the JD-R literature, Schaufeli (2017) recently outlined that the evidence for such interactions is weak, and even when significant interactions are reported, the practical relevance of such interactions tends to be low. Therefore, this work suggests that additional research on the potential of the buffering hypothesis is required.

While the earlier propositions of JD-R theory tend to focus on the buffering effect of job resources on demands in the health impairment process (e.g. Bakker et al., 2007), later propositions outlined that job resources influenced the motivational process leading to work engagement, particularly when job demands were high (e.g. Bakker et al., 2007; Sonnentag, 2017). For example, Bakker et al. (2007) found that job resources (e.g. supervisor support) particularly influenced work engagement when teachers were confronted with high levels of pupil misconduct (demands). This is in line with the propositions of COR theory which outlines that individuals gain their motivational potential in situations where they are confronted with high demands.

In addition to the moderating role of study resources in the relationship between demands (work exhaustion) and study engagement, they also have a potential moderating role in the relationship between personal resources and study engagement. This potential moderating role, along with the role of personal resources in the overall study engagement process, is discussed in the following section.

3.5.2 Personal Resources

JD-R theory outlines that personal resources are important determinants of how an individual adapts to his/her work/study environment, and therefore, play an important role in the motivational process leading to engagement (e.g. Kahu, Stephens, Leach, & Zepke, 2015; Schaufeli & Salanova, 2007; Schaufeli & Taris, 2014; Xanthopoulou et al., 2007). As outlined in the main propositions of JD-R theory, personal resources function in a similar manner to job resources as they contribute towards personal development and growth, and thus engagement, while also helping protect individuals from demanding situations and related costs (Bakker & Demerouti, 2017; Schaufeli & Taris, 2014). For example, empirical support has been found for the direct relationship between personal resources and engagement, the mediating role of personal resources in the relationship between job resources and engagement (e.g. Xanthopoulou et al., 2007), and the moderating role of personal resources in the relationship between job resources and engagement (e.g. Van den Broeck, Van Ruysseveldt, Smulders, & De Witte, 2011). As the exploration of all the potential roles of personal resources in the engagement process is beyond the scope of this study, it is useful to start by exploring their relationship with engagement and performance.

There is an extensive, and similar, list of personal resources presented in the work and education literature. For example, in the work engagement literature three personal resources have received ongoing attention including, self-efficacy, self-esteem and optimism (e.g. Hobfoll, 1989; Xanthopoulou et al., 2007). For example, Xanthopoulou et al. (2007), using JD-R theory to explore the role of personal resources in the work engagement process, found self-efficacy to be a critical factor in predicting engagement. Similarly, in the education literature, Kahu (2013) refers to personal resources including, self-efficacy, motivation, skills and identity in her conceptual model, with later research finding empirical support for their role in the study engagement process (e.g. Kahu et al., 2015). As an exploration of all of these variables is beyond the scope of this study, academic self-efficacy was chosen as the personal resource of interest in this study. The reason for its selection is the importance that is attributed to this variable in the learning process (e.g. Bandura, 1989, 1997; Honicke & Broadbent, 2016; Kahu, 2013; Kahu & Nelson, 2018; Pajares, 2002; Schunk, 1991). The literature supporting the selection of this variable is outlined below.

Self-efficacy is defined as "the belief in one's capabilities to organise and execute courses of action required to produce given attainments" (Bandura, 1997, p. 3). In academic settings, academic self-efficacy is referred to as a student's confidence in his/her abilities to successfully perform academic tasks at a designated level (Schunk, 1991; Schunk & Mullen, 2012). In the literature, there is a debate about whether self-efficacy is a general concept or whether it is a more domain specific construct (Bandura, 1977). From a social cognitive perspective, general self-efficacy beliefs differ conceptually and empirically from a person's domain specific beliefs. For example, in an education setting general self-efficacy beliefs refer to a person's general confidence about their academic capabilities, while domain specific self-efficacy would relate to a particular activity domain, such as subject-specific performance. As this study is set in a professional accounting education context, self-efficacy beliefs in this domain will be explored. However, the need for in-depth analysis of subject specific self-efficacy is beyond the scope of this study.

In the education literature, Bandura has conducted extensive work on the role of self-efficacy in the education process contending that an individual's behaviour, motivation and subsequent achievement cannot be fully understood without considering self-efficacy beliefs (Bandura, 1977, 1997). This has triggered a large body of research exploring the

role of self-efficacy in learning contexts. Much of this research has consistently found self-efficacy to be a strong predictor of student learning and academic performance (e.g. Byrne, Flood, & Griffin, 2014; Chemers, Hu, & Garcia, 2001; Lent, Brown, & Larkin, 1986; Pintrich & De Groot, 1990; Richardson, Abraham, & Bond, 2012; Schneider & Preckel, 2017; Zimmerman, 2000). For example, a meta-analysis examining 50 antecedents of academic performance found that self-efficacy was the strongest predictor (Richardson et al., 2012). Similar results were found in a more recent meta-analysis, where 105 predictors of academic performance were examined, with self-efficacy ranked as the second strongest predictor (after peer assessment) on academic achievement (Schneider & Preckel, 2017). In a study of Irish undergraduate accounting students, Byrne et al. (2014) found that high self-efficacy beliefs in relation to understanding course content, preparing appropriately for class and meeting deadlines were all associated with higher academic performance. While many of these studies did not specifically address the relationship between self-efficacy and study engagement, it must be acknowledged that self-efficacy is a psychological state and not a behavioural or cognitive state. Therefore, it can only influence exam performance through a mediating variable such as study engagement (Bandura, 1997; Pintrich & De Groot, 1990).

Consequently, there is a body of research which explores the relationship between self-efficacy and the three dimensions of study engagement. For example, some research explored the relationship between self-efficacy and all three dimensions of study engagement (e.g. Linnenbrink & Pintrich, 2003), while others studied the relationship between self-efficacy and one dimension of study engagement, including cognitive study engagement (e.g. Greene & Miller, 1996; Pintrich & De Groot, 1990; Walker, Greene, & Mansell, 2006), and affective study engagement (e.g. Bresó et al., 2011; Llorens, Schaufeli, Bakker, & Salanova, 2007; Ouweneel, LeBlanc, & Schaufeli, 2011; Salanova et al., 2010). Overall, this body of research provides evidence that self-efficacy beliefs can influence the various dimensions of study engagement in different ways, as well as outlining that individuals, with high self-efficacy beliefs, do not have to be engaged in all three ways in order to achieve desired performance (e.g. Pintrich & De Groot, 1990; Wigfield & Eccles, 2000). Therefore, similar to the sections above, which explore the influence of demands and study resources on each separate dimension of study engagement, these studies make a case for exploring the mediating role of each dimension

of study engagement separately, in the relationship between academic self-efficacy and exam performance.

In this current study, as passing the qualifying accounting exams is an important stage in the quest to becoming an accountant (e.g. Grey, 1998; Paisey & Paisey, 2014), and self-efficacy has been identified as an important personal resource fostering study engagement and performance, its exploration in this education context is important. Furthermore, as there is limited evidence of how academic self-efficacy contributes to the study engagement and learning of trainee accountants, this highlights an important gap in the literature. In order to address this gap, the mediating role of study engagement in the relationship between academic self-efficacy and exam performance, in a professional accounting education setting, is discussed below. This is done by firstly focusing on the direct relationships between academic self-efficacy and each dimension of study engagement, followed by a discussion of the mediated paths.

Personal resources (academic self-efficacy) and behavioural study engagement. The positive relationship between academic self-efficacy and behavioural study engagement (e.g. time spent in class and active learning) has received both theoretical and empirical support in the literature. While this relationship is not specifically addressed in the propositions of JD-R theory, it can be explained through the theories underlying JD-R theory, as outlined below.

Bandura's social cognitive theory (SCT) (1977) deals extensively with the concept of self-efficacy and provides the theoretical justification for its role in promoting behavioural study engagement. Bandura (1977) claims that individuals have a self-system which enables them to exercise a measure of control over their thoughts, feelings and actions, and as self-efficacy is part of this self-system, it is an influential arbiter of human behaviour (Bandura, 1977; Pajares, 2002). A key feature of SCT is the interplay and reciprocal relationships between personal factors (for example self-efficacy), behaviour (actions initiated) and environmental factors (physical and social support structures) (Pajares, 2002). Furthermore, this theory supports the view that individuals have the ability to create future outcomes in their thoughts. For example, in the case of this study, if trainee accountants have high self-efficacy beliefs, this may trigger a motivational process which encourages them to behave in a certain way (e.g. attend lectures), to ensure they achieve their goal of qualification.

Hobfoll's (1989) conservation of resources (COR) theory is also useful when explaining the role of self-efficacy in promoting behavioural study engagement. COR theory outlines that individuals strive to both protect resources and build resources (Hobfoll, 1989). When applied to an educational context, attending classes and active learning (behavioural study engagement) could be viewed as an opportunity to build competence (building personal resource) and to avoid negative outcomes, such as exam failure (protecting personal resource). Therefore, in line with COR theory, trainee accountants are encouraged to behaviourally engage in their studies (e.g. attend lectures) as it is an opportunity to both build and protect resources, a view which is also supported in the empirical literature (e.g. Burnett, Friedman, & Yang, 2009; Gaylon, Blondin, Yaw, Nalls, & Williams, 2012). Fredrickson's (2001) broaden and build theory further supports this positive relationship. This theory outlines that positive emotions will likely broaden an individual's thoughts and actions. As high self-efficacy beliefs are associated with positive emotions (e.g. feeling confident towards study tasks) it is likely that they will encourage students to attend lectures and engage in active learning (behavioural study engagement), to help achieve desired learning outcomes.

It has also been reported that students with high self-efficacy beliefs are more likely to invest more time and effort in their studies (e.g. Kahu et al., 2015; Linnenbrink & Pintrich, 2003; Pajares, 2002). This is based on the view that self-efficacy is often measured as the extent to which students feel they can make an effective contribution in class, they feel stimulated to achieve their study goals, they feel they can learn something interesting and feel like a good student (e.g. Pajares, 2002). For example, Kahu et al. (2015) found that when students felt confident about their studies (high self-efficacy) they were more likely to invest time in the study task. Linnenbrink and Pintrich (2003) explain the relationship between academic self-efficacy and behavioural engagement in a number of ways. For example, they outline that those with high self-efficacy beliefs are more likely to seek help if needed, therefore they are likely to invest more time and be more actively engaged in their learning. Supporting these results, Byrne et al. (2014) found that undergraduate accounting students reporting low self-efficacy beliefs were reluctant to seek help and actively engage in their studies (e.g. respond to questions in lectures). Given the support that exists for the positive relationship between academic self-efficacy and behavioural study engagement, as well as the positive relationship

between behavioural study engagement and exam performance, outlined in Section 3.4.1, it was therefore hypothesised that:

> *Hypothesis 2a: Behavioural study engagement mediates the relationship between academic self-efficacy and exam performance.*

Personal resources (academic self-efficacy) and cognitive study engagement. The positive relationship between academic self-efficacy and cognitive study engagement (e.g. higher order/deep learning) is also supported both theoretically and empirically in the literature. The theoretical work underpinning this positive relationship is similar to that presented in the section above. For example, SCT highlights that individuals experiencing high self-efficacy beliefs tend to invest greater effort, set more challenging goals, persist in the face of adversity and are motivated to achieve mastery in their study tasks (e.g. Bandura 1977, 1989, 1997). This relationship is often explained by reference to the goal-orientations literature, outlining that self-efficacy impacts goal choice, goal persistence, goal revision and goal-striving behaviour (Bandura, 1997: Bandura & Locke, 2003; Dweck, 1986: Greene & Miller, 1996; Liem, Lau, & Nie, 2008; Middleton & Midgley, 1997; Pajaras, 2002; Schunk & Mullen, 2012). Goal strategies are commonly divided into two categories, learning goals and performance goals (Dweck, 1986: Middleton & Midgley, 1997). Learning goals are described as those where students seek to develop new skills, knowledge and to achieve mastery, while performance goals are concerned with demonstrating ability, outperforming others and achieving success with little effort, with the overall objective of avoiding negative judgement (Dweck, 1986, p. 1040; Middleton & Midgley, 1997, p. 2). Although it is acknowledged that there are a number of factors influencing goal orientations, most motivational theorists conclude that lower self-efficacy beliefs lead to students setting performance goals and higher self-efficacy beliefs are more likely to lead to setting learning goals (Dweck 1986; Kaplan & Midgley, 1997; Locke & Latham, 1990; Middleton & Midgley, 1997). This view has gained significant support in the education literature with a number of studies building on this work and finding empirical support for the positive relationship between self-efficacy beliefs, learning goals and cognitive study engagement (e.g. Greene & Miller, 1996; Walker et al., 2006).

Other theories supporting the positive relationship between academic self-efficacy and cognitive study engagement include COR theory (Hobfoll, 1989) and broaden and build

theory (Fredrickson, 2001). For example, under the propositions of COR theory, individuals will strive to build and protect their resources. Therefore, high self-efficacy beliefs will likely encourage students to invest more effort in their study tasks (e.g. engage in deep learning), which in turn builds further self-efficacy beliefs, and reduces the likelihood of negative outcomes (e.g. exam failure). This is particularly relevant in this study context, as trainee accountants tend to be motivated to cognitively engage in their professional studies to ensure their success in the qualifying exams, as their future careers are contingent on their exam success (Anderson-Gough et al., 1998/2018; Flood & Wilson, 2008). Fredrickson's (2001) broaden and build theory further supports this positive relationship by outlining that positive emotions, such as those experienced with high self-efficacy, leads to broader thinking (e.g. cognitive study engagement), which in turn will likely lead to higher exam performance.

The impact of self-efficacy on cognitive study tasks is further explained in the conceptual work of Linnenbrink and Pintrich (2003). They explained that students with higher self-efficacy beliefs are more likely to try to understand their study material, and think deeply about it, by reflecting on what they have learned. They also outlined that due to these positive emotions they are more likely to go back over what they do not understand in order to achieve mastery. They further explained that highly efficacious students engage in this way as they believe they are capable of achieving the dept of understanding needed to achieve their desired learning outcomes, and believe that this can be achieved through increased effort. This is similar to the view of Pajares (2002) who outlined that those with high self-efficacy beliefs are more likely to heighten their effort when they face failure. Pintrich and De Groot (1990) found empirical support for this relationship finding that academic self-efficacy beliefs promoted cognitive strategy use, such as elaboration strategies, where the intention was to gain understanding. These findings resulted in a number of later studies exploring the same relationship with many of these studies finding that self-efficacy beliefs accounted for a 5-10% change in cognitive strategy use over time (e.g. Pintrich, 1999). Qualitative research also found support for this relationship explaining that the positive emotions associated with high self-efficacy beliefs encouraged them to "extend their learning beyond the prescribed content" (Kahu et al., 2015, p. 488).

The accounting education literature provides further support for this positive relationship. For example, Ravenscroft, Waymire, and West (2012) in a study of professional accounting students found that those with a growth mindset (e.g. confident, process focused) were more committed to achieving mastery in their studies. Consequently, they achieved higher performance in their exams than their peers with a fixed mindset (e.g. low in confidence, outcomes focused). Similarly, Byrne et al. (2014) found that undergraduate accounting students with high self-efficacy beliefs were those most likely to achieve a deep understanding of the material and take a positive approach towards their studies, with the opposite being true for those with lower self-efficacy beliefs. Therefore, in summary, given the theoretical and empirical support for the positive relationship between academic self-efficacy and cognitive study engagement, and the positive relationship between cognitive study engagement and exam performance, as outlined in Section 3.4.1 above, it can therefore be hypothesised that:

> *Hypothesis 2b: Cognitive study engagement mediates the relationship between academic self-efficacy and exam performance.*

Personal resources (academic self-efficacy) and affective study engagement. It is evident in the literature that high self-efficacy beliefs not only lead to changes in human behaviours and cognitive processes, such as choosing more challenging goals, but they also have a powerful influence on psychological processes (Bandura, 1977; Linnenbrink & Pintrich, 2003). Consequently, the relationship between self-efficacy and affective engagement (e.g. energy, pride, enthusiasm) has received significant attention in both the work and study engagement literature. Many of these studies provide both theoretical and empirical support for the positive relationship between these variables (e.g. Linnenbrink & Pintrich, 2003; Locke & Latham, 1990; Xanthopoulou et al., 2007).

Research applying JD-R theory attributes this positive relationship to individuals feeling in control of their work environment, and feeling confident and proud of their work, which contributes to a motivational process resulting in higher interest and enthusiasm towards their tasks (e.g. Llorens et al., 2007; Xanthopoulou et al., 2007). Similarly, research supporting the propositions of SCT, outlined that high self-efficacy beliefs tended to lead to individuals being more dedicated to their tasks, and thus more likely to persevere when faced with obstacles or challenges (e.g. Bresó et al., 2011; Llorens et al., 2007). Research referencing COR theory and Fredrickson's broaden and build theory also

help explain this positive relationship (e.g. Kahu et al., 2015; Llorens et al., 2007; Ouweneel et al., 2011; Xanthopoulou et al., 2007, 2009). For example, Llorens et al. (2007), using the propositions of COR theory, explain that students strive to protect and accumulate resources, therefore when they have more resources (e.g. high self-efficacy beliefs) it leads to positive outcomes such as increased engagement. Ouweneel et al. (2011) use the propositions of both COR theory and Fredrickson's broaden and build theory to explain that self-efficacy leads to greater willingness to spend additional energy and effort on study tasks, as well as providing empirical support for the positive and reciprocal relationships between positive emotions, academic self-efficacy and study engagement. They further explained that the positive emotions associated with personal resources such as self-efficacy, encourage students to engage in exploratory behaviours which can trigger interest in tasks. Similarly, Kahu et al. (2015) explained that negative emotions, such as students doubting their ability to successfully complete the task assignment (low self-efficacy), triggered worry and hence lower enjoyment and enthusiasm towards study tasks (affective study engagement).

Other studies in the education field have also explored the relationship between these two variables, with the general consensus being that those with higher academic self-efficacy are considered to be more interested and enthusiastic in their academic work (e.g. Bresó et al., 2011; Linnenbrink & Pintrich, 2003; Pajares, 2002; Salanova et al., 2010). Linnenbrink and Pintrich (2003) explain this positive relationship by outlining that where students are more confident in their ability to perform well in a task, this can evoke a motivational process where they experience personal interest in the task, they place value on what they are learning, and they experience positive emotions and pride around the goal that they are working towards. Other research has found that students with high self-efficacy beliefs are less likely to experience stress and instead approach their studies with a sense of serenity (Pajares, 2002). Salanova et al. (2010) also highlighted that as high self-efficacy beliefs are representative of a positive psychological state, it is likely that students experiencing this state will approach their studies with a sense of joy, interest and contentment, which in turn will lead to increased affective study engagement (Salanova et al., 2010). In this study, Salanova et al. (2010) also found support for the mediating role of affective study engagement between self-efficacy beliefs and exam performance. This finding was also supported in other studies, including that of Bresó et al. (2011) who explained that when students believe in their ability to successfully

complete a task they can draw upon the necessary cognitive and motivational resources to successfully execute study-related tasks to ensure their academic success. Given the theoretical and empirical support for the positive relationship between academic self-efficacy and affective study engagement above, and affective study engagement and exam performance, as outlined in Section 3.4.1, it is therefore hypothesised that:

> *Hypothesis 2c: Affective study engagement mediates the relationship between academic self-efficacy and exam performance.*

In addition to the direct relationship between academic self-efficacy and study engagement, this relationship can be moderated by other resources. Therefore, the potential moderating role of study resources in the relationship between academic self-efficacy and study engagement is discussed below.

Moderating role of study resources. While there is less evidence in the JD-R literature of the moderating effects of job/study resources on the relationship between personal resources and engagement, there is some empirical evidence that resources strengthen other resources. This is based on the propositions of COR theory which outlines that the accumulation of resources and the abundance of resources fosters engagement (e.g. Schaufeli, 2017; Sonnentag, 2017; Xanthopoulou et al., 2009). Using this theory, Sonnentag (2017) found that when individuals experience low personal resources (e.g. low confidence), the benefit that can be derived from resources can be limited. However, importantly, she outlined that at moderate levels (e.g. moderate confidence) positive resources, including encouragement from a supervisor (job/study resource), can promote engagement. This is in line with the propositions of COR theory which outlines that, resource gains are most salient in conditions where there is evidence of resource loss, where individuals will strive to both build and protect that resource.

These findings were also supported in research in the education field (Carini et al., 2006; Martin & Rimm-Kaufman, 2015; Umbach & Wawrzynski, 2005). For example, in a study of schools in the US, Martin and Rimm-Kaufman (2015) explored the moderating role of student-faculty interactions between self-efficacy and affective engagement. The results revealed that where student self-efficacy beliefs were low, support from faculty was an important buffer to maintain high engagement levels. They explained these findings with reference to the person-environment fit theory. This theory proposes that students are more susceptible to academic decline if there is a lack of alignment between their needs

and the demands of their learning environment, and that teacher support plays an important role in preventing that decline, especially for "at-risk" students. They also found that emotional support from teachers, rather than instructional support, buffered the relationship between self-efficacy and engagement. In the higher education literature, while not testing moderating effects, Carini et al. (2006) found that lower-ability students tended to benefit most from perceptions of a supportive environment and quality relationships within this environment. They explained these results by reference to the psychological needs of individuals and the need for a nurturing environment to increase confidence and commitment, which, in turn, enhances the learning experience.

The potential influence of study resources on academic self-efficacy, is further supported through social cognitive theory (SCT) (Bandura, 1977). According to SCT, self-efficacy beliefs can be informed by a number of sources, including verbal persuasion from others. In this context, the three categories of study resources (effective teaching practices, support from the professional body for academic and work difficulties, enriching educational experiences), can fall under the definition of verbal persuasion, which describes a situation when "people are led, through suggestion, into believing they can cope successfully with what has overwhelmed them in the past" (Bandura, 1977, p. 198). Applying these views to this study context, the professional body can potentially intervene and help strengthen the self-efficacy beliefs of trainee accountants.

The potential moderating role of study resources in the relationship between personal resources and study engagement can be further explained through the literature supporting "the boosting hypothesis" (e.g. Bakker et al., 2007; Tadić, Bakker, & Oerlemans, 2015). For example, Tadić et al. (2015) found that resources (e.g. performance feedback and social support) boosted the positive relationship between challenge demands (e.g. complex tasks that must be completed under time pressure) and work engagement. When applied to this research context it is possible that trainee accountants with high self-efficacy beliefs may set more challenging study tasks (challenge demands) to ensure their success in the professional exams. Therefore, additional support from the professional body (verbal persuasion) can have the effect of boosting their self-efficacy and encouraging them to attend more lectures, invest more time in cognitive study tasks, and be more dedicated towards their studies. Therefore, similar to what Tadić et al. (2015) outlined, even when individuals are presented with

challenging tasks, high levels of resources can boost their positive emotions and engagement as they feel supported, competent and that their work is valuable.

Drawing on these theoretical arguments and the supporting empirical research outlined above, the study resources provided by the professional body (e.g. support for academic difficulties) can strengthen the positive relationship between academic self-efficacy and the three dimensions of study engagement. It is therefore hypothesised that:

> *Hypotheses 2d-f: Study resources moderate the positive relationship between personal resources (academic self-efficacy) and behavioural study engagement (d), cognitive study engagement (e), and affective study engagement (f), such that the relationship will be strengthened, when study resources are greater.*

3.5.3 Demands

In the education literature, demands affecting study engagement typically relate to lifeload demands (Kahu, 2013; Kahu & Nelson, 2018). Lifeload is described by Kahu (2013) as "the sum of all the pressures in a student's life including, employment, needs of dependents, finances and health" (Kahu, 2013, p. 767). Lifeload is expected to have a negative effect on study engagement. For example, if students are employed while in higher education, their perceptions of their combined workload can potentially impact on their ability to engage in their studies (Kahu, 2013; Plant et al., 2005). Heavy workloads of this nature are akin to hindrance demands in JD-R theory and have been found to be negatively related to students' attendance at classes (behavioural study engagement) (e.g. Curtis & Shani, 2002; Plant et al., 2005). They also commonly result in the adoption of surface learning approaches rather than higher order (deep) learning (cognitive study engagement) (e.g. Kember, 2004), and are associated with lower energy and dedication towards studying (affective study engagement) (e.g. Le Pine et al., 2004; Salanova et al., 2010). These findings are an important consideration for trainee accountants as they are required to balance the demands of both employment and studying, in parallel, as discussed in the following sections.

Work burnout (exhaustion). As depicted in JD-R theory in Figure 3.7, job hindrance demands typically contribute to a health impairment process of which work burnout (exhaustion, cynicism, low professional efficacy), and lower performance, are

common outcomes. In this study only one dimension of burnout is explored, namely work exhaustion, and secondly, it is placed as a demand rather than an outcome of demands. In explaining the rationale for these choices it is firstly necessary to understand why exhaustion was chosen as the sole dimension of work burnout.

Exhaustion as the sole dimension of work burnout. While burnout typically has three components, exhaustion, cynicism and low professional efficacy, exhaustion is considered the core dimension of burnout, as it outlines the stress dimension of work, is the most easily identified, and is usually experienced before cynicism and low professional efficacy (e.g. Bakker & Costa, 2014; Maslach, Schaufeli, & Leiter, 2001; Mostert, Pienaar, Gauche, & Jackson, 2007; Schaufeli & Taris, 2014; Sweeney & Summers, 2002). Exhaustion is described as feelings of being emotionally drained by one's work (Bakker & Costa, 2014, p. 113). It is not an isolated event and instead is considered to be a prolonged response to a range of emotional and physical stressors (Leiter, 2017; Maslach et al., 2001; Schaufeli & Taris, 2014; Sonnentag, 2017). Some researchers claim that its effects can still be experienced years later (Salmela-Aro & Upadyaya, 2014; Schaufeli et al., 2002), and therefore, it cannot be alleviated easily by switching tasks (Sonnentag, 2017). There is also a body of literature which has found that exhaustion is the most likely dimension of burnout to spillover into non-work domains (e.g. Bakker et al., 2005; Bakker et al., 2006; Demerouti et al., 2005; Hakanen & Schaufeli, 2012). Furthermore, as outlined in Chapter Two, past research has found that exhaustion is prevalent amongst trainee accountants (Sweeney & Summers, 2002), therefore, its potential effects on the study engagement process is an important consideration in this research context.

Work exhaustion as a demand. The rationale for positioning exhaustion as an antecedent (hindrance demand) of engagement in this study was influenced by the work engagement and study engagement literature. Firstly, the literature exploring spillover effects recognises that strain (e.g. exhaustion), which is an outcome of demands in one domain, can spillover, and become a demand in another domain (e.g. Demerouti et al., 2005). Therefore, in the case of this study it is possible that exhaustion from the work domain becomes a demand in the study domain. In the education literature, this view is supported by the work of Kahu (2013) which outlines that work pressures (lifeload/demands) can negatively influence study engagement. This can be further explained by reference to the definition of a hindrance demand presented in the work

engagement literature. Hindrance demands are viewed by workers as unnecessarily thwarting personal growth and goal attainment (Bakker, Demerouti & Sanz-Vergel, 2014). When applied to this study, given that "workers" are trainee accountants, who place significant value on the goal of exam qualification (Anderson-Gough et al., 1998/2018), any factors which can potentially negatively impact on their progress towards this goal, including work exhaustion, is representative of a hinderance demand. On this basis, it was considered appropriate to include work exhaustion as a hindrance demand in a professional accounting education setting. This is explained further in the following section.

Demands in the accountancy profession. As outlined in Chapter Two, the accountancy profession has for many years been described as a demanding and stressful profession (e.g. Buchheit et al., 2016; Chong & Monroe, 2015; Collins & Killough, 1989; Fogarty et al., 2000; Haskins et al., 1990; Ozkan & Ozdevecioglu, 2013; Sweeney & Summers, 2002). Consequently, many researchers have found evidence of exhaustion amongst accountants as well as other negative outcomes such as job dissatisfaction, high turnover rates and negative spillover effects to other aspects of an individual's life (Collins & Killough, 1989; Fogarty et al., 2000). In particular, trainee accountants are at high risk of suffering from exhaustion, as past research has shown that they suffer from work stress due to time pressure, heavy workloads (including work and study) and conflicting demands (e.g. Carcello et al., 1991; Chong & Monroe, 2015; Sweeney & Summers, 2002). Furthermore, it has been found that those at junior levels in accounting firms are more likely to suffer from these stressors than those with more experience, as they have not developed the appropriate coping strategies (Chong & Monroe, 2015). As a result of these stresses, it is likely that exhaustion experienced as part of their jobs can spillover into their study time, and therefore, negatively impact on their ability to engage in their professional studies. While JD-R theory is used in many of these studies to frame the negative relationship between demands and engagement, the majority of researchers draw on other theories, including the conservation of resources (COR) theory, role stress theory, transactional stress theory, broaden and build theory and effort recovery theory. These theories, along with relevant empirical work, are used to frame the research hypotheses in this study context.

Demands (work exhaustion) and behavioural study engagement. It is likely that if trainee accountants are suffering exhaustion as a result of their jobs, they have less

energy. Therefore, they may be less likely to attend lectures that are scheduled at the end of a workday or weekend, as well as being less likely to engage in active learning with peers inside or outside class (behavioural study engagement). This view is supported in both the empirical and theoretical work supporting the spillover hypothesis. For example, Demerouti et al. (2005), through the use of role stress theory, explain that work and non-work domains are mutually incompatible, as work demands interfere with the time available for other commitments. When applied to a professional accounting education setting, the two most common competing domains for trainee accountants are work and study. For example, it is widely accepted that trainee accountants are subject to stressful and demanding workloads (e.g. Buchheit et al., 2016; Fogarty et al., 2000; Haskins et al., 1990; Ozkan & Ozdevecioglu, 2013; Sweeney & Summers, 2002). Consequently, there is an accepted culture that trainee accountants work excessive overtime in order to achieve work goals, a practice which can sometimes impact on their ability to attend lectures (e.g. Anderson-Gough et al., 1998/2018; Empson, 2004; Grey, 1998).

The negative effects of this excessive overtime can also be explained through effort-recovery theory (Meijman & Mulder, 1998). This theory outlines that if recovery is inadequate or insufficient, the result is a state of sustained activation that gradually exhausts the employee physically and/or mentally (Schaufeli & Taris, 2014). Recovery is described as the experience of being refreshed and replenished in a non-work domain, with growing empirical evidence finding that recovery periods can alleviate some of the negative consequences of exhaustion and stress (e.g. Sonnentag, 2003; Sonnentag, Mojza, Binnewies, & Scholl, 2008). In the case of trainee accountants, this physical exhaustion could result in lower attendance at lectures. There is also empirical work in the higher education literature which has found that engaging in part-time employment, while a full-time student at university, has a negative impact on lecture attendance, often due to feelings of tiredness and stress (e.g. Curtis & Shani, 2002). Therefore, based on these findings, it is possible that the effects of full-time employment will negatively impact on the lecture attendance of part-time students. As it is expected that behavioural study engagement will have a positive effect on exam performance, as outlined in Section 3.4.1, and work exhaustion will have a negative effect on behavioural study engagement as outlined above, it is therefore hypothesised that:

> *Hypothesis 3a: Behavioural study engagement mediates the relationship between work exhaustion and exam performance.*

Demands (work exhaustion) and cognitive study engagement. It is also proposed that work exhaustion will have a negative effect on cognitive study engagement (higher order/deep learning). Cognitive study engagement draws on the idea of investment, whereby students demonstrate a willingness to exert the effort necessary to comprehend complex ideas and master difficult skills (Fredricks et al., 2004; Kahu, 2013). Applying the propositions of JD-R theory it is expected that those feeling exhausted will have lower energy, and therefore will be less likely to invest effort in study tasks. The work of Crawford et al. (2010) also helps explain this expected negative relationship through the propositions of transactional stress theory. This theory suggests that stressful situations are appraised as being a challenge or hindrance. When considered a challenge, individuals view the situation as positive and changeable, and increase their effort to meet the demands of the situation to achieve desired outcomes. In contrast, when considered a hindrance, the situation is viewed as negative and stable, and individuals invest less effort, as they view effort as having decreased utility in this situation. For example, if a student is exhausted from work, they see little value in investing effort in studying as they believe they are too tired to absorb anything. The work of Demerouti et al. (2005) can also offer some insight on the potential spillover of work exhaustion onto cognitive study engagement. Through role stress theory they explain that when stress from work is "taken home", it can result in an employee being preoccupied with work, resulting in less focus on other tasks not related to work. As cognitive study engagement requires focus and effort in order to reach depth of understanding, feelings of tiredness and being drained as a result of work will likely have a negative impact.

Effort-recovery theory is also useful in explaining this proposed negative relationship. Prior research supports the view that trainee accountants often invest significant effort to achieve work goals, as this is an expectation of their roles (e.g. Sweeney & Summers, 2002). However, there is also evidence that this increased effort leads to excessive overtime on a persistent basis with little recovery time (e.g. Ozkan & Ozdevecioğlu, 2013). Therefore, drawing on the propositions of effort-recovery theory, it is likely that trainee accountants suffering work exhaustion will have less energy to seek mastery in their study tasks (cognitive study engagement), and hence may achieve lower exam performance as a result of inadequate recovery time. Taken together these theories and empirical work provide support for the proposed negative relationship between work exhaustion, cognitive study engagement and exam performance. Given the expected

positive relationship between cognitive study engagement and exam performance, as outlined in Section 3.4.1, and the expected negative relationship between work exhaustion and cognitive study engagement, outlined above, it is therefore hypothesised that:

> *Hypothesis 3b: Cognitive study engagement mediates the relationship between work exhaustion and exam performance.*

Demands (work exhaustion) and affective study engagement. Affective engagement is considered the psychological dimension of study engagement. Therefore, it is likely that prolonged exhaustion from work tasks, such as lower energy, will spillover into the study domain, having a negative impact on affective study engagement. This proposed negative relationship is based on the view that individuals experiencing work exhaustion are likely to have less energy (vigor), enthusiasm (dedication), and be less immersed (absorption) in their study tasks. This negative relationship has received the most theoretical support in the literature, as JD-R theory, and its underlying theories, emphasise the negative psychological effects of exhaustion. For example, effort recovery theory explains that inadequate recovery time from high strain demands can lead to psychological and physiological costs that deplete an individual's energy and willingness to engage in tasks (Schaufeli & Taris, 2014). This negative relationship is also explained through Hobfoll's (1989) COR theory. COR theory provides support for the view that if there is an actual or perceived loss of a resource, this will cause stress, reduced coping ability and may cause individuals to feel that they will not achieve anticipated returns. In the case of trainee accountants, work exhaustion could likely lead to a loss of energy (actual loss of resource), the effects of which could spillover into non-work-related aspects of their life, which in the case of this study, the most notable being, their study tasks.

There is also empirical support for this negative relationship. For example, drawing on transactional stress theory, LePine et al. (2004) explain that motivation to learn (affective study engagement) mediated the relationship between the two forms of stress (challenge and hindrance) and learning performance, whereby the indirect effect of challenge stress (e.g. difficulty of the work) was positive, and the indirect effect of hindrance stress (e.g. blockers to completing projects) was negative. Similar results were found by Salanova et al. (2010). Applying JD-R theory, they found support for the hypothesis that affective

study engagement mediated the relationship between performance obstacles (e.g. too many tasks) and future academic performance. Salanova et al. (2010) explained this negative mediated path through Fredrickson's (2001) broaden and build theory explaining that negative emotions (such as those associated with exhaustion) lead to reduced (instead of broader) thoughts and actions and willingness to persevere, and hence lower affective study engagement. As affective study engagement is expected to have a positive effect on exam performance, and work exhaustion is expected to have a negative effect on affective study engagement, it is therefore hypothesised that:

> *Hypothesis 3c: Affective study engagement mediates the relationship between work exhaustion and exam performance.*

In addition to the mediating role of study engagement in the relationship between demands and exam performance, JD-R theory also supports the view that the negative effects of demands on the engagement process can be moderated by job/study resources (e.g. Schaufeli, 2017; Schaufeli & Taris, 2014).

Moderating role of study resources. In a professional accounting education context, as the job of a trainee accountant is associated with high stress, as well as the competing demands of working and studying (e.g. Chong & Monroe, 2015; Ozkan & Ozdevecioğlu, 2013; Sweeney & Summers, 2002), study resources (effective teaching practices, supportive educational environment and enriching educational experiences), can potentially reduce the negative effect of these demands on study engagement. Drawing on the propositions of JD-R theory and its underlying theories, there is further support for this moderating hypothesis. For example, under the propositions of COR theory, when demands are high, the existence of resources are of greater importance. In the case of trainee accountants, high demands are likely to come from the responsibility of balancing work and study, therefore the existence of resources in the form of support from the PAB are of greater importance. As these theoretical arguments underpin the support for the moderating role of study resources in JD-R theory, it can therefore be hypothesised that:

> *Hypotheses 3d-f: Study resources moderate the negative relationship between demands (work exhaustion) and behavioural study engagement (d), cognitive study engagement (e), and affective study engagement (f), such that the relationship will be weakened, when study resources are greater.*

3.6 Summary of Variables Selected and Proposed Hypotheses

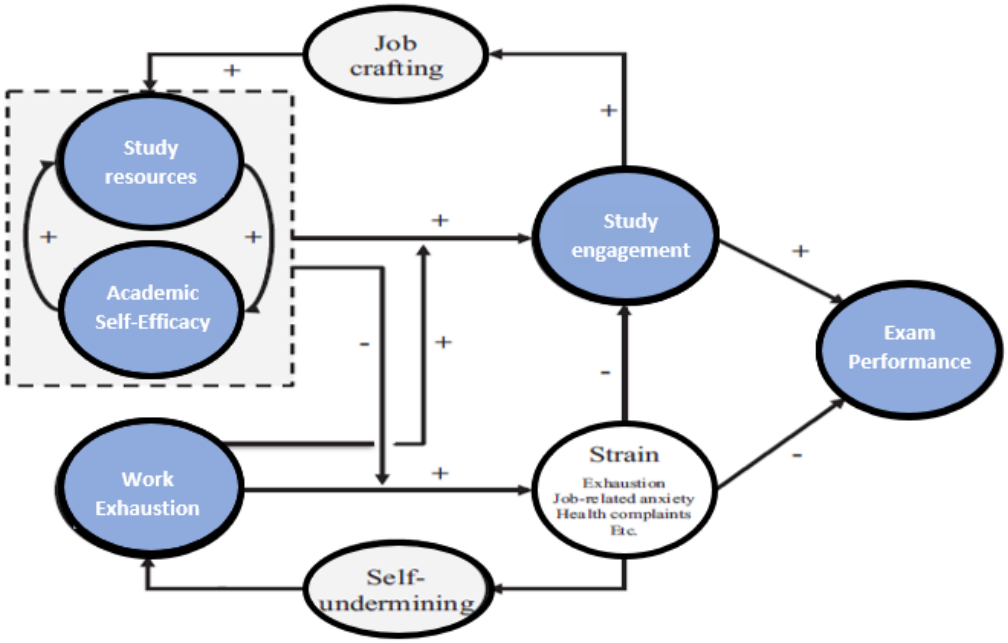


Figure 3.9: Job demands-resources (JD-R) theory – variables selected

Note. The variables highlighted in blue above are explored in this study.

On review of the literature presented in this chapter to date, as well as the professional accounting education literature presented in Chapter Two, a compelling case is made to explore the variables presented in Figure 3.9 above. These include study resources (e.g. effective teaching practices), personal resources (academic self-efficacy) and demands (work-exhaustion), as antecedents of study engagement; study engagement as a multidimensional construct; and exam performance as an outcome of study engagement. In summary, these variables were selected for the following reasons.

Antecedent variables. In line with JD-R theory, the antecedent variables selected were categorised as study resources, personal resources and demands.

Study resources. The second antecedent variable selected was study resources. As the engagement literature places strong emphasis on the role of the educational institution in the engagement process, it was considered important to explore this variable. Furthermore, given the range of study resources that are made available to trainee accountants (e.g. effective teaching practices, support services) by their

professional body, there is limited knowledge about how and whether these resources contribute towards study engagement and exam performance. Consequently, this highlighted an important gap in the literature.

Personal resources. The third antecedent variable selected was the personal resource of academic self-efficacy. Academic self-efficacy has emerged in the study engagement literature as an important predictor of study engagement and exam performance. As there is limited research on how academic self-efficacy could potentially affect trainee accountants study engagement and performance in their professional exams, it was considered important to explore this antecedent variable in this research.

Demands. The demand variable selected was work exhaustion. While it is acknowledged that trainee accountants work in very stressful environments, where they are expected to manage the demands of working full time and studying, there is limited knowledge about how these pressures impact on their professional studies. For example, the spillover hypothesis presented in Section 3.5.1, proposes that exhaustion from work can spillover into non-work domains, which in the case of this research is the study domain. Furthermore, the study engagement literature recognises the importance of understanding the influence of the wider social environment on student learning. Therefore, it was considered important to explore the effects of work exhaustion on the study engagement process, as these students are both working and studying in parallel.

Engagement variable. By exploring the three dimensions of study engagement, it is possible to better understand how trainee accountants participate in their studies (behavioural study engagement), the effort invested to achieve mastery (cognitive study engagement) and their enthusiasm and dedication to study tasks (affective study engagement). Therefore, by exploring all three dimensions, it gives a better appreciation of the nature and complexity of the concept, as well as those dimensions of study engagement that are most likely to influence exam performance. This level of insight would have been absent if only one dimension was studied.

Outcome variable. Exam performance was chosen as the outcome variable of interest in this study, as passing the professional qualifying exams is seen as a significant factor in a trainee accountants career progression. In addition, as outlined above, the study engagement literature strongly supports the positive relationship between study engagement (behavioural, cognitive and affective) and exam performance. However, as

there are no studies to date exploring these relationships in parallel, in a professional accounting education context, this highlighted an important gap in the literature.

Based on the gaps identified in the literature, three overarching hypotheses were presented with a series of sub-hypotheses. As outlined, these hypotheses will explore the relationships between the following variables: 1) study resources (e.g. effective teaching practices), study engagement and exam performance, 2) personal resources (academic self-efficacy), study engagement and exam performance, 3) demands (work exhaustion), study engagement and exam performance. These hypotheses are summarised in Table 3.2. The hypothesised model is presented in Figure 3.10 below.

Table 3.2

Summary of hypotheses

H1a-c	Study engagement mediates the relationship between study resources and exam performance
H1a	Behavioural study engagement mediates the relationship between study resources (e.g. effective teaching practices) and exam performance
H1b	Cognitive study engagement mediates the relationship between study resources (e.g. effective teaching practices) and exam performance
H1c	Affective study engagement mediates the relationship between study resources (e.g. effective teaching practices) and exam performance
H2a-c	Study engagement mediates the relationship between personal resources (academic self-efficacy) and exam performance
H2a	Behavioural study engagement mediates the relationship between personal resources (academic self-efficacy) and exam performance
H2b	Cognitive study engagement mediates the relationship between personal resources (academic self-efficacy) and exam performance
H2c	Affective study engagement mediates the relationship between personal resources (academic self-efficacy) and exam performance
H2d-f	Study resources moderates the relationship between personal resources (academic self-efficacy) and study engagement
H2d-f	Study resources moderate the positive relationship between personal resources (academic self-efficacy) and behavioural study engagement (d), cognitive study engagement (e), and affective study engagement (f), such that the relationship will be strengthened, when study resources are greater
H3a-c	Study engagement mediates the relationship between demands (work exhaustion) and exam performance
H3a	Behavioural study engagement mediates the relationship between demands (work exhaustion) and exam performance
H3b	Cognitive study engagement mediates the relationship between demands (work exhaustion) and exam performance
H3c	Affective study engagement mediates the relationship between demands (work exhaustion) and exam performance
H3d-f	Study resources moderates the relationship between demands (work exhaustion) and study engagement
H3d-f	Study resources moderate the negative relationship between demands (work exhaustion) and behavioural study engagement (d), cognitive study engagement (e), and affective study engagement (f), such that the relationship will be weakened, when study resources are greater

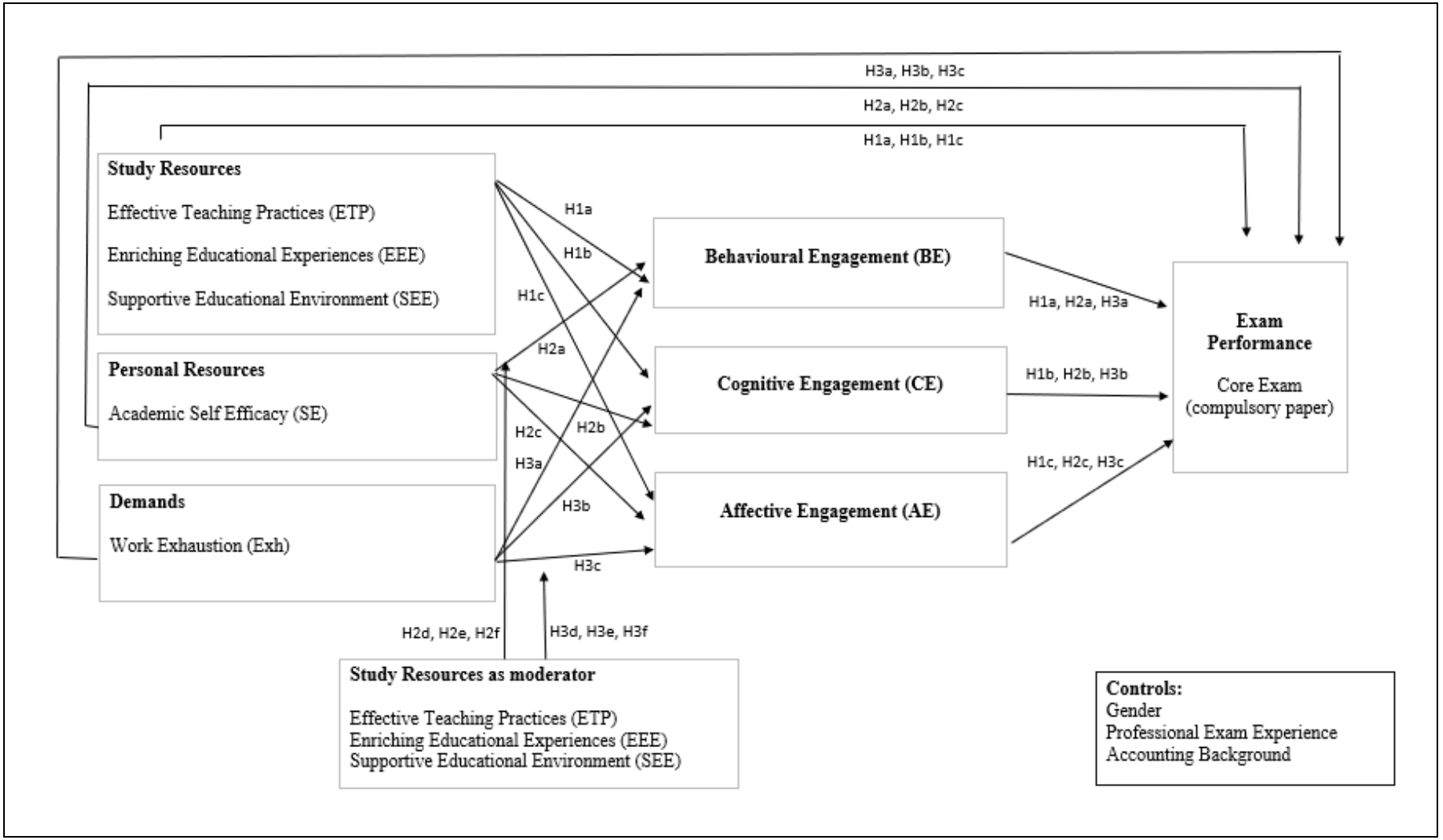


Figure 3.10: The hypothesised research model (excluding sub-scales)

3.7 Chapter Summary

This chapter commenced with a discussion of the concept of study engagement. This discussion was framed around three perspectives of study engagement, namely (a) the sociological/behavioural perspective, (b) the psychological perspective, and (c) the sociocultural perspective. The merits and shortcomings of each perspective were explored, concluding with the support for the use of a multidimensional definition of engagement, comprising the dimensions of behavioural, cognitive and affective study engagement. This review also revealed the complexity of the study engagement process highlighting the need for a conceptual or theoretical framework to draw together the various strands of engagement research. This review concluded with the selection of JD-R theory as the most appropriate theoretical lens to explore the process of study engagement in a professional accounting education context. The use of this theory supported the organisation of the main antecedent variables, as presented in the educational literature, into three categories: study resources, personal resources and demands. The role of each category of antecedent variable in the study engagement process was then discussed, concluding with the variables that were deemed most important in a professional accounting education context. These included study resources (e.g. effective teaching practices), personal resources (academic self-efficacy) and demands (work exhaustion). The chapter then progressed to explore these variables in more detail, considering the theoretical and empirical work shaping their relationships with study engagement and exam performance. Each of these sections concluded with the gaps identified in the professional accounting education literature and the hypotheses to be explored to address these gaps. The chapter concluded with a summary of the research hypotheses and the hypothesised research model. In the forthcoming chapter, the research methodology is presented.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

This chapter presents the research methodology. It begins by describing the research context for this study. The chapter then briefly discusses the philosophies and methodologies of social science research. This includes a discussion of the rationale for adopting a mixed methods approach, with a dominant quantitative focus, in this study. The chapter then outlines the quantitative research design, including the research instrument design and the data analysis strategy. The chapter concludes with a description of the research design and data analysis strategy for the qualitative stage.

4.2 Research Context

In Ireland, there are four main professional accountancy bodies (PABs), Chartered Accountants Ireland (CAI), Certified Public Accountants Ireland (CPA), the Chartered Institute of Management Accountants (CIMA) and the Association of Chartered Certified Accountants (ACCA). Each organisation operates independently, is self-regulated, and is supervised by the Irish Auditing and Accounting Supervisory Authority (IAASA). The distinguishing features between these accountancy bodies are their structure, size and core activities. CAI is the longest-established professional accountancy body in Ireland, established in 1888 by royal charter. It is also the largest Irish accountancy body, with approximately 29,000 members and 6,600 students (CAI, 2020c). Similar to the ICAEW and Institute of Chartered Accountants of Scotland (ICAS), in the United Kingdom (UK), the main activities pursued by CAI include the provision of educational and support services to all members working in a range of roles, in both industry and practice, including, accounting, tax, auditing, consulting and finance. While CAIs members activities were traditionally located in accounting firms, the trend in recent years has been for chartered accountants to be employed in a variety of roles and organisations, with approximately 65% of members working in industry (CAI, 2020c). CPA, also an Irish-based organisation, was established in 1943. Although smaller in size, it similarly represents its members in public practice, industry, financial services and the public sector. The other two accountancy bodies, ACCA and CIMA, although operating in

Ireland, are divisions of UK bodies. ACCA was established in 1904, and it provides similar services to those of CAI, while CIMA, being established in 1919, has historically been associated with management accounting in industry.

The research setting chosen for this study is CAI, with a specific focus on trainee accountants preparing for the final qualifying examination (FAE). There were a number of reasons for this choice. Firstly, CAI is the largest and oldest PAB in Ireland. Secondly, the researcher is a member of CAI, and therefore had links to the PAB, in particular the education and training department. The researcher has also completed the FAE exams, so her experience is useful in understanding the research context. Most importantly, the FAE exams are the only exams which all trainee accountants must complete, as there are no exemptions awarded for these exams. In addition, the FAE exams are different to all other professional exams of CAI, as they are case-based, multidisciplinary in nature and are open book.

Despite the differences in the PABs outlined above, there are also a number of similarities in their professional education systems. Therefore, the findings of this research may have relevance to other PABs. As the research setting has now been outlined, in the following section, the philosophical assumptions underpinning this research are explored briefly. This uncovers the researchers' philosophical orientation, as well as the implications for the design and execution of this study.

4.3 Philosophical Assumptions, Research Paradigms and Research Methodologies

The philosophical assumptions and research paradigms underpinning social science research largely determines the research methodology chosen. Research in social science has a long-standing tradition of adopting quantitative methodologies, whereby researchers have adopted the techniques of the natural sciences, in an effort to search for universal laws and generalisations, that reflect the structure of social behaviour (Bryman, 2016; Creswell & Creswell, 2017; Ryan, Scapens, & Theobald, 2002). There are three main research paradigms and research methodologies. Firstly, the positivist paradigm, which is mainly associated with quantitative techniques. Secondly, the interpretivist paradigm, that typically adopts qualitative techniques. Thirdly, the pragmatist paradigm, which supports mixed method research.

In Table 4.1 below, these three main philosophical paradigms are compared using the four philosophical assumptions of ontology, epistemology, human nature and methodology. Ontology refers to the researcher's view of reality and whether reality is objective or is the product of individual cognition. Epistemology relates to assumptions regarding the grounds of knowledge and considers the researcher's understanding of the world, as well as how he/she communicates this as knowledge (Burrell & Morgan, 1979, p. 1). This is also described as "the construction of meaning" (Crotty, 1998, p. 10) or the "nature of the relationship between the knower or would-be knower and what can be known" (Guba & Lincoln, 1994, p. 201). The third set of assumptions concerns human nature, and in particular, the relationship between humans and their environment. Finally, all three sets of assumptions have implications for methodology and for the way the researcher attempts to investigate and obtain knowledge about the social world (Burrell & Morgan, 1979, pp. 1-2). The discussion on methodology is further explored in Section 4.3.1, where the two main research approaches, quantitative and qualitative, are outlined. This is followed by a discussion on the merits of using mixed methods research.

Table 4.1

Comparison of philosophical paradigms

	Positivist/Objectivist	Interpretivist/Subjectivist	Pragmatist/Transformative
Ontology (nature of reality)	Reality is concrete, observed independently, independent of time, context and individual, governed by laws.	Reality is socially and experientially based. Largely dependent on experiences.	Reality is characterised by the practical relevance of research and the desire to search for novel and innovative approaches that serve human purposes.
Epistemology (researcher-participant relationship)	The relationship is objective, with a separateness existing between the researcher and the participant. Grounded in the view that knowledge can only be established through strict scientific methods based on neutral, objective and rigorous observations of external reality.	The relationship is subjective, with researchers and participants working together to co-construct a social reality.	Rejects the idea that epistemological issues exist on two opposing poles, instead viewing them as existing on a continuum. At some points in the research process, researchers and participants may require a highly interactive relationship (e.g. interviews), whereas, at other points, less interaction is required (e.g. surveys).
Human nature	Researchers assume that human behaviour is determined completely by the situation or environment – causes determine effects or outcomes.	Researchers perceive humans as masters and creators of their own environment, developing a theory or pattern of meaning throughout the research process.	Pragmatists believe that there is not one privileged description of events and that human behaviour can be a product of the environment or independent of this and that both are important narratives of how we make sense of the world.
Methodology (Process of research)	Knowledge is verified through scientific means. Supports the use of quantitative methodologies to test previously argued hypotheses in accordance with scientific rigour. Prominent tools include surveys.	Detailed analysis of the subject to allow its nature and characteristics to unfold. Prominent tools include in-depth interviews, which seek to emphasise depth of understanding.	Both qualitative and/or quantitative methods can be used, whereby methods are matched with the specific research purpose - see Table 4.2.

Note. Adapted from Burrell and Morgan (1979); Creswell and Creswell (2017); Teddlie and Tashakkori (2003)

4.3.1 Quantitative versus Qualitative Research Approaches

Quantitative research. Quantitative research is most typically carried out using surveys, experiments, the analysis of official statistics, structured observation and content analysis (Bryman, 2016). These methods are therefore often associated with determining objectivity, replicability and causality. Objectivity is achieved through the distance existing between the subject and researchers, whereas replicability is achieved through using the same research instrument in another context. Causality is revealed through statistical testing used to support or disprove specific hypotheses (Bryman, 2016, pp. 31-38). When reviewing the usefulness and trustworthiness of this research approach, researchers tend to highlight the objectivity, validity and generalisability of the research findings, as the key strengths of this approach over qualitative methods (Creswell & Creswell, 2017; Miles & Huberman, 1984). However, despite its strengths, quantitative research is often criticised for failing to capture the different ways in which individuals interpret the world around them and for using standardised measures (e.g. surveys) which capture a static and limited view of reality (Bryman, 2016).

Qualitative research. Qualitative research seeks to understand the social world from the perspective and lived experiences of the actor. Consequently, the objective is to determine novel or unanticipated findings, through studying the meaning that people bring to phenomena (Denzin & Lincoln, 2000, p. 3). There is an extensive range of techniques which are used in qualitative research, including observation, interviewing, focus groups and document analysis (Bryman, 2016). Given the nature of these techniques, a qualitative researcher is closely engaged with the subject during the data collection stage to facilitate a depth of understanding that leads to the discovery of new knowledge (Daft, 1983). However, as a result, qualitative research is often criticised for being less objective (Bryman, 2016). Despite this, there are many strengths to qualitative research, which are revealed through the criteria used to measure its usefulness and trustworthiness, including, credibility, transferability, dependability, confirmability, authenticity and neutrality. For example, qualitative studies are considered to present a detailed narrative, and are therefore sometimes considered more meaningful and informative than quantitative studies (Miles & Huberman, 1984, p. 15).

Mixed methods. Recent debates in the literature argue that quantitative and qualitative methods can be considered on a continuum, rather than being mutually

exclusive, and that the most appropriate method, or combination of methods, should be based on the research problem (e.g. Brannen, 2017). Therefore, the researcher must consider whether any aspects of the research problem would be ignored if only one research approach was used. There is an increasing body of research which supports the use of mixed methods approaches (Bryman, 2016), which is discussed further below.

4.3.2 Mixed Methods Approach

A mixed methods approach combines the use of both quantitative and qualitative research methods. Proponents of this approach claim that it allows researchers to develop an in-depth, holistic understanding of a phenomenon (Venkatesh, Brown, & Bala, 2013). It is also a way in which the strengths of each method can be capitalised, whereby the results obtained using one method can be further explained using another method (Bryman, 2016; Creswell & Creswell, 2017). While mixed methods research is considered to have a number of advantages over research using one methodology, there are also a number of criticisms reported. The main criticisms tend to centre around the philosophical assumptions of this approach (Gill & Johnson, 2002; Teddlie & Tashakkori, 2003). As indicated above, quantitative and qualitative methods tend to adopt a specific research paradigm. This had led to much debate as to whether research paradigms can be combined to facilitate mixed methods approaches. For example, a body of research known as the incompatibility thesis specifically states that the integration of quantitative and qualitative methods is impossible due to the incompatibility of the research paradigms that underlie the methods (Teddlie & Tashakkori, 2003, p. 98). Over time researchers have built an argument which questions this rationale. Emerging from this debate is support for three mixed methods research paradigms; 1) pragmatism, 2) transformative-emancipatory, and 3) critical realism (Venkatesh et al., 2013). Pragmatism emerged as the foundational philosophy of the mixed methods approach (Bryman, 2016). Pragmatism considers practical consequences and real effects to be important components of establishing meaning and truth. It therefore adopts an iterative approach between quantitative and qualitative methods to answer the research questions, thereby, rejecting the incompatibility thesis outlined above (Venkatesh et al., 2013). In doing so, the pragmatic paradigm places the research problem as the central focus, freeing the researcher to select the data collection and analysis methods to understand the problem

(Creswell & Creswell, 2017). Consequently, the researcher combines quantitative and qualitative techniques, with the aim of providing a richer understanding of the research problem (Johnson & Onwuegbuzie, 2004). In summary, when compared to the positivist and interpretivist research paradigms, the flexibility and practical value of the pragmatist approach emerges as one of its major strengths (see Table 4.1 above).

In practice, mixed methods approaches can be applied either sequentially or simultaneously, usually with one approach being the more dominant, and will adopt inductive or deductive principles (Morse, 2016). A sequential approach is used to elaborate on the findings of the other approach adopted, and it is carried out in stages, whereby a simultaneous approach is where both quantitative and qualitative methods are carried out in parallel (Morse, 2016; Teddlie & Tashakkori, 2003). Furthermore, an inductive approach seeks to build a theory or model through specific observations, which is typically tested through qualitative means, whereas deductive approaches typically start with a theory, and are tested through quantitative means. The combinations of mixed methods approaches are outlined below.

Table 4.2

Mixed methods design

Qualitative Theoretical Drive (Inductive)		Quantitative Theoretical Drive (Deductive)	
Sequential	*Simultaneous*	*Sequential*	*Simultaneous*
QUAL → qual; one of which is dominant	QUAL + qual; one of which is dominant	QUAN → quan; one of which is dominant	QUAN + quan; one of which is dominant
QUAL → quan; sequential with inductive theoretical drive	QUAL + quan; simultaneous with inductive theoretical drive	QUAN → qual; sequential with deductive theoretical drive	QUAN + qual; simultaneous with deductive theoretical drive

Note. Capitalisation indicates the dominance of the quantitative or qualitative method. See footnote [1]. Source: Adapted from Morse (2016, p. 89, p. 118)

[1] In accordance with Morse (2016), the uppercase "QUAN" (quantitative) and "QUAL" (qualitative) abbreviations represent the dominant research component, whereas the lowercase "quan" (quantitative) and "qual" (qualitative) abbreviations represent the supplementary component. The use of the plus sign (+) indicates that data is collected simultaneously, whereas the use of the arrow (→) indicates that data collection occurs sequentially.

The choice of which mixed methods design to use must be in line with the research questions and objectives. For example, using the QUAN → qual example from Table 4.2, the quantitative method is the primary method and the qualitative method is used to obtain enhanced description and understanding of the phenomenon under investigation. As the main component of this study is quantitative, it has a deductive theoretical drive (Morse, 2016; Venkatesh et al., 2013).

4.3.3 Research Approach of this Study

As outlined in Section 1.2, the overall objective of this research is to gain a better understanding of trainee accountants study engagement as they prepare for the final qualifying exams of one of the PABs in Ireland. On consolidation of the various research approaches, the researcher decided that the objective would be best answered by adopting a mixed methods approach. In determining its appropriateness, it was considered prudent to follow the GRAMMS (Good Reporting of a Mixed Methods Study) (O'Cathain, Murphy, & Nicholl, 2010). This guidance highlighted the importance of justifying, firstly, the methods of inquiry, secondly, the research strategy, and thirdly, the research stages.

According to Teddlie and Tashakkori (2003), the methods of inquiry should be in line with the research objective. The objective of this research, as outlined above, is to gain a better understanding of trainee accountants study engagement. Furthermore, as outlined in Chapter Three, JD-R theory was chosen as the theory to frame this research, whereby a series of research hypotheses were developed to test the mediating role of study engagement in the relationship between demands, study resources, personal resources and exam performance. Therefore, the dominant part of this study was designed to elicit standardised information and to determine statistical causality, through the use of quantitative methods. Secondly, it was expected that additional insights would be gained by supplementing the quantitative results with a qualitative component. Therefore, a sequential mixed methods approach, with a dominant quantitative and supplementary qualitative approach was selected as the research strategy. This strategy is supported in the higher education literature, where it has been recommended to use a combination of quantitative and qualitative methods when exploring the study engagement of students (Coates, 2005; Kahu, 2013; Krause & Coates, 2008).

The research stages of this study are described as QUAN→qual in terms of the options presented in Table 4.2. The quantitative (QUAN) stage encompassed a survey to measure each study variable and to test the study hypotheses. On completion of the quantitative stage, a set of interviews were conducted (qual) with a small sample of FAE students to gain a deeper understanding into some of the quantitative results. These research stages are outlined in Figure 4.1 below.

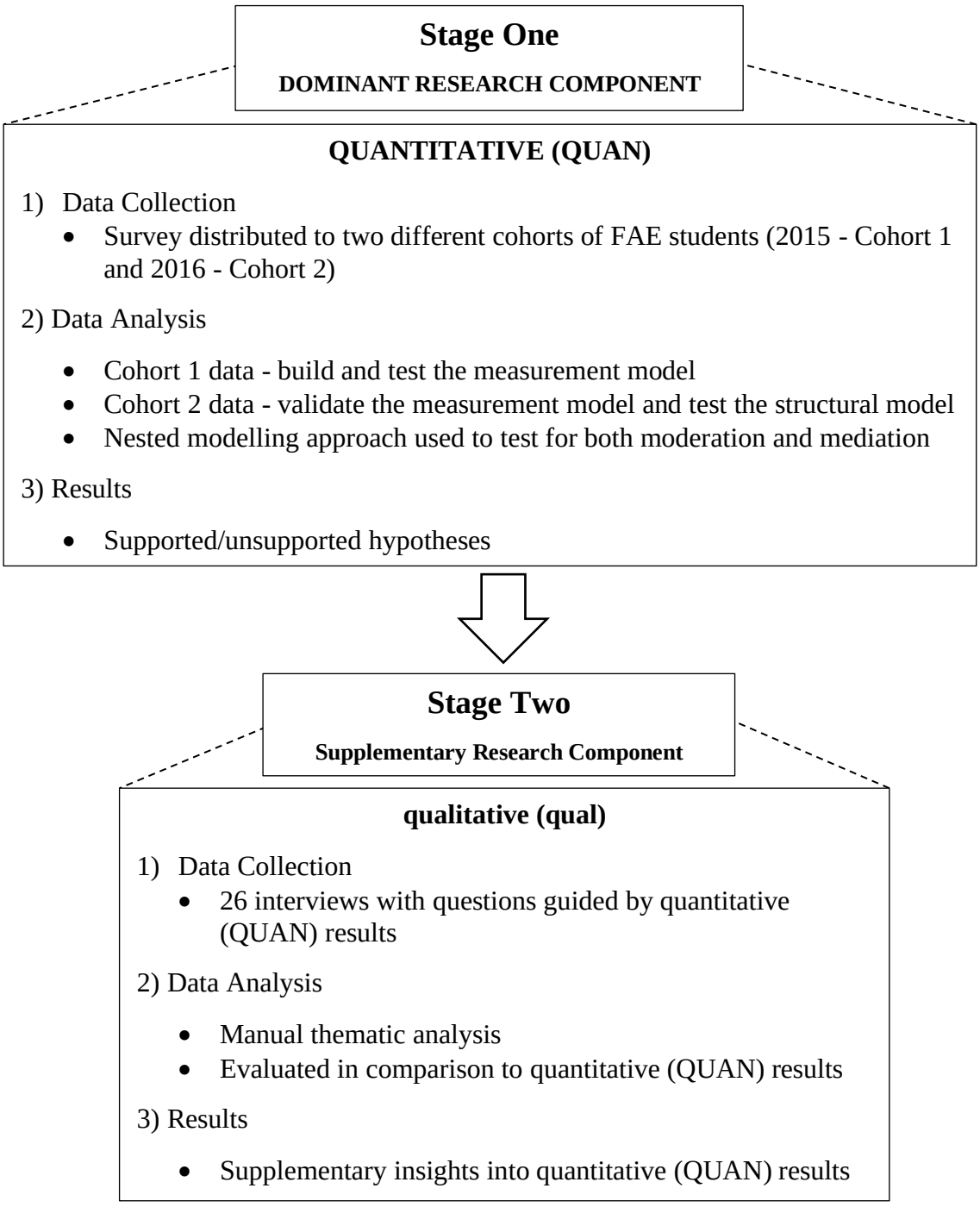


Figure 4.1: Stages of research

Reflecting on the four dimensions of social science research outlined in Table 4.1 (ontology, epistemology, human nature and methodology), the following conclusions can be drawn. From an ontological perspective, the researcher believes that reality is constructed with reference to practical relevance, accepting that reality can be both observed independently, as well as socially and experientially based. As regards epistemology, the researcher is primarily positivist and seeks to understand the social world through general laws and causal relationships facilitated by quantitative research. However, she also acknowledges the role of inductive research, through qualitative methods, to gain a richer understanding of the relationships between variables. The researcher also believes that there is not one privileged description of events and that human behaviour can be a product of the environment or independent of this, and that both are important narratives of how we make sense of the world. Taken together, the researcher's assumptions regarding ontology, epistemology and human nature resulted in the choice of a mixed methods approach. This approach was supported, as the objective of this study was to apply practical relevance, whereby the research question was central, and the data collection and analysis methods chosen, were those most likely to answer the research question. The following section discusses how this pragmatist philosophy was operationalised in the research design.

4.4 Stage One - Quantitative (QUAN) Methods

Quantitative surveys are typically used to explore patterns and relationships in data to allow conclusions to be drawn that can be generalised to the wider population (Flick, 2018). While their validity and usefulness are sometimes criticised, they are still a common method to collect information about unobservable phenomena, including personal perceptions and attitudes regarding the variables under investigation (Bryman, 2016). Within the research field of student engagement and psychology, many of the variables under investigation rely on personal perceptions and data is collected through quantitative surveys (e.g. Feldman & Kubota, 2015; Kuh, 2001, 2009b; Llorens et al., 2007; Schaufeli et al., 2002). It is recognised that as these studies rely on self-reported measures, there are a number of inherent limitations, particularly the risk of common method variance (CMV). CMV refers to the variance that is attributable to the measurement method, rather than the construct of interest. Therefore, when present it can

artificially magnify the relationship between study variables (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff & Organ, 1986).

The literature clearly outlines a number of survey design strategies which can be employed to enhance the quality of data collected and to mitigate against CMV (e.g. Lindell & Whitney, 2001). For example, research methodologists propose that a survey should be separated into sections with clear instructions given on how to answer each section. Equally, they advise that the measures used should be carefully selected, with preference being given to validated scales with sound psychometric properties. They also suggest that likert scales should have a clearly marked midpoint to ensure a more accurate reflection of responses and encourage the use of attention traps to promote an optimum level of cognitive processing. Furthermore, they suggest that care should be taken with the ordering of variables to ensure that variables measured earlier in the survey do not influence the responses to variables measured later (Podsakoff et al., 2003). Other techniques include assuring respondents that there are no preferable answers and all data is confidential (Brannick, Chan, Conway, Lance, & Spector, 2010; Podsakoff et al., 2003).

While the procedural remedies help to prevent common method variance are preferred, there are also a number of statistical remedies which can be used (Podsakoff et al., 2003). The literature proposes a number of ways to test for CMV. The most popular is the common latent factor (CLF) procedure. This requires the addition of a common latent factor to the measurement model which serves as a way to capture any CMV in the model (Gaskin, 2019). While there are remedies to deal with CMV if it exists, leading methodology theorists appear to have reached a general consensus that while CMV should not be overlooked, the issues associated with it tend to be overstated (Brannick et al., 2010).

4.4.1 Survey Design

The design of the survey used in this research employed many of the design features outlined above. For example, the survey was split into sections, with clear instructions provided for each section, and the dependent variables were mainly placed before the independent variables. The survey (see Appendix C) is comprised of the following sections:

Section 1:	Background information
Section 2:	FAE Programme: Behavioural, cognitive and affective study engagement, personal resources, study resources.
Section 3:	Experience of Work: Demands
Section 4:	General Questions

A key strength of this survey was the rigor applied in scale selection. The scales selected included a series of validated scales from the literature and context specific scales to reflect the research context of professional accounting education. The details of the scales used are described below and are summarised in Table 4.3.

Study resources. The study resources scales used in this study were adapted from the National Survey of Student Engagement (NSSE) and the Irish Survey of Student Engagement (ISSE). The NSSE includes four teaching resources sub-scales including: 1) student-faculty interaction, 2) effective teaching practices, 3) quality of interactions, and 4) supportive environments. While the most recent version of the ISSE has now been modified and aligned with the NSSE, the version of the ISSE used in this study had some similar sub-scales but were categorised differently. They included: 1) enriching educational experiences (this sub-scale was never included in the NSSE and is now no longer included in the ISSE), 2) student staff interactions (NSSE: student faculty interaction and effective teaching practices), and 3) supportive learning environments (NSSE: quality of interactions and supportive environment). In this survey, the scales retained which related to a professional education context included: 1) effective teaching practices (12 items), 2) a supportive educational environment (six items), and 3) enriching educational experiences (four items). Some of the wording in these scales were modified to fit the professional education context, along with the addition of a number of context-specific questions. A sample of a context-specific question added to the effective teaching practices scale included "I understand what I must achieve to be deemed professionally competent in the FAE". A sample of one added to the supportive educational environment scale was "I feel there is someone in CAI that I can contact to help me cope with any difficulties with my studies". Students were asked to score their responses to all twenty-two questions on a five-point likert scale which ranged from 1 = *strongly disagree to* 5 = *strongly agree*, rating their perceptions on whether they agreed or disagreed with the statements in all three categories. The NSSE and ISSE have

presented satisfactory reliability scores for each of these subscales with Cronbach alpha scores ranging from 0.66 to 0.86 (ISSE, 2016). In summary, in this research, study resources were measured using the three subscales of effective teaching practices (12 items), a supportive educational environment (six items) and enriching educational experiences (four items).

Personal resources (academic self-efficacy*)*. The literature presents an extensive range of instruments to measure academic self-efficacy in educational settings. In a meta-analysis of the educational psychology literature, Honicke and Broadbent (2016) found that the most commonly reported measure of academic self-efficacy was the Motivated Strategies for Learning Questionnaire (MSLQ). Whereas, in the student engagement literature, the academic self-efficacy dimension of the Maslach Burnout Inventory - Student Survey (MBI-SS) was the most popular (e.g. Llorens et al., 2007; Salanova et al., 2010; Schaufeli et al., 2002). For the purposes of selecting a self-efficacy scale for this study, the respective parts of both the MSLQ and the MBI-SS were examined. This revealed that they were both very similar in structure (six items) and orientation (likert scale statements), and both have reported strong reliability. On the basis that the MBI-SS is more commonly used in the engagement literature, it was decided to use this six-item scale in the current study. A sample of questions from the MBI-SS include "during class I feel confident that I am effective in getting things done" and "I can effectively solve the problems that arise in my studies". In the survey, students were asked to reflect on how often they experienced these feelings regarding their FAE studies on a seven-point likert scale which ranged from 0 = *Never to* 6 = *Always*. This sub-scale has also received strong psychometric support, with Cronbach alpha scores ranging from 0.67 to 0.80 (Llorens et al., 2007; Schaufeli et al., 2002).

Demands (work exhaustion). The burnout literature outlines a range of instruments that have been used to measure each component of burnout, including exhaustion, with the Maslach Burnout Inventory - General Survey (MBI-GS) emerging as the "gold standard" to assess burnout and its components (Schutte, Toppinen, Kalimo, & Schaufeli, 2000). The exhaustion dimension of the MBI-GS was used in this study. It includes five items, with a sample item from the exhaustion scale being "I feel burned out from my work". In the survey, students were asked to reflect on how often they experienced these feelings regarding their work as a trainee accountant on a seven-point likert scale which ranged from 0 = *Never* to 6 = *Always*. The psychometric validity of the

exhaustion scale has been well-documented across national samples and various occupational groups, with Cronbach alpha scores ranging between 0.74 to 0.88 (e.g. Halbesleben & Demerouti, 2005; Leiter & Schaufeli, 1996; Schutte et al., 2000).

Behavioural study engagement. Behavioural study engagement was measured in this study as time spent attending lectures, engagement in active learning, along with three other context-specific questions. The "time spent in lectures" scale asked participants to indicate the percentage of lectures attended during their FAE year. It is important to note that, while in this current climate lectures are delivered primarily in an online setting due to the coronavirus (COVID-19) pandemic, this study was conducted at a time when lectures were mainly delivered in a physical setting. That said, many of the principles of study engagement remain the same regardless of the educational setting (e.g. Blakey & Major, 2019).

The ISSE active learning scale measured the educational activities students engaged in both inside and outside class. For example, participants were asked how often they engaged in activities such as "asked questions or contributed to discussions in class", where participants had to score their responses on a four-point likert scale ranging from 1 = *never to* 4 = *very often*. In past research, the ISSE active learning scale has received satisfactory Cronbach alpha scores ranging from 0.58 to 0.63 (ISSE, 2016).

The other context specific questions sought to capture information on additional activities that students engaged in outside class. For example, students were asked to outline how often they "read business newspapers, professional magazines to improve your business knowledge".

Cognitive study engagement. Cognitive study engagement was measured in this study using both the higher order learning (HOL) scale of the ISSE and the deep learning scale from the Approaches and Study Skills Inventory for Students (ASSIST) instrument. The NSSE/ISSE higher order learning scale, which was informed by the approaches to learning literature, has received support in the student engagement literature as a proxy for deep learning and cognitive study engagement (e.g. Campbell & Cabrera, 2014; ISSE, 2016). It captures activities such as "synthesising and organising ideas, information, or experiences into new, more complex interpretations and relationships", with participants being asked to score their responses on a four-point likert scale where 1 = *very little* to 4 = *very much*. The NSSE/ISSE higher order learning scale has also been validated in many

jurisdictions across the higher education literature, with Cronbach alpha scores ranging from 0.81 to 0.85 (e.g. Laird, Seifert, Pascarella, Mayhew, & Blaich, 2014).

In this study the shorter validated 18-item version of the ASSIST (three sub-scales with six items in each scale), was also used to measure cognitive study engagement. It included questions such as "when I'm working on a new topic, I try to see in my own mind how all the ideas fit together" on a five-point Likert scale, ranging from 1 = *disagree to* 5 = *agree*. The ASSIST has been extensively validated in many jurisdictions across the higher education literature, with Cronbach alpha scores for the deep scale ranging from 0.78 to 0.85 (e.g. Tait, Entwistle, & McCune, 1998).

While there are similarities between both the NSSE/ISSE higher order learning scale and the ASSIST deep learning scale, the decision was made to include both scales in the original survey, with the intention in the analysis section, to determine which one was the best fit to the data in this study. This decision was based on the literature that supports the higher order learning scale as a measure of deep learning, but calls for more research on its suitability in different educational domains (Campbell & Cabrera, 2014). In summary, in this research, cognitive study engagement was measured using two measures, the higher order learning scale from the NSSE/ISSE and the deep learning scale from the ASSIST. The ASSIST scale has three sub-scales, use of evidence, seeking meaning and relating ideas.

Affective study engagement. Affective study engagement was measured in this study using the 17-item version of the Utrecht Work Engagement Scale - Student (UWES-S), which is derived from the general Utrecht Work Engagement Scale (UWES) scale. The UWES and UWES-S are based on the definition of engagement which describes it as "a positive, fulfilling, and work-related state of mind that is characterised by vigor, dedication and absorption" (Schaufeli et al., 2002, p. 22). A number of shortened versions of the scale were also developed, including the UWES-15, UWES-9, UWES-6, UWES-3. The UWES-S is a slightly adapted version of the UWES. For example, as per the UWES, the "item when I get up in the morning, I feel like going to work" is rephrased in the UWES-S as "when I get up in the morning, I feel like going to class", with both scales asking participants to respond to questions on a seven-point likert scale which ranged from 0 = *Never to* 6 = *Always*. Both the longer and shorter versions of the UWES and UWES-S have consistently reported high reliability, with Cronbach

Alpha scores ranging from 0.75 to 0.94 (Kulikowski, 2018; Schaufeli & Bakker, 2004; Schaufeli, Bakker, & Salanova, 2006; Schaufeli, Hakanen, Salanova, & De Witte, 2017; Seppälä et al., 2009).

This section concludes the discussion of the scales used in this survey and the scales used to measure each variable, as summarised in Table 4.3. It is important to note that the original survey included some additional items/questions that were excluded after the data analysis was completed. All items/questions are included in Table 4.3 to ensure completeness when comparing this table to the original survey in Appendix C. In the following section, the variable of exam performance is discussed, which was obtained independently of the main survey.

Table 4.3

Survey used in this study

Variable	Scale	Validated Scale	Items
Study Resources	National Survey of Student Engagement (NSSE)/Irish Survey of Student Engagement (ISSE) and context specific questions: - Enriching educational experiences - Supportive learning environment - Effective teaching practices	✓[a]	22
Personal Resources: Academic Self-efficacy	Maslach Burnout Inventory - Student Survey (MBI-SS): - Academic self-efficacy dimension	✓	6
Demands: Work Exhaustion	Maslach Burnout Inventory - General Survey (MBI-GS): Exhaustion dimension (cynicism scale included in original survey)	✓	10
Behavioural Study Engagement	Irish Survey of Student Engagement (ISSE) and context specific questions: - Time spent in class - Active learning - Other educational activities	✓[a]	9
Cognitive Study Engagement	Irish Survey of Student Engagement (ISSE): Higher order learning scale Approaches and Study Skills Inventory for Students (ASSIST): Deep learning scale	✓	17
Affective Study Engagement	Utrecht Work Engagement Scale-Student (UWES-S): Vigor, Dedication and Absorption	✓	17
Control Variables	Gender, Size of training firm, Prior performance, Professional exam experience, Accounting background, Higher education institution, Level of education	n/a	5
Other Questions	General satisfaction	n/a	3
Academic Performance	Objective measure	n/a	n/a
Total Items			89

[a] These scales have been validated in previous research. However, some context specific questions were included to reflect this research setting.

Exam performance. Exam performance was measured in this study using students final scores in their FAE exams, which were obtained directly from CAI. The FAE consisted of two main exams, a *core* exam, which includes a series of case studies aimed to integrate knowledge, skills and expertise across all technical disciplines, and an *elective* exam, where students choose to specialise in one of five areas (advanced auditing and assurance, advisory, advanced taxation, financial services, public sector). At the time this study was conducted, the overall FAE pass/fail classification for the core exam was determined by two components: 1) an overall mark (known as sufficiency score - see Table 4.4 below) and 2) a minimum level of competence in six subject areas (business leadership, financial accounting and reporting, audit and assurance, corporate and individual tax planning, finance and management accounting). The pass/fail classification for the elective was based on an overall (sufficiency) score. Students were also provided with an additional score, known as a *decile score* for both the core and elective. This score ranked students based on their performance relative to the entire student group, whereby students ranking in the top 10% received a decile ranking of 1, while students ranking in the bottom 10% received a decile ranking of 10. The exam scores are summarised in Table 4.4 below.

Table 4.4

FAE grade descriptor

Result	Description
Classification	Pass/fail [a] Core: result based on 1) overall sufficiency score 2) reaching a minimum competency level across six performance indicators Elective: result based on overall sufficiency score only
Decile score	Ranking 1-10 1 = Ranked in the top 10% 10 = Ranked in the bottom 10% (ranking is based on the overall sufficiency scores) Note: This score was reverse coded in this study
Sufficiency score	0 = Reached the required level of sufficiency Ranking thereafter 1-9 1 = Those closest to the required level for sufficiency 9 = Those furthest away from the required level for sufficiency

Note. Adapted from CAI, 2016

[a] Percentage grades not available to students when this study was conducted

As previous research had outlined concerns that the FAE pass/fail classification is unlikely to capture the variation in students' performance (Flood & Wilson, 2008), the decile (class ranking) score, outlined in Table 4.4, provides a slightly larger variance than the pass/fail score, therefore it was used in this study. This decile score was reverse coded at the analysis stage to facilitate easier interpretation. Further consideration was also given to whether performance in both core and elective subjects should be included or whether it was sufficient to include core performance only. The argument for including core performance only was that the core exam was the only exam common to all students. Additionally, the correlation between the results in both core and elective exams was significant, suggesting that when a student performs well in one, similar results were obtained in the other. It was therefore concluded that using the decile score in the FAE core, as the overall measure for academic performance in this study, was appropriate.

Control variables. Demographic information was collected from respondents with regard to gender and age, as well as background information on prior academic performance, undergraduate/postgraduate discipline, degree level, professional exam experience and size of training firm. These were justified as variables of interest in the literature (e.g. Astin, 1984; Kuh, 2003; Kuh et al., 2006; Pascarella, 1985; Tinto, 1975).

4.4.2 Sample Selection and Data Collection

In advance of the data collection stage, a number of preliminary procedures were carried out. Firstly, a pilot version of the paper survey was distributed to a small group of qualified accountants who had completed the FAE in previous years. This provided useful feedback on whether there were any ambiguities in the survey instructions and questions, in addition to determining approximately how long it took to complete the survey. This feedback confirmed that the survey did not require any modifications. Secondly, details of the research study and the survey (including the intention to perform some qualitative analysis at the end of the study) were submitted to the Research Ethics Committee in Dublin City University for review (see approval letter in Appendix D). Upon receiving approval, permission was sought from CAI to distribute the survey to two different cohorts of FAE students over two years (Cohort 1 and Cohort 2) (see approval email in Appendix E).

The FAE education programme runs for approximately 12 months (September to August). During the first nine months, students work full-time and study part-time, including attending lectures and completing interim assessments at different time points. In the final three months, students are typically on study leave, during which time they engage in full-time study, attend block lecture sessions and complete mock exams, before taking the final exams. Discussions with CAI revealed that the block lectures at the start of study leave typically attracted the highest attendance levels. Therefore, the survey was distributed at the block lectures which were held in various centres around the country, including Dublin, Cork, Galway, Limerick, Belfast, Kilkenny and Waterford. This sampling technique was considered most appropriate for this study, while recognising that there may be a risk of self-selection bias, given that only students attending these lectures could complete the survey. That said, students were not aware in advance of lectures that the survey would be administered during their classes, therefore, reducing the risk of self-selection bias to an acceptable level.

In order to target the largest number of students possible, it was agreed that the researcher would attend all centres. Arrangements were made with the relevant CAI lecturers in advance of each visit to allocate a 15-20minute time slot during which the researcher could address the students and distribute the survey. At each session, the researcher was introduced to the group by the CAI lecturer. This demonstrated support from CAI for the research and also gave the researcher the opportunity to introduce the study, including the overall research objective and the voluntary, confidential, non-incentive-based nature of the study. A cover letter, with a plain language statement, was also attached to the paper survey. It further explained the purpose of the research and the confidential nature of the study, and it included the contact details of the researcher and the research ethics committee (see Appendix C). All surveys were completed in the presence of the researcher, whom also controlled the collection of the completed surveys at each centre. It is also important to note that the response rate for paper-based surveys is conservative because the researcher can only distribute paper surveys to one sub-group (e.g. class) of students rather than to all that were enrolled, making it difficult to calculate the overall response rate (Nulty, 2008). The response rates for this study are outlined in Table 4.5 below.

Table 4.5

Response rates

Cohort	Total Registered[a]	Total Respondents	Total Useable Responses	Response Rate[b]
Cohort 1 (2015)	995	532	490	49%
Cohort 2 (2016)	1,151	793	711	62%
Total	2,146	1,325	1,201	56%

[a] Total number of students registered to sit the qualifying exams of CAI in those years (i.e. total population for Cohort 1 [2015] and Cohort 2 [2016])
[b] Based on useable responses

When compared to the average response rates for paper surveys, which is approximately 56% (Nulty, 2008), this response rate was considered satisfactory, with the missing responses attributed mainly to those who were absent on the day the survey was distributed. Those surveys deemed unusable were considered so, either because they had cases missing more than 10% of the data, or the student ID number was either missing or incorrect, meaning that it was not possible to match these surveys to the performance data provided by CAI (Cohort 1: 8%, Cohort 2: 9%). Further information on the process used to deal with missing data is outlined in Chapter Five. On completion of the quantitative data collection phase, the data analysis strategy was designed, as outlined below.

4.4.3 Data Analysis Strategy: Quantitative Data

The data analysis strategy for the quantitative data had two main objectives. Firstly, to build and test the measurement model to confirm the factor structure of each variable, the relationship between each factor and the internal consistency of each measure. Secondly, to build and test the structural model to allow the testing of the study hypotheses. As the data in this study was collected at two separate time points, from two different groups of participants (Cohort 1 and Cohort 2), it facilitated a two-phase approach to data analysis. The measurement model was built and tested using Cohort 1 data and validated using Cohort 2 data. The structural model was then built and tested using Cohort 2 data and used to test the study hypotheses. This approach to data analysis is supported in the literature. For example, Picard and Berk (1990) outlined that data splitting (partitioning

data into two portions) is a useful technique for model validation purposes. Similarly, in more recent research Fokkema and Greiff (2017) outlined that "if the goal of your study requires both exploration and confirmation, and sample size is large enough, perform each on separate data, for instance by splitting the dataset" (Fokkema & Greiff, 2017, p. 401). As this study required both exploration and confirmation, splitting the data was considered appropriate to ensure the validity and generalisability of the model.

Structural Equation Modelling (SEM) was used to test the study hypotheses using Mplus version 8 with Full Information Maximum Likelihood (FIML) estimation to deal with missing data (Muthén et al., 2017). The main advantages of using SEM over regression analysis is that it allows the modelling of latent variables, corrects for measurement error, specifies errors and their covariance structures and estimates entire theories simultaneously (Lacobucci, Saldanha, & Deng, 2007). Furthermore, given that the research model in this study (see Figure 3.10) required testing for both mediation and moderation, SEM was considered the most appropriate approach.

4.5 Stage Two - Qualitative (qual) Methods

Once the quantitative stage was completed the qualitative stage was conducted through the use of semi structured interviews. The interviews were undertaken to provide supplementary insights to the quantitative findings. A total of 26 interviews were conducted, the details of which are outlined in Table 4.6 below.

Table 4.6

Interview details

Number	Details	FAE Year
2	Pilot	2014
4	Completed survey	2015
10	Completed survey (included 3 students placed in "Top 10" of FAE)	2016
5	Recent perspectives	2018
5	Recent perspectives	2019
26		

Interviews were conducted in person with the exception of five which were conducted over video, due to the location of the participants. All interviews conducted in person

were held at the preferred location of the participant. An interview guide (see Appendix I) was used in the execution of each interview. This was designed in line with the Creswell and Poth (2016) interview guidelines, which include details on protocols such as, the design of questions, sampling, consent, interview structure (e.g. introducing interview, order of questions, time allocation for answers) and transcription logistics.

Guided by this work, the interviews commenced with an introduction to the study, including the nature of the questions that would be asked, verification that participation was completely voluntary, and assurance that all information shared was confidential. Permission was also sought to record the interview. The guide also ensured that all topics were encapsulated, that unambiguous language was used and that all questions were neutral, and not leading, while still addressing the intended research interests.

This interview guide, which was framed by the findings from the quantitative stage, was pilot tested on two students from the FAE 2014 cohort. Based on the feedback received, the interview guide was further refined, ensuring that all concepts were explained and that the questions were clear. All interviews were audio-recorded with a digital voice recorder, to ensure clear, high quality recordings. This was in line with the guidelines established by Poland (1999). The interviews progressed by asking participants general questions about their experiences of studying for the FAE exams, their experience of working full-time and studying part-time, what resources facilitated their engagement and the factors they deemed most important for success in the exams. Where necessary, prompts were given to encourage richer descriptions about these experiences. Not all interviews followed the same format, and the questions varied according to the flow of the conversation. However, the same general questions were addressed, and each interview lasted 20-40 minutes. The details of all interview participants are outlined in Table 4.7 below.

Table 4.7

Details of interview participants

Title	Gender	FAE Cohort
Pilot	Female	2014 (Pilot)
Pilot	Female	2014 (Pilot)
Participant 1	Female	2015
Participant 2	Male	2015
Participant 3	Female	2015
Participant 4	Male	2015
Participant 5	Female	2016 (Placed in Top 10)
Participant 6	Female	2016 (Placed in Top 10)
Participant 7	Female	2016 (Placed in Top 10)
Participant 8	Male	2016
Participant 9	Male	2016
Participant 10	Female	2016
Participant 11	Male	2016
Participant 12	Female	2016
Participant 13	Male	2016
Participant 14	Female	2016
Participant 15	Female	2018
Participant 16	Female	2018
Participant 17	Female	2018
Participant 18	Male	2018
Participant 19	Female	2018
Participant 20	Female	2019
Participant 21	Female	2019
Participant 22	Female	2019
Participant 23	Female	2019
Participant 24	Female	2019

4.5.1 Data Analysis Strategy: Qualitative Data

Qualitative data analysis commonly includes four stages: data preparation, familiarisation, coding, and generating meaning (Creswell & Creswell, 2005; Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2003).

1) The data preparation stage included the transcription of the interview recordings. The first two pilot interviews were transcribed by the researcher and all subsequent interviews were transcribed by a transcribing company. The researcher checked the accuracy of the transcription by listening back to the recordings while reading the transcripts. Care was taken to ensure that the identity of the participants was not revealed, as well as to ensure the security of the transcripts (Grinyer, 2009).

Consequently, each student was assigned a number (Participant 1-24) which was attached to the interview quotes used. Where names were revealed in the text of the transcripts, these were changed to fictitious names to maintain confidentiality.

2) The second stage required familiarisation with the data. This required re-reading the interview transcripts, listening back to the recordings and taking notes.
3) The third stage involved coding the data. The process of coding facilitated data simplification (or reduction) allowing data to be categorised into simpler, more general categories to facilitate analysis (Creswell & Creswell, 2005; Johnson & Onwuegbuzie, 2004). Due to the supplementary nature of the qualitative data in this study, the decision was made to code the data manually. This approach was considered appropriate in the literature (e.g. Basit, 2003). As outlined in Appendix J, the data was firstly coded based on the study variables to which it related e.g. work exhaustion, academic self-efficacy. These codes were then further analysed based on the hypotheses and unexpected findings to which they related.
4) The fourth stage required generating meaning from the interview data. This required in-depth examination and multiple interpretations of the codes and themes in the data to determine its meaning. Care was taken at this stage to ensure researcher bias was minimised and that the interpretations were grounded in the data presented. The analysis of the interview data is presented in Chapter Six.

4.6 Chapter Summary

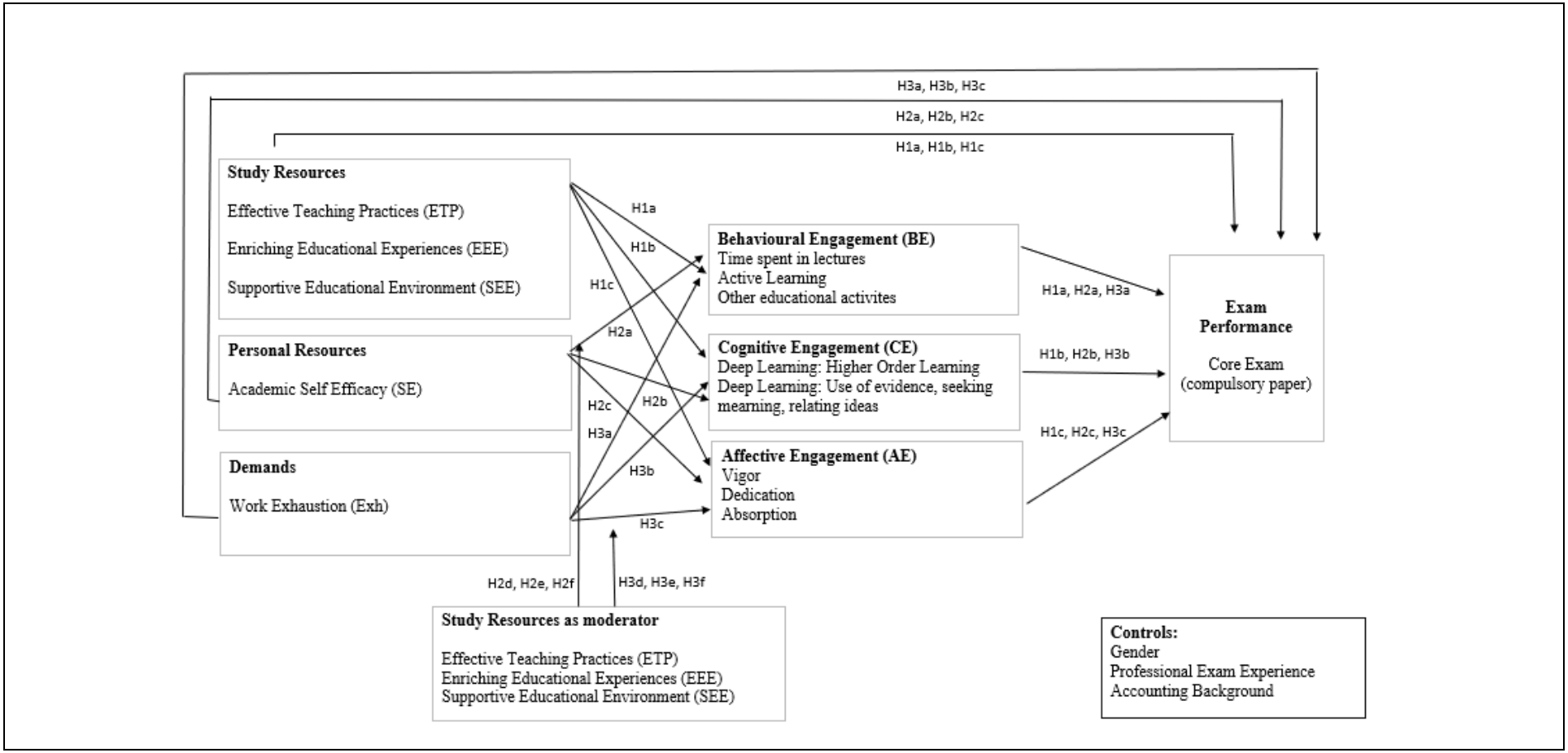
This chapter outlined the methodology adopted in this research. The chapter began with an introduction to the research context and included the reasons for choosing CAI as the setting for this study. The philosophical foundations underpinning this research were then discussed, with a specific focus on two main research approaches, quantitative and qualitative methods. This was followed by a discussion on the merits of using mixed methods research and why this approach was adopted in this study. The design of the study was then discussed in detail, including the survey design, the sample selection and data collection methods and the data analysis strategies for both the quantitative and qualitative research approaches. The following chapter will discuss the data analysis procedures and the results of the hypotheses testing.

CHAPTER FIVE: DATA ANALYSIS AND RESULTS

5.1 Introduction

This chapter describes the data analysis procedures employed in this study and the results of the hypotheses tested. It commences by presenting the hypothesised model as outlined in Figure 5.1. An overview of the data screening stage, including a description of the characteristics of the data sample is then presented. This is followed by an outline of the steps involved in using structural equation modelling to test the study hypotheses. This includes the stages involved in building and testing both the measurement and structural model. The final section of this chapter presents the results of the hypotheses tested.

5.2 The Hypothesised Research Model



Note. While this model is similar to the hypothesised model presented in Figure 3.10, the hypothesised model above includes the sub-scales that will be used to measure each variable.

Figure 5.1: The hypothesised research model (including sub-scales)

5.3 Data Screening

The initial data screening stage included reviewing the characteristics of each of the background variables (control variables) and the variance in the responses. The results outlined that there was little variation in the responses for age, prior academic performance, discipline and size of training firm. For example, 66% of total respondents were aged between 20-25 (Cohort 1: 70%, Cohort 2: 63%); 88% of respondents graduated with an accounting related degree (Cohort 1: 91%, Cohort 2: 87%); 66% of respondents achieved a 2.1 grade or above in their previous education (Cohort 1: 67%, Cohort 2: 66%) and 66% of respondents were training in Big Four accounting firms (Cohort 1: 63%, Cohort 2: 68%). The results of the significance tests showed no significant relationships between age, prior academic performance and size of training firm, with the main study variables. However, there were a number of significant relationships reported between students with an accounting related degree and the main study variables. Therefore, it was confirmed that the following control variables should be eliminated from further analysis: age, prior academic performance, degree level and size of training firm. This decision was supported by the literature on the exclusion of unrelated control variables, as this helps to decrease the risk of Type 1 errors (i.e. false positive findings), while maintaining statistical power (Cohen, 1992). Consequently, the variables of gender, discipline (accounting background) and professional exam experience were retained, as there was evidence of significant relationships between these variables and the main study variables, as well as there being support for their inclusion in the literature. The characteristics of each control variable is summarised in Table 5.1 below.

Table 5.1

Characteristics of the sample

Variable	Cohort 1: Sample Size 490[a]	Cohort 2: Sample Size 711
Gender		
Female	270 (55%)	370 (52%)
Male	220 (45%)	341(48%)
Age		
20-25	343 (70%)	448 (63%)
25-30	77 (16%)	149 (21%)
Over 30	25 (5%)	57 (8%)
Missing	45 (9%)	57 (8%)
Prior academic performance		
1st	123 (25%)	171 (24%)
2.1	204 (42%)	299 (42%)
2.2 or below	78 (16%)	44 (6%)
Missing	85 (17%)	197 (28%)
Degree level (highest qualification)		
Undergraduate	249 (51%)	420 (59%)
Postgraduate	204 (42%)	279 (39%)
Professional	15 (3%)	5 (1%)
Missing	22 (4%)	7 (1%)
Discipline/Accounting background		
Accounting	444 (91%)	618 (87%)
Non-Accounting	34 (7%)	64 (9%)
Missing	12 (2%)	29 (4%)

Variable	Cohort 1: Sample Size 490[a]	Cohort 2: Sample Size 711
Professional exam experience (CAP1/CAP2)		
Yes	157 (32%)	204 (29%)
No	333 (68%)	505 (71%)
Missing	0 (0%)	2 (<1%)
Size of training firm		
Big Four	309 (63%)	483 (68%)
Non-Big Four	181 (37%)	228 (32%)

[a] Sample size differences between Cohort 1 and Cohort 2 was due to a mandatory attendance rule (for some lectures) being introduced for Cohort 2 students

The next stage of data screening included, firstly, assessing the pattern of missing data. Secondly, reviewing the raw data and descriptive statistics (including checking for outliers). Thirdly, testing whether the assumptions of multivariate analysis were satisfied, including normality, homoscedasticity, linearity and multicollinearity (Gaskin, 2019; Hair, Black, Babin, Anderson, & Tatham, 2010; Tabachnick, Fidell, & Ullman, 2007).

5.3.1 Missing Data

Data from the questionnaire was entered manually into Microsoft Excel, with each case being given a unique student identifier number. The performance data was then matched to the unique student identifier numbers on the original data file. A code book was then created for the completed data file, and the data was transferred to the Statistical Package for the Social Sciences (SPSS). A missing cases review was then conducted. Table 5.2 below summarises the percentage of missing data on each variable.

Table 5.2

Percentage of missing values

Variables	Cohort 1	Cohort 2
Control Variables		
Gender	0%	0%
Professional Exam Experience	<1%	<1%
Accounting Background	2%	4%
Antecedents to Engagement		
Study Resources	<1%	<1%
Academic Self-Efficacy	<1%	<1%
Work Exhaustion	<1%	<1%
Engagement		
Behavioural	<1%	<1%
Cognitive	<1%	<1%
Affective	<1%	<1%

Note. Only includes control variables being used in the final model

When less than 5% of cases in any variable are missing, dealing with missing data is less problematic (Newman, 2009; Tabachnick et al., 2007). As evident in Table 5.2 above, the low prevalence of missing values in this dataset was unlikely to cause any major concerns. However, consideration was still given to the pattern of missing data, followed

by a discussion of how these missing values were treated. The pattern of missing data was determined for all variables, including control variables, using Little's MCAR test. Little and Rubin (2002) categorise missing data into three groups: data missing completely at random (MCAR); data missing at random (MAR); and data missing not at random (MNAR). MCAR refers to data that is missing independently of any other variables measured or missing. MAR describes a pattern which is related to some of the variables being measured but is unrelated to the values of the missing data. Finally, MNAR is data that is missing as a result of the value of that variable itself, irrespective of the values of other variables (Newman, 2009). Data satisfying the MCAR test is the least problematic, and all methods for dealing with missing data are applicable. However, MAR and MNAR data which exhibit non-random missing data patterns are considered more problematic (Newman, 2009). Little's MCAR test was conducted to determine the pattern of the missing data, the results of which are presented in Table 5.3 below.

Table 5.3

Pattern of missing data

Cohort	$\chi 2$	df	p-value	MCAR
Cohort 1	6044.087	5888	0.076	✓
Cohort 2	10921.986	9846	0.000	×

The results indicate that the MCAR test for Cohort 1 data was statistically insignificant ($p>0.05$), while Cohort 2 was statistically significant ($p<0.001$), suggesting that Cohort 2 data was either MAR or MNAR. A line-by-line review of the missing data concluded that it was unlikely to be MNAR (i.e. there were no patterns between the missing data), so it was considered to be MAR. The literature supports the use of two methods to deal with MAR, namely listwise deletion or full information maximum likelihood estimation (FIML) (Cheung, 2007). Using listwise deletion, an entire case is excluded from analysis if any value is missing. In contrast, FIML operates by estimating values for the unknown parameters of a model without introducing any bias, and it is the one most commonly used in structural equation modelling (Kline, 2015). Given that the percentage of missing values in Cohort 2 was so low, either estimation technique was unlikely to bias the results. As FIML does not require the deletion of any cases and is considered a more robust estimating technique for MAR data (Newman, 2009), its use was considered appropriate in this study.

5.3.2 Descriptive Statistics

Descriptive statistics for all study variables were examined to provide further insight into the characteristics of the sample and the distribution of responses. The frequencies, means, standard deviations, minimum and maximum scores were reviewed for each variable, to ensure that all responses were plausible, and within an expected range and direction (Tabachnick et al., 2007). Table 5.4 and Table 5.5 below, illustrates that the means and standard deviations were in line with expected results. This review also provided an additional check for any potential errors or outliers in the data.

5.3.3 Testing the Assumptions of Multivariate Analysis

Testing the assumptions of multivariate analysis included testing for multicollinearity, linearity, normality and homoscedasticity (Hair et al., 2010; Tabachnick et al., 2007).

Multicollinearity. Multicollinearity is deemed to exist when variables in a study are highly correlated, causing some of the variables to be redundant (Saunders, Lewis, & Thornhill, 2009). Multicollinearity was tested by reviewing the correlation matrix for each variable and through calculation of the tolerance levels and the variance inflating factor (VIF) (Cohen, Cohen, West, & Aiken, 2003). The results of the correlation analysis for both years are presented in Tables 5.4 and 5.5 below. The correlation matrix ranges from +1 to -1 and show both the magnitude and direction of the relationships, where those closer to +/- 1 indicate a strong relationship, and the direction of the relationship is indicated by the sign +/-. A range of acceptable thresholds have been presented in the literature, ranging from 0.75 to 0.90 (e.g. Hair, Ringle, & Sarstedt, 2011; Saunders et al., 2009), with correlations higher than these thresholds suggesting that multicollinearity may be present. Examination of the correlation matrices in Tables 5.4 and 5.5 below, revealed that none of the correlations breached the upper threshold of 0.90. The second multicollinearity test calculated the tolerance levels and the variance inflation factor (VIF) (Cohen et al., 2003). According to Cohen et al. (2003), a commonly used rule of thumb is that where tolerance levels are 0.10 or below, and the VIF is 10 or more, this acts as evidence of multicollinearity. The results in this study indicated that neither the tolerance nor VIF values, in either cohort, breached these thresholds. Taken together, these results confirmed that multicollinearity was not an issue in this dataset.

Table 5.4

Correlation matrix - Cohort 1 (before CFA)

			Correlations																	
Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 BE: Time	3.778	0.964	-																		
2 BE: Active Learning	2.023	0.502	.229**	-																	
3 BE: Other Educational Activities	2.280	0.559	.142**	.343**	-																
4 CE: Higher Order Learning	2.933	0.586	0.077	.127**	.185**	-															
5 CE: Seeking Meaning	3.760	0.645	0.063	.177**	.316**	.241**	-														
6 CE: Use of Evidence	3.910	0.601	0.085	.203**	.276**	.180**	.599**	-													
7 CE: Relating Ideas	3.487	0.671	0.001	.181**	.256**	.203**	.548**	.566**	-												
8 AE: Vigor	3.232	0.852	.251**	.330**	.370**	.195**	.359**	.348**	.307**	-											
9 AE: Dedication	3.427	0.872	.270**	.300**	.325**	.140**	.331**	.311**	.208**	.735**	-										
10 AE:Absorption	2.770	1.107	.192**	.257**	.314**	.107*	.381**	.339**	.281**	.733**	.700**	-									
11 PR: Academic Self-Efficacy	3.430	0.770	.226**	.435**	.366**	.211**	.326**	.338**	.241**	.744**	.682**	.612**	-								
12 D: Work Exhausation	3.605	1.239	-0.020	0.006	-.249**	-0.074	-0.087	-0.015	-0.015	-.169**	-.124**	0.014	-.170**	-							
13 SR: Effective Teaching Practices	3.527	0.487	.130**	0.022	.179**	.123**	.190**	.124**	.145**	.366**	.313**	.260**	.334**	-.280**	-						
14 SR: Supportive Educational Environment	3.478	0.629	0.037	0.014	-0.048	.103*	.118**	.091*	0.063	.234**	.204**	.184**	.171**	-.101*	.495**	-					
15 SR: Enriching Educational Experiences	3.374	0.639	0.079	.149**	.303**	.115*	.218**	.189**	.153**	.336**	.283**	.285**	.270**	-.137**	.431**	.364**	-				
16 Exam Performance	6.364	2.876	0.028	.124**	-0.012	.121**	-0.028	-0.001	-0.017	0.072	0.022	0.043	0.073	0.013	-.141**	-0.026	-.125**	-			
17 C: Gender	1.453	0.498	-.138**	-0.042	.165**	0.029	0.021	0.058	.118**	0.057	-0.003	-0.016	0.054	-.170**	0.035	-0.011	-0.062	-0.031	-		
18 C: Professional Exam Experience	0.684	0.466	-.124**	-0.003	-0.025	-0.086	-0.020	0.049	0.013	0.024	0.071	0.018	0.049	-.092*	0.039	0.067	-0.009	-0.024	-.095*	-	
19 C: Accounting Background	1.574	1.138	0.060	0.084	.131**	.130**	0.048	0.054	0.081	.116*	.115*	0.087	.124**	0.011	0.073	-0.022	0.080	.096*	-0.046	.333**	-

Note . n = 490; M = Mean; SD = Standard Deviation; BE = Behavioural Engagement, CE = Cognitive Engagement, AE = Affective Engagement, PR = Personal Resources, D = Demands, SR = Study Resources, C = Control

* p < .05; ** p < .01; *** p < .001

Table 5.5

Correlation matrix - Cohort 2 (before CFA)

			Correlations																		
Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 BE: Time	3.120	1.040	-																		
2 BE: Active Learning	2.030	0.640	.201**	-																	
3 BE: Other Educational Activities	2.270	0.535	.197**	.252**	-																
4 CE: Higher Order Learning	2.960	0.635	-0.002	.142**	.169**	-															
5 CE: Seeking Meaning	3.770	0.673	0.032	.143**	.321**	.119**	-														
6 CE: Use of Evidence	3.940	0.711	0.068	.161**	.265**	.171**	.540**	-													
7 CE: Relating Ideas	3.430	0.668	0.068	.163**	.294**	.147**	.575**	.486**	-												
8 AE: Vigor	3.150	0.819	.256**	.138**	.291**	.152**	.272**	.183**	.176**	-											
9 AE: Dedication	3.390	0.868	.258**	.245**	.284**	.170**	.274**	.172**	.229**	.678**	-										
10 AE:Absorption	2.740	1.054	.167**	.167**	.271**	.123**	.348**	.222**	.253**	.654**	.668**	-									
11 PR: Academic Self-Efficacy	3.400	0.710	.262**	.298**	.336**	.193**	.296**	.250**	.234**	.700**	.713**	.563**	-								
12 D: Work Exhausation	3.540	1.310	-.089*	0.025	-.137**	-0.054	-0.001	-0.060	0.006	-.188**	-.115**	-.095*	-.145**	-							
13 SR: Effective Teaching Practices	3.438	0.561	.258**	.113**	.159**	.192**	.114**	0.07098	.118**	.327**	.370**	.197**	.359**	-.117**	-						
14 SR: Supportive Educational Environment	3.345	0.662	0.033	0.044	0.016	0.06051	.076*	-0.00687	0.039	.181**	.193**	.140**	.165**	0.03073	.492**	-					
15 SR: Enriching Educational Experiences	3.325	0.676	.202**	.134**	.310**	.113**	.232**	.147**	.193**	.277**	.353**	.282**	.318**	-0.0385	.481**	.391**	-				
16 Exam Performance	6.350	2.905	-.192**	-0.0472	-.142**	0.06358	-0.071	0.040	-0.037	0.019	-.103**	-0.037	0.000	0.018	-.146**	-0.071	-.161**	-			
17 C: Gender	1.490	0.500	-.156**	-.085*	0.03642	-0.007	-0.027	0.015	0.02169	0.006	-.097**	-.113**	0.065	-0.0501	-0.033	-0.003	-.116**	.128**	-		
18 C: Professional Exam Experience	0.710	0.454	0.04611	0.064	0.062	0.033	0.073	0.044	0.052	.087*	.093*	0.061	.102**	-0.0633	.114**	0.037	.084*	-0.055	0.01924	-	
19 C: Accounting Background	1.680	1.236	-0.064	-0.017	0.05242	-0.00408	0.050	0.011	0.043	0.02218	.097*	0.063	0.05088	0.016	0.021	-0.057	0.002	0.01601	0.045	.355**	-

Note . n = 711; M = Mean; SD = Standard Deviation; BE = Behavioural Engagement, CE = Cognitive Engagement, AE = Affective Engagement, PR = Personal Resources, D = Demands, SR = Study Resources, C = Control

* p < .05; ** p < .01; *** p < .001

Linearity. Linearity was tested by reviewing the scatterplots and the deviation from linearity tests in the analysis of variance (ANOVA) table for each pair of independent variables (IV) and dependent variables (DV). The review of the scatterplots indicated that the following relationships may be problematic: study resources and work exhaustion (IV) with behavioural, cognitive and affective study engagement (DV). However, the review of the ANOVA tables indicated that the deviation-from-linearity tests were all non-significant. Therefore, all relationships between IV and DV were considered sufficiently linear.

Normality. Normality was assessed through inspection of the histograms and review of skewness and kurtosis scores. The review of the histograms was also a good test for outliers. The results suggested that, in both years, some of the variables in the dataset were not normally distributed. The Kolmogorov-Smirnov and the Shapiro-Wilk tests were also conducted, and they further confirmed that some variables were not normally distributed. The literature suggests that normally distributed variables in the social sciences are uncommon, especially when the dataset is large, and it suggests focusing instead on homoscedasticity tests (Gaskin, 2019; Gujarati, 2003; Schafer & Graham, 2002). Moreover, Gujarati (2003) outlines that normality assumptions are of critical importance when sample sizes are small (<100). Therefore, in larger sample sizes, like in the case of this study, if the error is not normally distributed, the sampling distribution of the regression coefficients will tend to be normally distributed (Gujarati, 2003). Furthermore, bootstrapping analysis, which was used in this study, does not require the data set to be normally distributed as the sampling distribution converges on a normal distribution regardless of the underlying data distribution (Fritz & MacKinnon, 2007).

Homoscedasticity. In this study, homoscedasticity was determined through a visual inspection of the scatterplots. The results revealed that all regression pairs were homoscedastic.

Overall, these results indicate that the assumptions of multivariate analysis were satisfied.

5.4 Structural Equation Modelling

Structural equation modelling is a two-step statistical technique that requires the analysis of two conceptually distinct models. The first model is a measurement model which specifies and confirms the relationships between a latent construct and its observed measures (e.g. self-efficacy [latent construct]) is measured by six observed measures [survey questions]). The confirmed measurement model is then used to build the structural model which simultaneously tests the causal relationships between independent and dependent variables based on a theory (Anderson & Gerbing, 1988).

In this study the measurement model was built and tested using data from Cohort 1. This measurement model was then validated using data from Cohort 2, and once validated, was used to test the structural model. A number of competing mediated and moderated structural models were tested using a nested modelling approach. When these tests were complete the best fitting structural model was used to test the study hypotheses.

5.4.1 Building the Measurement Model: Determined using Cohort 1 Data

The first step in building the measurement model involved an exploratory factor analysis (EFA) on all study variables. The results of the EFA provided a better understanding of the data before proceeding to the confirmatory factor analysis (CFA) stage, which focused on determining model fit, testing for validity and reliability and common method variance.

The hypothesised model presented in Figure 5.1 was the starting point for the EFA. This model included five scales which were previously validated in the literature, but had not been used in this research context. Therefore, it was considered appropriate to conduct an EFA to determine the pattern structure of all scales. A summary of the EFA results are presented below, with a more detailed explanation presented in Appendix F.

The results of the EFA confirmed the following:

1) Behavioural study engagement has three main factors: time spent in lectures, active learning, other educational activities.
2) Cognitive study engagement had a clear one-factor structure using the four-item higher order learning scale (a fifth item loaded onto another dimension). The six-item

ASSIST had a clear one-factor structure. The 12-item version did not show a clear pattern structure.

3) Affective study engagement measured using the UWES-S did not show a clear three-pattern structure with either the 17-item version or the nine-item version. It provided a clear one-factor structure with both the nine-item and six-item versions.
4) Personal resources - academic self-efficacy showed a clear one-factor structure using the academic self-efficacy scale of the MBI-SS.
5) Demands - work exhaustion had a clear one-factor structure using the exhaustion dimension of the MBI-GS.
6) The study resources factor was adapted from the NSSE/ISSE, with a number of context specific questions added. It was expected to load onto three factors, effective teaching practices, supportive educational environment and enriching educational experiences. The results of the EFA showed all items' loading onto five clear factors: effective teaching practices, clear exam guidelines, support from the professional body for academic and work difficulties, preferred lecture structure and resources.

Upon completion of the EFA, the confirmatory factor analysis (CFA) was completed. A CFA differs from an EFA in that it seeks to confirm a theoretically pre-specified measurement model (Brown, 2006). In this case, completing the EFA in advance of the CFA facilitated a better understanding of the data. The initial CFA included all items in the original scales, with the EFA results considered at a later point. The main stages involved in conducting the CFA included assessing: 1) model fit, 2) validity and reliability, and 3) common method variance (Gaskin, 2019). The work completed in each of these three stages is outlined below.

Model Fit. Model fit was determined using the five model fit indices detailed in Table 5.6 below. The first stage in determining model fit was to include all latent constructs in the measurement model and test the overall fit. A latent construct is a variable that is not directly observed (unobserved) and instead is captured by indicators that represent the latent construct (Muthén et al., 2017). For example, self-efficacy is a latent construct as it cannot be observed directly. Therefore, the efficacy dimension of the MBS-SS includes six items (factors) that capture behaviours indicative of self-efficacy. Therefore, these items (factors) are indicators of the underlying latent construct. There are six latent constructs in this study, with five considered second (higher) order

factors and one considered a first order factor. For example, affective study engagement is a second order factor as affective study engagement is a latent construct, measured by vigor, dedication and absorption, which are also latent constructs, which are subsequently measured by a number of indicators (factors). This example is presented in diagram format in Figure 5.2 below.

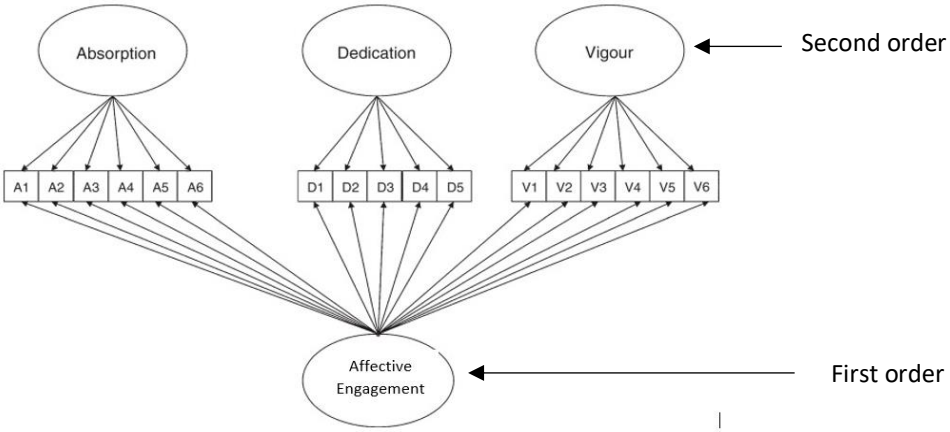


Figure 5.2: Affective engagement - second (higher) order three factor structure

The six latent constructs in this study, include four derived from validated scales, and two context specific scales. During the CFA stage, a number of competing models were tested with the objective of achieving model fit that could be justified theoretically and also supported statistically. The original measurement model was used as the baseline model. As it did not converge, a number of competing models were tested. These alternative models were firstly justified theoretically and then support was sought through the model fit indices. Therefore, when a modification was supported by the literature, the model fit indices were then tested, and only then was a change included in the factor structure. This resulted in an extensive number of models being tested. In Table 5.7 and 5.8 below, a sample of the models tested are presented. Table 5.7 presents the model fit indices and compares them to the accepted thresholds presented in Table 5.6. Table 5.8 presents a narrative summary of the modifications made to a sample of models, with a more detailed narrative description presented in the sections following Table 5.8. The final measurement model is also discussed.

Table 5.6

Model fit indices: thresholds

Measure	Accepted Thresholds		
	Good	Permissible	Poor
Chi-square ($\chi 2$)/Degrees of Freedom (df)	< 3	3 to 5	>5
Comparative Fit Index (CFI)	>.90	.80 to .90	<.80
Tucker-Lewis Index (TLI)	>.90	.80 to .90	<.80
Root Mean Square Error of Approximation (RMSEA)	<.05	.05 to .10	>.10
Standardized Root Mean Square Residual (SRMR)	<.05	.05 to .10	>.10

Note. Adapted from Gaskin, 2019; Hu & Bentler, 1999

Table 5.7

Confirmatory factor analysis (CFA): model fit comparison

CFA Model	$\chi 2$	df	$\chi 2$ /df	CFI	TLI	RMSEA	SRMR	Within Threshold		
								Good	Permissible	Poor
Model 1 - Original Model	Model reached the maximum number of iterations (10,000) and would not converge								N/A	
Model 2	3,215.310	1,353	2.376	0.827	0.818	0.053	0.068		✓	
Model 3	2,342.127	1,061	2.207	0.862	0.854	0.050	0.066		✓	
Model 4	3,089.068	1,068	2.892	0.783	0.771	0.062	0.095			✓
Model 5 - Final Model	1,138.396	539	2.112	0.918	0.910	0.048	0.050	✓		

Table 5.8

Confirmatory factor analysis (CFA): explanation of modifications

Variable	Details of Modifications made to each latent variable within Models 1-5
Study Resources	
Model 1	Second (higher) order five factor structure: Effective teaching practices (8), clear exam guidelines (4), support from the professional body (4), preferred lecture structure (3), resources (3)
Model 2	Second (higher) order three factor structure: Effective teaching practices (8), clear exam guidelines (4), support from the professional body (4) - Removed 'resources' subscale as the Cronbach alpha was below 0.6; removed 'preferred lecture structure' subscale as the factor loadings were below 0.4
Model 3	Second (higher) order three factor structure: Effective teaching practices (8), clear exam guidelines (4), support from the professional body (4) - Removed 'resources' subscale as the Cronbach alpha was below 0.6; removed 'preferred lecture structure' subscale as the factor loadings were below 0.4
Model 4	Second (higher) order three factor structure: Effective teaching practices (8), clear exam guidelines (4), support from the professional body (4) - Removed 'resources' subscale as the Cronbach alpha was below 0.6; removed 'preferred lecture structure' subscale as the factor loadings were below 0.4
Model 5	Three separate first order factor structures: Effective teaching practices (8), clear exam guidelines (4), support from the professional body (4)
Personal Resources	
Model 1	First order factor structure: Academic self-efficacy (6)
Model 2	First order factor structure: Academic self-efficacy (6)
Model 3	Academic self-efficacy included as a manifest variable (i.e. total mean score) - changed from first order factor structure to manifest variable so not necessary to include in the factor structure in the measurement model.
Model 4	Academic self-efficacy included as a manifest variable (i.e. total mean score) - changed from first order factor structure to manifest variable so not necessary to include in the factor structure in the measurement model.

Variable	Details of Modifications made to each latent variable within Models 1-5
Model 5	Academic self-efficacy included as a manifest variable (i.e. total mean score) - changed from first order factor structure to manifest variable so not necessary to include in the factor structure in the measurement model.
Demands	
Model 1	First order factor structure: Work exhaustion (5)
Model 2	First order factor structure: Work exhaustion (5)
Model 3	First order factor structure: Work exhaustion (5)
Model 4	First order factor structure: Work exhaustion (5)
Model 5	First order factor structure: Work exhaustion (5)
Behavioural Study Engagement	
Model 1	Second (higher) order three factor structure: Time - lecture attendance (5), active learning (5), academic challenge (3)
Model 2	First order one factor structure: Time - lecture attendance (5) - Removed 'academic challenge' subscale and 'active learning' subscale as the Cronbach alphas were below 0.6
Model 3	First order one factor structure: Time - lecture attendance (5)
Model 4	First order one factor structure: Time - lecture attendance (5)
Model 5	First order one factor structure: Time - lecture attendance (5)
Cognitive Study Engagement	
Model 1	Scale 1: First order one factor structure: higher order learning (5); Scale 2: Second (higher) order three factor structure (12-item): use of evidence (4), relating ideas (4), seeking meaning (4)
Model 2	Scale 1: First order one factor structure: higher order learning (5); Scale 2: Second (higher) order three factor structure (six-item): use of evidence (2), relating ideas (2), seeking meaning (2)
Model 3	Scale 1: First order one factor structure: higher order learning (5); Scale 2: Second (higher) order three factor structure (six-item): use of evidence (2), relating ideas (2), seeking meaning (2)

Variable	Details of Modifications made to each latent variable within Models 1-5
Model 4	Scale 1: First order one factor structure: higher order learning (4) - dropped one item from the original scale as it was loading below 0.40; Scale 2: One factor structure: Deep approaches to learning (6)
Model 5	Scale 1: First order one factor structure: higher order learning (4)
Affective Study Engagement	
Model 1	Second (higher) order three factor structure (17-item): vigor (6), dedication (5), absorption (6)
Model 2	Second (higher) order three factor structure (nine-item): vigor (3), dedication (3), absorption (3)
Model 3	Second (higher) order three factor structure (nine-item): vigor (3), dedication (3), absorption (3)
Model 4	Second (higher) order two factor structure (six-item): vigor (3) and dedication (3)
Model 5	First order one factor structure (six-item): Affective engagement measured as vigor and dedication (6)

Note. Models 1-5 are only a sample of the number of alternative models tested during the CFA stage before the final model was selected

Study resources. Study resources were originally structured as a second order factor with three factors: 1) effective teaching practices; 2) supportive educational environment; and 3) enriching educational experiences. Based on the results from the EFA presented above, the factor structure changed, resulting in a second order factor with five factors: 1) effective teaching practices; 2) clear exam guidelines; 3) support from the professional body for academic and work difficulties; 4) preferred lecture structure; and 5) resources. The CFA revealed that both the factors "preferred lecture structure" and "resources" were reducing model fit, and therefore were removed. The remaining three-factor higher order structure, while reporting a slightly better model fit, did not reach the acceptable model fit thresholds. Therefore, it was considered appropriate to test the higher order structure of study resources as three first order factors. The results revealed an acceptable model fit. Therefore, in the final measurement model study resources was measured using three first order factors - effective teaching practices, support from the professional body for academic and work difficulties, and clear exam guidelines. The use of first order factors for similar variables is supported in the student engagement literature (e.g. ISSE, 2016).

Personal resources (academic self-efficacy). Academic self-efficacy was originally measured using the six-item academic self-efficacy scale from the validated Maslach Burnout Inventory-Student Survey (MBI-SS). During the CFA stage, a number of competing factor structures for self-efficacy were tested. Initially, a first-order six-item factor structure was tested, which resulted in poor model fit for the overall measurement model. Upon further inspection, high modification indices between self-efficacy and affective study engagement were noted, along with one item loading below 0.40. Subsequent five-factor, four-factor and three-factor structures were tested, and where necessary, items loading below 0.40 were removed. However, this did not solve the model fit issues, nor did it decrease the modification indices. The final three-factor structure tested had one item loading below 0.40. Therefore, the factor structure was reduced to two items. As a factor structure should ideally not have less than three items (Gaskin, 2019), the technique of item parcelling was used in an attempt to retain self-efficacy as a latent construct and to solve the measurement model fit issues.

Item parcelling allows for the combination of items on a scale instead of using the items individually and can test these as second order observed variables in the CFA. The purpose of doing this is to allow additional factor structures related to the same scale to

be tested. While this technique has received some criticism, it is widely used in the literature, with certain approaches to parcelling considered more robust than others (Little, Cunningham, Shahar, & Widaman, 2002). The least supported parcelling technique is where items are combined at random. Therefore, an alternative technique which combines items in the scale based on their mean values (Little et al., 2002), was used. Using this approach, items with the highest and lowest mean values were combined until all items were in a parcel. As the original scale had six items, this resulted in three parcels. The results of the CFA using parcelling slightly improved model fit, but did not reach the desired thresholds.

The final approach considered, before removing self-efficacy from the model completely, was the creation of a manifest variable to act as an indicator for the factor structure. The main risk of using a manifest variable instead of a latent construct is a higher risk of measurement error. To gain some comfort over the use of the manifest variable, the standardised loadings and the mean scores of all items were reviewed, as well as the overall reliability of the scale. The standardised loadings were relatively high, the mean scores of all six items ranged from 2.80 to 4.13, with the standard deviations ranging from 1.00 to 1.30. The reliability for the scale was 0.72 (Table 5.10), which is above the 0.70 threshold (Santos, 1999). As the mean scores were all within a close range and the scale indicated good reliability, it was considered appropriate to use this approach to measure self-efficacy. As it was not a latent factor, it was not included in the measurement model. When tested in the structural model, the overall model fit reached the desired thresholds. However, it should be noted that the reliability of the scale using Cohort 2 data was 0.664 (Table 5.12). While this value is below Santos (1999) 0.70 reliability threshold, it is above Murphy and Davidshofer's (1988) 0.60 threshold. Based on these overall findings, it was considered appropriate to retain self-efficacy as a manifest variable for all further analysis, while still recognising the limitations of adopting this approach.

Demands (work exhaustion). Demands were defined as work exhaustion and measured using the five-item exhaustion dimension of the MBI-GS. This variable had a clear one factor structure in the EFA and contributed towards good model fit when included in the CFA. The use of the exhaustion dimension from this scale in isolation is supported in the literature (e.g. Schutte et al., 2000).

Behavioural study engagement. Behavioural study engagement was measured using three subscales in the original measurement model, 1) time spent at lectures, 2) active learning, and 3) other educational activities. In the final measurement model, behavioural study engagement was measured using only "time spent at lectures". These changes were justified firstly, on the basis that time is a central variable in student learning, as it dictates the amount of time a student spends learning a task and most importantly, it dictates the amount of time a student needs to spend on the task in order to learn or master it (Bloom, 1974; Carroll, 1963). Furthermore, Bloom (1974) outlines that learning requires time, and competence is attained only after a series of learning experiences, that may take months or years to complete (Bloom, 1974, p. 682). Secondly, from a statistical perspective, retaining only time spent at lectures as a measure of behavioural study engagement was justified, as both active learning ($\alpha = 0.599$) and other educational activities ($\alpha = 0.378$) had scale reliabilities below the recommended thresholds of 0.60 (Murphy & Davidshofer, 1988). In addition, their inclusion was leading to poor model fit in the overall model.

Cognitive study engagement. Cognitive study engagement was originally measured using both the five-item higher order learning (HOL) scale from the NSSE/ISSE and the 12-item ASSIST deep learning scale. As outlined in Chapter Four, both scales offered potential to measure cognitive study engagement. The HOL scale is derived from the learning approaches literature and similar to the ASSIST, was designed with the aim of measuring activities that promote student understanding and deep learning (Laird, Shoup, & Kuh, 2006). While the objective of both instruments is similar, the HOL scale asks a different and shorter set of questions to the ASSIST. In contrast, the ASSIST sets out a more comprehensive set of questions, using three subscales: use of evidence, seeking meaning and relating ideas. While the ASSIST is popular in the learning approaches literature, the HOL is popular in the student engagement literature. Both scales were included in the original survey, with the intention of determining, in the analysis section, which one was most appropriate in this study. This decision was based on the literature calling for more research on the suitability of the HOL scale in different educational domains (Campbell & Cabrera, 2014).

In the original measurement model, the 12-item ASSIST did not provide good model fit. When it was replaced by the shortened six-item version of the ASSIST, the model fit improved. In the original model, the five-item HOL did not provide good model fit. This

was likely due to one item “memorising facts, ideas or methods from your subjects and coursework so you can repeat them in pretty much the same form”, loading below 0.40 in the exploratory factor analysis (see Appendix F). When this item was deleted from the HOL scale, the model fit improved. Higher order learning was supported both theoretically (ISSE, 2016; NSSE, 2018), and statistically, as a proxy for deep learning and a measure of cognitive study engagement. It also provided better fit to the data than the ASSIST six-item scale. Therefore, it was retained as the sole measure of cognitive study engagement.

Affective study engagement. Affective study engagement was originally measured using the UWES-S (17-item), which has three sub-scales: vigor, dedication and absorption. The literature supports the use of this three-factor structure, but also supports the use of a one-factor structure to measure affective study engagement (e.g. Schaufeli et al., 2002). The results of the CFA indicated that the 17-item scale gave a poor model fit. It was therefore considered appropriate to test the shorter nine-item and six-item versions of the UWES-S. The nine-item version both supports a three-factor second (higher) order structure and a one-factor structure, while the six-item version supports a second (higher) order two-factor structure and a one-factor structure. All options were tested and the six-item one factor structure, which measured both vigor and dedication, emerged as the best-fitting scale. These results were supported by both the EFA and the CFA, as well as in the work engagement literature, with studies claiming that vigor and dedication are the main components of work engagement (e.g. González-Romá, Schaufeli, Bakker, & Lloret, 2006; Mauno et al., 2007; Mostert et al., 2007; Schaufeli & Bakker, 2004).

In summary, given the number of alternative models tested at the CFA stage, with changes being made only when supported firstly, theoretically, and then statistically, there is reasonable comfort that the final measurement model was the best-fitting model for the data. Table 5.9 below presents a summary of the factor structure of each variable.

Table 5.9

Final measurement model: factor structure

Variable	Final Measurement Model
Study Resources	
First order one factor structure - 8 item	Effective teaching practices (8)
First order one factor structure - 4 item	Support from the professional body for academic and work difficulties (4)
First order one factor structure - 4 item	Clear exam guidelines (4)
Personal Resources	
First order one factor structure - 6 item	Academic self-efficacy (6) [a]
Demands	
First order one factor structure - 5 item	Work exhaustion (5)
Behavioural Study Engagement	
First order one factor structure - 5 item	Time spent at lectures (5)
Cognitive Study Engagement	
First order one factor structure - 4 item	Higher order learning (4)
Affective Study Engagement	
First order one factor structure - 6 item	Vigor and Dedication (6)

Note. All factor loadings were above 0.40
[a] Manifest variable

Validity and reliability. The next step in the CFA stage was to examine the descriptive statistics for the final measurement model, which also formed the basis of the validity and reliability testing. While descriptive statistics were already presented at the data screening stage in Section 5.3, given that the structure of some of these variables had changed as a result of the CFA, it was necessary to re-calculate the mean scores for each new variable and review all of the corresponding descriptive statistics as well as the correlations between variables. The results are presented in Table 5.10 below.

Table 5.10

Correlation matrix - Cohort 1 (after CFA)

			Correlations											
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 BE: Behavioural Engagement	3.778	0.964	(0.839)											
2 CE: Cognitive Engagement	2.904	0.674	0.063	(0.751)										
3 AE: Affective Engagement	3.003	0.981	0.383***	0.253**	(0.823)									
4 PR: Academic Self-Efficacy	3.430	0.770	0.297***	0.261***	0.846***	(0.720)								
5 SR: Effective Teaching Practices	3.450	0.526	0.168*	0.116	0.482***	0.387***	(0.815)							
6 SR: Support from Professional Body	3.087	0.884	0.160*	0.215**	0.412***	0.302***	0.496	(0.853)						
7 SR: Clear Exam Guidelines	3.839	0.594	0.116	0.199*	0.300***	0.304***	0.698	0.487***	(0.727)					
8 D: Work Exhaustion	3.605	1.239	-0.080	-0.068	-0.190**	-0.185***	-0.271	-0.193**	-0.338***	(0.916)				
9 Exam Performance	6.364	2.876	0.028	.121**	0.073	0.008	-.121**	-0.007	-.103*	0.013	-			
10 C: Gender	1.453	0.498	-.138**	0.045	0.054	0.018	0.026	0.057	0.033	-.170**	-0.031	-		
11 C: Professional Exam Experience	0.684	0.466	-.124**	-0.065	0.049	0.023	0.058	0.085	0.000	-.092*	-0.024	-.095*	-	
12 C: Accounting Background	1.574	1.138	0.060	.135**	.124**	.102*	0.078	0.024	0.036	0.011	.096*	-0.046	.333**	-

Note: n = 490; M = Mean; SD = Standard Deviation; BE = Behavioural Engagement, CE = Cognitive Engagement, AE = Affective Engagement, PR = Personal Resources, D = Demands, SR = Study Resources, C = Control; Coefficient alpha reliability estimates are in parentheses.

* p < .05; ** p < .01; *** p < .001;

Table 5.10 indicates that the means and standard deviations were in line with expected results and that the majority of the relationships were significant and in the expected direction. Validity testing included testing for both convergent and discriminant validity. Convergent validity tests whether measures that are expected to be related are in fact related, whereas discriminant validity determines whether each measure is distinct (Hair et al., 2010). Convergent validity was tested by reviewing the correlation matrix for each variable. The results revealed that the correlation between self-efficacy and affective study engagement was the only one of possible concern. The correlation value 0.85, therefore above the 0.75 threshold but below the upper 0.90 threshold, indicating that multicollinearity could be a potential issue between these two variables. However, as the correlation value was below the upper threshold of 0.90 (Hair et al., 2011; Saunders et al., 2009), it was considered less problematic. Furthermore, the results from the tolerance and VIF tests revealed that the tolerance value was 0.429 and the VIF value was 2.331. Therefore, based on these combined results it was considered reasonable to assume that multicollinearity was not an issue between these two variables. Furthermore, Grewal, Cote, and Baumgarthner (2004) in a paper exploring multicollinearity in structural equation models, supported the use of these three tests and also highlighted that even where it is evident, if the measures have good reliability and there is a large sample size, which is the case in this study, then the negative effects of multicollinearity are reduced.

An exploratory factor analysis (EFA) was performed to test for discriminant validity. The results of the EFA found that all variables, with the exception of academic self-efficacy and affective study engagement, were loading on different factors, indicating discriminant validity. Further research on the variables of academic self-efficacy and affective study engagement indicated that both variables may load onto similar factors, as, in some past studies, self-efficacy was considered a fourth dimension of affective engagement (UWES scale - vigor, dedication and absorption) (Maslach & Leiter, 2016; Schaufeli & Salanova, 2007). While it is important to acknowledge the relationship between these two constructs, the majority of literature to date has treated self-efficacy as an item separate to affective engagement. Furthermore, where discriminant validity is an issue, it can lead to issues with model convergence and inadmissible solutions (Kenny, 2012). As the CFA converged and provided a good model fit when treating them both as separate constructs, it was considered appropriate to retain both.

The reliability of each scale was determined by obtaining the Cronbach alpha (α). The Cronbach alpha is a reliability coefficient, and it is recommended that the resulting coefficient of a scale should be above 0.70 (Nunnally & Bernstein, 1994; Santos, 1999), with some researchers proposing a lower threshold of 0.60 (Murphy & Davidshofer, 1988). In this study, the Cronbach alpha for each scale was determined both before and after the CFA (see Appendix G). The Cronbach alphas of each of the final scales were all above the 0.70 threshold. The results are presented in parentheses on the diagonal axis of Table 5.10 above.

Common method variance. As all data in this study was acquired through self-reported questionnaires, with the exception of the objective performance data, the risk of common method variance was investigated. This was tested using the common latent factor (CLF) procedure which is widely supported in the literature as a more robust test than the Harman's single factor test (e.g. Fuller, Simmering, Atinc, Atinc, & Babin, 2016; Gaskin, 2019; Williams & McGonigle, 2016). This involved the addition of a CLF to the measurement model. All items in the model loaded as indicators on the new latent factor model, with all paths constrained to be equal. The chi-square ($\chi 2$) difference test was then performed to determine whether the difference between the two models, namely the original model and the model with CLF, were significant. The results in this study were significant ($p<0.01$), indicating that common method variance was an issue in Cohort 1. According to Gaskin (2019), the most appropriate way to deal with this is to retain the CLF in the measurement model. As Cohort 1 data is only used to build the measurement model, the CMV test will be repeated again using Cohort 2 data as outlined in Section 5.4.2 below.

5.4.2 Validating the Measurement Model: Determined using Cohort 2 Data

The next stage of analysis involved validating the final measurement model outlined above using Cohort 2 data. Once validated, this model was used to test the structural model and the study hypotheses.

Model fit. The first test conducted was to determine whether the final measurement model using Cohort 1 data was a good fit for Cohort 2 data. The results, as presented in Table 5.11, indicated that both models had similar fit indices, and were therefore acceptable.

Table 5.11

Model fit indices: measurement model (Cohort 1 and Cohort 2)

Measurement Model					
Measure	Results		Accepted Thresholds [a]		
			Good	Permissible	Poor
Chi-square (χ2)/df					
Cohort 1	2.112		✓		
Cohort 2		2.544	✓		
CFI					
Cohort 1	0.918		✓		
Cohort 2		0.923	✓		
TLI					
Cohort 1	0.910		✓		
Cohort 2		0.915	✓		
RMSEA					
Cohort 1	0.048		✓		
Cohort 2		0.047	✓		
SRMR					
Cohort 1	0.050			✓	
Cohort 2		0.051		✓	

[a] See Table 5.6

As the Cohort 2 measurement model was a good fitting model, it was acceptable to proceed to the next stage of testing. The next stage included testing for validity, reliability and common method variance.

Validity and reliability. Table 5.12 below, outlines the mean, standard deviation, correlations and Cronbach alpha scores for all latent variables using Cohort 2 data. The values for all mean scores were above the mid-point on each likert scale, with the exception of affective study engagement, which was slightly below the mid-point.

Table 5.12

Correlation matrix - Cohort 2 (after CFA)

			Correlations											
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 BE: Behavioural Engagement	3.121	1.040	(0.825)											
2 CE: Cognitive Engagement	2.903	0.675	0.006	(0.828)										
3 AE: Affective Engagement	2.903	0.937	0.333***	0.277***	(0.799)									
4 PR: Academic Self-Efficacy	3.400	0.710	0.300***	0.245	0.836***	(0.664)								
5 SR: Effective Teaching Practices	3.236	0.624	0.314***	0.215***	0.406***	0.362***	(0.867)							
6 SR: Support from Professional Body	2.989	0.888	0.067	0.072***	0.227***	0.186***	0.501***	(0.822)						
7 SR: Clear Exam Guidelines	3.844	0.616	0.227***	0.267***	0.335***	0.340***	0.710***	0.436***	(0.757)					
8 D: Work Exhaustion	3.522	1.206	-0.181***	-0.084	-0.243***	-0.169***	-0.170***	-0.107*	-0.132**	(0.905)				
9 Exam Performance	6.346	2.905	-0.191**	0.057	-0.071	-0.081*	-0.169**	-0.085*	-0.0556	0.006	-			
10 C: Gender	1.485	0.500	-0.156**	-0.009	-0.027	-0.080*	-0.044	-0.018	0.001	-0.069	0.128**	-		
11 C: Professional Exam Experience	0.710	0.454	0.046	0.047	0.073	0.086*	0.131**	0.068	0.045	-0.078*	-0.055	0.019	-	
12 C: Accounting Background	1.677	1.236	-0.064	0.022	0.050	0.050	0.029	-0.043	-0.002	0.025	0.016	0.045	0.355**	-

Note: n = 711; M = Mean; SD = Standard Deviation; BE = Behavioural Engagement, CE = Cognitive Engagement, AE = Affective Engagement, PR = Personal Resources, D = Demands, SR = Study Resources, C = Control; Coefficient alpha reliability estimates are in parentheses.

* p < .05; ** p < .01; *** p < .001;

Validity testing included testing for both convergent and discriminant validity.

Convergent validity. Convergent validity was tested by reviewing the correlation matrix in Table 5.12. Similar to Cohort 1 data, the results of the correlation matrix review indicated that the correlation between self-efficacy and affective study engagement is above the threshold of 0.75 but below the 0.90 threshold (Hair et al., 2011; Saunders et al., 2009), therefore convergent validity was satisfied. Furthermore, the tolerance and VIF values were also obtained with the results from these tests indicating that all tolerance values were significantly higher than 0.10 and VIF values were significantly lower than 10, indicating that multicollinearity was not an issue.

Discriminant validity. Discriminant validity was tested by reviewing the pattern structure of all variables in the pattern matrix. The results suggested that there were some cross loadings between affective study engagement and self-efficacy, indicating issues with discriminant validity. These results were directly in line with the results in Cohort 1. Therefore, the same conclusions were drawn as those outlined in Section 5.4.1 above.

The reliability of each scale was determined by calculating the Cronbach alpha (α). The results are presented on the diagonal axis in Table 5.12 above. All scales, with the exception of self-efficacy, exceed the recommended threshold of 0.70 (Santos, 1999). While the self-efficacy scale is below 0.70, it is still above the lower threshold of 0.60 (Murphy & Davidshofer, 1988), therefore confirming its suitability for use in this study.

Common Method Variance. Similar to Section 5.4.1, the chi-square difference test was carried out and the common latent procedure was applied to Cohort 2 data. The results in Table 5.13 below outline that the model with a CLF, where all loadings are set to be equal (model 1 - CLF), fits better than the original model without a common latent factor. Equally, the model with a common latent factor and freely estimated loadings (model 2 - CLF), fits better than the model with a common latent factor and all loadings constrained to be equal (model 1 - CLF). Overall, these results indicate that common method variance is an issue in Cohort 2 of this dataset (with the main issues regarding the effective teaching practices scale). To address this, the model with a common latent factor and freely estimated loadings is retained and added to both the measurement and structural model for Cohort 2 data. However, it is important to note that the performance data was obtained objectively. Therefore, not all data in this model was collected using a

common method. This reduces the overall risk of common method variance affecting the results.

Table 5.13

Common method variance test

Model	$\chi 2$	df	CFI	TLI	RMSEA	SRMR	$\Delta\chi 2$	Δ df	p value
Original	1240.771	506	0.93	0.922	0.045	0.051	-	-	-
Model 1 - CLF	1232.502	505	0.93	0.922	0.045	0.052	8.269	1	0.004
Model 2 - CLF	919.754	472	0.957	0.949	0.037	0.036	312.75	33	<.001

5.4.3 Building and Testing the Structural Model: Determined using Cohort 2 Data

A structural model depicts the structural relationships between variables and allows the testing of multiple regressions between each variable. The structural model is based on the constructs confirmed in the measurement model. Therefore, the measurement model validated above, including a CLF to deal with common method variance, was used to test the structural model. The structural model in this study involved testing for both mediation and moderation. Mediation is explained as the mechanism through which an independent variable exerts its influence on a dependent variable (e.g. behavioural study engagement explains the relationship between self-efficacy and exam performance). In contrast, a moderator (interaction) variable is described as a variable which influences the causal effect of an independent variable on a dependent variable (e.g. effective teaching practices strengthens the positive relationship between academic self-efficacy and cognitive study engagement) (Hayes, 2018). A nested modelling approach was used to test for mediation and moderation. A model is said to be nested within another model when its set of freely estimated parameters is a subset of those estimated in the original model, whereby one or more parameters that are freely estimated in the original model are constrained in subsequent models (Anderson & Gerbing, 1988, p. 418). The first stage in moderation analysis is to determine the strength of the relationship between the independent variable and the moderator. When this is established the effect of the independent variable on the dependent variable is determined at various levels of the moderator (high, medium, low). This practice is known as probing an interaction (Hayes, 2014).

Nested modelling. The first structural model tested (model 1 - Table 5.14) included all moderators (study resources [effective teaching practices, clear exam guidelines and support from the professional body for academic and work difficulties]). These were included as moderators between the remaining independent variables (work exhaustion and academic self-efficacy) and dependent variables (behavioural, cognitive and affective study engagement), along with all other direct effects between variables. Each subsequent model (model 2 to 4 - Table 5.14) tested each moderator individually, meaning that the paths of the moderators not being tested were constrained to zero. The next model (model 5 - Table 5.14) constrained all moderating paths to zero, so there were no moderating effects. According to Muthén et al. (2017), while a nested modelling approach requires all interaction terms to be included, when they are constrained to zero, it is also a reasonable strategy to exclude them from the model and to assess model fit without any latent variable interactions (moderators). Therefore, the final model (model 6 - Table 5.14) excluded the interaction terms and tested for mediation only. This model had three potential mediators, and therefore, was defined as a parallel multiple mediator model (Hayes, 2018).

The literature supports the use of several types of fit indices, including, absolute fit indices (e.g. $\chi 2$, SRMR, RMSEA), comparative fit indices (e.g. CFI, TLI) and parsimonious fit indices (e.g. AIC and BIC) (Hayes, 2018; Kelloway, 2014). The parsimonious fit indices are concerned primarily with comparing competing models, with a lower value considered a better fitting model (Cohen, 1992; Kelloway, 2014). When a nested modelling approach is adopted, each model is being compared with alternative models to determine the best fitting model, therefore the reporting of the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) fit indices was considered appropriate. Furthermore, when testing interaction latent variables in a nested model in Mplus, the program only reports the AIC and BIC (Muthén et al., 2017). Table 5.14 presents the AIC and BIC results for models 1 - 6.

Table 5.14

Model fit indices: structural models

Model	Nested Models	AIC	BIC
Model 1	Mediated Moderated Model All moderators	72920.98	73847.44
Model 2	Mediated Moderated Model Moderator: Effective teaching practices	72902.10	73760.10
Model 3	Mediated Moderated Model Moderator: Clear exam guidelines	72906.63	73764.63
Model 4	Mediated Moderated Model Moderator: Support from the professional body	72915.11	73773.11
Model 5	Mediated Moderated Model Moderator: Interaction terms constrained to zero	67921.76	68729.56
Model 6	Mediated Model (with bootstrapping)	64155.76	65019.48

The results presented in the Mplus output of Model 3 revealed that the factor "effective teaching practices" was the only significant moderator between "work exhaustion" and "behavioural study engagement", and between "self-efficacy" and "behavioural study engagement". However, based on the model fit statistics, this did not provide the best-fitting model, therefore, there was limited support for the moderating effects of these variables. Instead, model 6, the parallel multiple mediator model, emerged as the best-fitting model, as it had the lowest AIC and BIC results, and was considered the most parsimonious model. A parsimonious model is described as one which reaches the desired level of explanation with as little predictor variables as possible (Hayes, 2018). As outlined above, alternative model fit statistics (e.g. RMSEA, CFI, TLI, etc.) were not available in Mplus when interaction latent variables were included (i.e. moderators). However, as the final model (model 6) does not include any moderation effects these model fit statistics were available and are presented in Table 5.15 below. The technique of bootstrapping was also used on model 6. Bootstrapping is a resampling technique, whereby the original sample is treated as a miniature representation of the population originally sampled, which allows resampling, that can be repeated multiple times (Hayes, 2018). This was carried out 10,000 times in the case of this study and gave comfort around the population parameters (e.g. model fit statistics) across these multiple samples.

Table 5.15

Model fit indices: final structural model

Structural Model - Model 6				
Measure	Results	Accepted Thresholds [a]		
		Good	Permissible	Poor
Chi-square (χ2)/df	2.152	✓		
CFI	0.932	✓		
TLI	0.920	✓		
RMSEA	0.041	✓		
SRMR	0.049	✓		

[a] See Table 5.6

Degrees of mediation. Before presenting the results of the hypotheses testing, an important discussion in the literature is the need to report on the degrees of mediation. Degrees of mediation are most commonly conceptualised as partial and full mediation. Partial mediation implies that the mediator (M) does not fully account for the relationship between X (independent) and Y (dependent), whereas full mediation means that the relationship between X and Y is fully accounted for by the indirect effect of M (Hayes, 2018, p. 119). However, while widely reported in the literature, Hayes (2018) argues that the distinction between partial and full mediation is problematic. His argument is based on four concerns. The first concern is the inconsistency in how full and partial mediation is tested and reported. The second concern is the notion that full mediation is better as it can reduce the likelihood that the researcher will search for other mediators. Equally, different researchers could report full mediation in the same model but use different mediators. Therefore, the term "full" mediation becomes redundant, as this acts as evidence that there are other potential mediators. The third concern is that partial mediation, by its nature, refers to a mis-specified model, which has not captured all of the possible mediators. The fourth concern is that different sample sizes can affect results on the exact same model. He concludes by recommending that researchers avoid expressing hypotheses or results on mediation analysis using these terms. Based on these conclusions, the distinction between full and partial mediation was not reported in this study.

5.5 Hypotheses Testing

The hypotheses of this study were set out in full in Chapter Three (Section 3.6, Table 3.2), and are summarised in Table 5.16 below. The results are presented in both descriptive (Table 5.17) and diagram format (Figure 5.3), with only standardised results being reported. It is also important to note that the moderation hypotheses, outlined in Table 3.2, were removed from all discussion and analysis going forward, as the models including these moderation effects did not provide the best fit to this dataset.

Table 5.16

Research hypotheses

Hypothesis 1: Study Resources, Study Engagement and Exam Performance	
H1a	(i-iii) Behavioural, cognitive and affective study engagement mediates the relationship between effective teaching practices and exam performance
H1b	(i-iii) Behavioural, cognitive and affective study engagement mediates the relationship between clear exam guidelines and exam performance
H1c	(i-iii) Behavioural, cognitive and affective study engagement mediates the relationship between support from the professional body for academic and work difficulties and exam performance
Hypothesis 2: Personal Resources (Academic self-efficacy), Study Engagement and Exam Performance	
H2	(a-c) Behavioural, cognitive and affective study engagement mediates the relationship between academic self-efficacy and exam performance
Hypothesis 3: Demands (Work exhaustion), Study Engagement and Exam Performance	
H3	(a-c) Behavioural, cognitive and affective study engagement mediates the relationship between work exhaustion and exam performance

5.5.1 Test of the Direct Relationships

In advance of presenting the results of mediation testing, the direct relationships between resources, demands, study engagement and exam performance are presented (note: results reporting $p < 0.05$ have a significant effect).

Study resources and engagement. Study resources included effective teaching practices, clear exam guidelines and support from the professional body for academic and work difficulties. Effective teaching practices had a positive effect on behavioural study engagement ($\beta = 0.310$, $p < 0.001$) and affective study engagement ($\beta = 0.132$, $p < 0.01$), had no effect on cognitive study engagement ($\beta = -0.013$, $p > 0.05$) and had a negative effect on exam performance ($\beta = -0.198$, $p < 0.01$). Clear exam guidelines had a positive effect on cognitive study engagement ($\beta = 0.175$, $p < 0.05$) and no effect on behavioural study engagement ($\beta = 0.028$, $p > 0.05$), affective study engagement ($\beta = -0.010$, $p > 0.05$) or exam performance ($\beta = 0.020$, $p > 0.05$). Support from the professional body for academic and work difficulties had a negative effect on behavioural study engagement ($\beta = -0.154$, $p < 0.01$) and had no effect on cognitive study engagement ($\beta = -0.052$, $p > 0.05$), affective study engagement ($\beta = 0.014$, $p > 0.05$) or exam performance ($\beta = -0.005$, $p > 0.05$).

Personal resources and engagement. Academic self-efficacy had a positive effect on behavioural study engagement ($\beta = 0.182$, $p < 0.001$), cognitive study engagement ($\beta = 0.186$, $p < 0.001$) and affective study engagement ($\beta = 0.773$, $p < 0.001$) and no effect on exam performance ($\beta = 0.146$, $p > 0.05$).

Demands and engagement. Work exhaustion had a negative effect on both behavioural ($\beta = -0.105$, $p < 0.01$) and affective study engagement ($\beta = -0.088$, $p < 0.01$) but had no effect on cognitive study engagement ($\beta = -0.034$, $p > 0.05$) or exam performance ($\beta = -0.035$, $p > 0.05$).

Study engagement and exam performance. The results also revealed that behavioural study engagement had a negative effect on exam performance ($\beta = -0.139$, $p < 0.01$), cognitive study engagement had a positive effect on exam performance ($\beta = 0.087$ $p < 0.05$) and affective study engagement had no effect on exam performance ($\beta = -0.069$, $p > 0.05$).

Variance explained. The modelled variables explained 20% of the variance in behavioural study engagement, 8% of the variance in cognitive study engagement, 75% of the variance in affective study engagement and 9% of the variance in exam performance (see Figure 5.3 - r^2 statistic). The results from testing the indirect paths are presented in the following section.

5.5.2 Test of the Indirect (Mediated) Relationships

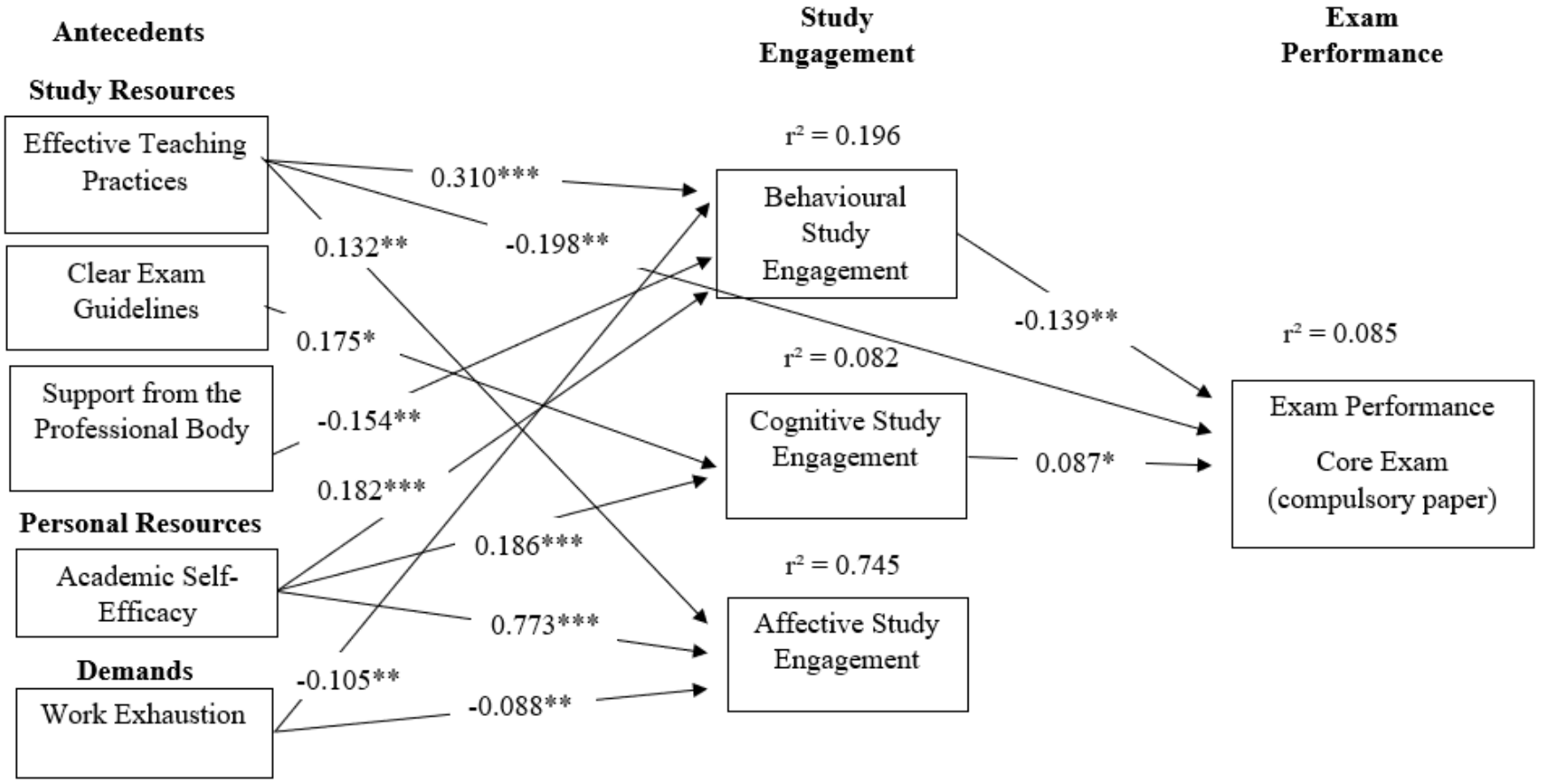
The mediated paths were tested using bootstrapping analysis. Using this technique, bias-corrected bootstrap, with 10,000 bootstrap samples, confirmed the significance of the following mediated effects with 95% confidence.

Hypothesis 1a (i-iii), H1b (i-iii) and H1c (i-iii) tested the mediated paths between study resources and exam performance. The results found that behavioural study engagement mediated the relationship between effective teaching practices and exam performance (-0.096 to -0.012) with an overall negative indirect effect. Cognitive study engagement mediated the effect of clear exam guidelines on exam performance (0.001 to 0.048) with an overall positive indirect effect. Behavioural study engagement mediated the effect of support from the professional body for academic work difficulties on exam performance (0.003 to 0.064) with an overall positive indirect effect. There were no other significant mediated paths reported. It can therefore be concluded that hypothesis 1a (i), 1b (ii) and 1c (i) were supported and hypothesis1a (ii and iii), 1b (i and iii) and 1c (ii and iii) were unsupported.

Hypothesis 2(a-c) tested the mediated paths between personal resources (academic self-efficacy) and exam performance. The results found that behavioural study engagement mediated the effect of personal resources (academic self-efficacy) on exam performance (-0.058 to -0.005) with an overall negative indirect effect. Cognitive study engagement mediated the effect of personal resources (academic self-efficacy) on exam performance (0.002 to 0.043) with an overall positive indirect effect. There were no other significant mediated paths reported. It can therefore be concluded that hypothesis 2a and 2b were supported and hypothesis 2c was unsupported.

Hypothesis 3(a-c) tested the mediated paths between demands (work exhaustion) and exam performance. The results found that behavioural study engagement mediated the effect of demands (work exhaustion) on exam performance (0.002 to 0.037) with an overall positive indirect effect. There were no other significant mediated paths reported. It can therefore be concluded that hypothesis 3a was supported and hypothesis 3b and 3c were unsupported.

All significant relationships reported above are presented in diagram format in Figure 5.3 below, followed by a summary of the hypotheses results in Table 5.17.



N=711, only standardised estimates are reported, * p < 0.05, ** p < 0.01, *** p < 0.001

Figure 5.3: SEM results: all significant relationships (Cohort 2)

Table 5.17

Results of hypotheses testing

		Supported	Unsupported
H1	Study engagement mediates the relationship between study resources and exam performance		
	Effective Teaching Practices		
H1a (i)	Behavioural study engagement mediates the relationship between effective teaching practices and exam performance	✓	
H1a (ii)	Cognitive study engagement mediates the relationship between effective teaching practices and exam performance		✓
H1a (iii)	Affective study engagement mediates the relationship between effective teaching practices and exam performance		✓
	Clear Exam Guidelines		
H1b (i)	Behavioural study engagement mediates the relationship between clear exam guidelines and exam performance		✓
H1b (ii)	Cognitive study engagement mediates the relationship between clear exam guidelines and exam performance	✓	
H1b (iii)	Affective study engagement mediates the relationship between clear exam guidelines and exam performance		✓
	Support from the Professional Body (for academic and work difficulties)		
H1c (i)	Behavioural study engagement mediates the relationship between support from the professional body for academic and work difficulties and exam performance	✓	
H1c (ii)	Cognitive study engagement mediates the relationship between support from the professional body for academic and work difficulties and exam performance		✓
H1c (iii)	Affective study engagement mediates the relationship between support from the professional body for academic and work difficulties and exam performance		✓

		Supported	Unsupported
H2	Study engagement mediates the relationship between personal resources (academic self-efficacy) and exam performance		
H2a	Behavioural study engagement mediates the relationship between academic self-efficacy and exam performance	✓	
H2b	Cognitive study engagement mediates the relationship between academic self-efficacy and exam performance	✓	
H2c	Affective study engagement mediates the relationship between academic self-efficacy and exam performance		✓
H3	Study engagement mediates the relationship between demands (work exhaustion) and exam performance		
H3a	Behavioural study engagement mediates the relationship between work exhaustion and exam performance	✓	
H3b	Cognitive study engagement mediates the relationship between work exhaustion and exam performance		✓
H3c	Affective study engagement mediates the relationship between work exhaustion and exam performance		✓

5.6 Chapter Summary

This chapter outlined the steps involved in the quantitative data analysis stage and the results from the hypotheses testing. The chapter began with a presentation of the hypothesised model, which was used as the foundation for all subsequent testing. The data analysis commenced with the data screening stage, followed by an EFA, the results of which are presented in Appendix F. The CFA stage required testing a number of competing measurement models to determine the best fitting model. The final measurement model selected was supported firstly, theoretically, and then statistically. This stage also involved testing for validity and reliability and common method variance. As the results of the CFA tests were satisfactory, the final measurement model was then validated on Cohort 2 data, using the same stringent tests. When validated, this measurement model was used to build the structural model using Cohort 2 data. Using a nested modelling approach, six competing structural models were tested. The differences between each of the structural models were explained, and the model fit statistics from each were compared. The best-fitting model was a parallel multiple mediator model. This model was used to test the study hypotheses. Finally, the results of the hypotheses were presented. These results are discussed in detail in the following chapter.

CHAPTER SIX: DISCUSSION

6.1 Introduction

This chapter discusses the quantitative findings presented in Chapter Five. In doing so, it aims to gain a better understanding of the study engagement of trainee accountants, as they prepare for the qualifying exams of Chartered Accountants Ireland (CAI). The supplementary qualitative findings are also presented and provide enhanced explanation and a contextualised understanding of the process of study engagement in this research setting. The quantitative and qualitative findings are then considered in light of the theoretical and empirical literature presented in Chapter Two and Chapter Three. The chapter is structured by firstly summarising the quantitative findings from Figure 5.3 and Table 5.17, followed by an in-depth discussion of each of the hypotheses tested.

6.2 Summary of Quantitative Research Findings

The results as presented in Chapter Five are summarised as follows:

Direct Relationships

1) Study resources (effective teaching practices) had a positive effect on behavioural and affective study engagement, a negative effect on exam performance and no effect on cognitive study engagement.
2) Study resources (clear exam guidelines) had a positive effect on cognitive study engagement and had no effect on behavioural and affective study engagement, or exam performance.
3) Study resources (support from the professional body for academic and work difficulties) had a negative effect on behavioural study engagement and had no effect on cognitive and affective study engagement, or exam performance.
4) Personal resources (academic self-efficacy) had a positive effect on behavioural, cognitive and affective study engagement and had no effect on exam performance.
5) Demands (work exhaustion) had a negative effect on behavioural and affective study engagement and had no effect on cognitive study engagement or exam performance.

6) Behavioural study engagement had a negative effect on exam performance; cognitive study engagement had a positive effect on exam performance; and affective study engagement had no effect on exam performance.

Mediated Relationships

7) Behavioural study engagement mediated the relationship between the following antecedent variables and exam performance:
   - effective teaching practices, with an overall negative effect.
   - support from the professional body for work and academic difficulties, with an overall positive effect.
   - academic self-efficacy with an overall negative effect.
   - work exhaustion, with an overall positive effect.
8) Cognitive study engagement mediated the relationship between the following antecedent variables and exam performance:
   - clear exam guidelines, with an overall positive effect.
   - academic self-efficacy, with an overall positive effect.
9) Affective study engagement did not mediate any relationships between antecedent variables and exam performance.

Note. In Appendix H the frequency of each variable is presented. While the data is cross sectional in nature, students were asked to reflect on their experiences over the course of the FAE year, rather than just on the day the survey was administered. Therefore, the interpretation of this data refers to a period of approximately nine months, rather than just one point in time.

In the following sections these quantitative results are discussed in detail in light of the theoretical and empirical work presented in Chapter Two and Chapter Three, and the supplementary insights gained from the interview findings. This discussion commences with an exploration of the relationships found between the three dimensions of study engagement. While this is not listed as a hypothesis, this is noteworthy, as the majority of studies only include one dimension of study engagement and therefore do not facilitate this comparison (e.g. Salanova et al., 2010). Each subsequent section in this chapter is structured by firstly explaining the direct relationships between variables, followed by a discussion of the mediated paths.

6.3 Study Engagement

The findings reveal a positive correlation between behavioural and affective study engagement and between cognitive and affective study engagement, while there was no significant correlation between behavioural and cognitive study engagement. The positive relationship between behavioural and affective study engagement is widely supported in the literature. This highlights that engagement in learning tasks can be an emotional experience (e.g. Kahn, 1990; Kahu, 2013). The qualitative data also indicated that students were more likely to attend classes when certain lecturers were delivering the class, which, in turn, stimulated their interest and enthusiasm in the subject, as demonstrated by the following interviewee:

> I found him [case-study lecturer] really insightful, and, because he came from industry and had so much external knowledge to bring to it [lectures], I found it really interesting.
>
> P6 (placed), 2016 Cohort

Equally, some students indicated that, if they were interested in particular content, they were more likely to attend the lecture, as in the case of the following student:

> I really enjoyed the xx modules […] there was much more discussion […] they were less about learning standards […] I thought he [the lecturer] was brilliant, and I really would have made an effort for his class […].
>
> P3, 2015 Cohort

Similarly, a positive relationship was reported between cognitive and affective engagement. This supports previous research which found that, when students are more interested and enthusiastic about their studies, they are more likely to adopt more meaningful learning approaches and vice versa (Pekrun et al., 2002). This view was also supported in the qualitative data, with a number of students stating that, the more they cognitively engaged with their studies, the more interested they became in the subject matter, also acknowledging that the more interested they became, the more they wanted to cognitively engage, as demonstrated by the following student:

> I was more interested when I had a proper grasp of it [the material] and the more I understood the material, the more I was engaging with it.
>
> P4, 2015 Cohort

In contrast to the above, there was no significant correlation between behavioural and cognitive study engagement, which was unexpected. While this may indicate that these two dimensions are not part of the same construct, the literature and interview data help explain this result, making a case for the inclusion of all three dimensions in the study engagement construct. Firstly, there is evidence in the literature that lecture attendance does not always promote cognitive study engagement, especially where the teaching quality is poor or the material is available elsewhere (e.g. Friedman et al., 2001). Similar explanations were provided in the case of this study, whereby, interviewees revealed that some of the lectures in this education programme, excluding the case-study lectures, "are not beneficial", with the main complaints centred around teaching style and content. Many students claimed that the technical material covered in the lectures was similar to that covered at CAP1 and CAP2 level, and was also available from other sources (e.g. online, in-house training), with others claiming that sometimes the lecturing styles were not engaging. Therefore, it is possible that in the case of this education programme because the majority of lectures focused on teaching technical material, this did not stimulate cognitive study engagement, whereby, if more lectures focused on teaching material using the case-study method, this would have stimulated higher cognitive study engagement.

Overall, these findings suggest that while not all dimensions of study engagement are positively related, there is still merit in defining study engagement as a multi-dimensional construct. Furthermore, by exploring engagement using three dimensions, rather than just one, it gives a more in depth understanding as to why students engage in certain ways, and the factors which can influence each dimension of engagement. It also provides scope to determine whether all three types of engagement are significant predictors of academic performance, something which is absent in studies using only one dimension (e.g. Salanova et al., 2010). These relationships are explored in the following section.

6.4 Study Engagement and Exam Performance

As outlined in Chapter Three, Section 3.4.1, it was expected that behavioural, cognitive and affective study engagement would lead to higher performance in exams (e.g. Fredricks et al., 2004; Kahu, 2013; Kember et al., 1995; Schaufeli et al., 2002). The quantitative results found that behavioural study engagement resulted in lower

performance in exams, cognitive study engagement had a positive effect on exam performance and affective study engagement had no effect on exam performance. Before interpreting these results, it should be acknowledged that over 90% of the students in this study passed the FAE exams, so lower performance is not an indication of exam failure, instead it is an indication of the class ranking a student achieved.

6.4.1 Behavioural Study Engagement and Exam Performance

In this study, behavioural study engagement was measured as the time spent attending lectures. On average students reported attending around half of the lectures scheduled. However, there was evidence of some students who reported attending very few and others who attended nearly all lectures (see Appendix H). The negative relationship found between behavioural study engagement and exam performance, which was unexpected, suggests that trainee accountants who attended more lectures, achieved lower exam performance. This result is largely inconsistent with both the claims of the PABs and the literature. For example, CAI promote the importance of attending classes, specifically stating that "there is a clear correlation between course attendance and exam success" (CAI, 2020a, p. 1). Similarly, the professional accountancy guidance in the US recommends that students should attend at least 150 hours of lectures in advance of sitting the professional accountancy exams (e.g. Needles, 2014; Needles & Powers, 1990). While there is some evidence in the higher education field indicating that higher lecture attendance can lead to lower exam performance, due to factors such as overreliance on teachers or exposure to a passive learning environment (e.g. Carroll, 1989; English et al., 2004; Riley & Ward, 2017), the education literature is mostly supportive of a positive relationship between lecture attendance and exam performance (e.g. Bloom, 1974; Carroll, 1963; Kember et al., 1995; Kuh, 2001; Plant et al., 2005; Riley & Ward, 2017; Tyler, 1930).

To further explore this result, it is firstly necessary to determine the nature of the lectures offered by the PAB in this study, and whether they may be indicative of a passive learning environment, or one that promotes active learning. This was important as past research has shown that a passive learning environment (e.g. where students are receivers of information), is unlikely to lead to desired learning outcomes (e.g. Carroll, 1989; English et al., 2004; Healy & McCutcheon, 2008; Riley & Ward, 2017). Upon review of the

interview findings, there was a clear theme that the majority of lectures focused on the transmission of technical material, much of which was recurring material previously covered at CAP1/CAP2 level or at master's degree level. While it was acknowledged by interview participants that technical material was important, a view supported in the literature (e.g. Pierre & Rebele, 2014; Rebele & Pierre, 2019), it was the application of this knowledge to business type scenarios that was considered critical for success in the FAE. As a result, many students claimed that the technical lectures were not as beneficial to their learning as case study lectures, which focused on exam technique and the application of knowledge, as well as being smaller in size. Therefore, in this study there is some evidence that student perceptions of technical lectures are representative of a passive learning environment, as indicated by the following student:

> A poor lecture for me was one that was very technical and went by the book where the lecturer was reading rules and standards […] I remember thinking, "this is not how a student learns", a student learns by doing questions or examples that reinforces the theory behind it. While you need to know the principles, sitting down reading the rules out of a book isn't going to make me learn.
>
> P1, 2015 Cohort

The lecture format described by this student may promote learning styles such as rote memorisation and lack of critical thought (e.g. English et al., 2004; Riley & Ward, 2017). Therefore, it is possible that trainee accountants who attended lectures of this nature adopted an approach to studying centered around reproduction of the material rather than developing understanding, and as a result, achieved lower performance in their professional exams. It is also possible that attendance at these lectures led to an overreliance on lecturers to provide direction on what should be learned, resulting in learning approaches characterised by, say, memorising, rather than seeking to understand the material, something which has been found in previous research (e.g. Kember et al., 1995; Kember et al., 1996).

There is some evidence in the accounting education literature that accounting students in higher education sometimes demonstrate a reluctance to engage in active learning (e.g. Healy & McCutcheon, 2008). That said, Healy and McCutcheon (2008) found that when efforts were made to expose these students to active learning approaches (e.g. active participation in case study learning), they reported a broader and deeper understanding of the subject area being studied. This gives a possible explanation as to why the majority of students interviewed in this study agreed that attendance at case lectures was beneficial

to their learning, while attendance at technical lectures was less beneficial. This view is captured by a student who received a Top 10 placing:

> I don't think I attended more than a maximum of five lectures over the entire year..... I didn't find them [technical lectures] in any way beneficial […]. For the case study days [lectures] […] you were in smaller groups [...] it was a way to get you practising, how to approach a case study because it is obviously a slightly different type of exam to what you might be used to before [....]. So, they were helpful to be fair.
>
> P7 (placed), 2016 Cohort

Interestingly, this student stated that while she found the case study lectures useful due to the small class sizes and exam focused content, she preferred to study on her own, outlining that "I have always been best at self-directed learning, so I would rather have gone through something myself at the weekend" (P7 [placed], 2016 Cohort). Similarly, another student outlined her preference to study alone, outlining that "I am a bit of a bookworm, if I am honest […] I learn by myself quite effectively" (P3, 2015 Cohort). This preference of study approach was common amongst many students interviewed and may explain why on average these students did not have high lecture attendance.

In addition to the nature of instruction, the learning environment itself may contribute to a passive learning experience. For example, given that trainee accountants are working in high stress environments and balancing many demands (e.g. Chong & Monroe, 2015; Ozkan & Ozdevecioğlu, 2013; Sweeney & Summers, 2002), it is possible that they do not have enough time to prepare for lectures, or are too tired to actively engage when in class. The following quotes are helpful in understanding the challenges of this study environment:

> You would do the minimum to keep up, for example attend lectures [...] but you wouldn't do, say the advance reading [...] there just aren't enough hours in the day to do it or energy to devote to doing that type of thing [studying outside class].
>
> P2, 2015 Cohort

> I think your brain is very invested in work during the day and the last thing that you want to do is go and try and listen to a lecture for three hours. Sometimes you might listen for the first few minutes and you drop off and then you realise that you haven't listened for 20 minutes because your mind has wandered off.
>
> P21, 2019 Cohort

These findings may indicate that time outside of work would be better spent resting, so that trainee accountants can actively engage in their studies at a time when they are less exhausted from work. The importance of recovery time was highlighted by Demerouti et

al. (2005) who explained that when opportunities for recovery are insufficient, over time this can lead to a depletion of energy, higher exhaustion and lower engagement in tasks.

The interview findings also help better understand why students who attended more lectures achieved lower exam performance. For example, one interviewee who ranked in the bottom 30% of her cohort, explained that she had failed the FAE twice in the past, and to try and avoid this happening again, she attended most of her lectures "I made sure I attended the majority of classes [...] I did any extra classes that were going" (P14, 2016 Cohort). In this instance, while this student had high lecture attendance, she achieved a lower performance ranking than her peers, likely due to her past performance, rather than high attendance at lectures. This view is supported in the literature where past performance is considered one of the most significant predictors of future exam performance in any educational setting (e.g. Gammie, 2000; Plant et al., 2005; Salanova et al., 2010). It is therefore possible that students experiencing difficulties with professional exams in the past may attend more lectures, as they view this as an opportunity for enhanced learning. This is in line with past research that exam performance is not only dependent on the time that a student "spends" on study tasks, but on the amount of time a student "needs to spend" on a task in order to master it (Carroll, 1963; Wiley & Harnischfeger, 1974).

From a theoretical perspective, it is more difficult to explain the negative relationship between behavioural study engagement and exam performance. As outlined in Chapter Three, the propositions of the theory of deliberate practice (Ericsson et al., 1993), helps describe a positive relationship between these two variables. However, this theory does uncover some possible explanations for this negative relationship. Firstly, in light of the explanations given by interview participants above, those who "deliberately" choose to attend lectures expect that this will contribute towards their success in the qualifying exams. However, due to possible factors such as exposure to a passive learning environment, overreliance on direction from lecturers or past performance, they achieve lower performance than their peers. This theory also helps highlight other deliberate practices which students engage in which may contribute towards their learning. These include, engaging in case study learning outside class, viewing recorded lectures online, attending private grind schools, in-house exam training provided by the training firms and peer group learning. Therefore, it is possible that if students are only behaviourally engaging in their studies in one way (physical lecture attendance) then they are not

engaging in these alternative forms of behavioural study engagement, and may therefore be at a disadvantage to their peers. For example, a number of students interviewed placed significant value on viewing recorded technical lectures online, rather than physically attending the lectures. They outlined that lectures in an asynchronous format helped promote active learning, as they had autonomy over their own study approach, and they were not trying to balance the demands of attending lectures and working.

These findings are also significant in the context of what Walberg (1988) highlighted about the importance of productive time, where study tasks are adapted to the needs of the learner. For example, one student stated that the online lectures were very useful as she "didn't have to sit through a three-hour lecture to get a 10-minute explanation" (P9, 2016 Cohort). Another student receiving a Top 10 placing outlined her preference for the online lectures over physically attending lectures stating that "I used to get so distracted in the classes [...] I took in nothing in those lectures [technical lectures], I found them so mundane […] so, I definitely found the online material more helpful" (P6 [placed], 2016 Cohort). Recognising the negative consequences of this passive study environment to student learning, this student advised CAI to reduce the number of technical lectures offered during the FAE year and move all that content online, to help foster a more active learning environment. Given in this current climate the mainstream education model of this PAB is now centered around online learning, further questions must be asked about the extent to which online learning environments promote active or passive learning and how it redefines the concept of behavioural study engagement.

Overall, the quantitative findings in this study, challenge the view that behavioural study engagement, in the form of lecture attendance, is an important predictor of exam performance. The interview findings help provide possible reasons about why this negative relationship was found, and provide some evidence that students behaviourally engage in their professional studies in many ways. Furthermore, taken together, both the quantitative and qualitative findings highlight that behavioural study engagement, whether it be in the form of lecture attendance (online or physical), or other active study tasks outside class, is not enough in isolation. Instead, students must also cognitively engage in their learning to achieve desired learning outcomes (Kember et al., 1995; Kember et al., 1996; Kuh, 2001, 2009a; Pace, 1984; Plant et al., 2005). The relationship between cognitive study engagement and exam performance is explored in the following section.

6.4.2 Cognitive Study Engagement and Exam Performance

In this study, cognitive study engagement was measured using the higher order learning (HOL) scale from the study engagement literature. This scale measured the extent to which students engaged in activities such as analysing and synthesising information, making judgements, and applying theories and concepts. The quantitative results revealed that the majority of students in this study reported cognitively engaging in their studies on a regular basis (see Appendix H). Furthermore, the results revealed that cognitive study engagement had a positive effect on exam performance. This positive relationship is widely supported in the education literature, where higher order learning is commonly considered a strong predictor of exam performance (e.g. Biggs, 2011; Booth et al., 1999; Carini et al., 2006; Entwistle & Entwistle, 1991; Kuh, 2009b; Pascarella et al., 2010; Pintrich & De Groot, 1990; Plant et al., 2005; Trigwell & Prosser, 1991).

As outlined in Chapter Three, this positive relationship can be explained through theoretical work from both the general education literature and the study engagement literature. In his taxonomy of educational objectives, Bloom (1956) refers to knowledge, comprehension, application, analysis, synthesis and evaluation, outlining that when students achieve mastery at each level of the taxonomy, they are more likely to achieve desired learning outcomes (Krathwohl, 2002). Similarly, Biggs (1978), in the 3P model, outlines that process (e.g. higher order learning) directly influences product (e.g. exam performance), due to students engaging in activities such as synthesising ideas, seeking meaning etc. A major theme emerging from the 3P model, and the literature supporting this work, is that the nature of the assessment at the process stage has a significant influence on the type of learning approach adopted by students (e.g. Entwistle & Entwistle, 1991), with more complex assessments considered to foster higher order learning (e.g. Boyce et al., 2001; Davidson, 2002).

In this study, both the quantitative results and the interview findings provide support for the main propositions of Blooms taxonomy, Biggs 3P model and the empirical research supporting this work. Firstly, the quantitative results confirm that students engaging in higher order learning, achieve higher performance in the qualifying exams of CAI. This result supports previous research which outlines that the qualifying exams of CAI are case-based exams, and are considered complex assessments designed to encapsulate the ambiguities of accounting practice, therefore requiring students to engage in learning

activities that foster understanding (e.g. Flood & Wilson, 2008). Given the nature of the exam, this might explain why students who prepare adequately through engaging in higher order learning achieve higher performance. The interview findings also provide some support for this view. For example, the three interviewees receiving Top 10 places in the FAE exams, unanimously agreed, that the key to high performance in these exams is having the ability to comprehend and synthesise technical knowledge, and then having the ability to apply it to a business case scenario. When asked to describe their study approaches, the majority of students interviewed referred to a number of the elements of higher order learning referred to by Bloom (1956), including knowledge, comprehension and application. For example, "you had to be at a competent level across all [subjects]…. I mapped out the whole case study solution before I started writing anything and linked all the indicators" (P6 [placed], 2016 Cohort), "the integrated case study format is really interesting […]. It examines how you take what you know and how you can apply it" (P13, 2016 Cohort), "the material [FAE] itself is OK to get through [...], it's just how it's applied is completely different" (P13, 2016 Cohort). The views of these students were in line with the research outlining the importance of developing the necessary skills to deal with case-study assessments in accounting education (e.g. Ballantine et al., 2008; Boyce et al., 2001; Hassall et al., 1998; Healy & McCutcheon, 2008).

These results can also be explained through the theory of deliberate practice (e.g. Ericsson et al., 1993) as both the quantitative and qualitative findings suggest that trainee accountants deliberately engage in study techniques conducive to preparing for case-based exams, which in turn leads to higher exam performance. This theory also highlights that these deliberate activities are often tailored to the specific needs of the person. This may explain why trainee accountants in this study, place less emphasis on attendance at technical lectures, and more on cognitively engaging in study tasks, as demonstrated through the quantitative results. The interview findings may provide some further insights into these deliberate activities. For example, one interviewee receiving a Top 10 placing outlined her study preferences as follows:

> I would always find that my own study was better but I thought they [the case study lectures] were good just in terms of exposing you to the material […] but you still have to sit down and learn it [the material] yourself. […] I linked up with three other people that were sitting them [the FAE] as well and we used to do a case ourselves and then come together and correct it together.
>
> P5 (placed), 2016 Cohort

These results highlight that trainee accountants are actively and cognitively engaged in their learning, and do so in ways that suit their learning preferences. These findings provide support for the propositions of Cheetham and Chivers (1998) model of professional competence (Figure 2.2, Chapter Two), which outlines how individuals personal preferences can dictate how one develops their professional competencies.

The results of this study also build on the work of Flood and Wilson (2008) which was carried out in a similar research context. They found support for the positive relationship between higher order (deep) learning and success in the FAE exams. However, they found that there were no significant differences on the deep learning scale between those who passed and failed. In their explanation of these results, they acknowledged that the pass/fail classification of exam performance used in their study lacked variation, and therefore provided limited information. As this study measures exam performance using a class ranking scale, this research succeeds in building on the work of Flood and Wilson (2008) through supporting the view that students reporting higher engagement in cognitive study tasks, achieved higher performance in the FAE exams. That said, it must be acknowledged that the case study nature of the FAE exam elicits this type of study engagement, with students acknowledging that they are motivated to engage in this way, as it is necessary to achieve their goal of qualification. Therefore, this research supports prior research highlighting that trainee accountants are primarily concerned with qualification and want to secure a pass rather than being concerned with doing well in the exams (e.g. Flood & Wilson, 2008; Grey, 1998; Paisey & Paisey, 2014). This view is discussed further in the following section which explores the relationship between affective study engagement and exam performance.

6.4.3 Affective Study Engagement and Exam Performance

In this research, affective study engagement was measured using the vigor and dedication dimensions from the UWES-S. The quantitative results revealed that on average trainee accountants in this study had relatively low levels of affective study engagement. Furthermore, the quantitative results revealed that affective study engagement did not influence exam performance. This result is inconsistent with many prior empirical studies which report a positive relationship between these two variables in academic settings (e.g. Cotton et al., 2002; Pekrun et al., 2002; Salanova et al., 2010; Schaufeli et al., 2002). It

is also inconsistent with the main propositions of JD-R theory and its underlying theories, which supports the view that engaged students are more goal orientated, likely to invest more energy in tasks, experience joy and enthusiasm, which in turn can broaden their thoughts and actions leading to higher performance (e.g. Fredrickson, 2001; Sonnentag, 2003).

The unexpected finding can be explained through consideration of the dimensions of affective study engagement used in this study. This construct, measured as vigor (e.g. feelings of being energetic, capable, wanting to attend class) and dedication (e.g. feelings of enthusiasm, pride, inspiration), primarily captures the motivational state of trainee accountants as they prepare for these qualifying exams. The link between motivation and affective engagement is well documented in the literature. For example, Siu et al. (2014) outlined that motivation implies the direction and intensity of an individual's energy and vigor. They further explained that intrinsic motivation refers to motivation that is driven by interest and enjoyment of the task and exists within the individual rather than being influenced by any external factors. Thus, intrinsic motivation is considered to be favourable towards affective engagement (Ryan & Deci, 2000; Siu et al., 2014). Furthermore, past studies have shown that positive motivational states such as affective engagement positively influence performance (e.g. Salanova et al., 2010). This relationship can be explained through Frederickson's (2001) broaden and build theory, which supports the view that positive emotions lead to broader thoughts and actions, and in turn higher performance.

Given that the trainee accountants in this study reported that they did not experience feelings of vigor and dedication towards their professional studies on a regular basis, this might explain why affective study engagement was not a predictor of exam performance. As outlined in Section 6.4.2 above, past studies have shown that trainee accountants often lack intrinsic motivation towards their professional studies, with many reporting that they were more concerned with passing their qualifying exams, and not necessarily inherently interested in the material being studied or achieving high marks (e.g. Anderson-Gough et al., 1998/2018; Flood & Wilson, 2008; Grey, 1998; Paisey & Paisey, 2014). This study provides further evidence of this. For example, the following interviewee outlined that "If I was going to a lecture, I wanted it to be exam-focused [...] I would have no interest in the general knowledge of accounting" (P15, 2018 Cohort). Similarly, another interviewee stated that:

> I guess I got more enthusiastic when I could understand something, not because I thought it was particularly interesting but because I knew that if I was given that information in a different way [in the exam], I would know how to approach it or interpret it.
>
> P4, 2015 Cohort

It may also be possible that trainee accountants could not affectively engage in their studies due to feelings of exhaustion. While the relationship between work exhaustion and affective study engagement is explained in more detail in Section 6.4.3 below, it is useful to consider the ongoing debate about whether these two variables are opposites. For example, Leiter and Maslach (2017) outlined that by considering exhaustion and vigor as opposites of the "energy" dimension this can help explain some (not all) of the dynamics between the variables. For example, in the case of this study, if these variables are pegged as opposites, then this provides an alternative explanation for why trainee accountants have lower energy reserves while studying, and hence, why this is not a predictor of exam performance.

In summary, the discussion above outlines possible reasons for the relationships found between each dimension of study engagement and exam performance. As cognitive study engagement was the only positive predictor of exam performance, this raises important questions around the motivation to learn and the quality of learning that takes place at the pre-qualification stage. For example, if students do not consider lecture attendance as important for their success in the qualifying exams, are they compromising the development of technical competence? Also, if trainee accountants are mainly motivated by the goal of qualification, and are not energetic and enthusiastic about their studies, does this have implications for how they engage in continuous learning and their work as accountants after qualification? These questions are discussed in more detail in Chapter Seven.

These results also pose important questions regarding the factors which influence study engagement. In the following sections, some of these factors are discussed including the direct paths between study resources, personal resources, demands and study engagement. This provides the basis for understanding the mediated paths summarised in Section 6.2, which are discussed at the end of each section below.

6.5 Study Resources, Study Engagement and Exam Performance

Hypothesis 1 proposed that behavioural, cognitive, and affective study engagement would mediate the relationship between study resources (effective teaching practices, clear exam guidelines and support from the professional body) and exam performance. As outlined at the beginning of Section 6.2, the quantitative results revealed that behavioural study engagement mediated the paths between effective teaching practices, support from the professional body and exam performance. Cognitive study engagement mediated the path between clear exam guidelines and exam performance. Affective study engagement did not mediate any paths between study resources and exam performance. Therefore, as outlined in Table 5.17, hypothesis 1a (i), 1b (ii) and 1c (i) were supported, while 1a (ii, iii), 1b (i, iii) and 1c (ii, iii) were unsupported.

In advance of exploring the direct paths between study resources and study engagement, it is firstly important to recap on the measurement of each study resource. Firstly, *effective teaching practices* were measured using eight items including the lecturers teaching style, his/her ability to explain the material well, make lectures interesting and intellectually stimulating, his/her interest in the subject, the quality of his/her notes and his/her level of organisation. On average students in this study were only in slight agreement about the quality of this resource. Secondly, *clear exam guidelines* measured whether the introductory classes provided by CAI, clearly outlined what was needed to be deemed professionally competent in the FAE exams, whether lecturers clearly explained the best approach to answering exam questions and the effort required, and whether students felt that they were aware of what was required to succeed in the FAE exams. On average students agreed that this resource was provided. Thirdly, *support from the professional body*, captured information on whether students felt supported both academically and professionally by the PAB. On average students tended to have a neutral response about the provision of this resource.

The first quantitative result that must be considered is the negative relationship between effective teaching practices and exam performance. This result suggests that when lecturers adopt effective teaching practices (e.g. explaining the material well, stimulating interest in the subject) this will have a negative impact on exam performance. While the education literature has mostly found a positive relationship between these two variables (e.g. Chickering & Gamson, 1987; Kuh, 2001; McCormick et al., 2013), some studies

have cautioned that the opposite could also be found (e.g. Biggs, 2011). For example, if students get too much support from their teachers, it may limit their engagement in independent learning, which is essential for cognitive development, and hence, exam performance. However, it is also important to note that study resources are unlikely to impact exam performance unless through a mediating variable such as study engagement. Therefore, a better understanding of this direct path is provided in the discussion below.

6.5.1 Study Resources and Behavioural Study Engagement

As outlined in Section 6.2, effective teaching practices had a positive effect on behavioural study engagement, clear exam guidelines had no effect on behavioural study engagement, and support from the professional body had a negative effect on behavioural study engagement. Given the theoretical and empirical support for the positive relationship between study resources and behavioural study engagement (e.g. Carroll 1963; Finn 1989; Friedman et al., 2001; Hill et al., 2003; Kelly, 2012; Salanova et al., 2010; Smithikrai et al., 2018), some of the results were unexpected.

Effective teaching practices and behavioural study engagement. The quantitative results supported the expected positive relationship between effective teaching practices and lecture attendance (behavioural study engagement). This positive relationship is supported by the propositions of JD-R theory and its underlying theories, which outline the motivational role of resources in fostering engagement and performance (e.g. Bakker & Demerouti, 2017; Demerouti & Bakker, 2011; Schaufeli & Taris, 2014). Applying the propositions of COR theory (Hobfoll, 1989) individuals are motivated to build and protect resources. Therefore, it is understandable why a study resource, such as a lecturer who makes classes interesting and intellectually stimulating, would encourage higher lecture attendance, as students possibly viewed lecture attendance as a way to build further resources (e.g. competence). The interview findings helped support this explanation with many interviewees explaining that certain lecturers encouraged them to attend class, as this was a useful way to build mastery in a subject area. For example, one student outlined that “if you have a particularly strong lecturer, you are not going to miss that lecture, because that is better than any form of study” (P12, 2016 Cohort).

The propositions of JD-R theory and effort-recovery theory also highlight why an abundance of resources, such as many lectures, trigger the motivational process leading to engagement. For example, effort-recovery theory (Meijman & Mulder, 1998) highlights that abundant resources foster a willingness to dedicate increased effort to the task, as individuals feel supported. Therefore, in this research setting, it could be argued that the extensive number of lectures made available to FAE students, delivered by experts in the field, are what triggers this motivational process. However, the interview findings suggested that the quality of teaching and the preference for certain types of lectures seemed to vary, with less value being placed on the number of lectures, and more on the type of lectures.

This concept of "value" is something highlighted in many studies applying COR theory, which outline that the value assigned to resources varies among individuals and is tied to their personal experiences (e.g. Bakker et al., 2007). Therefore, in cases where little value is placed on resources, they are not likely to encourage higher engagement, as they do not contribute to any motivational process (Halbesleben et al., 2014). This was particularly evident in this study, whereby students tended to prefer certain lecturing styles, modes of delivery and lecture content over others. For example, there seemed to be a general preference for the following: attending technical lectures in an asynchronous setting rather than face to face; lectures which focused on exam technique; and lecturers who referred to their industry experience to help illustrate how to apply technical knowledge to business case scenarios. These insights aligned with prior research which highlighted the important role of quality instruction in encouraging lecture attendance (e.g. Carroll, 1963; Hill et al., 2003; Kelly, 2012). This included the work of Sangster et al. (2007) which highlighted the need for accountancy education to be applicable to the reality of business. Furthermore, these findings align with recent research demonstrating the value students attribute to online learning (e.g. Blakey & Major, 2019; Buelow, Barry, & Rich, 2018), including in accounting education settings (e.g. Malan, 2020). This is particularly relevant in this current climate, whereby online learning is now the mainstream education model for the majority of educational institutions, including this PAB, a model which now redefines the meaning of behavioural study engagement.

However, despite this positive direct path, an overall negative mediated path was found between effective teaching practices and exam performance, through behavioural study engagement. This result was unexpected. This mediated path is explained by the results

of the two direct paths, whereby when effective teaching practices to behavioural study engagement (positive) and behavioural study engagement to exam performance (negative), were multiplied, the total indirect (mediated path) effect was negative. Consequently, this mediated path suggests that effective teaching practices results in lower performance as a result of higher lecture attendance. As explained in Section 6.4.1, this mediated path must be considered in the context of the unexpected direct path between behavioural study engagement and exam performance.

Clear exam guidelines and behavioural study engagement. Given the support above for the positive relationship between effective teaching practices and behavioural study engagement (e.g. Biggs, 2011), it was surprising that clear exam guidelines did not influence lecture attendance (behavioural study engagement). A positive relationship was expected, as this study resource includes items which specifically focus on preparing trainee accountants for the case study nature of the FAE exams (e.g. "lecturers clearly explain the best approach to answering exam questions"). Furthermore, given that trainee accountants are particularly focused on the goal of qualification, it was surprising that students were not encouraged to attend lectures to get access to this resource. Therefore, this finding is unsupported by the propositions of JD-R theory and its underlying theories.

Given this unexpected relationship, the interview findings were helpful in uncovering possible reasons for this result. For example, some interviewees outlined that lectures run by CAI were not the only place where guidelines on how to approach the FAE were provided. Instead, there were alternative ways to access these resources which interviewees outlined contributed towards lower attendance at CAI lectures. These alternatives sources included in-house lectures provided by training firms, private grind schools and advice from peer groups. One interviewee explained the impact of these additional study resources outlining that "I knew that I was going to get notes anyway [at the in-house training] so I thought, 'well, what is the point in going to a lecture really when we are going to get the notes anyway?' " (P11, 2016 Cohort). Similarly, another student outlined that:

> There were definitely clear guidelines given [by CAI about how to approach the FAE], but I did not think that one set of guidelines suits everyone. I found, talking to my peers, whether it be in work or my college friends, far more beneficial [than attending CAI's lectures], and especially talking to those who had gone through it a year or two before.
>
> P1, 2015 Cohort

These perspectives therefore align with the explanations presented in the section above, which highlighted that unless individuals value the resources being provided, they are not likely to contribute to any motivational process (e.g. Halbesleben et al., 2014), which in this case, is the motivation to attend lectures. This also highlights possible reasons why behavioural study engagement did not mediate the path between clear exam guidelines and exam performance.

Support from the professional body and behavioural study engagement. The quantitative results found that the study resource, support from the professional body, had a negative effect on behavioural study engagement, which was unexpected. This negative relationship is unsupported by the propositions of JD-R theory and its underlying theories. A possible explanation for this negative relationship may be that, when students feel they are supported by the professional body (e.g. "I feel there is someone in Chartered Accountants Ireland that I can contact to help me cope with any difficulties with my studies"), it may discourage them from attending lectures, as they believe the support needed to succeed is provided outside class. As this relationship was unexpected, the interview findings were useful in helping explore other possible reasons for this result.

An interesting perspective was provided by one interviewee who stated that she faced academic difficulties throughout her FAE year, and at one point nearly gave up. Her experiences supported the view presented above, that due to seeking support from the professional body outside class, this contributed towards lower lecture attendance:

> There were lectures put on that [...] I didn't go to [...] the style of them frightened me [...] you would do a paper and then hand it to the person beside you and they would correct it. The thought of that would have just freaked me out [...]. If I was really having an absolute stumbling block, I was able to send her [institute lecturer] an email and, within, an hour, she had the handwritten solution back to me.
>
> P10, 2016 Cohort

The experience of this student can be further explained using the propositions of COR theory which outlines that individuals strive to protect and build resources, which in this case might be protecting and building their confidence. Therefore, instead of attending classes, this student sought to protect her resources (e.g. confidence) by seeking support outside of class. It may also be possible that the level of support available outside class discouraged attendance, a view supported by Biggs (2011). Another possibility may be

that for confidentiality reasons, if students were experiencing work or study difficulties, they would not seek support in a public setting (e.g. lectures), as they want to protect their resources (e.g. reputation). Furthermore, it is also possible that they did not seek this support from the professional body.

These insights also help to explain the mediating role of behavioural study engagement in the relationship between support from the professional body and exam performance, which had an overall positive effect. When the two direct paths, support from the professional body to behavioural study engagement (negative) and behavioural study engagement to exam performance (negative), were multiplied, the total indirect (mediated path) effect was positive. While a positive mediated path was expected, the results of the two direct paths were unexpected. In its current form, this mediated path suggests that support provided by the professional body for work and academic difficulties contributed to higher exam performance, as it encouraged lower lecture attendance. However, for the reasons outlined above, as well as the discussion in Section 6.4.1, caution must be exercised when interpreting this overall mediated path.

In summary, the results of the quantitative and qualitative findings confirm that these three types of study resource influence behavioural study engagement in different ways. When these relationships are considered in the context of the theoretical and empirical work presented in Chapter Three, these results are attributed to the value that trainee accountants place on these resources, and whether they need to attend lectures to access the resources sought. If the resources are not valued (e.g. face to face technical lectures), or if the resources are valued, but are available outside CAI lectures (e.g. in-house training), then this does not encourage lecture attendance. In contrast, if the resource is valued and is available in lectures (e.g. quality lecturers focusing on exam technique), then this type of resource encourages students to attend class. All these findings have implications for the professional body given the importance they place on lecture attendance. These implications are discussed further in Chapter Seven. In addition to encouraging lecture attendance, study resources were also expected to encourage cognitive study engagement. These results are discussed below.

6.5.2 Study Resources and Cognitive Study Engagement

As outlined in Section 6.2, effective teaching practices had no effect on cognitive study engagement, clear exam guidelines had a positive effect on cognitive study engagement, and support from the professional body had no effect on cognitive study engagement. With the exception of the positive relationship between clear exam guidelines and cognitive study engagement, the other two results were unexpected.

Effective teaching practices and cognitive study engagement. There is a large body of theoretical and empirical support for the positive relationship between effective teaching practices and cognitive study engagement, therefore, the results in this study were unexpected. For example, these results are in contrast to prior research applying JD-R theory, which supports the view that study resources such as quality teaching, promotes study activities representative of cognitive study engagement (e.g. Smithikrai et al., 2018). The findings are also in contrast to the popular work of Entwistle (2000), which highlighted that teaching approaches, that are based on a student-focused strategy (e.g. encouraging self-directed learning), are more likely to be associated with gaining a thorough understanding of the material being studied (cognitive study engagement), and hence, enhanced performance (see Figure 3.8, Chapter Three). In addition, this research does not align with the general education research which highlights the important role of teachers in developing students sense of ownership of their learning, and promoting the use of strategies that helps develop knowledge and understanding (e.g. Biggs, 2011; Hill et al., 2003; Kuh et al., 2006; Laird et al., 2008; Mann, 2001; Trigwell et al., 1994; Trigwell et al., 1999). This view is also shared in the accounting education literature (e.g. Beattie et al., 1997; Booth et al., 1999; Boyce et al., 2001; Byrne et al., 2002; Davidson, 2002; Jackling, 2005; Sangster et al., 2007). Therefore, in the context of this prior research, the results of this study raise important questions as to why this study resource did not promote cognitive study engagement amongst these students.

Upon further review of the literature, while the majority of research supports the positive relationship between these two variables as outlined above, there is some evidence of research where this study resource did not encourage cognitive study engagement. For example, Hassall and Joyce (2001), in their study of trainee management accountants, found that at stage three of their professional studies, students who had contact with a tutor through lectures, had a higher tendency towards surface approaches to learning (e.g.

memorisation), whereas those who engaged in self-directed learning were more likely to engage in higher order learning (e.g. developing understanding). Similarly, other research has found that an overreliance on teachers can reduce a students' tendency to engage in self-directed learning (e.g. Kember et al., 1995; Kember et al., 1996). While this may indicate a potential reason for the results found in this study, it was considered useful to explore the interview findings to provide other potential insights.

The general theme amongst interviewees in this study, was that although some lecturers made the material interesting and stimulating, and helped develop understanding (effective teaching practices), these were not the most important factors in encouraging their cognitive study engagement (higher order learning). The majority of students interviewed, outlined that the FAE exams required self-directed learning, and, in most cases, students recognised that while exam focused lectures were useful, success at FAE was mostly dependent on them taking control of their own learning. They also outlined that by the time of completing the FAE exams, students were well experienced at sitting exams and knew what study techniques suited them best. These themes were captured by the following students who stated "every person has their own study methodology that works [...], it is not our first rodeo. We have all done so many different exams before in the past" (P6 [placed], 2016 Cohort). Similarly, P16 (2018 Cohort) stated, "I think with these exams you have to apply yourself […] you have to sit down and do it yourself. I do not think that anyone can actually teach it to you, especially for the FAEs". These findings therefore reject the principles of JD-R theory and some of its underlying theories, including, effort recovery theory and COR theory, which support the motivational role that abundant study resources potentially play in fostering cognitive study engagement.

While these quotes highlight the importance of self-directed learning and autonomy, there are many studies in the education field which emphasise the role of the teacher in creating an environment that fosters autonomy (e.g. Biggs, 2011; Ryan & Deci, 2000; Steele & Fullagar, 2009). As autonomy and self-directed learning is most effective when students have clarity around their learning tasks, it was expected that the study resource, clear exam guidelines, would promote this type of autonomy in learning and encourage a student to cognitively engage in their study tasks. This relationship is discussed further below.

Clear exam guidelines and cognitive study engagement. The study resource, clear exam guidelines, had a positive effect on cognitive study engagement, which was expected. This resource included items such as "lecturers clearly explain the best approach to answering exam questions". The exam questions in the FAE are case study based, and aim to encapsulate the ambiguities of accounting practice. It was therefore expected that trainee accountants would place significant value on this study resource, as it provides guidance on how to prepare for these complex types of exam questions. This positive relationship aligns with both the theoretical and empirical work underpinning this research hypothesis. Firstly, these findings align with the propositions of JD-R theory, and theories such as COR theory, which support the motivational role of resources (that are valued by the individual) in the engagement process. These results also align with prior research which highlights the important role of study resources that provide clarity on what is expected and how to study (e.g. Kahu et al., 2015). Furthermore, these results align with the studies which highlight that resources, which help in the preparation for complex assessment methods, such as case study learning, promotes higher order learning (e.g. Boyce et al., 2001; Davidson, 2002; Entwistle, 2000).

These findings also contribute to the accounting education literature. In particular they add to the body of literature that highlights the important role of accounting educators in designing learning tasks and assessment that requires students to develop understanding and apply accounting knowledge to the reality of business (e.g. Sangster et al., 2007). It also adds to the literature promoting the case study method in accounting education (e.g. Ballantine et al., 2008; Boyce et al., 2001; Hassall et al., 1998; Healy & McCutcheon, 2008). For example, the findings of this research now provide further support for the work of Boyce et al. (2001) which found that the use of teaching strategies which provide clear guidance and exposure to the case-study method fosters higher quality learning because:

1) Students know what is to be learnt, how it is to be learnt and the emotional process of learning.
2) There is emphasis on the importance of: active rather than passive learning, as well as learning that incorporates reflection and processing of abstract conceptions; interaction with others in order to negotiate meaning and manipulate ideas; a well-structured knowledge base.

The findings of this research also contribute to the professional education literature which emphasises the importance of understanding the link between knowledge, facts and application to develop professional competence (Cheetham & Chivers, 1998; Jarvis, 1983). It does so by highlighting the role of study resources, such as clear exam guidelines, in creating this link. This is further emphasised in the interview data where interviewees generally agreed that study resources, which provide specific guidelines about how to apply technical content (i.e. case study lectures), contributed most towards their engagement and performance in the FAE. For example, the following quote captured this common theme, "the case-studies [lectures] are vital [to success in the FAE] in that they go beyond teaching you new material and start to teach you how to complete a case-study" (P13, 2016 Cohort). This quote also highlights that FAE students are generally exam focused, as outlined in past research (Flood & Wilson, 2008; Grey, 1998; Hamilton, 2013; Paisey & Paisey, 2014), and explains why they place so much value on this study resource. In addition, this discussion also helps explain why cognitive study engagement mediates the path between clear exam guidelines and exam performance, with an overall positive effect, which was expected.

In light of this discussion, it is also important to acknowledge, as outlined in Section 6.5.1, that there are other avenues where students can access similar study resources. These alternative sources include, in-house lectures provided by training firms, private grind schools and peer groups, with some students attributing their success at FAE to the combination of these resources. For example, when one student who received a Top 10 place, was asked what factors she considered most important for success in the FAE exams, she outlined the following:

> [The case study days aimed] to get you practising how to approach a case study[...] [it was also helpful] getting advice from people who had done it [the FAE] before [...]. We knew that we were going to get [in-house training in the firm] anything we needed [to help us prepare for the exam] [...]. [Practising case studies was very useful preparation for the exams]. You should do as much of the case-studies as you can [...] during your study leave […] just practice them and you will pick it up in the end.
>
> P7 (placed), 2016 Cohort

These findings further support the view that study resources which specifically focus on exam preparation promote cognitive study engagement, and are most valued by students. However, these insights also raise questions about the quality of learning that is being achieved, a concern explored more in Chapter Seven. The next study resource, support

from the professional body, and its influence on cognitive study engagement, is discussed below.

Support from the professional body and cognitive study engagement. The third study resource, support from the professional body, did not influence cognitive study engagement. In addition, there was no support found for the mediating role of cognitive study engagement in the relationship between this study resource and exam performance. These direct and mediated results were unexpected, as based on the propositions of JD-R theory, and its underlying theories, abundant resources foster engagement and performance. More specifically, it was thought that if students sought help from the professional body, for say study difficulties, once this support was received, it was expected to increase cognitive study engagement. However, as explained in the previous sections, and in Chapter Three, it is only where these resources are valued and needed by students, that they can potentially influence engagement (e.g. Halbesleben et al., 2014). Given the unexpected nature of these results the interview findings were helpful in providing additional explanations. For example, there seemed to be a general theme amongst interviewees that they did not avail of this type of resource. In addition, others outlined that if they needed this type of support, they would likely seek it elsewhere, rather than from the PAB, as demonstrated by the following student.

> Our first point of call [if we needed support] would tend to be people within our peer group or the people in our learning and education department [within the training firm] before you would […] go to the Institute [CAI] […] but I probably didn't need that support anyway.
>
> P2, 2015 Cohort

This explanation aligns with past research which found that the benefits of resources were not realised in situations where individuals did not need support (Bakker et al., 2007). Another possible reason that this resource did not influence cognitive study engagement was because it was viewed as a supplementary resource and not something which was directly related to helping students prepare for the qualifying exams (e.g. Chartered Accountants Ireland provide good student support and advice).

In summary, these results highlight that the three types of study resources influence cognitive study engagement in different ways, emphasising the value students place on different types of resources. It was also expected that all three study resources would have a positive influence on affective study engagement. These results are discussed below.

6.5.3 Study Resources and Affective Study Engagement

As outlined in Section 6.2, effective teaching practices had a positive influence on affective study engagement, while clear exam guidelines and support from the professional body had no influence. In addition, affective study engagement did not mediate any paths between study resources and exam performance. With the exception of the positive relationship between effective teaching practices and affective study engagement, the other results were unexpected.

Effective teaching practices and affective study engagement. The positive relationship found between effective teaching practices and affective study engagement in this study is supported both theoretically and empirically. For example, COR theory (Hobfoll, 1989) supports the view that exposure to a study resource such as an interesting and enthusiastic lecturer, will likely contribute towards the motivational process that promotes affective study engagement, as students view this as a way to build further resources (e.g. competence). These results are also supported by the propositions of Fredrickson's (2001) broaden and build theory. This theory outlines that positive emotions, such as those experienced after interacting with an enthusiastic lecturer, may increase an individual's thoughts and actions, and encourage them to be more energetic and enthusiastic towards their studies. These findings also align with past research in the higher education field, where teaching practices are considered to have a key role in promoting enjoyment of learning, and stimulating interest in the subject matter (e.g. Pekrun et al., 2002; Salanova et al., 2010; Smithikrai et al., 2018). These results are further explained through the work of Ryan and Deci (2000) which highlights the intrinsic motivational role of resources. This work supports the view that lecturers can encourage students to take ownership of their own learning (autonomy), can create a sense of belonging to a learning community (relatedness) and help develop student competence through positive and constructive feedback. This in turn can increase a student's interest, enthusiasm and dedication towards their studies.

When the students in this study were asked about their affective engagement in study tasks, some students considered the material taught in their final qualifying year to be interesting, with many attributing this interest to their lecturers ability to relate their classroom learning to real life scenarios. For example, the following student outlined that

"I found xx [subject] more interesting […] the lecturer was always giving real-world examples and that made it easier in terms of, what I was learning, and actually applying it, while if it's a list of slides […] it's just boring" (P11, 2016 Cohort). These findings align with the views of Sangster et al. (2007) which highlight the risks of adopting a textbook approach to teaching accountancy and instead the importance of making it applicable to the reality of business. Therefore, the findings in this study are encouraging in highlighting the role of accountancy educators in promoting interest, enthusiasm, and pride (affective study engagement), in accounting education.

However, despite this positive relationship affective study engagement did not mediate the relationship between effective teaching practices and exam performance, which is in contrast to past research (e.g. Salanova et al., 2010; Smithikrai et al., 2018). This is likely due to affective study engagement not influencing exam performance which is explained further at the end of this section.

Clear exam guidelines and affective study engagement. The study resource, clear exam guidelines, did not influence affective study engagement. There was also no mediated path found between this study resource and exam performance through affective study engagement. Both of these results were unexpected. These findings therefore challenge the propositions of JD-R theory, and other theories such as COR theory and effort recovery theory, which highlight that the more resources made available to a person the more engaged they are likely to be (e.g. Halbesleben et al., 2014; Hobfoll, 1989; Meijman & Mulder, 1998). Given that this study resource is very specifically focused on preparing students for the qualifying exams, it is possible that it does not promote intrinsic interest in the subject matter being taught. In the psychology literature, Herzberg's motivation-hygiene theory can help provide possible explanations. This theory outlines that resources mainly fall into two categories, motivational factors and hygiene factors. Motivational factors are considered intrinsic elements of the work/study environment which arise from the task itself (e.g. learning something meaningful). In contrast, hygiene factors are considered extrinsic elements of the work/study environment (e.g. physical resources), which can aid an individual in achieving goals, but are not a source of motivation (Herzberg, 2005). Therefore, it is possible that the study resource, clear exam guidelines, is more likely to be a hygiene factor rather than a motivational factor. This conclusion is further supported through past research in the accounting education field which highlights that trainee accountants are mostly concerned with

passing the qualifying exams and engaging in the most effective strategies to achieve this goal (e.g. Flood & Wilson, 2008).

Given the unexpected nature of this result, the interview findings were useful in providing further explanations. For example, when asked about how this study resource influenced study engagement the following interviewee replied:

> I guess I got more enthusiastic when I could understand something, not because I thought it was particularly interesting, but because I knew that, if I was given that information in a different way, I would know how to approach it or interpret it [in the exam].
>
> P4, 2015 Cohort

Equally, there was evidence that other exam focused study resources, which were intended to provide clarity on what it takes to succeed in the FAE, actually resulted in alienation, rather than encouraging affective study engagement. This was demonstrated by the following student who outlined that the mock exams, while intended to help her prepare for the final exams, had the opposite effect, and resulted in reducing her confidence, while at the same time reducing her vigor and dedication towards her studies. She outlined that "the mocks are a horrendous experience […] I understand why it is good to have hard, really complex mocks […], but it ruins your confidence, and you think, 'What's the point?' " (P2, 2015 Cohort). Insights such as this are important for the PAB, as past research (e.g. Mann, 2001) highlights the negative impact of alienation on learning, and the important role of the educational institution in addressing this.

Similarly, the study resource, support from the professional body, did not influence affective study engagement. In addition, there was no mediated path found between this study resource and exam performance, through affective study engagement. These results are discussed below.

Support from the professional body and affective study engagement. The study resource, support from the professional body, did not influence affective study engagement. This study resource is akin to psychological support, as it helps students cope with stresses (e.g. "I feel there is somebody to help me cope"). It was therefore expected that this resource would have a positive impact on the motivational process leading to affective study engagement. This expectation was based on research from the work engagement literature which supports the view that resources which foster coping

strategies lead to increased affective engagement (Bakker et al., 2007), therefore aligning with a central proposition of JD-R theory.

This result, which was unexpected, is best explained through the interview findings. As outlined in Section 6.5.1 and 6.5.2 above, there was a general theme amongst interviewees that trainee accountants did not tend to need this support or seek this type of support from CAI. They further outlined that in circumstances where they did require support for academic or work difficulties, they would reach out to their in-house learning coordinator or peer group, before approaching CAI. Given that these students did not seem to avail of this type of support, these findings align with past research which found, that the benefits of coping resources were not realised, where individuals were not experiencing a significant amount of stress, and did not need support (Bakker et al., 2007). It could also be possible that, similar to the nature of "clear exam guidelines" the study resource, support from the professional body, was also perceived as a hygiene factor, and therefore, did not have any motivational impact (Herzberg, 2005).

Overall, the results of the mediated paths revealed that affective study engagement did not mediate the relationship between study resources and exam performance. This finding is inconsistent with past literature which supported the mediating role of affective study engagement in the motivational process leading to exam performance (e.g. Salanova et al., 2010; Smithikrai et al., 2018). These findings are also inconsistent with studies from the work engagement literature which has found strong support for the mediating role of affective study engagement in the engagement process (e.g. Schaufeli, 2017; Schaufeli & Taris, 2014). This result can be explained by the quantitative results. Firstly, that affective study engagement did not influence exam performance. Secondly, clear exam guidelines and support from the professional body did not influence affective study engagement. Thirdly, the only study resource predicting affective study engagement was effective teaching practices, which had a negative direct effect on exam performance.

In summary, while not all expected results were supported, at the overall level, the main findings from this section highlight the important role of study resources in the motivational process leading to study engagement, as well as the mediating role of behavioral and cognitive study engagement, in the relationship between certain study resources and exam performance. Together, these findings further support the main propositions of JD-R theory and its underlying theories. Furthermore, there is support for

the work of Chickering and Gamson (1987), in the study engagement literature, which outlines that while study resources can stand alone and influence study engagement independently, together, they exert a powerful force on the education process (McCormick et al., 2013). As JD-R theory also supports the role of personal resources in the study engagement process, this is discussed in the following section.

6.6 Personal Resources, Study Engagement and Exam Performance

Hypothesis 2 proposed that behavioural, cognitive, and affective study engagement would mediate the relationship between personal resources (academic self-efficacy) and exam performance. As outlined at the start of Section 6.2, the quantitative results found that both behavioural and cognitive study engagement mediated this relationship, but affective study engagement did not. Therefore, as outlined in Table 5.17, hypothesis 2a and 2b were supported and 2c was unsupported.

In this study, academic self-efficacy was measured by asking trainee accountants whether they believed they were a good student, felt confident about their studies, could effectively solve problems, felt stimulated, could make an effective contribution to class and whether they had learned interesting things during their FAE year. On average, trainee accountants in this study reported high self-efficacy, sometimes, but not on a regular basis. Furthermore, the quantitative results revealed that academic self-efficacy had a positive direct effect on all three types of study engagement, but had no direct effect on exam performance. These results are discussed in more detail in the sections below.

6.6.1 Personal Resources (Academic self-efficacy) and Behavioural Study Engagement

The quantitative results found a positive relationship between academic self-efficacy and behavioural study engagement (lecture attendance), which was expected. This positive relationship is explained through the propositions of JD-R theory, and its underlying theories, which support the motivational role of personal resources in fostering engagement and subsequent performance (e.g. Bakker & Demerouti, 2017; Schaufeli & Salanova, 2007; Schaufeli & Taris, 2014; Xanthopoulou et al., 2007). In particular, social cognitive theory (SCT: Bandura, 1977) helps explain this positive relationship, as it

attributes a central role to self-efficacy in influencing behaviour. Bandura's (1977, 1997) work supports the view that self-efficacy beliefs are part of a self-system. In the case of this study, this self-system may explain how trainee accountants exercise control over their thoughts and actions, particularly in cases where there is an incentive to work towards a particular goal, such as exam qualification. The results of this study are also aligned with the propositions of the COR theory (Hobfoll, 1989), whereby it can be explained that trainee accountants are likely motivated by the opportunity to build and protect resources (e.g. competence and confidence). Therefore, to improve their chances of success in the qualifying exams, they might view attendance at lectures as a way to help them achieve this goal. This view was supported by the interviewees, who in general, expressed that they were relatively confident in their ability to pass the exams, and for those that did attend lectures, the incentive to do so was to build further knowledge (i.e. building resources). This theme was captured in the following quote:

> I would always be of the opinion that if I put the work in, I know I am going to get over the line. […] I would have always gone to lectures, because, in the back of my head, as I walk into an exam hall, I know that I have done all I can to get there [pass the exams] […] So it's more of a confidence, reassurance thing.
>
> P1, 2015 Cohort

This positive relationship can also be explained through Fredrickson's (2001) broaden and build theory, which outlines that positive emotions such as those experienced with high self-efficacy beliefs (e.g. "I feel stimulated when I achieve my study goals"), prompt individuals to engage with their environments and partake in activities, which in the case of this research, might be lecture attendance. The results of this study also align with the higher education literature which has found that efficacious students tend to invest more time and effort in their studies, such as attending lectures (e.g. Bandura & Locke, 2003; Greene & Miller, 1996; Linnenbrink & Pintrich, 2003; Llorens et al., 2007; Ouweneel et al., 2011; Pajares, 2002; Walker et al., 2006; Zimmerman, 2000), with similar results being found in professional accounting education settings (Hassall & Joyce, 2001). In this research context, investing time and effort in studies can manifest itself in many ways. For example, there was some evidence that where trainee accountants felt confident in their ability, and valued what was being taught in class, they were more likely to invest time in attending lectures because they believed that they would learn something interesting or valuable. This was demonstrated by the following student who outlined that "I was certainly always very confident with my ability to learn the material [...] I went to

lectures to get the information I needed" (P12, 2016 Cohort). This view aligns with the work of Linnenbrink and Pintrich (2003) which outlined that those with high self-efficacy beliefs are more likely to seek help and invest more time in their studies when needed. Interestingly, there was also some evidence amongst interviewees as to how low self-efficacy beliefs affected lecture attendance. For example, one interviewee stated that she attended very few lectures and instead used the asynchronous online lectures, outlining that she "would never be confident enough to ask questions in class" (P3, 2015 Cohort), and therefore preferred to study independently. Given that one of the measures of self-efficacy was "I feel I can make an effective contribution in class", this may explain why students with lower self-efficacy may be less likely to attend lectures, a view which is consistent with prior research in accounting education settings (e.g. Byrne et al., 2014).

In light of these observations, the results of the mediated paths were explored. When the direct effects of academic self-efficacy to behavioural study engagement (positive) and behavioural study engagement to exam performance (negative) were multiplied, the overall indirect effect (mediated path) was negative, which was unexpected. Consequently, this mediated path suggests that those with higher academic self-efficacy achieved lower exam performance, as a result of higher lecture attendance. As explained in Section 6.4.1, caution must be exercised when interpreting the negative relationship between behavioural study engagement and exam performance, as there are a number of potential underlying reasons for this result. Using the example of past performance, a potential reason for this negative mediated path could be explained as follows. The literature supports the view that students with high self-efficacy beliefs, recover quickly from setbacks (e.g. Bandura, 1997; Pintrich & De Groot, 1990; Ravenscroft et al., 2012), which in the case of this study, the setback could be past exam failure. Therefore, it may be possible that students who have failed exams in the past attend lectures to give themselves the best opportunity to perform well in future exams. However, they may still achieve lower performance than their peers, as a result of past performance rather than lecture attendance. As previously referred to in Section 6.4.1, there was some evidence of this in the interview data, whereby one interviewee, who received a lower performance ranking than her peers in the FAE exams, explained that she had failed professional exams in the past. However, despite this, was confident that she could pass the FAE exams at future attempts, and therefore attended the majority of lectures to help her achieve this goal (P14, 2016 Cohort). This explanation is supported in the literature

finding that past performance is a common predictor of future performance (e.g. Carroll, 1963; Gammie, 2000; Plant et al., 2005; Salanova et al., 2010). It is also supported by the work of Bresó et al. (2011) who outlined that in situations where students may not achieve success on their first attempt, those with high self-efficacy beliefs, tend to test alternative courses of action (e.g. attend more lectures) to achieve success in the future.

6.6.2 Personal Resources (Academic self-efficacy) and Cognitive Study Engagement

The quantitative findings found a positive relationship between academic self-efficacy and cognitive study engagement (higher order learning), which was expected. This result aligns with the propositions of JD-R theory, its underlying theories, and the empirical work shaping this study hypothesis (e.g. Bandura, 1977; Dweck, 1986; Linnenbrink & Pintrich, 2003; Pintrich & De Groot, 1990; Ravenscroft et al., 2012; Walker et al., 2006; Zimmerman, 2000). Firstly, this result can be explained with reference to the propositions of SCT (Bandura, 1977) and the empirical work supporting this theory, whereby it is widely accepted that individuals with high self-efficacy beliefs are more likely to choose learning goals where they seek to develop new skills, knowledge and to achieve mastery (Dweck, 1986; Kaplan & Midgley, 1997; Locke & Latham, 1990; Middleton & Midgley, 1997).

Explaining this further, Locke and Latham (1990) outlined that a person's self-efficacy beliefs allows them estimate the levels of effort required to achieve a task and whether this effort will pay off, but also whether they have the capacity to perform in a particular context. It therefore may explain why those with higher self-efficacy beliefs will embrace more challenging tasks, as they believe the effort invested will result in their desired outcomes. When applied to this research context, as the case study nature of the FAE exams is considered a challenging and complex form of assessment (e.g. Boyce et al., 2019), it is understandable why those with higher self-efficacy beliefs are more willing to embrace these challenging goals, as they see it as a way to achieve mastery, and thus exam qualification. While this view was generally supported in the interview data, this point can also be explained using the example of a student who experienced lower self-efficacy beliefs during her FAE year, whereby instead of wanting to embrace the challenges of preparing for the FAE exams, she wanted to give up:

> I was feeling so negative and then it basically came to a point where I just gave up and I was like, I am not going to get these [the FAE exams]. It's just too hard. There is too much to cover.
>
> P10, 2016 Cohort

That said, this student did admit that she viewed her FAE year in two halves, the first half where she experienced the above, and the second half where she felt more confident about her ability to succeed at the FAE, where she was more cognitively engaged in her studies. This indicated that self-efficacy beliefs may fluctuate over time, a theme which also seemed to be common amongst interviewees, whereby they gained more confidence as they progressed through the FAE year, which in turn encouraged cognitive study engagement. This was explained by the following student who outlined that "I think throughout the process [FAE year], the more you practiced [case study questions], the more confident you got and the more engaged you became" (P7 [placed], 2016 Cohort). While it is not intended in this study to test the reciprocal relationships between study variables, these findings support a possible positive relationship between academic self-efficacy and cognitive study engagement.

This positive relationship can also be explained with reference to COR theory (Hobfoll, 1989), which proposes that individuals seek to build and protect resources. In the case of this study, passing the qualifying exams is considered a major step in the career progression of a trainee accountant. Therefore, where students believed they could achieve this goal they were motivated to cognitively engage in their studies to ensure their success (which is a form of building resources). The work of Schunk and Mullen (2012) also helps explain the predictive power of self-efficacy and the motivation to build and protect resources. Using the concept of *human agency*, they explained that individuals with high self-efficacy beliefs want to proactively distinguish themselves from others, and are therefore motivated to engage in tasks that can help achieve this. In the case of trainee accountants, this agency (resource) likely comes in the form of exam qualification, providing a possible explanation as to why they were committed to cognitively engaging in their study tasks to achieve this outcome. This is also referred to in Chapter Two, whereby agency in the accountancy profession is characterised by the development of professional knowledge and competence, which are considered the distinguishing characteristics of a profession (e.g. Carr-Saunders & Wilson, 1933; Larson, 1977; MacDonald, 1995).

Frederickson's (2001) broaden and build theory also supports, and helps explain, the positive relationship found between academic self-efficacy and cognitive study engagement. It outlines that, positive emotions, such as those associated with high self-efficacy beliefs, leads to wider thinking and greater ability to synthesise ideas from a range of sources, with negative emotions having the opposite effect. Both the quantitative results of this study and the interview findings support this point with many interviewees expressing that even though the FAE exam was different to any exams they had done in the past, they were confident in their ability to master the case study method, and therefore actively engaged in learning tasks that promoted understanding and application of knowledge. While these results were expected, this study further contributes to the body of literature which supports the main propositions of these theories, including the general literature (e.g. Linnenbrink & Pintrich, 2003; Pintrich & De Groot, 1990) and the accounting education literature (e.g. Byrne et al., 2014; Hassall & Joyce, 2001; Ravenscroft et al., 2012).

In addition to this positive direct path, cognitive study engagement mediated the path between academic self-efficacy and exam performance, with an overall positive effect, which was expected. This positive effect suggests that higher self-efficacy beliefs led to higher exam performance, as a result of higher cognitive study engagement. This result is supported in the theoretical and empirical literature presented in Section 6.4.2, and in the discussion above. The interview findings further explain this mediated path, whereby with the exception of a few cases, the majority of students were confident in their ability to pass the FAE exams, but did recognise where they had gaps in their knowledge. However, they outlined that if they developed proficiency in the case study method, which requires cognitive study engagement, they were confident that they would achieve their desired learning outcomes. Given the support for this mediated path, this study now adds to the body of research which supports the view that academic self-efficacy is unlikely to influence exam performance directly, and instead, influences it through a mediating variable such as study engagement (e.g. Llorens et al., 2007; Salanova & Schaufeli, 2008; Salanova et al., 2010).

While it was expected that affective study engagement would also mediate the path between academic self-efficacy and exam performance, this path was not supported. This result, along with the direct paths between these variables, are discussed below.

6.6.3 Personal Resources (Academic self-efficacy) and Affective Study Engagement

The positive relationship between academic self-efficacy and affective study engagement (e.g. energy, pride, enthusiasm) was the strongest of all of the three types of study engagement (Figure 5.3, Chapter Five). This result is widely supported in both the theoretical and empirical research from the work and study engagement literature, as presented in Chapter Three (e.g. Bresó et al., 2011; Kahu et al., 2015; Linnenbrink & Pintrich, 2003; Llorens et al., 2007; Ouweneel et al., 2011; Salanova et al., 2010; Xanthopoulou et al., 2007, 2009). It is also supported through the interview findings in this study. The strength of this relationship may be explained by the psychological nature of both constructs. For example, Linnenbrink and Pintrich (2003) outlined that both academic self-efficacy and affective (motivational) engagement are psychological in nature and suggested that students' interest in tasks may develop from their perceived competence (self-efficacy).

JD-R theory supports this positive relationship by explaining that the existence of personal resources, such as academic self-efficacy, contributes towards a motivational process, where individuals experience increased engagement, including feelings of pride and enthusiasm (e.g. Bakker & Demerouti, 2017). Similarly, SCT (Bandura, 1977, 1989) explains that self-efficacy leads to greater willingness to expend energy (vigor) and commitment to achieving more challenging goals (dedication). Bandura (1989) explains this view by reference to highly efficient analytical thinking and the ability to control dysfunctional cognitions, such as those associated with exam failure. The experiences of one interviewee helps explain this point. They stated that in the lead up to both their first and second attempts at the FAE exams they were confident and felt good about the exams, but after failing they felt "really devastated and really embarrassed" (P11, 2016 Cohort). According to SCT, it is at this point that the predictive power of self-efficacy beliefs is most important. In the case of this student, instead of withdrawing from study tasks, on his third attempt he sought the help of a tutor. He explained that the purpose of this was to help build the expertise needed in the case study method and also to help build and retain his confidence. This in turn helped him develop the right psychological mindset to approach the exams. These findings are supported by the work of Pajares (2002) which outline that, students with high self-efficacy beliefs are more likely to heighten their

efforts in the face of failure, and instead approach their studies with a sense of serenity. Similarly, Bresó et al. (2011) outlined that the positive relationship between academic self-efficacy and affective study engagement is based on an individual's ability to deal with emotional processes, especially those associated with problematic situations.

The propositions of COR theory (Hobfoll, 1989) also help explain this positive relationship. Using the example of the interviewee (P11, 2016 Cohort) outlined above, there is evidence of strong self-efficacy beliefs, and when these were threatened, the student sought to reinforce these using another resource (an independent tutor). He explained that through engaging with the tutor he gained an outside perspective, which had a positive psychological impact on his approach to studying for exams. Therefore, this acts as evidence of a student seeking to protect and build resources (self-efficacy) through the use of another resource (independent tutor) to avoid negative outcomes (exam failure). In doing so, this triggered a motivational process leading to enhanced affective study engagement and exam performance. Similarly, Fredrickson's (2001) broaden and build theory supports the view that when individuals experience positive emotions, such as those experienced from high self-efficacy, their thoughts and actions are impacted in a positive way. For example, the following interviewee helps explain this point by outlining that, "I was more interested when I had a proper grasp of it [the material] and the more I understood the material, the more I was engaging with it" (P4, 2015 Cohort). While this quote demonstrates the reciprocal relationships between variables, it also outlines how this student became more affectively engaged (interested) as a result of higher self-efficacy beliefs (proper grasp of the material). Together, these findings serve as further evidence of the reciprocal and complex relationships between emotions, engagement and learning, which can spiral upwards towards increased engagement or downwards causing disengagement, a view which is supported by other studies (Kahu et al., 2015; Llorens et al., 2007; Ouweneel et al., 2011).

In light of the discussion above, it was surprising that affective study engagement did not mediate the relationship between academic self-efficacy and exam performance. However, upon further review of the quantitative results, neither academic self-efficacy nor affective study engagement, had a direct effect on exam performance. This relationship can be further explained through the view that self-efficacy beliefs were unlikely to directly impact on exam performance, other than through a mediating

variable. Therefore, given that affective study engagement did not directly impact on exam performance, it was less likely to be a mediator.

In summary, the results discussed in this section supports prior research finding that high academic self-efficacy beliefs are positively related to behavioural, cognitive, and affective study engagement. While self-efficacy did not directly influence exam performance, it had an indirect effect (mediated path) through both behavioural and cognitive study engagement. These results support the mediating propositions of JD-R theory, albeit caution must be exercised when interpreting some of these results, as past research, mainly supports the mediating role of affective study engagement (e.g. Llorens et al., 2007; Salanova et al., 2010). Therefore, this research makes an important empirical contribution to the study engagement and JD-R literature.

6.7 Demands, Study Engagement and Exam Performance

Hypothesis 3 proposed that behavioural, cognitive and affective study engagement would mediate the relationship between work exhaustion and exam performance. As outlined at the start of Section 6.2, the quantitative results revealed that only behavioural study engagement mediated this relationship. Therefore, as presented in Table 5.17, hypothesis 3a was supported and hypotheses 3b and 3c were unsupported.

In this study, exhaustion was characterised by feelings of being burned out, tired, emotionally drained and strained from work (e.g. Maslach et al., 2001). The quantitative results revealed that on average trainee accountants in this study experienced exhaustion on a regular basis (see Appendix H). The quantitative results also found that work exhaustion spilled over to the study domain and had a negative effect on behavioural and affective study engagement, while it had no effect on cognitive study engagement or exam performance. Behavioural study engagement also mediated the relationship between work exhaustion and exam performance, with an overall positive indirect path. While it must be acknowledged that it can be difficult to determine spillover effects using cross sectional data, there is evidence of a similar approach being used in other studies (e.g. Demerouti et al., 2005). Furthermore, the survey questions asked students to reflect on their experiences over the course of their FAE year, rather than at just one point in time. In addition, the qualitative data provided useful insights indicating that over time the effects of work exhaustion spilled over to the study domain. For example, the following student outlined that "[when I went on study leave] it took me a couple of

weeks to recover and to get past the exhaustion levels of having been working so hard for so long" (P13, 2016 Cohort). Therefore, while recognising cross sectional data as a limitation, which is outlined in Chapter Seven, the quantitative results presented below, which are further supported by the qualitative findings, provide evidence of spillover effects from the work to the study domain. The results are discussed in detail below.

6.7.1 Demands (Work exhaustion) and Behavioural Study Engagement

It was expected that if trainee accountants were feeling tired and drained from their work, these negative effects would spillover to the study domain, contributing to lower lecture attendance (behavioural study engagement). This negative spillover relationship was supported through the quantitative findings. There are no studies to date that explore the spillover effects from the work domain to the study domain in a professional accounting education setting. Therefore, the findings from this study add to prior empirical and theoretical work supporting the concept of the spillover hypothesis (e.g. Bakker et al., 2005; Bakker et al., 2006; Demerouti et al., 2005; Hakanen & Schaufeli, 2012). For example, Demerouti et al. (2005) in their study of the spillover effects of work demands to the non-work domain found the same negative relationship. Drawing on the propositions of role stress theory they outlined that work and non-work settings are incompatible domains. Referring to the concept of "time", they outlined that demands from work can result in individuals having less time to invest in activities outside of work. When these principles are applied to the negative relationship found between work exhaustion and behavioural study engagement in this study, it provides a possible explanation as to why trainee accountants, experiencing exhaustion from work, are less likely to attend lectures.

As outlined in Chapter Two and Chapter Three, the expectation to work long hours, while also trying to balance the demands of studying, is something which is embedded into the culture of accountancy training firms (e.g. Chong & Monroe, 2015; Sweeney & Summers, 2002). Furthermore, successful integration into this workplace culture is considered as important to the professional socialisation of trainee accountants, as passing the qualifying exams (Anderson-Gough et al., 1998/2018; Hamilton, 2013; Paisey & Paisey, 2014). In their research, Anderson-Gough et al. (1998/2018) interviewed students from a number of accountancy training firms, with many referring

to this process of working and studying as a "trial of strength", as the demands of working overtime, while also trying to study, was draining. When probed further, these interviewees reported a blurring of the boundaries between work time and personal/study time, but that it was doable, and something that they just needed to get through (Anderson-Gough et al., 1998/2018, p. 221). Similar findings were revealed from the trainee accountants interviewed in this study. For example, a common theme amongst interviewees was that while they realised the importance of engaging in their professional studies, including attending lectures, they sometimes felt that they should prioritise their work over attending lectures. For example, some trainees outlined that "you can make a stand, but I guess the culture in the company I worked in was, 'you have to work at all costs' " (P11, 2016 Cohort), with another student stating, "as a trainee, you were leaving saying, 'really, I should not be leaving when there is an awful lot of work to do'. so, I think that definitely affects it [lecture attendance]" (P9, 2016 Cohort).

There was also evidence in the interview data that due to role conflict (e.g. logistics), it was not always possible to attend lectures. This was consistent with the work of Curtis and Shani (2002) who found that employment commitments can detract from study tasks, such as lecture attendance. For example, the following student, who was working on a client site abroad, outlined that "logistically speaking, it was impossible to get to them [lectures] and then to still get to the airport on time" (P13, 2016 Cohort). While these findings may seem less relevant in this current climate, as trainee accountants are not required to travel for work, and lectures are now delivered online, the nature of their jobs have not changed. Therefore, the physical (e.g. lower energy) and mental exhaustion from working excessive hours is still a concern. It is also possible that they may be experiencing increased exhaustion as a result of the pandemic, as recent reports have outlined that at least 60% of employees in Ireland are feeling more stressed since the onset of COVID-19 (Harnett, Kieran, & Global, 2020). Consequently, the following quotes capturing the exhaustion levels of trainee accountants in this study are still relevant in this current climate.

> I was unfortunate enough to be on the worst job in my department and I basically did 350 extra hours in about three months […] even if I had wanted to [attend lectures], because we were working Saturdays [I could not attend lectures] […] You weren't getting enough sleep, never mind even thinking about studying.
>
> P20, 2019 Cohort

> It's not working full-time that's the problem. It's working more than full-time that's the problem […] I wasn't working a 40-hour week for January, February, March, and April in my FAE year. I was working considerably more than that every week […] Sometimes if lectures were scheduled I would think "I can't do that this weekend. I have done 70 hours of work this week. I have been up all night. I have travelled. I am not going to lectures on Saturday."
>
> P13, 2016 Cohort

> You are not able to study and work overtime, well I'm not […]. It was not even the physical tiredness of overtime, it was the mental drain […]. I would not even have considered going to a lecture in busy season.
>
> P23, 2019 Cohort

The negative effects of this mental and physical exhaustion described by these trainee accountants can be explained through effort-recovery theory (Meijman & Mulder, 1998) and the recovery literature (Sonnentag, 2003; Sonnentag et al., 2008). As proposed in Chapter Three, if trainee accountants do not have adequate time to recover from the exhaustion experienced from their jobs, they will be less likely to attend lectures, and instead use this time to try to recover from the effects of work. Interestingly, past studies support the view that short rest periods (day-level recovery), that occur in the evenings of a normal work week, have more of a lasting impact than longer rest periods (e.g. holidays), where the positive effects fade sooner (e.g. Sonnentag, 2003). Interestingly, the interview findings outlined that trainee accountants often try to find ways to incorporate periods of recovery into their working week. Given the exceptionally long hours they are working, especially during busy season, lectures scheduled in the evenings and weekends are likely impinging on their recovery time from work exhaustion. This indicates a potential reason why many students choose not to attend lectures. The following student who achieved a Top 10 placing highlighted the importance of regular recovery time during the FAE year and outlined her experiences of why work exhaustion resulted in lower lecture attendance.

> I needed to be re-energised through socialising with my friends or through sport, so the last thing I wanted to do was to sit down with the books and do a day of study on a Saturday [at lectures] when I have already worked Monday to Friday.
>
> P6 (placed), 2016 Cohort

This discussion provides possible reasons as to why work exhaustion had a negative influence on behavioural study engagement. However, the mediated path between work exhaustion and exam performance through behavioural study engagement, was positive, which was unexpected. This can be explained as follows. When the direct path between

work exhaustion to behavioural study engagement (negative) and the path from behavioural study engagement to exam performance (negative), were multiplied, the total indirect (mediated path) effect was positive. Consequently, this mediated path suggests that work exhaustion has a positive effect on exam performance, as a result of the negative relationship between behavioural study engagement and exam performance. However, as outlined in Section 6.4.1 above, caution must be exercised when interpreting the negative relationship between behavioural study engagement (lecture attendance) and exam performance. While this negative relationship suggests that higher lecture attendance leads to lower exam performance, there are other possible factors which likely contribute to this relationship (e.g. past performance, overreliance on lecturers, dominant focus on learning technical material taught at lectures, at the expense of building expertise in the case study method). Using one of these examples to explain this mediated path, say if students' attending classes have an overreliance on lecturers to direct their learning, they are less likely to engage in self-directed learning, and therefore achieve lower performance. In contrast, those who are not attending lectures may be more likely to engage in self-directed learning and achieve higher performance. Therefore, as work exhaustion leads to lower lecture attendance, those not attending lectures may be more likely to engage in self-directed learning, which will have a positive impact on their exam performance. In addition to the unexpected results of this mediated path, the quantitative results also revealed that cognitive study engagement did not mediate the path between work exhaustion and exam performance. These findings are discussed below.

6.7.2 Demands (Work exhaustion) and Cognitive Study Engagement

In this research context, cognitive study engagement is concerned with trainee accountants investment in higher order learning. It was therefore expected that if trainee accountants were suffering from work exhaustion, they would be less likely to cognitively engage in their studies, due to feeling tired and being drained from work. The main arguments made for expecting a negative relationship were as follows. Firstly, using the propositions of JD-R theory, work exhaustion was considered a hindrance demand. Therefore, it was expected that students experiencing this would be less likely to invest effort in their studies, as they viewed this demand as negative and stable (e.g. Crawford et al., 2010). Secondly, Demerouti et al. (2005), through role stress theory, explained that

demands from work can spillover into other aspects of a person's life and result in that person being pre-occupied with work when they should be engaged in other tasks. Thirdly, effort-recovery theory supported the view that inadequate recovery time outside of work, can negatively impact on a trainee accountants ability to cognitively engage in study tasks. It was therefore surprising that the quantitative results in this study revealed that work exhaustion did not negatively influence cognitive study engagement. This result was also surprising when considered in the context of the negative relationship found between work exhaustion and behavioural study engagement. This was so, as prior research suggests that exhaustion is a prolonged syndrome and cannot be alleviated by switching tasks (e.g. Sonnentag, 2017). Therefore, it would have been expected if students were feeling too exhausted and drained to attend lectures, then they would also have been too tired and exhausted to cognitively engage in their studies.

In order to understand this unexpected relationship, it is useful to firstly look at the structure of the FAE programme. This programme commences in September, with the first interim assessment usually taking place in December, the second interim assessment being held in April, and the final exams being held in August, at the end of study leave. With the exception of study leave, students are balancing the demands of working, studying and completing assessments for nearly nine months of their FAE year. It is also relevant to highlight the past research which outlines that these exams are seen as a significant factor in a trainee accountants career progression (Anderson-Gough et al., 1998/2018; Flood & Wilson, 2008; Hamilton, 2013; Paisey & Paisey, 2014). For example, Hamilton (2013) outlined that the qualifying exams are high stake assessments and seen as the boundary to becoming a qualified accountant. Therefore, trainee accountants engage in their studies in such a way that provides them with the best chance of success (e.g. Flood & Wilson, 2008). In this research, the interview findings provide support for this view. For example, some students outlined that during the FAE year they managed their workloads to allow them cognitively engage in their interim assessments, despite exhaustion levels experienced from work. For example, a number of interviewees used the phrase "we do what we need to do to get through the year".

COR theory helps explain why work exhaustion does not negatively influence cognitive study engagement. This theory outlines that individuals will strive to retain, protect and build resources, and are mostly threatened by the potential or actual loss of resources (Hobfoll, 1989). As trainee accountants are motivated by the goal of qualification, which

is a measure of their professional competence (resource), students are likely to be motivated to protect and build this resource through cognitively engaging in their study tasks. Therefore, as demands (work exhaustion) could potentially threaten the achievement of this goal (resource), this might explain why, despite exhaustion levels, trainee accountants continue to cognitively engage in their study tasks.

This process of juggling the demands of working full time and studying can also be explained through the concept of *job crafting*. Job crafting emerges from the work engagement literature and describes behaviours in which employees proactively align the characteristics of their jobs with their own abilities, needs and preferences (Wrzesniewski & Dutton, 2001). Interestingly, studies exploring this concept have found that job crafting has motivational potential and can be facilitated by the design of jobs and the allocation of daily tasks (e.g. Cullinane, Bosak, Flood, & Demerouti, 2017). Applying this rationale to the findings of this study, it could be argued that trainee accountants are engaging in *study crafting*, whereby they are proactively aligning the study resources provided by the PAB in such a way that it meets their needs and preferences. Cheetham and Chivers (1998) also referred to a similar concept in their model of professional competence (Figure 2.2, Chapter Two). They outlined that personality traits can help or hinder the performance of particular professional roles, as individuals develop their own ways of doing things, in line with what suits their personalities. While the concept of study crafting was not specifically explored in this study, the interview findings suggest that some students experiencing exhaustion may be engaging in activities indicative of study crafting. For example, some interviewees indicated that when they did not attend technical lectures it allowed them more time to rest and cognitively engage in their study tasks in their own time. This is explained by the following student:

> One thing I did prefer though [instead of attending lectures], I re-watched the lectures as they [CAI] put the lectures up online […] that was much better because I could actually concentrate […] I could do it in my own time and I would be more alert and less jaded after work.
>
> P11, 2016 Cohort

It is also important to acknowledge that if trainee accountants are experiencing exhaustion, but are still cognitively engaged in their study tasks throughout the FAE year, they are likely to have very little rest. The experience of the following trainee captures the consequences of balancing work and cognitive study engagement, without adequate recovery time:

> We had a ridiculously busy period, and I was working from 9am to 1am for four weeks […] I passed out in work and banged my head [...] I had to be taken to hospital [...] During this time, I was sitting the elective assessment [...] I did not do any study up to the week before, because I knew I was off for a week, but during my week off, I was studying from 9-5, going back into work, staying there to 1am, and then going back to study the next morning. The morning of the exam, I sat it at 9.30am, finished at 12 noon or 12.30pm on a Saturday, and went back into the office at 1pm [...] the Wednesday after, I collapsed [...] It was all work-related.
>
> P8, 2016 Cohort

The consequences of inadequate recovery time were also voiced by other trainees. For example, one student, who admitted to taking very few breaks during the FAE year, outlined that even after taking two weeks off at the start of study leave she "did not feel back to normal" (P20, 2019 Cohort), and did not feel like studying until at least the fifth week of study leave. This aligns with the work of Sonnentag (2003) which outlined that regular breaks are more beneficial than longer rest periods (e.g. holidays). Another student outlined that they had been experiencing exhaustion for more than just the FAE year:

> I had gone from a four-year degree to three and a half years of constant work and exams […] then I had to repeat, so I never got a break the whole time […] I was absolutely wrecked. I was wrecked […] I was shattered […] The work-life balance was dreadful.
>
> P4, 2015 Cohort

In light of these findings, it is clear that despite exhaustion levels, trainee accountants are still committed to the goal of qualification, and therefore cognitively engage in their studies to ensure exam success. This may also explain why there was no mediated path between work exhaustion and exam performance through cognitive study engagement, which was unexpected. Given these insights, the sustainability of these work and study practices must be questioned. As the objective of the FAE is to provide a platform for the development of lifelong learning skills (IAESB, 2019), these findings are cause for concern. In addition, these experiences may contribute towards lower interest, enthusiasm, and dedication towards study tasks and may explain why trainee accountants in this study experience lower affective study engagement. This is discussed below.

6.7.3 Demands (Work exhaustion) and Affective Study Engagement

The quantitative findings found support for the negative relationship between work exhaustion and affective study engagement, measured as feelings of vigor (energetic, capable, feel like attending class) and dedication (proud, enthusiastic, inspired) towards studying. This result aligned with both the theoretical and empirical literature, as outlined in Chapter Three. For example, JD-R theory emphasises the negative psychological effects of exhaustion. As affective study engagement is the psychological dimension of study engagement, this negative relationship was expected. These findings are further explained through Hobfoll's (1989) COR theory, which supports the view that demands (exhaustion) may threaten or cause the loss of a trainee accountant's energetic resources (e.g. enthusiasm and interest) and can spillover into, and negatively affect, their professional studies. Similarly, Fredrickson's (2001) broaden and build theory supports these findings outlining that, negative emotions, such as those associated with exhaustion, can lead to reduced thoughts and actions, and hence, affective study engagement. This negative relationship can also be explained through effort-recovery theory. Given that exhaustion is associated with feelings of being tired and drained, it is reasonable that without adequate recovery time, these feelings lead to psychological costs and the depletion of an individual's energy, a key proposition of effort-recovery theory.

The interview findings help further explain the quantitative results. For example, a common theme amongst interviewees was that the negative emotions associated with working excessive overtime contributed towards lower affective study engagement.

> It's bleak [...] you resented studying [...] You finish your overtime, or you're off the worst of the busy jobs, and you're saying, "Oh, okay, I'm finally free, but I'm not, because now I have to spend all those additional hours studying" [...] your brain is so fatigued from doing a minimum of 50-hour weeks for three months that the concentration just was not there when it came to studying.
>
> P17, 2018 Cohort

> When I was working, it was awful. I hated it [my job], so intense. I was feeling so negative […] it basically came to a point where I just gave up, and I was like, "I am not going to get these [the FAE exams]. It's just too hard. There is too much to cover" [...] if you are working overtime, you are tired; you are stressed out; you are working long hours anyway; then, you just have this added anxiety […]. You have got exams coming up, and you do not have enough time to study.
>
> P10, 2016 Cohort

The experiences of these students provide some evidence of the psychological challenges of work exhaustion and how this hindrance demand can spillover and influence affective study engagement in a professional accounting education setting. By finding support for these spillover effects, this research builds on the current body of research which has found that accountants working excessive hours, particularly during busy season, experience exhaustion and lower energy and enthusiasm towards their work (e.g. Chong & Monroe, 2015; Sweeney & Summers, 2002). In addition to the spillover effects from the work domain to the study domain, the common views presented by the interviewees above, raises the question as to whether these negative emotions may have crossed over and caused lower affective study engagement amongst other students. This question emerges as a result of research which has found that both positive and negative emotions can crossover from groups or individuals to other individuals in the same domain (Bakker et al., 2005; Bakker et al., 2006).

Given the support above for the negative relationship between work exhaustion and affective study engagement, affective study engagement did not mediate the path between work exhaustion and exam performance. This result was inconsistent with prior research which found that affective engagement mediated the path between hindrance demands and performance related outcomes (e.g. LePine et al., 2004; Salanova et al., 2010). Exploring this result further, this may be due to there being no significant relationship found between affective study engagement and exam performance. As explained in Section 6.4.3, trainee accountants are commonly focused on the goal of qualification, rather than being intrinsically interested in, and enthusiastic, about their studies (e.g. Paisey & Paisey, 2014). It is also worthy to note that the quantitative findings did not reveal a negative relationship between work exhaustion and exam performance. This was similar to the results of other study engagement research, which found that the effects of working full-time did not have any impact on performance in undergraduate exams (e.g. Nonis & Hudson, 2006). This can be explained through the reasoning that demands from the work domain are most likely to have an impact on exam performance in the study domain, through a mediating variable, such as study engagement.

In summary, this discussion makes an important contribution to the accounting education, study engagement and JD-R literature, as it provides empirical support for the spillover effects of work exhaustion from the work domain to the study domain. This is also significant because no prior study explored the spillover effects of demands on the three

dimensions of study engagement. This discussion also highlights the need to consider the consequences of work exhaustion on the long-term wellbeing of trainee accountants.

6.8 Chapter Summary

This chapter discusses the results of the hypotheses testing. The results find support for the mediating role of both behavioural and cognitive study engagement in the engagement process. Therefore, these results provide some support for the main propositions of JD-R theory, its underlying theories, and the empirical work framing the study hypotheses. However, while these findings are informative, as outlined in Figure 5.3 (Chapter Five), this model suggests that together the resources, demands and engagement dimensions explored in this study, only explain approximately 9% of the variance in the exam performance variable (r^2 statistic). While this low variance in exam performance is in line with other studies (e.g. Gordon et al., 2008), it suggests that there are other variables that also predict exam performance, which have not been captured in this study. In addition, the qualitative data revealed a number of factors not captured in the survey which students considered important for their success in the FAE exams (e.g. peer support, in-house training). Therefore, while this research makes a number of important contributions, it also provides a useful starting point for future research in this area, all of which are discussed in more detail in the following chapter.

CHAPTER SEVEN: CONCLUSIONS

7.1 Introduction

The primary objective of this study was to conduct an in-depth examination of the study engagement of trainee accountants when preparing for the final qualifying exams of a professional accountancy body (PAB). This chapter commences by evaluating the achievement of this research objective. This is followed by a presentation of the contributions of this research to the accounting education literature, the study engagement literature and the JD-R literature. The practical recommendations, which have implications for PABs, accounting educators, accounting training firms and trainee accountants, are then discussed. The limitations of this research are then acknowledged, as well as the identification of areas for future research. The chapter closes with the researcher's reflections on this study, including the overall conclusion to this research.

7.2 Achievement of the Overall Research Objective

As outlined above, the overall objective of this research was to gain a better understanding of the study engagement of trainee accountants when preparing for the final qualifying exams of a professional accountancy body (PAB). In doing so, it was expected that this study would contribute, firstly, to a perceived gap in the accounting education literature, highlighting the need for more rigorous empirical research about how trainee accountants learn. Secondly, it was expected that this research would provide valuable insights into the quality of learning at the IPD stage, and whether this education programme was achieving its stated objectives. Thirdly, it was expected that this research would provide the foundation and rationale for future research exploring whether the study engagement experiences of trainee accountants at the IPD stage, has implications for their professional development and engagement in work tasks later in their careers. Research of this nature was considered to have important implications for the careers of these accountants, and in turn, the future of the accountancy profession.

On reflection, this study has achieved its research objectives. It has done so through the rigor applied to the design, conduct and analysis of each stage of the research. This approach facilitated an in-depth examination of how trainee accountants engage in their

professional studies, the factors that contribute to, and impede, the study engagement process, and some of the reasons why these factors influence study engagement and exam performance. The research was framed using JD-R theory, with a specific focus on the role of behavioural, cognitive, and affective study engagement in mediating the relationship between demands (work exhaustion), personal resources (academic self-efficacy), study resources (e.g. effective teaching practices) and exam performance.

The study findings revealed that trainee accountants' engagement in the FAE study programme is highly contextualised. They view the qualifying exams as a significant factor in their career progression, and are willing to do whatever it takes to get through the exams, with this intention evident in how they engage in their study tasks. As discussed in Chapter Six, the quantitative results revealed that work exhaustion, academic self-efficacy, and the study resources provided by the professional accountancy body, all influence the three types of study engagement in different ways. It was also found that cognitive study engagement was the only dimension of engagement that positively impacted on exam performance, while behavioural study engagement had a negative influence, and affective study engagement had no influence. Furthermore, it was found that study engagement played a mediating role in the relationship between some of the antecedent variables and exam performance.

While some of these results were expected, others were unexpected. For example, it was expected that academic self-efficacy would have a positive effect on all three types of study engagement. However, it was unexpected to find that study resources influenced the three dimensions of study engagement differently. For example, the positive relationship between effective teaching practices and behavioural study engagement was expected. However, this resource did not influence cognitive study engagement, which was unexpected. Similarly, work exhaustion impacted on the three types of study engagement differently, whereby it had a negative effect on behavioural and affective study engagement, which was expected, but had no impact on cognitive study engagement or exam performance, which was unexpected.

The interviews provided supplementary insights and possible reasons for these findings. For example, students revealed that they placed more value on lectures that focused on exam technique and were case study based, rather than lectures emphasising technical content. Furthermore, they revealed that despite exhaustion levels from work, trainees

managed their workloads and study tasks to ensure that they could still cognitively engage in their studies. This was the case, as trainees were committed to the goal of qualification, and saw cognitive study engagement as the key to achieving this goal. In summary, this research not only achieves its objectives but has also led to a number of research contributions, as discussed in the following section.

7.3 Research Contributions

This research offers a number of valuable contributions to the accounting education literature, the study engagement literature and the JD-R literature. There are also a number of practical implications of this research. All these contributions are discussed in the sections below.

7.3.1 Accounting Education Literature: Professional Education

As outlined in Chapter Two, quality education and the development of professional competence, is regarded as the cornerstone of any profession, as it is considered the key to public confidence in that profession (Jarvis, 1983). As study engagement is considered a research informed intervention to improve the quality of education in any educational setting (McCormick et al., 2013), this research highlights the importance of understanding the study engagement process of trainee accountants. In doing so, it also extends the accounting education literature by addressing some of the areas for future research highlighted in *The Routledge Companion to Accounting Education* (Wilson, 2014), including the need to better understand how trainee accountants learn. It also answers more recent calls to conduct quality empirical research in the accounting education field (Apostolou et al., 2020; Tharapos & Marriott, 2020).

This research specifically focuses on professional education at the IPD stage and presents evidence of how trainee accountants engage in learning at the early stages of their career. As education at the IPD stage is expected to lay the foundations for lifelong learning in the accountancy profession, this research has important implications for professional education programmes, and for how accountants engage in their work and professional development later in their careers. Given that these individuals are the future of the accountancy profession, this research makes an important contribution to the ongoing

debate as to whether accounting education is achieving its stated objectives. These contributions are considered from three perspectives. Firstly, student learning at the IPD stage. Secondly, how learning at the IPD stage has implications for the future careers of accountants and the accountancy profession, and thirdly, how this research acts as a guide for future empirical research in professional accounting education.

Student learning at the Initial Professional Development (IPD) stage. This current research is the first study to conduct a comprehensive exploration of study engagement in the field of professional accounting education. It specifically explores the mediating role of behavioural (attendance at lectures), cognitive (higher order learning) and affective (interest, enthusiasm, dedication) study engagement in the relationship between demands (work exhaustion), personal resources (academic self-efficacy), study resources (e.g. effective teaching practices) and exam performance. It therefore builds on the current body of professional accounting education research which is centered around three main themes; the predictors of exam success in the qualifying accountancy exams (e.g. Gammie, 2000; Gammie et al., 2004; Gammie & Kirkham, 2008); understanding how trainee accountants learn and how learning approaches impact on exam performance (e.g. Flood & Wilson, 2008; Hassall & Joyce, 1997, 2001); and the socialisation of trainee accountants (e.g. Anderson-Gough et al., 1998/2018, 2002; Grey, 1998; Hamilton, 2013; Paisey & Paisey, 2014).

More specifically, this current study contributes to these three themes of research by providing evidence about the learning experiences of trainee accountants through the lens of study engagement. For example, while the work of Gammie and colleagues was useful in providing information on the pre-entry factors influencing exam performance (e.g. undergraduate degree performance), Gammie herself outlined that it provided little evidence about the learning experiences of trainee accountants. The literature exploring the learning approaches of trainee accountants addressed some of these gaps. However, they too outlined that there was "considerable scope" for future research to further explore the factors influencing learning and performance in pre-qualification accounting education (e.g. Flood & Wilson, 2008). Recognising these gaps, this current study not only supports the results of previous studies but also builds on this research. For example, the quantitative results in this study found that cognitive study engagement (higher order learning) had a positive impact on exam performance, which supports the results of previous research (e.g. Flood & Wilson, 2008). This study also builds on this previous

work by exploring the other ways in which trainee accountants engage in their studies, how this impacts on exam performance, as well as the factors that both impede and facilitate this engagement process. For example, the quantitative results also found that behavioural study engagement negatively impacted on exam performance, affective study engagement had no impact, and other factors influenced study engagement and exam performance, both positively (e.g. clear exam guidelines) and negatively (e.g. work exhaustion).

Socialisation of trainee accountants. This study also contributes to the body of research on the socialisation of trainee accountants, as outlined in Section 2.3.2. A common theme in the socialisation literature is how trainee accountants, in forming their professional identity, often adapt to the norms and culture of their training firms. For example, it has been widely accepted that accountancy firms have a culture of working long hours and sacrificing personal time, including study time, to complete work-related tasks (e.g. Chong & Monroe, 2015; Fogarty et al., 2000; Paisey & Paisey, 2014). While it is expected that these factors can have major implications for the quality of learning at the IPD stage, there is little consideration of this in the literature. This research addresses this gap as it not only provides empirical support for the spillover effects of work exhaustion to the study domain, but it also presents possible reasons for the relationships found. For example, the quantitative results revealed that work exhaustion negatively impacted on behavioural and affective study engagement, but had no effect on cognitive study engagement or exam performance. Probing these results further, the interview findings revealed that when trainee accountants were experiencing exhaustion from their work, they were more likely to miss lectures (behavioural study engagement) and be less enthusiastic and energetic about their studies (affective study engagement). However, given their commitment to the goal of passing the qualifying exams, they continued to cognitively engage in their studies, as they saw this as important for their exam success and career progression.

Knowledge and skills developed at the IPD stage. This research also makes an important contribution to the long-standing debate in the accounting education literature regarding the knowledge and skills being developed in professional accountancy education (e.g. Boyce et al., 2019; Chaffer & Webb, 2017; Evans et al., 2014; Flood, 2014; Pierre & Rebele, 2014; Rebele & Pierre, 2019; Sangster et al., 2014). For example, in addition to the points discussed above, the interview data outlined that there is still

significant focus on the delivery of technical lectures in pre-qualification accounting education programmes. While students acknowledged that "learning" this content is important to develop a strong knowledge base, a view that is supported in the literature (e.g. Pierre & Rebele, 2014; Rebele & Pierre, 2019), they expressed a preference for more lectures that focus on the "application" of technical content to business type scenarios, as they believed it would be more beneficial to their learning. By revealing that the PAB in this study still places considerable focus on the delivery of technical lectures, these findings are somewhat concerning for both the education of trainee accountants and the future of the profession. These concerns are discussed in more detail below.

Future careers of accountants and the accountancy profession. Given that education at the IPD stage is considered to lay the foundations for continuous learning throughout ones career (e.g. IFAC, 2020), the concerns regarding the quality of learning, and the motivation to learn at this early stage of professional development, are important. Firstly, the results of this study indicate that trainee accountants, while committed to the goal of passing the qualifying exams, view exam qualification as the end goal, rather than viewing this educational experience as a platform for continuous learning. Consequently, this underlying motivation may impact on how they engage in their professional studies. These engagement patterns not only have implications for the quality of learning at the IPD stage, but they may also be indicative of how trainee accountants engage in both work and learning tasks after qualification. As a result, this may have implications for their future careers and thus the future of the accountancy profession. For example, the quantitative results indicate that on average trainee accountants in this study were not affectively engaged (energetic, enthusiastic and dedicated) in their studies on a regular basis. Given that past research has shown that engagement patterns are relatively stable over the long term (e.g. Maslach & Leiter, 2008; Salmela-Aro et al., 2009, 2011; Schaufeli & Bakker, 2010), this might suggest that accountants later in their career may also lack energy and enthusiasm towards learning at the CPD stages, and their work tasks as accountants. This in turn may lead to a number of negative outcomes (e.g. lower professional competence), which not only has implications for an accountants own career but also has important implications for the profession. In addition, this study also reveals that trainee accountants adapt to the culture of working long hours and juggling the demands of both working and studying. Past research has shown that such demands can sometimes stifle motivation to learn (e.g. LePine et al., 2004), and also cause high levels

of stress (e.g. Collins & Killough, 1989). Therefore, engagement in these practices not only has implications for professional development and work engagement at both the IPD and CPD stage, but it also has implications for the long-term wellbeing of these individuals.

These findings also pose the question as to what other values and norms trainee accountants accept in their quest to "becoming" a professional. For example, Empson (2004) highlighted that trainee accountants often internalise and accept other attributes, such as a reluctance to engage in critical questioning of accounting practices. The accountancy profession has an important duty to society, not only in the execution of its duties, but also in contributing towards the development of well-educated accountants. Therefore, any decline in the quality of learning, as well as the acceptance of values and norms that are misaligned with the objectives of the accountancy profession, has implications for both the future careers of accountants and the future of the profession. These concerns highlight the fundamental importance of conducting more research in this field, firstly to understand more about the socialisation process of trainee accountants, and secondly, to ensure that trainee accountants are adequately prepared for the workplace. This will help ensure that the accountancy profession does not bear the cost of poorly educated members or members not dedicated to their roles (Tharapos & Marriott, 2020). The contribution of this study to future research in this field is discussed below, and further developed in Section 7.5.

Guide for future empirical research in professional accounting education. In their most recent review of the accounting education literature, Apostolou et al. (2020) highlighted that there has been a stark decline in the average number of empirical studies in accounting education research. They specifically outlined that "despite three decades of encouragement to produce more empirical evidence to improve accounting education, empirical work may be in decline, with the percentages for the last four years being below the 29-year average" (Apostolou et al., 2020, p. 18). This study helps address some of these concerns, not only because it contributes to the empirical research in this field, but it also provides methodological and theoretical guidance for researchers seeking to explore the study engagement process of trainee accountants in future research. For example, this study supports a valid and psychometrically sound scale to measure each dimension of study engagement and antecedent variable in a professional accounting education setting. This is facilitated by the two-stage quantitative approach, whereby the

measurement model was built using data from Cohort 1, and then validated with data from Cohort 2, reaffirming the validity of the scales used. While some of the scales used in this study are specific to the professional accounting education field, this methodology can be applied to any educational setting. Therefore, this guide is also useful in the study engagement field, as outlined below.

7.3.2 Study Engagement Literature

This research contributes to the study engagement literature through its support for a theoretical framework to explore the process of study engagement, as well as providing conceptual clarity around the definition of study engagement. This is significant as these are two of the most common criticisms of this literature (e.g. Fredricks et al., 2016; Kahu, 2013; Trowler, 2010). While attempts have been made to address these gaps (e.g. Kahu, 2013; Kahu & Nelson, 2018; Zepke & Leach, 2010), agreement on a strong theoretical approach to understanding study engagement has not been reached. By empirically supporting JD-R theory, a well-developed theoretical framework, this research not only contributes towards the existing literature that applies JD-R theory in educational settings (e.g. Salanova et al., 2010; Salmela-Aro & Upadyaya, 2014), but it also provides a better understanding of the process of study engagement. Furthermore, the application of JD-R theory has supported the exploration of: 1) engagement as a multidimensional construct; 2) the influence of a range of resources and demands on study engagement; 3) the mediating role of engagement between antecedents and consequences; and 4) the influence of potential moderating variables on the engagement process.

Multi-dimensional definition of study engagement. The multidimensional definition of study engagement supported through this research, consists of behavioural, cognitive and affective dimensions. As all three dimensions of study engagement interact with the antecedent variables, and the outcome variable of exam performance, in different ways, these findings support the view that learning is not only a behavioural and cognitive process, but is also an emotional process (e.g. Fredricks et al., 2004; Kahu, 2013, 2014; Schaufeli et al., 2002). Consequently, failure to adopt a multidimensional definition would have resulted in a narrow view of study engagement, and would have limited the potential to fully understand the various ways in which students engage.

JD-R theory to explore the process of study engagement. This research also addresses calls in the literature to explore the relationships between the various dimensions of engagement, its antecedents and consequences (e.g. Fredricks et al., 2016; Kahu, 2013; Kahu & Nelson, 2018). Through the use of JD-R theory, this research has succeeded in developing the conceptual work of Kahu (2013) and Kahu and Nelson (2018), as well as finding support for some of the main propositions of these conceptual models. For example, this study has found support for defining engagement as a multidimensional construct and the role of antecedents and consequences in the engagement process. This study also helps expand their work. Firstly, this study has found support for both the positive and negative role of antecedent variables in the engagement process. Given that Kahu and Nelson's frameworks do not distinguish between the direction and nature of these relationships, this is an important contribution. Secondly, this study supports the mediating role of study engagement in the engagement process. As Kahu and Nelson (2018) specifically outline only four mediating variables, none of which are study engagement, this research makes a strong case for modifying these frameworks and refraining from specifically identifying mediating variables.

Methodological guide. As outlined in section 7.3.1 above, the methodology adopted in this study provides a useful guide for future research in the study engagement field. While some of the measurement scales in this study are specific to a professional accounting education context, overall, the study engagement measurement model, and the rigour applied to build this model and measure each variable, can be used to guide future research in any educational setting. The support for this multidimensional definition also addresses concerns that previous definitions lacked clarity and were less informative in understanding the engagement process (Fredricks et al., 2016; Gordon et al., 2008; Kahu, 2013; Pike 2013). This study has been able to address these concerns as it presents a clear definition, and valid measurement scale, for each dimension of study engagement, as well as using an objective performance measure based on a class ranking score. This study also demonstrates the value of mixed methods research, whereby quantitative findings are supplemented with individual student perspectives to enable a more detailed examination of both how, and why, students engage in their studies. This helps address the lack of research that explore individual patterns of study engagement, something which is called for in the literature (e.g. Fredricks et al., 2016; Kahu, 2013).

7.3.3 Job Demands-Resources (JD-R) Literature

This is the first study to apply JD-R theory using three dimensions of engagement (behavioural, cognitive and affective). This is significant, as the majority of studies using JD-R theory use only one dimension of engagement, affective study engagement (e.g. Bakker et al., 2007; Saks, 2006; Schaufeli et al., 2002). Secondly, this study tested and found support for a number of the propositions of JD-R theory outlined by Bakker and Demerouti (2017), and summarised in Chapter Three. In doing so, it also found support for the inclusion of additional propositions of JD-R theory.

Multi-dimensional definition of engagement. The use of the three-dimensional definition of engagement was supported both through the quantitative and qualitative findings, as well as being supported in the study engagement literature (e.g. Kahu, 2013; Kahu & Nelson, 2018), and the work engagement literature (e.g. Kahn, 1990). As outlined in Chapter Three, Kahn (1990) claimed that individuals exhibit engagement when they are physically engaged in tasks, cognitively attentive and empathetically connected to their work. Research advocating the use of definitions which map back to Kahn's conceptualisation of engagement (e.g. Rich, Lepine, & Crawford, 2010) have criticised the use of a single dimension in the work engagement field. Furthermore, as outlined in Figure 5.3 (Chapter Five), the use of the affective dimension in isolation, would have provided little insight into the mediating role of study engagement in the relationship between demands (work exhaustion), study resources (e.g. effective teaching practices), personal resources (academic self-efficacy), and exam performance. This would have resulted in there being much less scope to understand the various ways in which trainee accountants engage in their studies.

Propositions of JD-R theory. This research also found support for some of the propositions of JD-R theory. For example, it adds to the current body of research supporting the proposition that resources (personal and study) evoke a motivational process leading to study engagement and positive outcomes, including exam performance. Given the support that already exists for this proposition in the literature, the most novel contribution from this research, is exploring the process of engagement using demands and resources from two different domains - demands from the work domain and resources from the study domain. Furthermore, the negative spillover effects of hindrance demands in the form of work exhaustion to the study domain were tested.

While spillover hypotheses are supported in the literature, for example, spillover of demands into non-work domains (e.g. Bakker et al., 2005; Bakker et al., 2006; Demerouti et al., 2005; Hakanen & Schaufeli, 2012), it is not yet considered a main proposition of JD-R theory. This research now provides support for its inclusion. Furthermore, while it was originally theorised in this study that demands would have a negative impact on engagement, a relationship that has been examined in previous studies (e.g. Bakker et al., 2006; Harter et al., 2002; LePine et al., 2004; Salanova et al., 2010; Xanthopoulou et al., 2007), the main propositions of JD-R theory focus on the role of demands in the health impairment process leading to burnout, rather than its impact on engagement. Therefore, the findings from this study indicate that there is scope to develop another key proposition of JD-R theory, acknowledging that demands from one domain can spillover and influence the motivational process leading to engagement, in another domain.

In summary, this concludes the main contributions of this research to the existing literature. In addition to these contributions, a number of practical implications and recommendations are evident. These are discussed below.

7.4 Practical Implications and Recommendations

IFAC (2020) outlined that the role of accountants is rapidly changing, and while professional accountancy organisations must prepare its members to thrive in this changing world, they also require all members to take responsibility for their continuing professional development and engage in increased self-directed learning and personal exploration. As the IPD stage is considered to lay the foundations for self-directed continuous learning (IAESB, 2019), the findings from this study have practical implications for PABs, accounting educators, accounting training firms and trainee accountants.

Goal of qualification. As outlined in Section 7.3.1, the findings revealed that while trainee accountants invest in self-directed learning when preparing for the final qualifying exams, the incentive to do so seems to be for the title of "Chartered Accountant", rather than being interested in the syllabus or content, or their future professional learning. Given that the accountancy profession is distinguished based on the specialised skills and knowledge of its members (e.g. Abbott, 1988/2014), these findings may have implications for the future careers of these accountants, and thus the

profession. Furthermore, any notable decline in educational quality and the development of specialised skills and knowledge may also negatively impact on attracting future graduates to the profession (Tharapos & Marriott, 2020).

Risks of work exhaustion. These motives may be explained by the quantitative results which suggest that, even when trainee accountants are experiencing work exhaustion, they balance the demands of working and study, to do what it takes to pass the qualifying exams, and successfully complete their work tasks. As identified in previous research, this is an accepted part of the socialisation process of becoming an accountant (e.g. Empson, 2004; Grey, 1998; Hamilton, 2013). However, given the consequences of work exhaustion to the long-term wellbeing of an individual (e.g. Maslach & Schaufeli, 2017), this is something which PABs, accounting training firms and trainee accountants should be aware. Trainee accountants are also considered at greater risk of exhaustion than their more experienced colleagues, due to the demands of working long hours and studying (e.g. Carcello et al., 1991; Chong & Monroe, 2015; Fogarty et al., 2000; Sweeney & Summers, 2002). While prior research has suggested that measures such as capping the extra hours worked by accountants during busy season may be a possible way to address exhaustion levels (e.g. Sweeney & Summers, 2002), there is little evidence of any reforms being made. Therefore, given the results of this study, and the importance placed on adequate recovery time to help deal with the negative consequences of work exhaustion (e.g. Sonnentag, 2003), PABs may be encouraged to implement measures to help address this issue.

Self-efficacy as an intervention. The results of this study also highlight the importance of academic self-efficacy in predicting study engagement in this setting. As self-efficacy can be influenced through interventions such as training and support (Bakker et al., 2014; Luthans, Avey, Avolio, Norman, & Combs, 2006; Ouweneel et al., 2011; Saks, 1995; Zimmerman, 2000), professional bodies and training firms may want to invest additional resources in this regard. For example, education research has found that learning communities formed around certain academic activities strengthen students' positive self-efficacy beliefs (Bresó et al., 2011; Umbach & Wawrzynski, 2005). This was also a theme prevalent in the interview data, where some students highlighted a preference to study with peers. Furthermore, in certain training firms, students were provided with an area which served as a form of learning community and was considered a useful resource to build confidence by those that could avail of it.

Study resources. The results also suggested that the study resources provided by the PAB influenced the three dimensions of study engagement and exam performance in different ways. For example, the interview findings outlined that perceived poor-quality lectures and availability of asynchronous online lectures discouraged lecture attendance (behavioural study engagement). Students also expressed that they were less likely to attend technical lectures, as they did not consider these as beneficial to their learning as case study lectures. The focus on transmission of technical content in lectures was not in keeping with the applied nature of the qualifying exam which featured in this study, something which has been widely criticised in the literature (e.g. Boyce et al., 2019; Chaffer & Webb, 2017; Sangster et al., 2014). Therefore, PABs should examine the alignment between the curriculum, teaching and assessment in their professional education programmes. The findings of this research may also inform how the professional body can tailor the delivery of their professional education programme, in a way that encourages higher engagement and learning (e.g. moving more content online, smaller class sizes). Interestingly, like all educational institutions, online learning is something which PABs have been required to embrace in recent months due to the challenges of the coronavirus (COVID-19) pandemic (e.g. Malan, 2020). This is discussed in more detail in the section below.

7.5 Limitations and Future Research

This section commences by discussing the limitations of this study. Within these limitations a number of opportunities for future research were identified. This section closes with an overview of how this study can advance research in the professional accounting education field.

Limitation one. The first limitation of this study relates to the use of a self-reported survey to collect the main study data which increases the risk of common method variance. While the results of common method variance testing indicated that it was an issue in both Cohort 1 and Cohort 2 of this dataset, this was accounted for through the use of a common latent factor (see Section 5.4.2). Additionally, given that the performance data was obtained objectively, it reduces the risk that common method variance affected the study results. While the practice of using self-reported measures is the foundation of much empirical research in the engagement field, there have been recent

calls to integrate more objective measures of demands, resources and outcomes (Bakker & Demerouti, 2017). While this research addresses this call by using an objective performance measure, there is scope to conduct further research using objective measures of demands and resources.

Limitation two. The second limitation is the acknowledgement that JD-R theory is a descriptive theory which does not provide psychological explanations for the relationships between variables (Schaufeli & Taris, 2014). While noting this limitation, every effort was made to overcome it, by drawing on a range of other theories when analysing and discussing the findings. This practice is common in any research applying JD-R theory.

Limitation three. The third limitation relates to the measurement of certain variables. ***The first measurement limitation*** relates to the use of a domain specific measure of academic self-efficacy (i.e. professional accountancy education), but does not use a task specific measure (e.g. academic self-efficacy for each subject area including tax, audit etc). While the literature supports a range of general and task specific self-efficacy measures, there is a body of research which specifically supports the use of task-specific measures (e.g. Bandura, 1977; Saks, 1995). While task specific measures can provide information related to each subject, that level of detail was not considered necessary in this study, as not all students studied the same elective subjects. However, recognising the value of task specific measures, this may be an area of interest in future research.

The second measurement limitation relates to the measurement of behavioural study engagement, which was measured as lecture attendance. As revealed through the interview findings, trainee accountants behaviourally engage in their studies in many ways, other than through lectures provided by the PAB. For example, many reported attending in-house lectures provided by their training firm. Based on these insights, future research could include alternative measures of behavioural study engagement. This is supported by research that has highlighted the need to capture engagement activities inside and outside class (e.g. Burch et al., 2015).

The third measurement limitation relates to the exam performance variable. As explained in Section 4.4.1, exam performance in this study was measured using a class ranking (decile) score, which ranged from 1 (bottom 10%) to 10 (top 10%). This

performance score addressed some of the concerns in previous studies regarding the lack of variation in the pass/fail classification of FAE results (Flood & Wilson, 2008). However, when compared to more traditional performance measures (e.g. percentage scores), this measure is limited in explaining the variation in exam performance. Furthermore, decile score is a class ranking score, so a students' ranking is relative to the performance of their peers in that year. However, since the data for this study was gathered, CAI has removed the decile score as a performance measure and reintroduced percentage grades. Therefore, it would be worthwhile to replicate this study again with this new performance measure. Additionally, it must also be acknowledged, similar to other studies (e.g. Flood & Wilson, 2008; Jackling, 2005), that exam performance is only one measure of competence, and other measures could also be used. For example, in a recent IFAC report they outlined that proficiency in completing work-based tasks is a valid measure of professional competence (IFAC, 2019). Therefore, future studies may consider exploring other measures of competence.

Limitation four. The fourth limitation relates to the cross-sectional nature of the survey data. Although the exam performance data relates to a separate point in time, the survey data was limited in its ability to adequately reflect on the process of engagement and the reciprocal relationships amongst variables. For example, a common theme mentioned throughout this study was the spillover effects of work exhaustion to the study domain. While the qualitative data provided some support for these spillover effects over time, the survey data is limited in determining spillover effects, as it only looks at one point in time. That said, the nature of how the questions were asked in the survey did require students to reflect on their experiences over the course of the FAE year and not just on the day the survey was being administered. Another theme suggested in the qualitative data was that self-efficacy may be both an antecedent and a consequence of engagement. However, due to the cross-sectional nature of the survey data it was not possible to test for reciprocal relationships. Additionally, this study did not capture the extent to which engagement and other variables, including work exhaustion and self-efficacy, vary over time and with intensity, something which has been found in other studies (e.g. Ouweneel et al., 2011). Therefore, future research of a longitudinal nature would address these limitations. Related to this, future research could use the control variables (e.g. gender, past experience) to uncover some of the sources of self-efficacy beliefs and exhaustion levels of trainee accountants. For example, past research on

medical students revealed an increase in exhaustion with each year of work and study (e.g. Santen, Holt, Kemp, & Hemphill, 2010). This suggests that trainee accountants who have been balancing the demands of working and studying for a number of years may be at greater risk, something which was also suggested through the interview data in this study.

Limitation five. The fifth limitation of this research relates to the predictive capability of the variables in the overall model. In Figure 5.3 (see r^2 statistics above each dependent variable), the variables under observation explained; 20% of the variance in behavioural study engagement, 8% of the variance in cognitive study engagement, 75% of the variance in affective study engagement, and 9% of the variance in exam performance. These results suggest that there may be other variables not captured at the quantitative stage which may also be predictors of study engagement and exam performance in this research setting, or which may demonstrate alternative ways in which students engage in their studies. For example, the interview findings revealed that students engage in their professional studies in ways not captured in the original survey. These include watching asynchronous lectures online, attending in-house training provided by the training firm and attending specialised private grind schools. Furthermore, given that the mainstream education model now adopted by this professional body is centered around online learning, as a result of the coronavirus (COVID-19) pandemic, there is a need to reflect these changes in future measures of behavioural study engagement. These limitations also highlight the scope to explore other concepts presented in the engagement literature. These include concepts such as study crafting and the crossover effects of work exhaustion amongst, for example, peer groups. In addition, there is scope to explore other propositions of JD-R theory such as the health impairment process leading to study burnout.

Limitation six. The sixth limitation relates to the generalisability of these results. While the two-phase approach to the quantitative data analysis provided support regarding the generalisability of the study across years, the findings only relate to one PAB in Ireland. Therefore, it would be useful to extend this research to additional cohorts and other professional bodies, to determine whether this research can be generalised to other professional accounting contexts, as well as other educational settings. It would also be useful to gain the perspectives of other stakeholders, including the professional body and training firms. In addition, as outlined above, this current study explores trainee

accountants engagement in an education model that is primarily delivered through face-to-face lectures. Therefore, in light of the challenges of the coronavirus (COVID-19) pandemic, which has led to this education programme now being delivered online, the generalisability of this methodology and framework to future research must be considered. This will be particularly relevant if the current online education model of this PAB and other PABs becomes the mainstream mode of delivery. That said, recent research has highlighted that many of the principles of study engagement remain the same regardless of the educational setting (e.g. Blakey & Major, 2019; Buelow et al., 2019; Burch et al., 2015; Malan, 2020). Therefore, this study serves as a useful foundation for future research exploring study engagement in an online setting, something which is being called for in the accounting education literature (e.g. Sangster, Stoner, & Flood, 2020).

Future research in the professional accounting education field. While the discussion above highlights the limitations of this current research, there is scope to use this study as the foundation to advance research in the professional accounting education field. In the first instance, future research has the potential to build on this current work to help better understand and improve the quality of education for trainee accountants at the IPD stage. In doing so, this body of research can advance the ongoing debate as to whether accounting education is achieving its stated objectives, and whether further reforms need to be made. This research also provides the foundation to explore the longer-term study and work engagement habits of accountants, and whether the patterns of study engagement experienced at the IPD stage informs later work engagement and learning after qualification. For example, past research in the professional accounting education field highlights the importance of the IPD stage in "making the accountant" (e.g. Anderson-Gough et al., 1998/2018, 2002; Paisey & Paisey, 2014). Therefore, future studies could explore which dimension of study engagement (behavioural, cognitive or affective) has the strongest influence on how accountants engage in their roles as professionals after qualification. Moreover, further research in this area could explore specific findings of this study, such as whether the lower levels of affective study engagement experienced by trainees predict future work engagement and learning at the CPD stage.

The study engagement literature also supports future research of this nature. This was indicated in past research finding that study engagement strategies (e.g. task focused

academic strategies) at university, influenced early career work engagement and burnout (e.g. Salmela-Aro et al., 2009, 2011). Furthermore, research in the work psychology field generally supports the view that engagement levels remain relatively stable over time (e.g. Schaufeli & Bakker, 2010). In addition, there is evidence that signs of exhaustion early in one's career is a warning sign of impending problems (Maslach & Leiter, 2008). Similarly, other research has highlighted that engaged individuals are motivated to stay engaged in order to build resources over time (e.g. Bakker & Demerouti, 2017). There is also scope to carry out more research on the relationships between the three dimensions of study engagement and their role in the engagement process. This would not only address calls in the literature for more research to understand how each of the dimensions interact (e.g. Boykin & Noguera, 2011) but would also facilitate a broader understanding of the overall engagement process. Given the importance of these research avenues in understanding the engagement and development of accountants throughout their career, research of this nature would also help address concerns that accounting education research lacks relevance to the accounting profession (e.g. Tharapos & Marriott, 2020).

This concludes the discussion on the research limitations and areas for future research. The following sections outline the reflections of the researcher and the conclusion.

7.6 Reflections of the Researcher

I commenced this study having experienced the process of preparing for the FAE of CAI. Since qualification, I have been primarily involved with students in the higher education sector, many of whom go forward to complete the professional accountancy exams. In addition, I was also directly involved in the FAE support provided by the accountancy firms prior to the conduct of this study. Overall, I have not been hugely surprised by the study engagement patterns of trainee accountants and the factors influencing engagement and exam performance found in this study.

Expected findings. Firstly, I am aware of the culture in training firms, whereby the expectation is to work long hours while still being expected to study for, and pass, the FAE. Therefore, I can empathise with those who experienced exhaustion but who balanced the demands of working and cognitively engaging in their professional studies to ensure success in the FAE. Secondly, I understand why the case study format of the FAE, which requires students to analyse, integrate and synthesise ideas from different

sources, and apply professional judgement, encourages cognitive study engagement. I also appreciate why trainee accountants prioritise attending lectures which focus on building skills in the case study method. It was also expected that students with high self-efficacy beliefs would be more engaged. Therefore, overall, the influence of these study and personal resources on study engagement was mostly in line with my expectations.

Unexpected findings. There were a number of findings which I did not expect. The extent to which work exhaustion affected some students was surprising. For example, the interview data revealed that there was an incident of a student being hospitalised due to chronic exhaustion, with other students outlining that it took months to overcome the exhaustion levels experienced. It was also unexpected to find that behavioural study engagement (lecture attendance) had a negative influence on exam performance, and that affective study engagement (e.g. energy, pride, enthusiasm) did not influence exam performance. That said, when the interview findings were considered, it became more evident as to why these results emerged. For example, the interview findings showed a pattern that students who preferred to have more support from lecturers, some of which had experienced exam failure in the past, were more likely to attend lectures. Therefore, the negative relationship between behavioural study engagement (lecture attendance) and exam performance could be partly attributed to past performance, and possible discomfort with self-directed learning. The interview findings also revealed that many students did not consider affective study engagement important for success in the FAE. Instead, they placed significant emphasis on the role of cognitive study engagement in achieving exam success. It was also unexpected to see the limited value placed on some study resources provided by the PABs, with many students drawing on other resources including, peer groups, private grind schools and in-house training.

Personal development. As a result of this study, I have learned a lot that will develop me both as an accounting educator and as a researcher. Firstly, I have gained a better understanding of the variety of ways in which students engage in professional accountancy education, as well as the factors that influence their study engagement and exam performance, findings which are also likely to be applicable in the higher education setting. I am also more conscious of the impact that I as an educator can have on students engagement through my teaching style, my preparedness for lectures and the content and orientation of my lectures. Therefore, personally, this research has value in the classroom, which Sangster, Fogarty, Stoner, and Marriott (2015) outline as an important measure of

impact in education research. This study has also allowed me to gain a more thorough understanding of how to conduct research. For example, I have gained confidence in my ability to design and conduct a research project, and to analyse and interpret findings. Therefore, while this project has been at times challenging, it has also been very rewarding, and I hope it will provide a strong foundation as I embark on future research.

Implications for stakeholders. This research also has important implications for a range of critical stakeholders, including accountants, PABs, accounting educators, training firms and society. As professional accounting education plays a critical role in educating the accounting professionals and business leaders of tomorrow, any decline in the quality of accounting education will result in graduates being inadequately prepared for the workplace (Tharapos & Marriott, 2020). Therefore, research like the current study that seeks to understand more about the learning experiences of trainee accountants, and how this can impact on their future careers, is important.

7.7 Conclusion

This chapter draws this research to a close. This study is the first attempt at untangling the complexity of the study engagement process in a professional accounting education setting. It has therefore not only achieved the overall objective of this research, but it has made a number of important contributions to the professional accounting education literature, the study engagement literature and the JD-R theory literature. The practical implications and recommendations of this research were also presented, with a number of notable contributions to the PABs, accounting educators, accounting training firms and trainee accountants. This chapter also acknowledged the limitations of this research, as well as potential areas of future research. The most notable area of future research is the potential to build a body of work exploring the concept of study engagement in professional accounting education settings. The final section presented the researchers' own reflections on the findings from this study, concluding with the value of this research journey to her development both as a teacher and as a researcher.

REFERENCES

Abbott, A. (2014). The system of professions: An essay on the division of expert labor. Chicago, IL: University of Chicago press. (Original work published in 1988).

Accounting Education Change Commission (AECC). (1990). Objectives of education for accountants: Position Statement No. 1. *Issues in Accounting Education, 5*(2), 307-312.

Adler, N. J., & Harzing, A. W. (2009). When knowledge wins: Transcending the sense and nonsense of academic rankings. *Academy of Management Learning & Education*, *8*(1), 72-95.

Adler, R. W., & Milne, M. J. (1997). Improving the quality of accounting students' learning through action-oriented learning tasks. *Accounting education, 6*(3), 191-215.

Albrecht, W. S., & Sack, R. J. (2000). *Accounting education: Charting the course through a perilous future*. Sarasota, FL: American Accounting Association.

Altbach, P. (2015). Higher education and the WTO: Globalization run amok. *International Higher Education, 23,* 2-4.

American Accounting Association (AAA). (1990). Bedford Committee on the Future Structure, Content and Scope of Accounting Education, "Future accounting education: Preparing for the expanding profession", *Issues in Accounting Education,* 1, 307-312.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411-423.

Anderson-Gough, F., Grey, C., & Robson, K. (2001). Tests of time: organizational time-reckoning and the making of accountants in two multi-national accounting firms. *Accounting, Organizations and Society, 26*(2), 99-122.

Anderson-Gough, F., Grey, C., & Robson, K. (2002). Accounting professionals and the accounting profession: Linking conduct and context. *Accounting and Business Research, 32*(1), 41-56.

Anderson-Gough, F., Grey, C., & Robson, K. (2018). Making up accountants: The organizational and professional socialization of trainee chartered accountants. Routledge. (Original work published in 1998).

Apostolou, B., Dorminey, J. W., & Hassell, J. M. (2020). Accounting education literature review (2019). *Journal of Accounting Education*, 100670. Retrieved from https://www.sciencedirect.com/science/article/pii/S0748575120300245?casa_token=Kf7ApL7EEE8AAAAA:9nt8yN-_PJK2o78CeQ305bN-CGsDaICXMT-QR3Gx1Krwz2R6R3SuN1BCHQ2rHy4kP36XCypuhg

Arthur Andersen, Co., Arthur Young, Coopers, Lybrand, Deloitte Haskins & Sells, Ernst & Whinney, Peat Marwick Mitchell, Price Waterhouse, & Touche Ross. (1989). Perspectives on education: Capabilities for success in the accounting profession. New York: Author.

Association of Certified Chartered Accountants (ACCA). (2018). Looking to the future. Leading the way. Retrieved from https://www.accaglobal.com/content/dam/ACCA_Global/Members/AB/2018/September/AB-INT-Sept-2018.pdf

Astin, A. W. (1970). The methodology of research on college impact: Part one. *Sociology of Education,* 43, 223-254.

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*(4), 297-308.

Astin, A. W. (1993). What matters in college? (Vol 9) *Four critical years revisited.* San Francisco: Jossey-Bass.

Bakker, A. B., & Costa, P. L. (2014). Chronic job burnout and daily functioning: A theoretical analysis. *Burnout Research, 1*(3), 112-119.

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, *22*(3), 309-328.

Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273-285.

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD–R approach. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 389-411.

Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2005). The crossover of burnout and work engagement among working couples. *Human Relations*, *58*(5), 661-689.

Bakker, A. B., Emmerik, H. V., & Euwema, M. C. (2006). Crossover of burnout and engagement in work teams. *Work and occupations*, *33*(4), 464-489.

Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, *99*(2), 274-284.

Ballantine, J. A., Duff, A., & Larres, P. M. (2008). Accounting and business students' approaches to learning: A longitudinal study. *Journal of Accounting Education*, *26*(4), 188-201.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), 191-215.

Bandura, A. (1989). Regulation of cognitive processes through perceived self-efficacy. Developmental Psychology, 25(5), 729-735.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Macmillan.

Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88(1), 87-99.

Baron, P., & Corbin, L. (2012). Student engagement: Rhetoric and reality. *Higher Education Research & Development*, *31*(6), 759-772.

Basit, T. (2003). Manual or electronic? The role of coding in qualitative data analysis. *Educational research*, 45(2), 143-154.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin*, 117(3), 497-529.

Beattie, V., Collins, B., & McInnes, B. (1997). Deep and surface learning: A simple or simplistic dichotomy? *Accounting Education: An International Journal*, 6(1), 1-12.

Behn, B. K., Ezzell, W. F., Murphy, L. A., Rayburn, J. D., Stith, M. T., & Strawser, J. R. (2012). The Pathways Commission on Accounting Higher Education: Charting a national strategy for the next generation of accountants. *Issues in Accounting Education*, *27*(3), 595-600.

Biggs, J. B. (1978). Individual and group differences in study processes. *British Journal of Educational Psychology*, *48*(3), 266-279.

Biggs, J. B. (2011). *Teaching for quality learning at university: What the student does*. Berkshire, UK: McGraw-Hill Education.

Blakey, C. H., & Major, C. H. (2019). Student Perceptions of Engagement in Online Courses: An Exploratory Study. *Online Journal of Distance Learning Administration*, *22*(4). Retrieved from https://www.westga.edu/~distance/ojdla/winter224/blakeymajor224.html

Blankley, A. I., Kerr, D., & Wiggins, C. E. (2017). The state of accounting education in business schools: An examination and analysis of active learning techniques. *Advances in Accounting Education: Teaching and Curriculum Innovations*, *21*, 101-124.

Bloom, B. S. (1956). *Taxonomy of educational objectives*: *Vol. 1. Cognitive domain*. New York: McKay.

Bloom, B. S. (1974). Time and learning. *American psychologist*, *29*(9), 682.

Booth, P., Luckett, P., & Mladenovic, R. (1999). The quality of learning in accounting education: The impact of approaches to learning on academic performance. *Accounting Education*, *8*(4), 277-300.

Boritz, J. E., & Stoner, G. N. (2014). Technology in accounting education. In *The Routledge companion to accounting education* (pp. 385-413). Routledge.

Boyce, G., Narayanan, V., Greer, S., & Blair, B. (2019). Taking the pulse of accounting education reform: liberal education, sociological perspectives, and exploring ways forward. *Accounting Education*, *28*(3), 274-303.

Boyce, G., Williams, S., Kelly, A., & Yee, H. (2001). Fostering deep and elaborative learning and generic (soft) skill development: The strategic use of case studies in accounting education. *Accounting Education*, *10*(1), 37-60.

Boykin, A. W., & Noguera, P. (2011). *Creating the opportunity to learn: Moving from research to practice to close the achievement gap.* ACSD: Association for Supervision and Curriculum Development

Brannen, J. (Ed.). (2017). *Mixing methods: Qualitative and quantitative research*. Routledge.

Brannick, M. T., Chan, D., Conway, J. M., Lance, C. E., & Spector, P. E. (2010). What is method variance and how can we cope with it? A panel discussion. *Organizational Research Methods*, *13*(3), 407-420.

Braxton, J. M., Sullivan, A. S., & Johnson, R. M. (1997). Appraising Tinto's theory of college student departure. *Higher Education*, *12*, 107-164.

Bresó, E., Schaufeli, W. B., & Salanova, M. (2011). Can a self-efficacy-based intervention decrease burnout, increase engagement, and enhance performance? A quasi-experimental study. *Higher Education*, *61*(4), 339-355.

Brown, T. A. (2006). *Confirmatory factor analysis for applied research.* New York, NY: Guilford Press.

Bryman, A. (2016). *Social research methods*. Oxford: Oxford University Press.

Bryson, C. (Ed.) (2014). *Understanding and developing student engagement*. London: Routledge.

Bryson, C., G. Cooper, & C. Hardy. (2010, December). *Reaching a common understanding of the meaning of student engagement.* Wales: Society of Research into Higher Education Conference.

Buchheit, S., Dalton, D. W., Harp, N. L., & Hollingsworth, C. W. (2016). A contemporary analysis of accounting professionals' work-life balance. *Accounting Horizons,* 30(1), 41-62.

Buelow, J. R., Barry, T., & Rich, L. E. (2018). Supporting Learning Engagement with Online Students. *Online Learning*, *22*(4), 313-340.

Burch, G. F., Heller, N. A., Burch, J. J., Freed, R., & Steed, S. A. (2015). Student engagement: Developing a conceptual framework and survey instrument. *Journal of Education for Business*, *90*(4), 224-229.

Burnett, R., Friedman, M., & Yang, Y. W. (2009). The change of students' perception of accounting skills in intermediate accounting: A guide for accounting education reform. *The Accounting Educators' Journal*, 18, 81-101.

Burrell, G., & Morgan, G. (1979). *Sociological paradigms and organisational analysis: Elements of the sociology of corporate life*. London: Routledge.

Byrne, M., Flood, B., & Griffin, J. (2014). Measuring the academic self-efficacy of first-year accounting students. *Accounting Education, 23*(5), 407-423.

Byrne, M., Flood, B., & Willis, P. (2002). The relationship between learning approaches and learning outcomes: A study of Irish accounting students. *Accounting Education*, *11*(1), 27-42.

Caliskan, A., & Ergun, Y. A. (2012). Examining job satisfaction burnout and reality shock amongst newly graduated nurses. *Procedia-Social and Behavioral Sciences*, *47*, 1392-1397.

Campbell, C. M., & Cabrera, A. F. (2011). How sound is NSSE?: Investigating the psychometric properties of NSSE at a public, research-extensive institution. *The Review of Higher Education*, *35*(1), 77-103.

Campbell, C. M., & Cabrera, A. F. (2014). Making the mark: Are grades and deep learning related?. *Research in Higher Education*, *55*(5), 494-507.

Cappelletto, G. (2010). *Challenges facing accounting education in Australia*. Melbourne: AFAANZ.

Carcello, J. V., Copeland Jr, J. E., Hermanson, R. H., & Turner, D. H. (1991). A public accounting career: The gap between student expectations and accounting staff experiences. *Accounting Horizons*, *5*(3), 1.

Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in Higher Education*, *47*(1), 1-32.

Carr-Saunders, A. M., & Wilson, P. A. (1933). *The professions*. Oxford: Clarenden Press.

Carroll, J.B. (1963). *A model of school learning*. Teachers College Record, 64, 723-733.

Carroll, J. B. (1989). The Carroll Model: A 25-year Retrospective and Prospective View. *Educational Researcher* 18 (1): 26–31.

Chaffer, C., & Webb, J. (2017). An evaluation of competency development in accounting trainees. *Accounting Education*, *26*(5-6), 431-458.

Chartered Accountants Ireland (CAI). (2016). Final Admitting Examination explanatory information. Retrieved from https://www.charteredaccountants.ie/docs/default-source/dept-exams/explanatory-information--results-letter.pdf?sfvrsn=4

Chartered Accountants Ireland (CAI). (2020a). Attendance Requirements. Retrieved from https://www.charteredaccountants.ie/docs/default-source/Students/1819/general-shared-information/attendance-requirements.pdf?sfvrsn=6

Chartered Accountants Ireland (CAI). (2020b). Course Description. Retrieved from https://www.charteredaccountants.ie/Prospective-Students/Course-description.

Chartered Accountants Ireland (CAI). (2020c). How does being a member support my career?. Retrieved from https://www.charteredaccountants.ie/Members/Your-Institute/Annual-Subscription-Fees/fees-and-subscriptions-faq

Cheetham, G., & Chivers, G. (1998). The reflective (and competent) practitioner: A model of professional competence which seeks to harmonise the reflective practitioner and competence-based approaches. *Journal of European Industrial Training*, *22*(7), 267-276.

Cheetham, G., & Chivers, G. (2000). A new look at competent professional practice. *Journal of European Industrial Training, 24*(7), 374-383.

Chemers, M. M., Hu, L. T., & Garcia, B. F. (2001). Academic self-efficacy and first year college student performance and adjustment. *Journal of Educational Psychology*, *93*(1), 55-64.

Cheung, M. W. L. (2007). Comparison of methods of handling missing time-invariant covariates in latent growth models under the assumption of missing completely at random. *Organizational Research Methods, 10*(4), 609-634.

Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 3*, 1-7.

Chong, V. K., & Monroe, G. S. (2015). The impact of the antecedents and consequences of job burnout on junior accountants' turnover intentions: a structural equation modelling approach. *Accounting & Finance*, *55*(1), 105-132.

Coates, H. (2005). The value of student engagement for higher education quality assurance. *Quality in Higher Education, 11*(1), 25-36.

Coates, H., & Krause, K. L. (2005). Investigating ten years of equity policy in Australian higher education. *Journal of Higher Education Policy and Management*, *27*(1), 35-46.

Coates, H., & McCormick, A. C. (Eds.). (2014). *Engaging university students: International insights from system-wide studies*. Berlin: Springer, Dordrecht

Coffey, A. J. (1994). Timing is everything'; graduate accountants, time and organizational commitment. *Sociology,* 28(4), 943-956.

Cohen, J. (1992). Statistical power analysis. *Current directions in psychological science, 1*(3), 98-101.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Multiple regression/correlation with two or more independent variables. Applied multiple regression/correlation analysis for the behavioral sciences*. New York, NY: Routledge.

College Student Experiences Questionnaire (CSEQ). (2013). College activities. Retrieved from http://cseq.indiana.edu/cseq_collegeactivities.cfm

Collins, K. M., & Killough, L. N. (1989). Managing stress in public accounting. *Journal of Accountancy*, *167*(5), 92-98.

Cotton, S., Dollard, M., & De Jonge, J. (2002). Stress and student job design: Satisfaction, well-being, and performance in university students. *International Journal of Stress Management, 9*, 147-162.

Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: a theoretical extension and meta-analytic test. *Journal of applied psychology*, *95*(5), 834-848.

Creswell, J. W., & Creswell, J. D. (2005). Mixed methods research: Developments, debates, and dilemmas. Research in organizations: Foundations and methods of inquiry, 315-326.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage publications.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks, CA: Sage Publications.

Cruce, T. M., Wolniak, G. C., Seifert, T. A., & Pascarella, E. T. (2006). Impacts of good practices on cognitive development, learning orientations, and graduate degree plans during the first year of college. *Journal of College Student Development*, *47*(4), 365-383.

Cullinane, S. J., Bosak, J., Flood, P. C., & Demerouti, E. (2017). Job crafting for lean engagement: The interplay of day and job-level characteristics. European Journal of Work and Organizational Psychology, 26(4), 541-554.

Curtis, S., & Shani, N. (2002). The effect of taking paid employment during term-time on students' academic studies. *Journal of further and higher education*, *26*(2), 129-138.

Daft, R. L. (1983). Learning the craft of organizational research. *Academy of Management Review*, *8*(4), 539-546.

Davidson, R. A. (2002). Relationship of study approach and exam performance. *Journal of Accounting Education*, *20*(1), 29-44.

Demerouti, E., & Bakker, A. B. (2011). The job demands-resources model: Challenges for future research. *SA Journal of Industrial Psychology*, *37*(2), 1-9.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499-512.

Demerouti, E., Bakker, A. B., & Schaufeli, W. B. (2005). Spillover and crossover of exhaustion and life satisfaction among dual-earner parents. *Journal of Vocational Behavior*, *67*(2), 266-289.

Denzin, N. K., & Lincoln, Y. S. (2000). Methods of collecting and analyzing empirical materials. *Handbook of Qualitative Research*, *2*, 710-813.

Duff, A. (2014). Learning styles and approaches in accounting education. *The Routledge companion to accounting education*, 163-188.

Duff, A., & Mladenovic, R. (2015). Antecedents and consequences of accounting students' approaches to learning: A cluster analytic approach. *The British Accounting Review*, *47*(3), 321-338.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*(10), 1040-1048.

Egan, K. (1997). *The educated mind: How cognitive tools shape our understanding*. Chicago, IL: University of Chicago Press.

Empson, L. (2004). Organizational identity change: managerial regulation and member identification in an accounting firm acquisition. Accounting, Organizations and Society, 29(8), 759-781.

English, L., P. Luckett, & R. Mladenovic. (2004). Encouraging a deep approach to learning through curriculum design. *Accounting Education* 13 (2): 251–266.

Entwistle, N. (2000, June). Promoting deep learning through teaching and assessment. In *Assessment to Promote Deep Learning: Insights from AAHF's 2000 and 1999*

Assessment Conferences (pp. 9-20). Washington DC: American Association of Higher Education.

Entwistle, N. J., & Entwistle, A. (1991). Contrasting forms of understanding for degree examinations: The student experience and its implications. *Higher Education, 22*(3), 205-227.

Entwistle, N. J., & Ramsden, P. (1983). *Understanding student learning*. London: Croom Helm.

Eraut M. (1992). Developing the knowledge base: a process perspective on professional education. In: Barnett R, ed. *Learning to Effect*. (pp. 98-118). Buckingham: Society for Research into Higher Education and Open University Press.

Ericsson, K. A., Krampe, R. T., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100, 363-406.

Evans, E., Burritt, R., & Guthrie, J. (Eds.). (2010). *Accounting Education at a Crossroad in 2010*. Institute of Chartered Accountants in Australia.

Evans, E., Juchau, R., & Wilson, R. M. (Eds.). (2014). *The interface of accounting education and professional training*. Routledge.

Feldman, D. B., & Kubota, M. (2015). Hope, self-efficacy, optimism, and academic achievement: Distinguishing constructs and levels of specificity in predicting college grade-point average. *Learning and Individual Differences, 37(1)*, 210-216.

Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, *59*(2), 117-142.

Flick, U. (2018). *An introduction to qualitative research*. Thousand Oaks, CA: Sage Publications.

Flood, B. (2014). The case for change in accounting education. In R. M. S. Wilson (Ed.), *The Routledge companion to accounting education* (pp. 81–101). Abingdon and New York: Routledge.

Flood, B., & Wilson, R. M. (2008). An exploration of the learning approaches of prospective professional accountants in Ireland. *Accounting Forum*, 32(3), 225-239.

Flood, B., & Wilson, R. M. (2009). Conceptions of learning of prospective professional accountants in Ireland: An exploratory study. *Irish Accounting Review*, 16(1), 21–38.

Fogarty, T. J., Singh, J., Rhoads, G. K., & Moore, R. K. (2000). Antecedents and consequences of burnout in accounting: Beyond the role stress model. *Behavioral Research in Accounting, 12*, 31-68.

Fokkema, M., & Greiff, S. (2017). How performing PCA and CFA on the same data equals trouble. *European Journal of Psychological Assessment*, 33, 399-402.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of educational research*, *74*(1), 59-109.

Fredricks, J. A., Filsecker, M., & Lawson, M. A. (2016). Student engagement, context, and adjustment: Addressing definitional, measurement, and methodological issues. *Learning and Instruction*, 43, 1–4.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218-226.

Freidson, E. (1988). Theory and the professions. *Indiana. Law Journal*, 64, 423-456.

Friedman, P., Rodriguez, F., & McComb, J. (2001). Why students do and do not attend classes: Myths and realities. *College Teaching*, 49(4), 124-133.

Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological science*, 18(3), 233-239.

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, *69*(8), 3192-3198.

Gammie, E. (2000). The use of biodata in the pre-selection of fully accredited graduates for chartered accountancy training places in Scotland. *Accounting and Business Research*, *31*(1), 19-35.

Gammie, E., Cargill, E., & Gammie, B. (2004). Selection techniques within the accountancy profession in Scotland. *Journal of Applied Accounting Research*.

Gammie, E., & Kirkham, L. (2008). Breaking the link with a university education in the creation of a chartered accountant: The ICAS story. *The British Accounting Review*, *40*(4), 356-375.

Gaskin, J. (2019). Statwiki. Retrieved from http://statwiki.kolobkreations.com/index.php?title=Main_Page

Gaylon, C. E., Blondin, C. A., Yaw, J. S., Nalls, M. L., & Williams, R. L. (2012). The relationship of academic self-efficacy to class participation and exam performance. *Social Psychology of Education*, *15*(2), 233-249.

Gill, J., & Johnson, P. (2002). *Research methods for managers*. London: Sage Publications.

Gonyea, R. M. (2006). The relationship between student engagement and selected desirable outcomes in the first year of college. In *46th Annual Association for Institution Research Forum*. Chicago, IL 14-18 May.

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

Gordon, J., Ludlum, J., & Hoey, J. J. (2008). Validating NSSE against student outcomes: Are they related? *Research in Higher Education*, *49*(1), 19-39.

Greene, B. A., & Miller, R. B. (1996). Influences on achievement: Goals, perceived ability, and cognitive engagement. *Contemporary Educational Psychology*, *21*(2), 181-192.

Grewal, R., Cote, J. A., & Baumgartner, H. (2004). Multicollinearity and measurement error in structural equation models: Implications for theory testing. *Marketing science*, *23*(4), 519-529.

Grey, C. (1998). On being a professional in a "Big Six" firm. *Accounting, organizations and society*, *23*(5-6), 569-587.

Grinyer, A. (2009). The anonymity of research participants: Assumptions, ethics, and practicalities. *Pan-Pacific management review*, *12*(1), 49-58.

Gromada, A., & Shewbridge, C. (2016). *Student Learning Time: A Literature Review*. OECD Education Working Papers, No. 127. Paris: OECD Publishing.

Guba, E.G., & Lincoln, Y.S. (1994). Competing paradigms in qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks, CA: Sage Publications.

Gujarati D. (2003). Multicollinearity: what happens if the regressors are correlated. In *Basic Econometrics* (pp. 363-363). New York: McGraw-Hill

Gunuc, S., & Kuzu, A. (2015). Student engagement scale: development, reliability and validity. *Assessment & Evaluation in Higher Education*, *40*(4), 587-610.

Hair, J. F., Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *SEM: An introduction. Multivariate data analysis: A global perspective* (7th ed.) Upper Saddle River, NJ: Pearson Education.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, *19*(2), 139-152.

Hakanen, J. J., & Schaufeli, W. B. (2012). Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *Journal of affective disorders*, *141*(2-3), 415-424.

Halbesleben, J. R., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work & Stress*, *19*(3), 208-220.

Halbesleben, J. R., Neveu, J. P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the "COR" understanding the role of resources in conservation of resources theory. *Journal of Management*, *40*(5), 1334-1364.

Halverson, L. R., & Graham, C. R. (2019). Learner engagement in blended learning environments: A conceptual framework. *Online Learning*, *23*(2), 145-178.

Hamilton, S. E. (2013). Exploring professional identity: The perceptions of chartered accountant students. *The British Accounting Review*, *45*(1), 37-49.

Hancock, P., Howieson, B., Kavanagh, M., Kent, J., Tempone, I., & Segal, N. (2009). Accounting for the future: More than numbers. *Australian Teaching and Learning Council*. Strawberry Hills, NSW.

Hanlon, G. (1994). *The commercialisation of accountancy: Flexible accumulation and the transformation of the service class*. London: Macmillan

Hanson, E., & Phillips, F. (2006). Teaching financial accounting with analogies: Improving initial comprehension and enhancing subsequent learning. *Issues in Accounting Education*, 21(1), 1-14.

Harnett, C., Kieran, S., & Global, O. M. T. (2020). Beyond Covid-19: Research Insights into a New World of Work. Retrieved from https://omtglobal.com/wp-content/uploads/2020/08/New-World-of-Work-OMT-Global-Report-2020_-1.pdf

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87,* 268–279.

Harvey-Cook, J. E., & Taffler, R. J. (2000). Biodata in professional entry-level selection: Statistical scoring of common format applications. *Journal of occupational and organizational psychology*, *73*(1), 103-118.

Haskins, M. E., Baglioni, A. J., Jr., & Cooper, C. L. (1990). An investigation of the sources, moderators, and psychological symptoms of stress among audit seniors. *Contemporary Accounting Research*, *6*(2), 361-385.

Hassall, T., & Joyce, J. (1997). What do the examinations of professional bodies reward? Some preliminary evidence. In G. Gibbs, & C. Rust (Eds.), *Improving student learning through course design* (pp. 529–38). Oxford: The Oxford Centre for Staff and Learning Development.

Hassall, T., & Joyce, J. (2001). Approaches to learning of management accounting students. *Education + Training*, *43*(3), 145-153.

Hassall, T., Lewis, S., & Broadbent, M. (1998). Teaching and learning using case studies: A teaching note. *Accounting Education*, *7*(4), 325-334.

Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs*, *85*(1), 4-40.

Healy, M., & M. McCutcheon. (2008). Engagement with active learning: Reflections on the experiences of Irish accounting students. *The Irish Accounting Review* 15 (1): 31–49.

Herzberg, F. (2005). Motivation-hygiene theory. J. Miner, Organizational Behavior I: Essential Theories of Motivation and Leadership, 61-74.

Hill, Y., Lomas, L., & MacGregor, J. (2003). Students' perceptions of quality in higher education. *Quality Assurance in Education*, *11*(1), 15-20.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513-524.

Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educational Research Review, 17*(2), 63-84.

Hopwood, A. G., & Miller, P. (Eds.). (1994). *Accounting as social and institutional practice.* Cambridge, UK: Cambridge University Press.

Hoskin, K., & Anderson-Gough, F. (2004). The context of learning in professional work environments: Insights from the accountancy profession. In *Workplace learning in context* (pp. 87-104). Routledge.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1-55.

Hu, S., & Kuh, G. D. (2002). Being (dis) engaged in educationally purposeful activities: The influences of student and institutional characteristics. *Research in Higher Education, 43*(5), 555-575.

Hu, S., & Kuh, G. D. (2003). Diversity experiences and college student learning and personal development. *Journal of College Student Development, 44*(3), 320-334.

Hu, S., & McCormick, A. C. (2012). An engagement-based student typology and its relationship to college outcomes. *Research in Higher Education, 53*(7), 738-754.

Humphrey, C. (2005). 'In the aftermath of crisis: Reflections on the principles, values and significance of academic inquiry in accounting': Introduction. *European Accounting Review, 14*(2), 341-351.

International Accounting Education Standards Board (IAESB). (2019). *Handbook of International Education Standards* (Revised). Retrieved from

https://www.ifac.org/system/files/publications/files/Handbook-of-International-Education-Standards-2019.pdf

International Federation of Accountants (IFAC). (2019). Information on accountancy education stakeholders. Retrieved from https://www.ifac.org/system/files/publications/files/IFAC-Call-for-Information.pdf

International Federation of Accountants (IFAC). (2020). Re-imagining the Future Accountant - Our Call to Action. Retrieved from https://www.ifac.org/knowledge-gateway/preparing-future-ready-professionals/discussion/re-imagining-future-accountant-our-call-action

Irish Survey of Student Engagement (ISSE). (2016). Irish survey of student engagement – Implementation of the 2016 National Pilot (Full Reference Report). Retrieved from https://studentsurvey.ie/sites/default/files/2019-10/ISSE-Report-2016-final.pdf

Jackling, B. (2005). Perceptions of the learning context and learning approaches: Implications for quality learning outcomes in accounting. *Accounting education*, *14*(3), 271-291.

Jarvis, P. (1983). *Professional education*. London: Routledge.

Johnson, T. J. (1972). *Professions and power*. London: Routledge.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, *33*(7), 14-26.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, *33*(4), 692-724.

Kahu, E. (2013). Framing student engagement in higher education. *Studies in Higher Education*, *38*(5), 758-773.

Kahu, E. (2014). Increasing the emotional engagement of first year mature-aged distance students: Interest and belonging. *International Journal of the First Year in Higher Education, 5*(2), 45-55.

Kahu, E. R., & Nelson, K. (2018). Student engagement in the educational interface: understanding the mechanisms of student success. *Higher Education Research & Development, 37*(1), 58-71.

Kahu, E., Nelson, K., & Picton, C. (2017). Student interest as a key driver of engagement for first year students. *Student Success, 8*(2), 55-66.

Kahu, E., Stephens, C., Leach, L., & Zepke, N. (2015). Linking academic emotions and student engagement: Mature-aged distance students' transition to university. *Journal of Further and Higher Education, 39*(4), 481-497.

Kaplan, A., & Midgley, C. (1997). The effect of achievement goals: Does level of perceived academic competence make a difference? *Contemporary Educational Psychology, 22*(4), 415-435.

Kelloway, E. K. (2014). *Using Mplus for structural equation modeling: A researcher's guide*. Thousand Oaks, CA: Sage Publications.

Kelly, G. E. (2012). Lecture attendance rates at university and related factors. *Journal of Further and Higher Education, 36*(1), 17-40.

Kember, D. (2004). Interpreting student workload and the factors which shape students' perceptions of their workload. *Studies in Higher Education, 29*(2), 165-184.

Kember, D., Jamieson, Q. W., Pomfret, M., & Wong, E. T. (1995). Learning approaches, study time and academic performance. *Higher Education, 29*(3), 329-343.

Kember, D., Ng, S., Tse, H., Wong, E. T., & Pomfret, M. (1996). An examination of the interrelationships between workload, study time, learning approaches and academic outcomes. *Studies in Higher Education, 21*(3), 347-358.

Kenny, D. A. (2012). Multiple latent variable models: Confirmatory factor analysis. David Kenny. Retrieved from http://davidakenny.net/cm/mfactor.htm

Kim, M. M. (2001). Institutional effectiveness of women-only colleges: Cultivating students' desire to influence social conditions. *The Journal of Higher Education*, 72(3), 287-321.

Kinzie, J., & Kuh, G. (2017). Reframing student success in college: Advancing know-what and know-how. *Change: The Magazine of Higher Learning*, *49*(3), 19-27.

Kline, R. B. (2015). *Principles and practice of structural equation modeling*. New York: Guilford publications.

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into Practice*, *41*(4), 212-218.

Krause, K. L., & Coates, H. (2008). Students' engagement in first-year university. *Assessment & Evaluation in Higher Education*, *33*(5), 493-505.

Kuh, G. D. (2001). *The National Survey of Student Engagement: Conceptual framework and overview of psychometric properties*. Bloomington, IN: Indiana University Center for Postsecondary Research.

Kuh, G. D. (2003). What we're learning about student engagement from NSSE: Benchmarks for effective educational practices. *Change: The Magazine of Higher Learning*, *35*(2), 24-32.

Kuh, G. D. (2009a). The national survey of student engagement: Conceptual and empirical foundations. *New Directions for Institutional Research*, *2009*(141), 5-20.

Kuh, G. D. (2009b). What student affairs professionals need to know about student engagement. *Journal of College Student Development*, *50*(6), 683-706.

Kuh, G. D., Hu, S., & Vesper, N. (2000). "They shall be known by what they do": An activities-based typology of college students. *Journal of College Student Development, 41*(2), 228-244.

Kuh, G. D., Kinzie, J. L., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006). *What matters to student success: A review of the literature commissioned report for the national symposium on postsecondary student success: Spearheading a dialog on student success.* Washington, DC: National Postsecondary Education Cooperative.

Kuh, G. D., Pace, C. R., & Vesper, N. (1997). The development of process indicators to estimate student gains associated with good practices in undergraduate education. Research in higher education, 38(4), 435-454.

Kulikowski, K. (2018). Measurement of work engagement with single-item measure. *Polish Psychological Bulletin, 49*(4), 406-415.

Lacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology*, *17*(2), 140-154.

Laird, T. F. N., Seifert, T. A., Pascarella, E. T., Mayhew, M. J., & Blaich, C. F. (2014). Deeply affecting first-year students' thinking: Deep approaches to learning and three dimensions of cognitive development. *The Journal of Higher Education, 85*(3), 402-432.

Laird, T. F. N., Shoup, R., & Kuh, G. D. (2006, May). Measuring deep approaches to learning using the National Survey of Student Engagement. Association for Institutional Research Annual Forum.

Laird, T. F. N., Shoup, R., Kuh, G. D., & Schwarz, M. J. (2008). The effects of discipline on deep approaches to student learning and college outcomes. *Research in Higher Education*, *49*(6), 469-494.

Larson, M. (1977). *The Rise of Professionalism.* California: University of California Press.

Leiter, M. P. (2017). Burnout as a developmental process: Consideration of models. In W.B. Schaufeli, C. Maslach & T. Marek (eds.) *Professional burnout* (pp. 237–250). Washington, DC: Taylor and Francis.

Leiter, M. P., & Maslach, C. (2008). *The truth about burnout: How organizations cause personal stress and what to do about it*. New York: Wiley.

Leiter, M. P., & Maslach, C. (2017). Burnout and engagement: Contributions to a new vision. *Burnout Research, 5*, 55-57.

Leiter, M. P., & Schaufeli, W. B. (1996). Consistency of the burnout construct across occupations. *Anxiety, Stress, and Coping*, *9*(3), 229-243.

Lent, R. W., Brown, S. D., & Larkin, K. C. (1986). Relation of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology*, *31*(3), 356-362.

LePine, J. A., LePine, M. A., & Jackson, C. L. (2004). Challenge and hindrance stress: relationships with exhaustion, motivation to learn, and learning performance. *Journal of applied psychology*, *89*(5), 883.

Liem, A. D., Lau, S., & Nie, Y. (2008). The role of self-efficacy, task value, and achievement goals in predicting learning strategies, task disengagement, peer relationship, and achievement outcome. *Contemporary Educational Psychology*, *33*(4), 486-512.

Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, *86*(1), 114-121.

Linnenbrink, E. A., & Pintrich, P. R. (2003). The role of self-efficacy beliefs in student engagement and learning in the classroom. *Reading & Writing Quarterly*, *19*(2), 119-137.

Little, R. J., & Rubin, D. B. (2002). *Statistical analysis with missing data*. New York: Wiley.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, *9*(2), 151-173.

Llorens, S., Schaufeli, W., Bakker, A., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in Human Behavior*, *23*(1), 825-841.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting & task performance*. Englewood Cliffs, NJ, US: Prentice-Hall.

Lucas, U., & Mladenovic, R. (2014). Perceptions of accounting. In *The Routledge Companion to Accounting Education* (pp. 163-182). Routledge.

Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: Toward a micro-intervention. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *27*(3), 387-393.

Macdonald, K. M. (1995). *The sociology of the professions*. London: Sage.

Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology*, *1*(1), 3-30.

Malan, M. (2020). Engaging students in a fully online accounting degree: an action research study. *Accounting Education*, *29*(4), 321-339.

Mann, S. J. (2001). Alternative perspectives on the student experience: Alienation and engagement. *Studies in Higher Education*, *26*(1), 7-19.

Maroco, J., Maroco, A. L., Campos, J. A. D. B., & Fredricks, J. A. (2016). University student's engagement: development of the University Student Engagement Inventory (USEI). *Psicologia: Reflexão e Crítica*, *29*(1), 21. Retrieved from https://link.springer.com/article/10.1186/s41155-016-0042-8

Martin, D. P., & Rimm-Kaufman, S. E. (2015). Do student self-efficacy and teacher-student interaction quality contribute to emotional and social engagement in fifth grade math? *Journal of School Psychology*, *53*(5), 359-373.

Marton, F., & Booth, S. A. (1997). *Learning and awareness*. Psychology Press.

Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. Journal of applied psychology, 93(3), 498-512.

Maslach, C., & Leiter, M. P. (2016). Burnout. In *Stress: Concepts, cognition, emotion, and behavior* (pp. 351-357). Cambridge, US: Academic Press.

Maslach, C., & Schaufeli, W. B. (2017). Historical and conceptual development of burnout. In *Professional burnout* (pp. 1-16). London: Routledge.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*(1), 397-422.

Mauno, S., Kinnunen, U., & Ruokolainen, M. (2007). Job demands and resources as antecedents of work engagement: A longitudinal study. Journal of vocational behavior, 70(1), 149-171.

May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology, 77,* 11-37.

McCormick, A. C., Kinzie, J., & Gonyea, R. M. (2013). Student engagement: Bridging research and practice to improve the quality of undergraduate education. In Paulsen, M.B., Ed., *Higher education: Handbook of theory and research* (pp. 47–92). Berlin: Springer, Dordrecht.

McInnis, C. (2001). Signs of disengagement? The changing undergraduate experience in Australian universities. Melbourne, Australia: Centre for Studies in Higher Education. Retrieved from http://repository.unimelb.edu.au/10187/1331

McKinsey (2019). The Changing role of the CFO. Podcast Transcript. Retrieved from https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-evolution-of-the-cfo

McMahon, B., & Portelli, J. P. (2004). Engagement for what? Beyond popular discourses of student engagement. *Leadership and Policy in Schools, 3*(1), 59-76.

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth, H. Thierry, & C. J. de Wolff (Eds.), Handbook of work and organizational psychology (2nd ed., pp. 5–33). Hove, England: Psychology Press.

Middleton, M. J., & Midgley, C. (1997). Avoiding the demonstration of lack of ability: An underexplored aspect of goal theory. *Journal of Educational Psychology*, *89*(4), 710-718.

Milem, J. F., & Berger, J. B. (1997). A modified model of college student persistence: Exploring the relationship between Astin's theory of involvement and Tinto's theory of student departure. *Journal of College Student Development*, *38*(4), 387-400.

Miles, M. B., & Huberman, A. M. (1984). Drawing valid meaning from qualitative data: Toward a shared craft. *Educational Researcher*, *13*(5), 20-30.

Morse, J. M. (2016). *Mixed method design: Principles and procedures*. London: Routledge.

Mostert, K., Pienaar, J., Gauche, C., & Jackson, L. T. B. (2007). Burnout and engagement in university students: A psychometric analysis of the MBI-SS and UWES-S. *South African Journal of Higher Education*, *21*(1), 147-162.

Murphy, K. R., & Davidshofer, C. O. (1988). *Psychological testing: Principles, and Applications*. Englewood Cliffs, NJ, US: Prentice Hall.

Murphy, B., & Hassall, T. (2020). Developing accountants: from novice to expert. *Accounting Education, 29*(1), 1-31.

Muthén, B. O., Muthén, L. K., & Asparouhov, T. (2017). *Regression and mediation analysis using Mplus*. Los Angeles, CA: Muthén & Muthén.

National Survey of Student Engagement (NSSE). (2018). Engagement Indicators. Retrieved from http://nsse.indiana.edu/2018_Institutional_Report/pdf/NSSE18%20Engagement%20Indicators%20(NSSEville%20State).pdf

Needles Jr, B. E. (2010). Accounting education: The impact of globalization. *Accounting Education: an international journal*, *19*(6), 601-605.

Needles Jr, B. E. (2014). Modelling accounting education. In *The Routledge companion to accounting education* (pp. 64-87). Routledge.

Needles, B. E., & Powers, M. (1990). A comparative study of models for accounting education. *Issues in Accounting Education*, *5*(2), 250-267.

Newman, D. A. (2009). Missing data techniques and low response rates. In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends* (pp. 7–36). London: Routledge.

Newmann, F.M., G.G. Wehlage, & S. Lamborn. (1992). The significance and sources of student engagement. In F.M. Newmann (Eds), *Student engagement and achievement in American secondary schools* (pp. 11–39). New York: Teachers College Press.

Nonis, S. A., & Hudson, G. I. (2006). Academic performance of college students: Influence of time spent studying and working. *Journal of Education for Business*, *81*(3), 151-159.

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment & Evaluation in Higher Education*, *33*(3), 301-314.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychological theory*. New York, NY: MacGraw-Hill.

O'Cathain, A., Murphy, E., & Nicholl, J. (2010). Three techniques for integrating data in mixed methods studies. *British Medical Journal: BMJ*, *341*, 45-87.

Olssen, M., & Peters, M. A. (2005). Neoliberalism, higher education and the knowledge economy: From the free market to knowledge capitalism. *Journal of Education Policy*, *20*(3), 313-345.

Organisation for Economic Cooperation and Development (OECD). (2019). Education at a Glance 2019. Retrieved from https://www.oecd.org/education/education-at-a-glance/

Ouweneel, E., LeBlanc, P. M., & Schaufeli, W. B. (2011). Flourishing students: A longitudinal study on positive emotions, personal resources, and study engagement. *The Journal of Positive Psychology*, *6*(2), 142-153.

Ozkan, A., & Ozdevecioğlu, M. (2013). The effects of occupational stress on burnout and life satisfaction: A study in accountants. *Quality & Quantity*, *47*(5), 2785-2798.

Pace, C. R. (1984). Student effort: A new key to assessing quality. Higher Education Research Institute, Project on the Study of Quality in Undergraduate Education, Los Angeles: University of California.

Paisey, C., & Paisey, N. J. (2006). Cutting to the core? A reflection upon recent education policy debates within the Institute of Chartered Accountants in England and Wales. *The British Accounting Review*, *38*(1), 31-61.

Paisey, C., & Paisey, N. J. (2014). The state of professional accounting education and training. In *The Routledge companion to accounting education* (pp. 674-696). Routledge.

Pajares, F. (2002). Overview of social cognitive theory and of self-efficacy. Retrieved from http://www.uky.edu/~eushe2/Pajares/efftalk.html

Pascarella, E. T. (1985). College environmental influences on learning and cognitive development: A critical review and synthesis. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 1, pp. 1–61). New York, NY: Agathon.

Pascarella, E. T., Seifert, T. A., & Blaich, C. (2010). How effective are the NSSE benchmarks in predicting important educational outcomes?. Change: The Magazine of Higher Learning, 42(1), 16-22.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research. (Vol 2*). San Francisco: Jossey-Bass.

Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist*, *37*(2), 91-105.

Peters, R. S. (1966). *Ethics and education.* London: Allen and Unwin.

Picard, R., & Berk, K. (1990). Data Splitting. *The American Statistician, 44*(2), 140-147.

Pierce, A. (2007). *Ethics and the professional accounting firm: A literature review*. Edinburgh: Institute of Chartered Accountants of Scotland.

Pierre, E. K. S., & Rebele, J. E. (2014). An agenda for improving accounting education. In *The Routledge companion to accounting education* (pp. 140-160). Routledge.

Pike, G. R. (2013). NSSE benchmarks and institutional outcomes: A note on the importance of considering the intended uses of a measure in validity studies. *Research in Higher Education*, 54(2), 149-170.

Pike, G. R., & Kuh, G. D. (2005). First-and second-generation college students: A comparison of their engagement and intellectual development. *The Journal of Higher Education*, *76*(3), 276-300.

Pintrich, P. R. (1999). The role of motivation in promoting and sustaining self-regulated learning. *International journal of educational research*, *31*(6), 459-470.

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, *82*(1), 33-40.

Plant, E. A., Ericsson, K. A., Hill, L., & Asberg, K. (2005). Why study time does not predict grade point average across college students: Implications of deliberate practice for academic performance. *Contemporary Educational Psychology*, *30*(1), 96-116.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879-903.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12*(4), 531-544.

Poland, B.D. (1999). Transcription quality as an aspect of rigour in qualitative research. In A. Bryman, & R. G. Burgess (Eds.), *Qualitative research. 1,* 290-310.

Ramsden, P. (1979). Student learning and perceptions of the academic environment. *Higher Education*, *8*(4), 411-427.

Ravenscroft, S. P., Waymire, T. R., & West, T. D. (2012). Accounting students' metacognition: The association of performance, calibration error, and mindset. *Issues in Accounting Education, 27*(3), 707-732.

Rebele, J. E., & Pierre, E. K. S. (2019). A commentary on learning objectives for accounting education programs: The importance of soft skills and technical knowledge. *Journal of Accounting Education*, *48*, 71-79.

Redmond, P., Abawi, L. A., Brown, A., Henderson, R., & Heffernan, A. (2018). An online engagement framework for higher education. *Online Learning*, *22*(1), 183-204.

Reeve, J. (2013). How students create motivationally supportive learning environments for themselves: The concept of agentic engagement. *Journal of educational psychology*, *105*(3), 579-595.

Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. Academy of management journal, 53(3), 617-635.

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, *138*(2), 353-387.

Riley, J., & Ward, K. (2017). Active learning, cooperative active learning, and passive learning methods in an accounting information systems course. *Issues in Accounting Education*, *32*(2), 1-16.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.

Ryan, B., Scapens, R. W., & Theobald, M. (2002). *Research method and methodology in finance and accounting*. 2nd edition. Thomson: London.

Saks, A. M. (1995). Longitudinal field investigation of the moderating and mediating effects of self-efficacy on the relationship between training and newcomer adjustment. *Journal of Applied Psychology*, 80(2), 211-225.

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21 (3), 600–619.

Saks, M. (2012). Defining a profession: The role of knowledge and expertise. *Professions and Professionalism*, *2*(1), 1-10.

Salanova, M., & Schaufeli, W. B. (2008). A cross-national study of work engagement as a mediator between job resources and proactive behaviour. *The International Journal of Human Resource Management*, *19*(1), 116-131.

Salanova, M., Schaufeli, W., Martínez, I., & Bresó, E. (2010). How obstacles and facilitators predict academic performance: The mediating role of study burnout and engagement. *Anxiety, Stress & Coping*, *23*(1), 53-70.

Salmela-Aro, K., Tolvanen, A., & Nurmi, J. E. (2009). Achievement strategies during university studies predict early career burnout and engagement. *Journal of vocational behavior*, *75*(2), 162-172.

Salmela-Aro, K., Tolvanen, A., & Nurmi, J. E. (2011). Social strategies during university studies predict early career work burnout and engagement: 18-year longitudinal study. *Journal of Vocational Behavior*, *79*(1), 145-157.

Salmela-Aro, K., & Upadyaya, K. (2014). School burnout and engagement in the context of demands-resources model. *British Journal of Educational Psychology*, *84*(1), 137-151.

Sangster, A. (2016). The genesis of double entry bookkeeping. The Accounting Review, 91(1), 299-315.

Sangster, A., Fogarty, T., Stoner, G., & Marriott, N. (2015). The impact of accounting education research. Accounting Education, 24(5), 423-444.

Sangster, A., Shahin, I. O., Al-Rashed, W. I., Othata, O. O., Stainbank, L. J., Kitindi, E. G., ... & Howieson, B. (2014). Emerging areas within the accounting curriculum. In *The Routledge Companion to Accounting Education* (pp. 352-382). Routledge.

Sangster, A., Stoner, G., & Flood, B. (2020). Insights into accounting education in a COVID-19 world. Accounting Education, 29(5), 431-562.

Sangster, A., Stoner, G. N., & McCarthy, P. A. (2007). Lessons for the classroom from Luca Pacioli. *Issues in Accounting Education*, *22*(3), 447-457.

Santen, S. A., Holt, D. B., Kemp, J. D., & Hemphill, R. R. (2010). Burnout in medical students: Examining the prevalence and associated factors. *Southern Medical Journal*, *103*(8), 758-763.

Santos, J. R. A. (1999). Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of Extension*, *37*(2), 1-5.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Essex: Financial Times/Prentice Hall.

Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, *7*(2), 147-177.

Schaufeli, W. B. (2017). Applying the job demands-resources model. *Organizational Dynamics*, *2*(46), 120-132.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *25*(3), 293-315.

Schaufeli, W. B., & Bakker, A. B. (2010). Defining and measuring work engagement: Bringing clarity to the concept. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 10 –24). New York: Psychology Press

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

Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. Journal of cross-cultural psychology, 33(5), 464-481.

Schaufeli, W. B., & Salanova, M. (2007). Efficacy or inefficacy, that's the question: Burnout and work engagement, and their relationships with efficacy beliefs. *Anxiety, stress, and coping*, *20*(2), 177-196.

Schaufeli, W. B., Shimazu, A., Hakanen, J., Salanova, M., & De Witte, H. (2017). An Ultra-Short Measure for Work Engagement: The UWES-3 validation across five countries. *European Journal of Psychological Assessment*. Advance online publication.

Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the job demands-resources model: Implications for improving work and health. In *Bridging occupational, organizational and public health* (pp. 43–68). Berlin: Springer, Dordrecht.

Schneider, M., & Preckel, F. (2017). Variables associated with achievement in higher education: A systematic review of meta-analyses. *Psychological Bulletin*, *143*(6), 565-600.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action.* New York: Basic Books.

Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, *26*(3–4), 207-231.

Schunk, D. H., & Mullen, C. A. (2012). Self-efficacy as an engaged learner. In *Handbook of research on student engagement* (pp. 219-235). Springer, Boston, MA.

Schutte, N., Toppinen, S., Kalimo, R., & Schaufeli, W. (2000). The factorial validity of the Maslach Burnout Inventory-General Survey (MBI-GS) across occupational groups and nations. *Journal of Occupational and Organizational Psychology*, *73*(1), 53-66.

Seppälä, P., Mauno, S., Feldt, T., Hakanen, J., Kinnunen, U., Tolvanen, A., & Schaufeli, W. (2009). The construct validity of the Utrecht Work Engagement Scale: Multisample and longitudinal evidence. *Journal of Happiness Studies*, *10*(4), 459-481.

Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus*, *134*(3), 52-59.

Shulman, L. S., & Carey, N. B. (1984). Psychology and the limitations of individual rationality: Implications for the study of reasoning and civility. *Review of Educational Research*, *54*(4), 501-524.

Sidaway, S., De Lange, P., Bouilheres, F., & Sangster, A. (2013). Professional accounting body affiliation: Shifting priorities in the transition from student to practitioner. Accounting Education, 22(6), 605-617.

Sikka, P., Haslam, C., Kyriacou, O., & Agrizzi, D. (2007). Professionalizing claims and the state of UK professional accounting education: some evidence. *Accounting Education: an international journal, 16*(1), 3-21.

Siu, O. L., Bakker, A. B., & Jiang, X. (2014). Psychological capital among university students: Relationships with study engagement and intrinsic motivation. *Journal of Happiness Studies, 15*(4), 979-994.

Smithikrai, C., Homklin, T., Pusapanich, P., Wongpinpech, V., & Kreausukon, P. (2018). Factors influencing Students' Academic Success: The Mediating Role of Study Engagement. *International Journal of Behavioral Science, 13*(1), 1-14.

Solomonides, I. (2013). A relational and multidimensional model of student engagement. In E. Dunne & D. Owen (Eds.), *The student engagement handbook: Practice in higher education* (pp. 43-58). London: Bingley: Emerald Group Publishing Ltd

Solomonides, I., & Reid, A. (2009, July). *Understanding the relationships between student identity and engagement with studies*. Darwin: Higher Education Research and Development Society of Australasia conference.

Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. *Journal of Applied Psychology, 88*(3), 518-528.

Sonnentag, S. (2017). A task-level perspective on work engagement: A new approach that helps to differentiate the concepts of engagement and burnout. *Burnout Research, 5 (6)*, 12-20.

Sonnentag, S., Mojza, E. J., Binnewies, C., & Scholl, A. (2008). Being engaged at work and detached at home: A week-level study on work engagement, psychological detachment, and affect. *Work & Stress, 22*(3), 257-276.

Steele, J. P., & Fullagar, C. J. (2009). Facilitators and outcomes of student engagement in a college setting. *The Journal of Psychology, 143*(1), 5-27.

Sundem, G. L. (2014). Fifty years of change in accounting education: the influence of institutions. In *The Routledge companion to accounting education* (pp. 649-669). Routledge.

Sweeney, J. T., & Summers, S. L. (2002). The effect of the busy season workload on public accountants' job burnout. *Behavioral Research in Accounting*, *14*(1), 223-245.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics (Vol. 5)*. Boston, MA: Pearson.

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

Tait, H., Entwistle, N. J., & McCune, V. (1998). ASSIST: A reconceptualisation of the Approaches to Studying Inventory In: Rust C, editor. *Improving student learning: Improving students as learners.* Oxford: Oxford Brookes University/Oxford Centre for Staff and Learning

Taylor, I. (1997). *Developing learning in professional education: Partnerships for practice*. London: McGraw-Hill Education.

Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 3-50). Thousand Oaks, CA: Sage.

Tharapos, M., & Marriott, N. (2020). Beauty is in the eye of the beholder: Research quality in accounting education. *The British Accounting Review*, 100934. Retrieved from https://www.sciencedirect.com/science/article/pii/S0890838920300548?casa_token=oHpyDRwv-tgAAAAA:qwshIO15aCvhxABM_UPGtXJQMg2_mu7kZ8_Y1xW-xayt4c2JIDiCJKPtz67ZKX_2eQSIPO2PgA#bib2

Tims, M., Bakker, A. B., & Derks, D. (2013). The impact of job crafting on job demands, job resources, and well-being. *Journal of Occupational Health Psychology*, *18*(2), 230-240.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, *45*(1), 89-125.

Trigwell, K., & Prosser, M. (1991). Improving the quality of student learning: The influence of learning context and student approaches to learning on learning outcomes. *Higher Education*, *22*(3), 251-266.

Trigwell, K., Prosser, M., & Taylor, P. (1994). Qualitative differences in approaches to teaching first year university science. *Higher Education*, *27*(1), 75-84.

Trigwell, K., Prosser, M., & Waterhouse, F. (1999). Relations between teachers' approaches to teaching and students' approaches to learning. *Higher Education*, *37*(1), 57-70.

Trowler, V. (2010). Student engagement literature review. *The Higher Education Academy*, *11*(1), 1-15.

Tyler, R. W. (1930). Measuring the ability to infer. *Educational Research Bulletin*, 9(11), 475-480.

Umbach, P. D., & Wawrzynski, M. R. (2005). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education*, *46*(2), 153-184.

Van den Broeck, A., Van Ruysseveldt, J., Smulders, P., & De Witte, H. (2011). Does an intrinsic work value orientation strengthen the impact of job resources? A perspective from the Job Demands-Resources Model. *European Journal of Work and Organizational Psychology*, *20*(5), 581-609.

Van der Doef, M., & Maes, S. (1999). The job demand-control (-support) model and psychological well-being: A review of 20 years of empirical research. *Work & Stress*, *13*(2), 87-114.

Velayutham, S., & Perera, H. (1993). The reflective accountant: Towards a new model for professional development. *Accounting Education*, *2*(4), 287-301.

Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, 21-54.

Walberg, H. J. (1988), "Synthesis of research on time and learning", *Educational leadership*, 45(6), 76-85.

Walker, C. O., Greene, B. A., & Mansell, R. A. (2006). Identification with academics, intrinsic/extrinsic motivation, and self-efficacy as predictors of cognitive engagement. *Learning and Individual Differences*, *16*(1), 1-12.

Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, *25*(1), 68-81.

Wiley, D. E., & Harnischfeger, A. (1974). Explosion of a myth: Quantity of schooling and exposure to instruction, major educational vehicles. *Educational researcher*, *3*(4), 7-12.

Williams, L. J., & McGonagle, A. K. (2016). Four research designs and a comprehensive analysis strategy for investigating common method variance with self-report measures using latent variables. *Journal of Business and Psychology*, *31*(3), 339-359.

Willmott, H. (1986). Organising the profession: a theoretical and historical examination of the development of the major accountancy bodies in the UK. *Accounting, Organizations and Society*, *11*(6), 555-580.

Wilson, R. M. (2014). *The Routledge companion to accounting education*. London: Routledge.

Wolf-Wendel, L., Ward, K., & Kinzie, J. (2009). A tangled web of terms: The overlap and unique contribution of involvement, engagement, and integration to understanding college student success. *Journal of College Student Development*, *50*(4), 407-428.

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, *26*(2), 179-201.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International journal of stress management*, *14*(2), 121-141.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior*, *74*(3), 235-244.

Yakın, M., & Erdil, O. (2012). Relationships between self-efficacy and work engagement and the effects on job satisfaction: a survey on certified public accountants. Procedia-Social and Behavioral Sciences, 58, 370-378.

Zepke, N., & Leach, L. (2010). Improving student engagement: Ten proposals for action. *Active Learning in Higher Education*, *11*(3), 167-177.

Zepke, N., Leach, L., & Butler, P. (2014). Student engagement: students' and teachers' perceptions. *Higher Education Research & Development*, *33*(2), 386-398.

Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, *25*(1), 82-91.

APPENDIX A: KEY AUTHORS AND CONTRIBUTIONS - PERSPECTIVES OF ENGAGEMENT

Key Author(s)	Main Contributions and Criticisms	Measure
Sociological/Behavioural Perspective		
Tyler (1930)	Time spent studying and the college experience is important to achieve desired learning outcomes. Key contribution - 'time' is an important factor in the engagement process. Key criticism - limited view on the complexity of the engagement process.	National Assessment of Education Progress (a series of surveys in the 1960s)
Pace (1984)	Importance of 'quality of effort' for student success - educational and behavioural activities such as studying, interacting with peers and faculty, and using facilities and learning opportunities that are available in a college setting. Key contribution - 'quality of effort' is an important factor in the engagement process. Key criticism - limited view on the complexity of the engagement process.	College Student Experiences Questionnaire (CSEQ)
Astin (1970, 1984, 1993)	Input-Environment-Output (IEO) model - input variables (e.g. prior academic performance) impact on output variables (e.g. exam performance) both directly, and indirectly, through the medium of engagement in the college environment (e.g. interaction with faculty). Theory of Involvement - the quantity and quality of physical and psychological energy that students invest in the college experience. Key contribution - Highlighted the important role of the institution in designing effective educational policy to increase engagement. Key criticism - Failure to distinguish the state of engagement from its antecedents and outcomes.	College Student Experiences Questionnaire (CSEQ)
Tinto (1975)	Theory of College Student Departure - academic and social integration in the educational environment encourages engagement. Explored the extent to which students adopt the attitudes and beliefs of peers and faculty and adhere to the structural rules of the institution. Key contribution - provide useful insights into the factors influencing the engagement process. Key criticism - failed to devote enough attention to the state of engagement.	None noted

Key Author(s)	Main Contributions and Criticisms	Measure
Sociological/Behavioural Perspective		
Pascarella (1985)	General Causal Model - student background, interactions with faculty/peers and investment in quality effort have a direct influence on learning and cognitive development. Key contribution - ability to bring together the various themes in the literature up to that point into one cohesive model. Key criticism - narrow view of study engagement (i.e. quality of effort), did not acknowledge the psychological process of learning.	None noted
Chickering and Gamson (1987)	Seven principles of good practice summarise the teaching and learning activities most likely to lead to high quality learning. These include: 1) encouraging contact between students and faculty, 2) reciprocity and cooperation among students, 3) active learning, 4) prompt feedback, 5) communication of high expectations, 6) time on task, and 7) respect for diverse talents and ways of learning. Key contribution - students attending institutions that implement these practices are more likely to be engaged and satisfied and to persist and achieve academic success, a view which is widely supported in the study engagement literature. Key criticism - focuses on the antecedents to engagement rather than the state of engagement.	None noted
Kuh (2001, 2003, 2009b)	NSSE framework - model of university quality through the lens of student engagement. Student engagement is summarised into five main categories: 1) the level of academic challenge, 2) experiences with faculty, 3) learning with peers, 4) campus environment experiences, and 5) high impact practices. Key contribution - most widely used instrument to measure study engagement in the higher education literature. Key criticism - failed to distinguish between engagement, its antecedents and outcomes.	National Survey of Student Engagement (NSSE)

Key Author(s)	Main Contributions and Criticisms	Measure
Sociological/Behavioural Perspective		
Kuh (2003); Krause and Coates (2008)	Engagement is defined as the time and energy students devote to educationally purposeful activities and the role of the institution in providing opportunities for engagement in these activities. Key contribution - most widely used definitions of study engagement in the higher education literature. Key criticism - definitions refers to state of engagement, as well as some of the antecedents to engagement. Therefore, lack of clarity of the engagement process. Given the popularity of these definitions they have contributed to difficulties with clearly defining the concept of study engagement.	National Survey of Student Engagement (NSSE) and Australian Survey of Student Engagement (AUSSE)
Pike and Kuh (2005)	Conceptual Model of Cognitive Development - early engagement in both academic and social activities is essential to develop knowledge and understanding. The college environment has a direct influence on cognitive gains. Learning is the product of active involvement in educational activities. Key contribution - specifically refers to the concept of engagement. Key criticism - does not add to the theoretical development of the concept of study engagement.	National Survey of Student Engagement (NSSE)
Hu and McCormick (2012)	Student typologies - categorise students into groups based on their patterns of behaviours in an educational setting. For example, academics, unconventional, disengaged, collegiate, maximisers, conventionalists and grinds. Different typologies engage in different ways. Key contribution - alternative way to view engagement. Key criticism - adds to the difficulty of finding one useable definition for engagement.	National Survey of Student Engagement (NSSE)
Psychological Perspective		
Fredricks et al. (2004), Kahu (2013), Kahn (1990), Boykin and Noguera (2011).	Engagement is a multidimensional construct – behavioural, cognitive and emotional. Key contribution - The three-dimensional definition of study engagement offers the most potential to understand the complexity of the engagement process. Key criticism - Lack of clarity around the state of engagement its antecedents and outcomes.	Refers to a variety of context specific scales and standardised scales e.g. NSSE

Key Author(s)	Main Contributions and Criticisms	Measure
Psychological Perspective		
Finn (1989);	Participation/Identification Model - behavioural and emotional engagement are important for academic achievement. Key contribution - recognises the fundamental importance of behavioural (participation) and emotional (identification) engagement. Key criticism - simplistic in nature, does not uncover the complexity of the engagement process.	Refers to a variety of context specific scales, as well as conducting site visits – series of interviews and review criteria.
Carroll (1963, 1989); Bloom (1974); Fredricks et al. (2004); Kahu (2013)	Behavioural study engagement - commonly defined as time spent studying and active learning. Key contribution - builds on the sociological/behavioural perspective and incorporates this work into the multidimensional definition of study engagement. Key criticism - only considers one dimension of study engagement.	National Survey of Student Engagement (NSSE) and context specific scales.
Entwistle and Ramsden (1983); Fredricks et al. (2004); Kahu (2013); Laird et al. (2008); Pintrich and De Groot (1990)	Cognitive study engagement - defined as higher order (deep) learning. The approaches to learning literature are a major contributor to this definition. They define higher order (deep) learning as a desire to develop understanding and knowledge and is aligned with high quality learning outcomes. Given the strength of this concept the NSSE added a deep learning scale to the instrument. Key contribution - higher order (deep) learning strategies are associated with cognitive gains. Key criticism - only considers one dimension of study engagement.	Approaches to Studying Inventory (ASI) and Approaches and Studies Skills Inventory for Students (ASSIST), National Survey of Student Engagement (NSSE)

Key Author(s)	Main Contributions and Criticisms	Measure
Psychological Perspective		
Schaufeli et al. (2002)	Affective study engagement - defined as vigor, dedication, absorption. Vigor is described as the energy invested in learning, mental resilience, persistence and the willingness to invest time in educational activities. Dedication relates to a sense of significance, enthusiasm, inspiration, pride and challenge, while absorption is described as being fully concentrated on, and happily engrossed, in one's study, where time passes quickly and the student finds difficulty detaching from work. Key contribution - recognises that learning is an emotional process. Key criticism - only considers one dimension of study engagement. Note: see Chapter Three for other authors contributing to this definition	Utrecht Work Engagement Scale – Student (UWES-S)
Sociocultural Perspective		
Bryson et al. (2010)	Seeks to understand 'why' students' engage - explores the influence of institutional culture and the wider social and political context on student engagement under three themes: 1) disengagement, 2) constructivist view of education and 3) the influence of societal and market driven changes. Key contribution - provides useful insights into the antecedents of study engagement. Key criticism - places limited attention on the state of engagement.	National Student Survey (NSS)
Mann (2001)	Disengagement or alienation - barriers to engagement created by cultural differences and societal and political influences have redefined the meaning of education and how students engage. Key contribution - provides useful insights into the antecedents of study engagement. Key criticism - places limited attention on the state of engagement.	None noted

Key Author(s)	Main Contributions and Criticisms	Measure
Sociocultural Perspective		
Solomonides and Reid (2009)	Relational Model of Student Engagement - engagement depends on 'sense of being' (how students think of themselves and their study) and 'sense of transformation' (how students' learn) - when learning is set in a social, political and economic context, students' take a more active role. Key contribution - provides useful insights into the antecedents of study engagement. Key criticism - places limited attention on the state of engagement.	None noted
Adler and Harzing (2009)	As a result of globalisation, education is viewed more as a public rather than a private good with students being criticised for focusing more on career credentials rather than learning. Key contribution - provides useful insights into the antecedents of study engagement. Key criticism - places limited attention on the state of engagement.	None noted
Holistic Perspective		
Bryson (2014)	Engagement is centered around the being of students and how they make sense of their educational experience, it is dynamic, multidimensional and complex and is different for each individual. Key contribution - recognises the individual nature of student learning. Key criticism - does not present a clear definition of study engagement.	None noted
Bryson et al. (2010)	Process of engagement is made up of two types of engagement - 'engaging students' (what the institution does) and 'students engaging' (what the student does). Key contribution - presents useful insights into the process of engagement. Key criticism - does not present a clear definition of study engagement.	National Student Survey (NSS)

Key Author(s)	Main Contributions and Criticisms	Measure
Holistic Perspective		
Zepke and Leach (2010)	Conceptual organiser - five engagement perspectives: 1) student motivation and agency, 2) transactional engagement between the student and faculty and between the student and his/her peers, 3) institutional support, 4) external influences, 5) active citizenship. (1-4 antecedents to engagement and 5 outcome of engagement). Key contribution - provides useful insights into the antecedents of study engagement. Key criticism - does not present a clear definition of study engagement.	Refers to National Survey of Student Engagement (NSSE), Community College Survey of Student Engagement (CCSSE), Australasian Survey of Student Engagement (AUSSE)

Note. See Chapter Three for a more comprehensive list of authors contributing to each perspective.

APPENDIX B: KEY AUTHORS AND CONTRIBUTIONS - STUDY ENGAGEMENT LITERATURE

Key Author(s)	Main Contributions	Engagement Process
Antecedent: Demands		
Kahu (2013); Kahu and Nelson (2018)	Demands include external pressures, such as family background, the needs of dependents, health problems and the demands of employment, and are considered to have a negative influence on study engagement.	Antecedent to study engagement
Bakker et al. (2005); Bakker et al. (2006); Demerouti et al. (2005); Hakanen and Schaufeli (2012)	Demands from one domain can spillover and influence the motivational process leading to engagement in another domain - exhaustion from work can spillover and negatively influence study engagement.	
Demands (Work Exhaustion) and Behavioural Study Engagement		
Anderson-Gough et al. (1998/2018); Demerouti et al. (2005); Sweeney and Summers (2002)	Work and non-work domains are mutually incompatible, as work demands interfere with the time available for other commitments. When applied to a professional accounting education setting, the two most common competing domains for trainee accountants are work and study. Given the stressful and demanding workloads that trainee accountants are subject to, it is likely that they will have less time to invest in study tasks, such as attending lectures, therefore leading to lower behavioural study engagement.	Antecedent to behavioural study engagement
Demands (Work Exhaustion) and Cognitive Study Engagement		
Crawford et al. (2010); Demerouti et al. (2005); Ozkan and Ozdevecioğlu (2013)	Applying the propositions of JD-R theory it is expected that those feeling exhausted will have lower energy, and therefore are less likely to invest effort in study tasks. When stress from work is 'taken home' it can result in an employee being preoccupied with work, resulting in less focus on other tasks, not related to work. As cognitive study	Antecedent to cognitive study engagement

Key Author(s)	Main Contributions	Engagement Process
	engagement requires focus and effort in order to reach depth of understanding, feelings of tiredness and being drained as a result of work, will likely have a negative impact on cognitive engagement. Drawing on the propositions of effort-recovery theory it is likely that trainee accountants suffering work exhaustion will have less energy to seek mastery in their study tasks (cognitive study engagement), and hence may achieve lower exam performance, as a result of inadequate recovery time.	
Demands (Work Exhaustion) and Affective Study Engagement		
Fredrickson's (2001); Hobfoll (1989); LePine et al. (2004); Salanova et al. (2010); Schaufeli and Taris, (2014)	Affective engagement is considered the psychological dimension of study engagement. Applying JD-R theory, research has found support for the hypothesis that affective study engagement mediated the relationship between performance obstacles (e.g. too many tasks) and future academic performance. This negative mediated path can be explained through broaden and build theory, whereby the negative emotions (such as those associated with exhaustion) lead to reduced (instead of broader) thoughts and actions and willingness to persevere, and hence lower affective study engagement.	Antecedent to affective study engagement
Antecedent: Study Resources		
Astin (1970, 1984, 1993); Biggs (2011): Chickering and Gamson (1987); Kahu (2013); Kahu and Nelson (2018); Kuh (2003); Krause and Coates (2008); Laird et al. (2008); NSSE (2018); Pascarella,	Study resources fall into two main categories: structural characteristics (e.g. policy, curriculum) and psychosocial resources (e.g. teaching practices). Psychosocial resources are considered to have the most profound impact on engagement. Three categories of study resources gaining a lot of attention in the literature include: *Effective teaching practices* including teaching style, content, competence of lecturer. A *supportive educational environment*, including positive interpersonal relationships and support for student learning and development, wellbeing and non-academic responsibilities (e.g. work).	Antecedent to study engagement

Key Author(s)	Main Contributions	Engagement Process
(1985); Pascarella and Terenzini, (2005); Tinto (1975); Zepke and Leach (2010)	*Enriching educational experiences* including interaction with diverse others, participation in high impact practices such as learning communities.	
Study Resources and Behavioural Study Engagement		
Friedman et al. (2001); Kahu, (2013); NSSE (2018); Pascarella (1985); Pike and Kuh (2005); Salanova et al. (2010); Smithikrai et al. (2018); Tinto (1975)	Study resources (e.g. quality of instruction, access to course content) play an important role in promoting activities such as participation in class activities and active learning (behavioural study engagement).	Antecedent to behavioural study engagement
Study Resources and Cognitive Study Engagement		
Biggs (2011); Entwistle (2000); Kuh et al. (2006); Laird et al. (2008); Ramsden (1979); Steele and Fullagar, (2009); Trigwell and Prosser, (1991)	Widely accepted view that faculty, through quality teaching and the support provided to students, have a key role to play in encouraging students to engage in high order/deep approaches to learning leading to a thorough understanding and mastery of the content being studied.	Antecedent to cognitive study engagement

Key Author(s)	Main Contributions	Engagement Process
Study Resources and Affective Study Engagement		
Salanova et al. (2010); Smithikrai et al. (2018).	Positive relationship between resources and affective engagement is a central proposition of JD-R theory, and have been empirically supported in education studies which have found that the availability of resources (e.g. quality teaching) contribute to a motivational process leading to positive outcomes (e.g. high performance), through increased study engagement.	Antecedent to affective study engagement
Antecedent: Personal Resources		
Schaufeli and Salanova (2007); Schaufeli and Taris (2014); Xanthopoulou et al. (2007)	JD-R theory outlines that personal resources are important determinants of how an individual adapts to his/her work/study environment, and therefore play an important role in the motivational process leading to engagement	Antecedent to study engagement
Personal Resources (Academic Self-Efficacy) and Behavioural Study Engagement		
Bandura (1977); Hobfoll (1989); Linnenbrink and Pintrich (2003); Pajares (2002)	Individuals have a self-system which enables them to exercise a measure of control over their thoughts, feelings and actions, as self-efficacy is part of this self-system it has been found to be an influential arbiter of human behaviour. Therefore, high self-efficacy beliefs can trigger a motivational process which encourages individuals to behave in a certain way (e.g. attend lectures). Attending classes and active learning (behavioural study engagement) can also be viewed as an opportunity to build competence (building personal resource) and to avoid negative outcomes. This aligns with the propositions of COR theory which outlines that individuals are motivated to build and protect resources.	Antecedent to behavioural study engagement

Key Author(s)	Main Contributions	Engagement Process
Personal Resources (Academic Self-Efficacy) and Cognitive Study Engagement		
Greene and Miller (1996); Linnenbrink and Pintrich (2003); Pintrich and De Groot, (1990); Ravenscroft et al. (2012); Walker et al. (2006)	Individuals experiencing high self-efficacy beliefs tend to invest greater effort, set more challenging goals, persist in the face of adversity and adopt higher order/deep learning strategies. Furthermore, students with higher self-efficacy beliefs are more likely to try to understand their study material and think deeply about it through reflection.	Antecedent to cognitive study engagement
Personal Resources (Academic Self-Efficacy) and Affective Study Engagement		
Bresó et al. (2011); Harter (1992); Llorens et al. (2007); Ouweneel et al. (2011); Salanova et al. (2010)	High self-efficacy beliefs have a powerful influence on psychological processes, whereby those with higher academic self-efficacy beliefs are considered to be more interested and enthusiastic in their academic work. This positive relationship is explained by outlining that where students are more confident in their ability to perform well in a task this can evoke a motivational process where they experience personal interest in the task, they place value on what they are learning, and they experience positive emotions and pride around the goal that they are working towards.	Antecedent to affective study engagement
Outcome: Exam Performance		
Entwistle and Ramsden (1983); Kahu (2013); Kahu and Nelson (2018); Kuh (2001); Pascarella and Terenzini (2005);	Outcome variables are commonly categorised as proximal (immediate) and distal (long-term) consequences. Proximal consequences include two categories: academic, including learning and development, and social, including satisfaction and wellbeing. Distal consequences also include two categories: academic, including retention, work success and lifelong learning, and social, citizenship and personal growth. Exam performance is considered one of the most important outcomes of study engagement in an educational setting.	Study engagement and exam performance

Key Author(s)	Main Contributions	Engagement Process
Pascarella et al. (2010); Pike and Kuh (2005)		
Anderson-Gough et al. (1998/2018); Flood and Wilson (2008); Paisey and Paisey (2014)	In professional accounting education, the objective of the initial professional development (IPD) stage is to enable the trainee accountant to develop professional competence through education and training. Professional competence is measured through performance in the qualifying exams. Therefore, exam performance is the outcome variable of interest in this research.	Study engagement and exam performance
Behavioural Study Engagement and Exam Performance		
Bloom (1974); Carroll (1963); Riley and Ward (2017); Tyler (1930); Wiley and Harnischfeger (1974)	Time spent studying, including lecture attendance, where students are actively engaged in learning, is an important factor in achieving desired learning outcomes, including exam performance.	Behavioural study engagement and exam performance
Cognitive Study Engagement and Exam Performance		
Booth et al. (1999); Carini et al. (2006); Davidson (2002); Entwistle and Entwistle (1991); Laird et al. (2008); Pascarella et al. (2010); Pintrich and De Groot (1990)	Higher order/deep learning strategies are typically characterised by intentional efforts to achieve mastery such as analysing information, synthesising ideas, making judgements about ideas and applying theories, and have consistently been found to lead to higher quality learning outcomes, including exam performance	Cognitive study engagement and exam performance

Key Author(s)	Main Contributions	Engagement Process
Affective Study Engagement and Exam Performance		
Pekrun et al. (2002); Salanova et al. (2010); Schaufeli et al. (2002)	Affective study engagement (vigor, dedication and absorption) is positively related to academic performance. Common explanations are that vigorous and dedicated students are more likely to be energetic about studying and immersed in their studies, and therefore likely to achieve higher performance.	Affective study engagement and exam performance

Note. See Chapter Three for a more comprehensive list of theoretical and empirical work contributing to each section below.

APPENDIX C: QUESTIONNAIRE/SURVEY

Research Study
Trainee Chartered Accountants' Experience of their Final Admitting Examination (FAE) Education Programme

PLAIN LANGUAGE STATEMENT

Caroline McGroary of DCU Business School, under the supervision of Prof. Marann Byrne and Prof. Barbara Flood of DCU, would like to invite you to participate in a study concerning your experience of the FAE programme of Chartered Accountants Ireland. This research is being carried out to gain a better understanding of students' engagement with and opinion of their FAE programme. This study will also explore factors which may promote or inhibit students' engagement in their studies.

Accompanying this statement is a questionnaire that asks a variety of questions relating to background workload, self-efficacy, teaching, institutional support, and academic engagement. You are asked to look over the questionnaire and, if you choose to do so, complete it, and return it to us. It should take you less than **15 minutes** to complete.

Information compiled from this questionnaire will be reported in aggregate form, will only be used for research purposes and will only be accessible to the above-named researcher along with her supervisors. All completed surveys will be stored in a locked filing cabinet in the researcher's office and will be confidentially destroyed when the study is completed. Although the questionnaire requires you to give your name, we assure you that you will not be identified at any stage during the conduct of the study or in analysing or presenting the results. It is also hoped to link the questionnaire responses to performances in the FAE. Please note that your participation in this study is voluntary, and you may withdraw from the research study at any point. By completing the questionnaire, you are indicating your consent to participate.

Following an analysis of the questionnaire data, I hope to interview a sample of students to gain a more in-depth understanding of their experiences of the FAE programme. If you would like to participate in these interviews, please provide your e-mail address at the end of the questionnaire.

If you have any concerns about this study and wish to contact an independent person, please contact: The Secretary, Dublin City University Research Ethics Committee, c/o Office of the Vice-President for Research, Dublin City University, Dublin 9, Tel: 01-7005000.

Section 1: Background Information

1. CAI Membership no/student no: _____

2. Name: _____

3. Gender: Male ☐ Female ☐ Age (years): _____

4. What size is your training firm/company:

Big 4 ☐ Large company (250+ employees) ☐ Medium (50-250 employees) ☐

Small (less than 50 employees) ☐

5. Is this your first set of professional exams with Chartered Accountants Ireland? Yes ☐ No ☐

   5.1 What other exams have you completed with Chartered Accountants Ireland? CAP 1 ☐ CAP 2 ☐

   5.2 What is your highest academic award?

Level of Degree: _____

Discipline: _____

University/Institution: _____

Overall classification: _____

Section 2: FAE Programme

This section has been designed to describe your experience of the FAE programme.

6. What percentage of lectures have you attended since the start of the FAE Programme? (tick the relevant box)

	0-20%	**21-40%**	**41-60%**	**61-80%**	**81-100%**
Content lectures – Core					
Content lectures - Elective					
Case-study workshops					
Other lectures e.g. cross marking workshop					
Block release lectures					

In your experience, during the FAE programme, about how often have you done each of the following?	**Never**	**Some-times**	**Often**	**Very Often**
7. Asked questions or contributed to discussions in class.	1	2	3	4
8. Worked hard to master difficult content.	1	2	3	4
9. Attended class **without** completing the required preparatory work.	1	2	3	4
10. Worked with other students **inside** class to master difficult content.	1	2	3	4
11. Worked with other students **outside** class to master difficult content.	1	2	3	4
12. Read business newspapers, professional magazines to improve your business knowledge.	1	2	3	4
13. Discussed your coursework with teaching/institute staff **inside** class.	1	2	3	4
14. Discussed issues from your coursework with others **outside** class (e.g. teaching/institute staff, peers, family, co-workers).	1	2	3	4

During the FAE programme, how much has your coursework emphasised the following intellectual activities?	**Very Little**	**Some**	**Quite a Bit**	**Very Much**
15. **Memorising** facts, ideas or methods from your subjects and coursework so you can repeat them in pretty much the same form.	1	2	3	4
16. **Analysing** the basic elements of an idea, problem, experience, or theory, such as examining a particular case or situation in depth and considering its components.	1	2	3	4

17. **Organising** and synthesising ideas, information or experiences into new, more complex interpretations and relationships.	1	2	3	4
18. **Making judgements** about the value of information, arguments, or methods (e.g. examining how others gather and interpret data, and assessing the soundness of their conclusions through class discussions or review of sample answers).	1	2	3	4
19. **Applying** theories or concepts to practical problems or in new situations.	1	2	3	4

Approaches to Study

The next part of this survey asks you to indicate your relative agreement or disagreement with comments about studying. Please work through the comments, giving your immediate response. In deciding your answers, think in terms of this particular lecture course. Please respond truthfully, so that your answers will accurately describe your actual ways of studying, and work your way through the survey quite quickly.

	Agree	**Agree Somewhat**	**Unsure**	**Disagree Somewhat**	**Disagree**
20. I usually set out to understand for myself the meaning of what we have to learn.	5	4	3	2	1
21. I look at the evidence carefully and try to reach my own conclusion about what I'm studying.	5	4	3	2	1
22. I try to relate ideas I come across to those in other topics or other courses whenever possible.	5	4	3	2	1
23. When I read an article or book, I try to find out for myself exactly what the author means.	5	4	3	2	1
24. When I'm working on a new topic, I try to see in my own mind how all the ideas fit together.	5	4	3	2	1
25. Often, I find myself questioning things I hear in class or read in books/coursework.	5	4	3	2	1
26. When I am reading, I stop from time to time to reflect on what I am trying to learn from it.	5	4	3	2	1

27. Ideas in coursework/books or articles often set me off on long chains of thought of my own.	5	4	3	2	1
28. When I read, I examine the details carefully to see how they fit in with what's being said.	5	4	3	2	1
29. Before tackling a problem or case-study, I first try to work out what lies behind it.	5	4	3	2	1
30. I like to play around with ideas of my own even if they do not get me very far.	5	4	3	2	1
31. It's important for me to be able to follow the argument, or to see the reason behind things.	5	4	3	2	1

The following 23 statements are about how you feel regarding your FAE studies. Please read each statement carefully and decide if you ever feel this way about your studies. If you have never had this feeling, circle the number "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by circling the number (from 1 to 6) that best describes how frequently you feel that way.

Never 0	**Almost Never 1**	**Rarely 2**	**Sometimes 3**	**Often 4**	**Very Often 5**	**Always 6**
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

	Never	**Almost Never**	**Rarely**	**Some-times**	**Often**	**Very Often**	**Always**
32. When I'm doing my work as a student, I feel bursting with energy.	0	1	2	3	4	5	6
33. During class I feel confident that I am effective in getting things done.	0	1	2	3	4	5	6
34. To me, my studies are challenging.	0	1	2	3	4	5	6
35. I believe that I make an effective contribution to the classes that I attend.	0	1	2	3	4	5	6
36. I am enthusiastic about my studies.	0	1	2	3	4	5	6

37. I am very resilient, mentally, as far as my studies are concerned.	0	1	2	3	4	5	6
38. I have learned many interesting things during the course of my studies.	0	1	2	3	4	5	6
39. When lectures/workshops are scheduled, I feel like going to class.	0	1	2	3	4	5	6
40. Time flies when I am studying.	0	1	2	3	4	5	6
41. In my opinion, I am a good student.	0	1	2	3	4	5	6
42. I am immersed in my studies.	0	1	2	3	4	5	6
43. My studies inspire me.	0	1	2	3	4	5	6
44. I feel happy when I am studying intensely.	0	1	2	3	4	5	6
45. I get carried away when I am studying.	0	1	2	3	4	5	6
46. When I am studying, I forget everything else around me.	0	1	2	3	4	5	6
47. It is difficult to detach myself from my studies.	0	1	2	3	4	5	6
48. I feel stimulated when I achieve my study goals.	0	1	2	3	4	5	6
49. I can effectively solve the problems that arise in my studies.	0	1	2	3	4	5	6
50. I feel energetic and capable when I'm studying or going to class.	0	1	2	3	4	5	6
51. I am proud of my studies.	0	1	2	3	4	5	6
52. As far as my studies are concerned, I always persevere, even when things do not go well.	0	1	2	3	4	5	6
53. I find my studies full of meaning and purpose.	0	1	2	3	4	5	6
54. I can continue studying for very long periods at a time.	0	1	2	3	4	5	6

In the case of the following statements, please circle the number beside each statement which most accurately reflects the extent to which you agree or disagree with the statement, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
55. Lecturers make the material interesting.	1	2	3	4	5
56. Any changes in the running of the FAE programme are communicated effectively.	1	2	3	4	5

57. The lecture notes are very good in helping me develop a good understanding of the course content.	1	2	3	4	5
58. Lecturers are really good at explaining the material.	1	2	3	4	5
59. Lecturers clearly outline the level of effort required to succeed in the FAE.	1	2	3	4	5
60. I find the online material very helpful in enabling my learning.	1	2	3	4	5
61. Lectures and case-study sessions are well-organised and run smoothly.	1	2	3	4	5
62. The lecture notes are intellectually stimulating.	1	2	3	4	5
63. I feel there is someone in Chartered Accountants Ireland that I can contact to help me cope with any difficulties with my studies.	1	2	3	4	5
64. Lecturers teach course sessions in an organised way.	1	2	3	4	5
65. Chartered Accountants Ireland provides good student support and advice.	1	2	3	4	5
66. I prefer block releases to attending classes at night.	1	2	3	4	5
67. I regularly read assigned textbooks.	1	2	3	4	5
68. Lecturers are enthusiastic about their subject.	1	2	3	4	5
69. I believe the lecturers teach in ways that enable me to learn.	1	2	3	4	5
70. Chartered Accountants Ireland’s introductory sessions set out clearly what I need to do to succeed in the FAE.	1	2	3	4	5
71. Block releases are a very effective way of covering material.	1	2	3	4	5
72. I regularly use the institute’s online learning material.	1	2	3	4	5
73. I prefer block releases to attending classes at weekends.	1	2	3	4	5
74. I understand what I must achieve to be deemed professionally competent in the FAE.	1	2	3	4	5
75. Lecturers clearly explain the best approach to answering exam questions.	1	2	3	4	5
76. I feel there is someone in Chartered Accountants Ireland that I can contact to help me cope with work difficulties.	1	2	3	4	5

Section 3: Experience of Work

The following 10 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. Using the same scale as above, if you have never had this feeling, circle the number '0' (zero). If you have had this feeling, indicate how often you feel it by circling the number (from 1-6) that best describes how frequently you feel that way.

	Never	**Almost Never**	**Rarely**	**Some -times**	**Often**	**Very Often**	**Always**
77. I feel emotionally drained from my work.	0	1	2	3	4	5	6
78. I doubt the significance of my work.	0	1	2	3	4	5	6
79. I have become less enthusiastic about my work.	0	1	2	3	4	5	6
80. I feel used up at the end of the workday.	0	1	2	3	4	5	6
81. Working all day is really a strain for me.	0	1	2	3	4	5	6
82. I feel tired when I get up in the morning and have to face another day on the job.	0	1	2	3	4	5	6
83. I have become more cynical about whether my work contributes anything.	0	1	2	3	4	5	6
84. I feel burned out from my work.	0	1	2	3	4	5	6
85. I just want to do my job and not be bothered.	0	1	2	3	4	5	6
86. I have become less interested in my work since I started this job.	0	1	2	3	4	5	6

87. **Did you have the freedom to choose your FAE elective?**

Yes ☐ No ☐

88. **Overall, how would you evaluate your entire educational experience with Chartered Accountants Ireland?**

Poor	Fair	Good	Excellent

89. **Would you recommend the Chartered Accountants Ireland qualification to a friend?**

Definitely no	Probably no	Probably yes	Definitely yes

END OF SURVEY

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY. IT IS MUCH APPRECIATED.

If you are interested in participating in a follow-up interview, please fill in your name and email address in the space provided below.

Name: _____

Email Address: _____

APPENDIX D: ETHICS APPROVAL LETTER

Oliscoil Chathair Bhaile Átha Cliath
Dublin City University

DCU

Prof. Marann Byrne
Dublin Business School

REC Reference:	**DCUREC/2015/143**
Proposal Title:	**An exploration of trainee accountants' experience of and engagement with the Final Admitting Examination (FAE) programme of Chartered Accountants Ireland.**
Applicant(s):	**Prof. Marann Byrne; Prof. Barbara Flood; Ms Caroline McGroary;**

Dear Marann,

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this project.

Materials used to recruit participants should state that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee.

Should substantial modifications to the research protocol be required at a later stage, a further submission should be made to the REC.

Yours sincerely,

Dónal O'Mathúna

Dr Dónal O'Mathúna
Chairperson
DCU Research Ethics Committee

DCU
Research & Innovation

APPENDIX E: CHARTERED ACCOUNTANTS IRELAND (CAI) APPROVAL EMAIL

Email Sent

To: Diarmuid Breathnach
From: Caroline McGroary
Date: 30th April 2015
Subject: PhD Research Approval - Student Experiences of the FAE Education Programme

Dear Mr Breathnach,

By way of introduction, my name is Caroline McGroary, and I am a lecturer in accounting in Dublin City University. I am currently doing a PhD in the area of professional accounting education, under the supervision of Prof. Marann Byrne and Prof. Barbara Flood.

In brief, my research seeks to explore professional accounting students' experiences of their Final Admitting Examination (FAE) education programme. In doing so, it will explore students' engagement in their studies and the main factors influencing their level of engagement. It is hoped that this data will be collected through a questionnaire, and, following analysis of this data, a sample of students will be interviewed. Finally, if access to student exam results is granted, it will be possible to analyse how student engagement impacts on academic performance.

At this stage, I am seeking approval from Chartered Accountants Ireland to invite current and future FAE students to participate in the questionnaire (see attached). Ideally, students would complete the questionnaire at the June 2015 and 2016 block release sessions.

The survey has recently been sent for ethical approval in DCU, and confirmation is expected to be received in the coming weeks. As a result, the content of the survey attached may be subject to slight change, which will be communicated to you accordingly.

If you would like to discuss this research further, please contact me at this email address, or you can you call me on +353876124446.

I would like to take this opportunity to thank you in advance for considering participating in this research, and I look forward to hearing from you.

Kind regards,
Caroline

Reply Received

To: Caroline McGroary
From: Diarmuid Breathnach
Date: 7th May 2015
Subject: PhD Research Approval – Student Experiences of the FAE Education Programme

Hi Caroline,

Firstly, apologies for the delay in responding to you. We have discussed this internally and are delighted to support the research on the understanding that you would share information on the findings.

Could I suggest we meet sometime next week and go through the practicalities and logistics?

Kind regards,
Diarmuid

APPENDIX F: RESULTS OF EXPLORATORY FACTOR ANALYSIS (EFA)

The results for the EFA, using direct oblimin with oblique rotation, are presented below. Note: Items loading below 0.40 were considered a weak measure of the related construct (Hair et al., 2010).

Behavioural Study Engagement Scale

The behavioural study engagement scale was expected to load onto three factors: time, active learning, and other educational activities. The first EFA revealed all items loading onto four factors, with two measures of active learning loading onto an unexpected fourth factor, "Discussed your coursework with teaching/Institute staff inside class" and "Asked questions or contributed to discussions in class". As the fourth factor had only two indicators, it was not considered appropriate for further analysis, as the literature suggests that each factor should ideally have a least three items (Gaskin, 2019). Therefore, it was considered appropriate to run the EFA again, forcing all items to load onto three factors. Using this approach, a clear three-factor structure emerged, with each item loading onto its expected dimension. Together, these explained 50.865% of the variance. The results are presented below.

Exploratory Factor Analysis: Behavioural Study Engagement

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.802
Bartlett's Test of Sphericity Approx. Chi-Square	2343.36
df	153
Sig.	0.000

Factor Loadings (Pattern Matrix)

	FACTORS		
	1	2	3
Time spent studying			
Core Lectures	0.874		
Electives	0.843		
Workshops	0.777		
Other Lectures	0.755		
Block Release	0.606		
Active Learning			
Discussed your coursework with teaching/Institute staff inside class.		0.716	
Worked with other students inside class to master difficult content.		0.688	
Discussed issues from your coursework with others outside class e.g. teaching/Institute staff, peers, family, co-workers.		0.557	
Worked with other students outside class to master difficult content.		0.538	
Asked questions or contributed to discussions in class.		0.428	
Memorising facts, ideas or methods from your subjects and coursework so you can repeat them in pretty much the same form.		-	
Other Educational Activities			
Attended class without completing the required preparatory work.			0.764
Worked hard to master difficult content.			0.634
Read business newspapers, professional magazines to improve your business knowledge.			-
Eigenvalues	3.703	1.899	1.149
% of variance explained	20.574	10.551	6.381

Note. Extraction Method: Principal Component Analysis. Rotation method: Oblimim and Kaiser Normalisation. Rotation converged in 8 iterations

Cognitive Study Engagement Scales

Cognitive study engagement was measured using two scales. The first scale was the five item Higher Order Learning scale (National Survey of Student Engagement (NSSE) – Deep Learning Scale), which was expected to load onto one factor. The second scale was the twelve item Approaches to Study Skills Inventory for Students (ASSIST) scale which was expected to load onto three factors: seeking meaning, relating ideas and use of evidence.

The initial EFA conducted on the Higher Order Learning (HOL) scale revealed that all five items loaded onto two factors. The item "memorising facts, ideas or methods from your subjects and coursework so you can repeat them in pretty much the same form" loaded onto a different scale. When forced to load onto one factor the same item loaded below 0.40. It was therefore considered a poor fit for this scale and was eliminated from further analysis. The remaining four items loaded onto one factor and together explained approximately 53.965% of the variance. The results of the EFA are presented below.

Exploratory Factor Analysis: Cognitive Study Engagement – HOL Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.803
Bartlett's Test of Sphericity Approx. Chi-Square	732.128
df	10
Sig.	0.000

Factor Loadings (Component Matrix)	
	Factor 1
Cognitive Engagement (Higher Order Learning [HOL] Scale)	
Making judgements about the value of information, arguments or methods	0.844
Organising and synthesising ideas, information or experiences into new, more complex interpretations and relationships.	0.814
Applying theories or concepts to practical problems or in new situations	0.811
Analysing the basic elements of an idea, problem, experience or theory, such as examining a particular case or situation in depth and considering its components.	0.788
Memorising facts, ideas or methods from your subjects and coursework so you can repeat them in pretty much the same form.	0.212
Eigenvalues	2.698
% of variance	53.965

Note. Extraction Method: Principal Component Analysis. 1 Component extracted

The initial EFA conducted on the ASSIST revealed that the items loaded onto three factors. However, they did not load onto their expected dimensions. As a shortened version of the ASSIST (six-item) is also supported in the literature, it was considered appropriate to conduct an EFA on the items relating to this scale. The results showed that all items loaded onto one factor, which was the expected result, and together explained 40.353% of the variance. The results of the EFA on this shortened version of the ASSIST deep learning scale are presented below.

Exploratory Factor Analysis: Cognitive Study Engagement – ASSIST Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.767
Bartlett's Test of Sphericity Approx. Chi-Square	433.181
Df	15
Sig.	0.000

Factor Loadings (Component Matrix)	
	Factor 1
Cognitive Engagement (Deep Learning)	
When I read, I examine the details carefully to see how they fit in with what's being said.	0.695
When I read an article or book, I try to find out for myself exactly what the author means.	0.668
When I'm working on a new topic, I try to see in my own mind how all the ideas fit together.	0.660
Often I find myself questioning things I hear in class or read in books/coursework.	0.637
Ideas in coursework/books or articles often set me off on long chains of thought of my own.	0.614
Before tackling a problem or case study, I first try to work out what lies behind it.	0.522
Eigenvalues	2.421
% of variance	40.353

Note. Extraction Method: Principal Component Analysis. 1 Component extracted

Affective Study Engagement Scale

Affective study engagement is measured using the UWES-S (17-item), which has three sub-scales: vigor, dedication and absorption. The literature supports the use of this three-factor structure, but also supports the use of a one-factor structure to measure affective study engagement (e.g. Schaufeli et al., 2002). The results of the three-factor structure test indicated that the items did not load as expected. It was therefore considered appropriate to test the shorter nine-item and six-item versions of the UWES-S to determine their pattern structure. The nine-item version both supports a three-factor structure and one factor structure, while the six-item version supports a two-factor structure and one factor structure. The EFA of both the nine-item version and the six-item version loaded onto one factor as expected. The nine-item version explained 51.375% of the variance, and the six-item version explained 53.884% of the variance. Overall, the EFA suggested that either the nine-item or the six-item version of the UWES-S was a better fit than the 17-item version for this analysis, and these findings were considered at the CFA stage. The results of the EFA on both the nine-item and six-item scales are presented below.

Exploratory Factor Analysis: Affective Study Engagement (Nine-item Version)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.893
Bartlett's Test of Sphericity Approx. Chi-Square	1842.760
df	32
Sig.	0.000

Factor Loadings (Component Matrix)	
	Factor 1
Affective Engagement	
My studies inspire me.	0.818
I feel happy when I am studying intensely.	0.780
I am enthusiastic about my studies.	0.770
I feel energetic and capable when I'm studying or going to class	0.753
I am immersed in my studies.	0.708
I get carried away when I am studying.	0.691
I am proud of my studies.	0.659
When I'm doing my work as a student, I feel bursting with energy.	0.628
When lectures/workshops are scheduled, I feel like going to class.	0.616
Eigenvalues	4.624
% of variance	51.375

Note. Extraction Method: Principal Component Analysis. 1 Component extracted

Exploratory Factor Analysis: Affective Study Engagement (Six-item Version)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.835
Bartlett's Test of Sphericity Approx. Chi-Square	956.121
df	15
Sig.	0.000
Factor Loadings (Component Matrix)	
	Factor 1
Affective Engagement	
My studies inspire me.	0.803
I am enthusiastic about my studies.	0.792
I feel energetic and capable when I'm studying or going to class	0.770
I am proud of my studies.	0.693
When lectures/workshops are scheduled, I feel like going to class.	0.669
When I'm doing my work as a student, I feel bursting with energy.	0.663
Eigenvalues	3.233
% of variance	53.884

Note. Extraction Method: Principal Component Analysis. 1 Component extracted

Personal Resources (Academic Self-efficacy) Scale

The academic self-efficacy scale was adapted from the MBI-SS, academic self-efficacy dimension. It included six items, which were expected to load onto one factor. The initial EFA results indicated that all items loaded onto two factors. Given the support for the one-factor structure of this scale in the literature (Schaufeli et al., 2002), it was considered appropriate to force all items to load onto one factor. Together, this one-factor structure explained 42.927% of the variance. The results are presented below.

Exploratory Factor Analysis: Academic Self-efficacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.763
Bartlett's Test of Sphericity Approx. Chi-Square	537.938
df	15
Sig.	0.000

Factor Loadings (Component Matrix)	
	Factor 1
Academic Self-Efficacy	
During class I feel confident that I am effective in getting things done.	0.718
I have learned many interesting things during the course of my studies.	0.682
In my opinion, I am a good student.	0.676
I can effectively solve the problems that arise in my studies.	0.668
I believe that I make an effective contribution to the classes that I attend.	0.614
I feel stimulated when I achieve my study goals.	0.562
Eigenvalues	2.576
Percentage of Variance explained	42.927

Note. Extraction Method: Principal Component Analysis. 1 Component extracted

Work Exhaustion Scale

The work burnout scale was adapted from the MBI-GS, which includes 5 items in total which were expected to load onto one dimension, exhaustion. The results of the EFA confirm that all items load onto one factor and together explain 74.87% of the variance. The results are presented below.

Exploratory Factor Analysis: Work Exhaustion

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.866
Bartlett's Test of Sphericity Approx. Chi-Square	1696.107
df	10
Sig.	0.000

Factor Loadings (Component Matrix)	
	Factor 1
Work Exhaustion	
I feel burned out from my work.	0.901
I feel used up at the end of the workday.	0.883
Working all day is really a strain for me.	0.856
I feel tired when I get up in the morning and have to face another day on the job.	0.853
I feel emotionally drained from my work.	0.832
Eigenvalues	3.744
Percentage of Variance explained	74.871

Note. Extraction Method: Principal Component Analysis. 1 Component extracted

Study Resources Scale

The study resources scale was adapted from the ISSE, with a number of context-specific questions added. In the original scales, the items were grouped under three headings: effective teaching practices, supportive campus environment and enriching educational experiences. However, given the themes of the context-specific questions, all items were expected to be grouped under five themes: effective teaching practices, support from a professional body, preferred lecture structure, preparation for exams and resources. The initial EFA results suggested that there are six factors, with all items loading onto their expected dimensions, except effective teaching practices, which was split into two factors. Given the nature of the questions, it was considered appropriate to force the items to load onto five factors. The results indicated that all items loaded onto their expected dimensions and together explained 57.893% of the variance. The results are presented below.

Exploratory Factor Analysis: Study Resources

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.852
Bartlett's Test of Sphericity Approx. Chi-Square	3871.07
df	231
Sig.	0.000

Factor Loadings (Pattern Matrix)

	FACTORS				
	1	2	3	4	5
Effective Teaching Practices					
Lecturers are really good at explaining the material	0.779				
Lecturers make the material interesting.	0.759				
I believe the lecturers teach in ways that enable me to learn.	0.750				
The lecture notes are very good in helping me develop a good understanding of the course content.	0.608				
Lecturers teach course sessions in an organised way	0.537				
The lecture notes are intellectually stimulating.	0.490				
Lecturers are enthusiastic about their subject.	0.477				
Lectures and case study sessions are well organised and run smoothly.	0.464				
Preferred Lecture Structure					
I prefer block releases to attending classes at weekends		0.907			
I prefer block releases to attending classes at night		0.893			
Block releases are a very effective way of covering material.		0.852			
Support from Professional Body					
I feel there is someone in Chartered Accountants Ireland that I can contact to help me cope with work difficulties.			0.863		
I feel there is someone in Chartered Accountants Ireland that I can contact to help me cope with any difficulties with my studies.			0.858		
Chartered Accountants Ireland provide good student support and advice.			0.793		
Any changes in the running of the FAE programme are communicated effectively.			0.430		
Resources					
I regularly use the Institute's online learning material.				0.879	
I find the online material very helpful in enabling my learning.				0.674	
I regularly read assigned textbooks.				0.603	
Preparation for Exams					
I understand what I must achieve to be deemed professionally competent in the FAE.					-0.7588
Chartered Accountants Ireland's introductory sessions set out clearly what I need to do to succeed in the FAE.					-0.7353
Lecturers clearly outline the level of effort required to succeed in the FAE.					-0.6582
Lecturers clearly explain the best approach to answering exam questions.					-0.6523
Eigenvalues	6.087	2.408	1.659	1.375	1.207
% of variance	27.670	10.944	7.540	6.251	5.488

Note. Extraction Method: Principal Component Analysis. Rotation method: Oblimim and Kaiser Normalisation. Rotation converged in 6 iterations.

APPENDIX G: CRONBACH ALPHA BEFORE AND AFTER CONFIRMATORY FACTOR ANALYSIS (CFA)

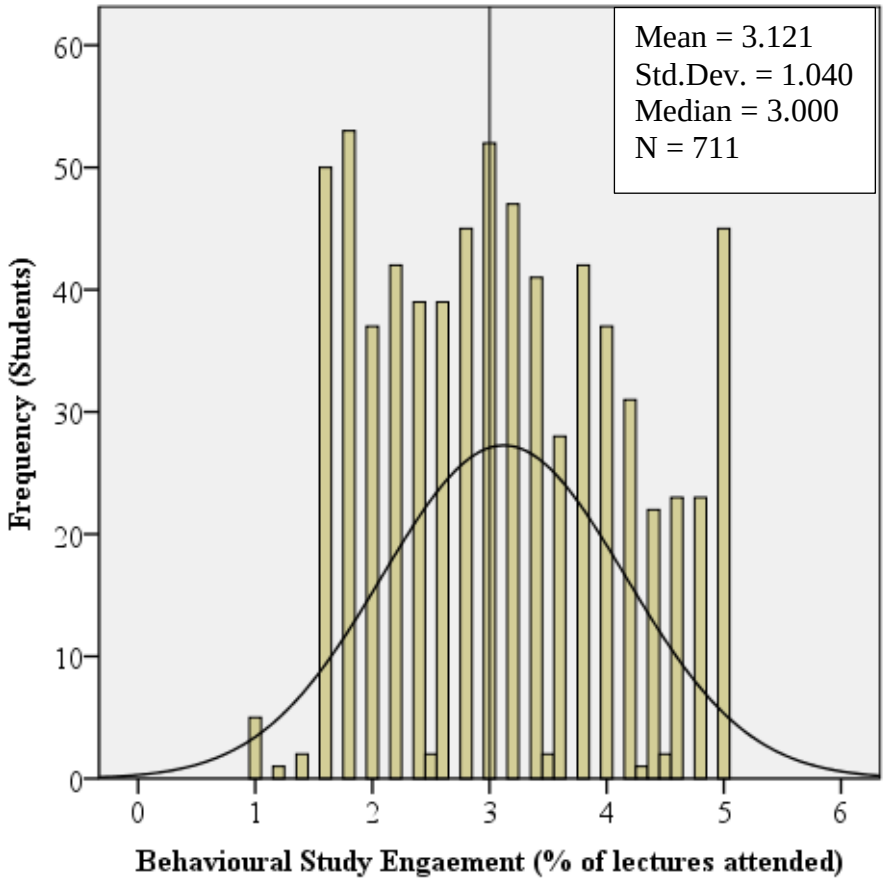
	Original - Other Studies		Before CFA		After CFA	
Variables	No. of items	Cronbach Alpha	No. of items	Cronbach Alpha	No. of items	Cronbach Alpha
Behavioural Engagement						
Time spent at lectures	N/A	N/A	5	0.839	5	0.839
Active Learning Scale (NSSE/ISSE)	4	0.630	4	0.599	N/A	N/A
Other Educational Activities	N/A	N/A	3	0.378	N/A	N/A
Cognitive Engagement						
Deep Learning: Use of evidence, seeking meaning and relating ideas (ASSIST)	12	0.840	12	0.802	N/A	N/A
Deep Learning: Higher Order Learning (NSSE/ISSE)	5	0.858	4	0.751	4	0.751
Affective Engagement						
Vigor, dedication and absorption[1] (UWES-S)	17	0.930	17	0.901	6	0.823
Demands (Work Exhaustion)						
Exhaustion (MBI-GS)	5	0.880	5	0.916	5	0.916
Study Resources						
Effective teaching practices (NSSE/ISSE)	6	0.770	8	0.815	8	0.815
Preparation for FAE Exams	N/A	N/A	4	0.727	4	0.727
Support from Professional Body	N/A	N/A	4	0.800	3	0.853
Preferred Lecture Structure	N/A	N/A	3	0.855	N/A	N/A
Resources	N/A	N/A	3	0.598	N/A	N/A
Personal Resources (Academic Self-efficacy)						
Academic Self Efficacy (MBI-S)	6	0.760	6	0.720	6	0.720

Note. Results based on year 1 data only

[1] Absorption dimension removed during the CFA

APPENDIX H: FREQUENCY DISTRIBUTION OF STUDY VARIABLES

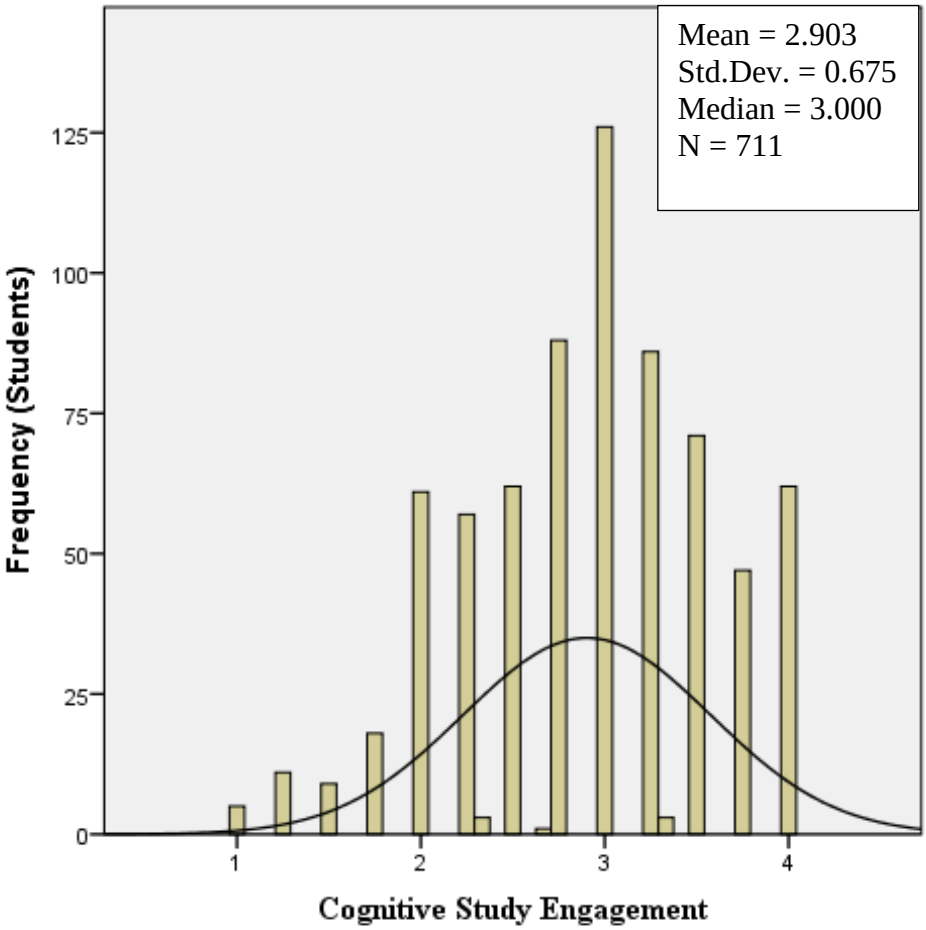
Variable 1: Behavioural Study Engagement



1 = 0-20%, 2 = 21-40%, 3 = 41-60%, 4 = 61-80%, 5 = 81-100%

Refer to questionnaire in Appendix C: Question 6

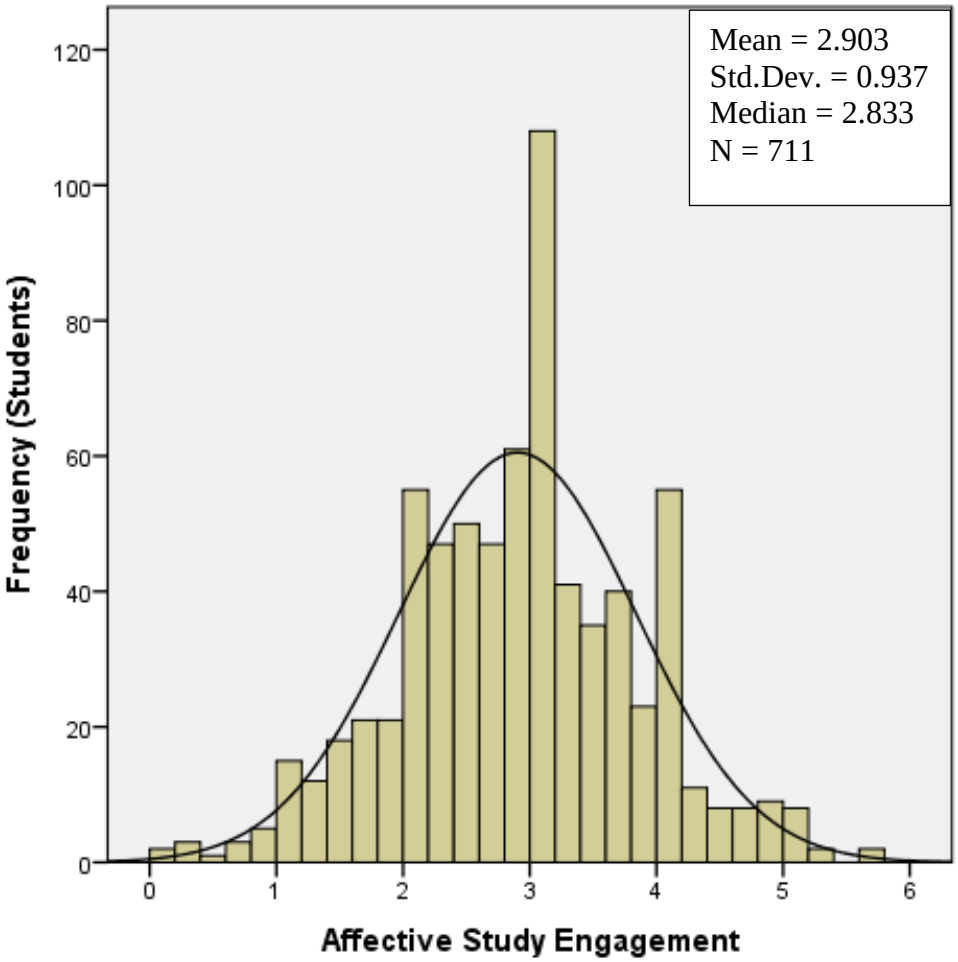
Variable 2: Cognitive Study Engagement



1 = Very Little, 2 = Some, 3 = Quite a Bit, 4 = Very Much

Refer to questionnaire in Appendix C: Questions 16-19

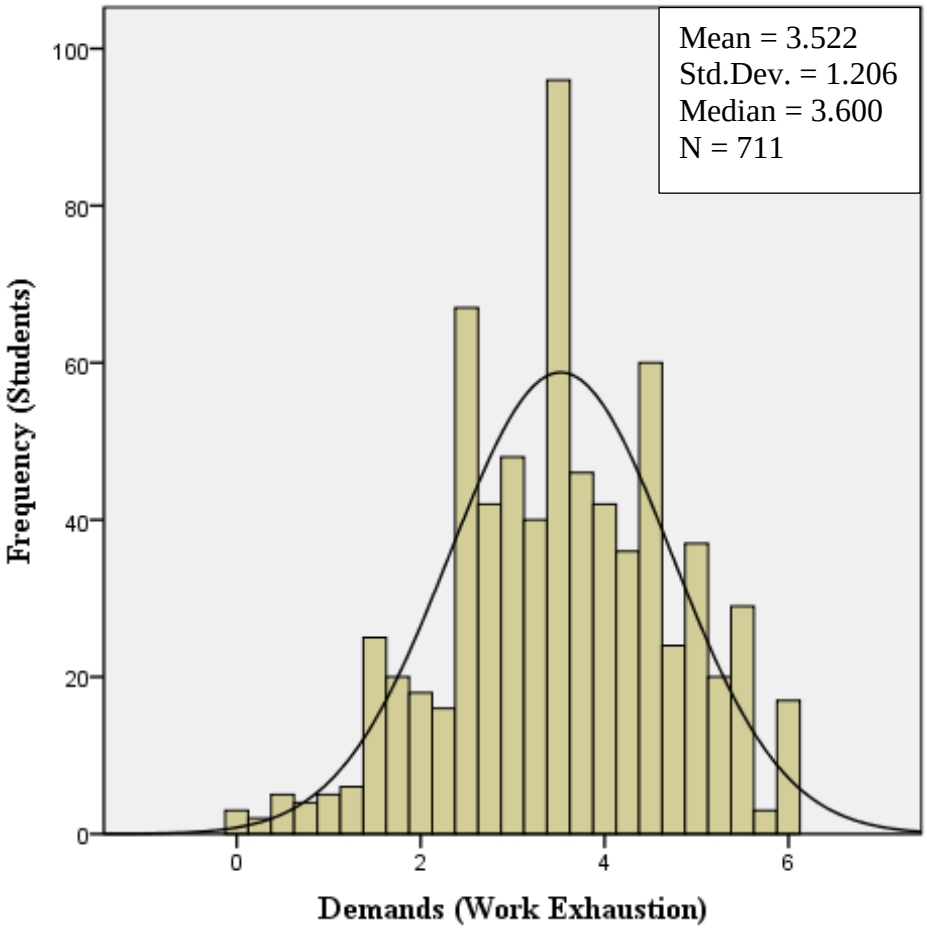
Variable 3: Affective Study Engagement



0 = Never, 1 = Almost Never, 2 = Rarely, 3 = Some-times, 4 = Often, 5 = Very Often, 6 = Always

Refer to questionnaire in Appendix C: Questions 32, 36, 39, 43, 50, 51

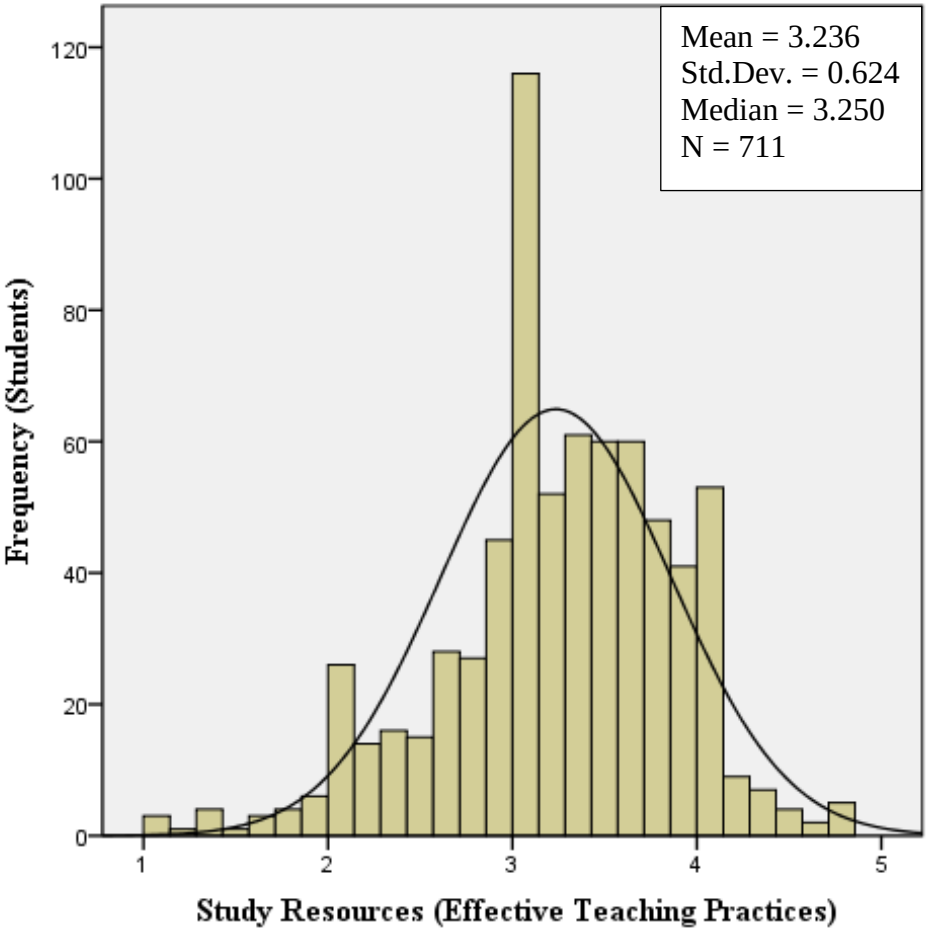
Variable 4: Demands (Work Exhaustion)



0 = Never, 1 = Almost Never, 2 = Rarely, 3 = Some-times, 4 = Often, 5 = Very Often, 6 = Always

Refer to questionnaire in Appendix C: Questions 77, 80, 81, 82, 84

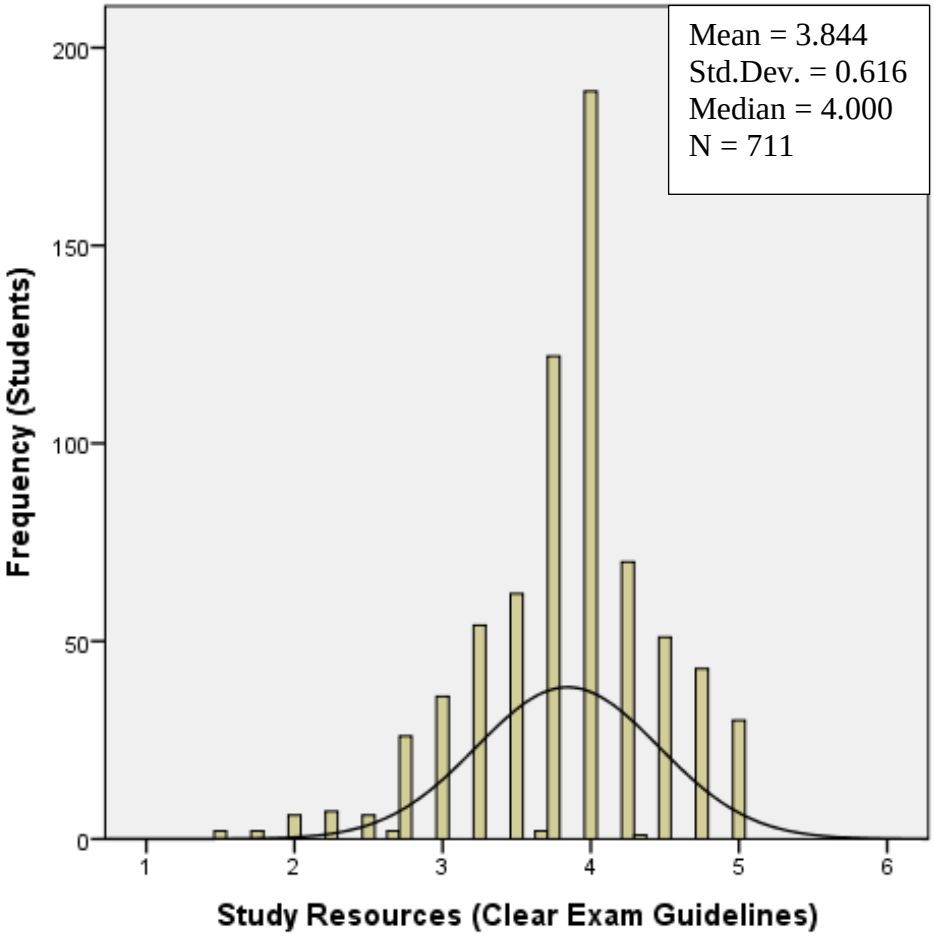
Variable 5: Study Resources (Effective Teaching Practices)



1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Refer to questionnaire in Appendix C: Questions 55, 57, 58, 61, 62, 64, 68, 69

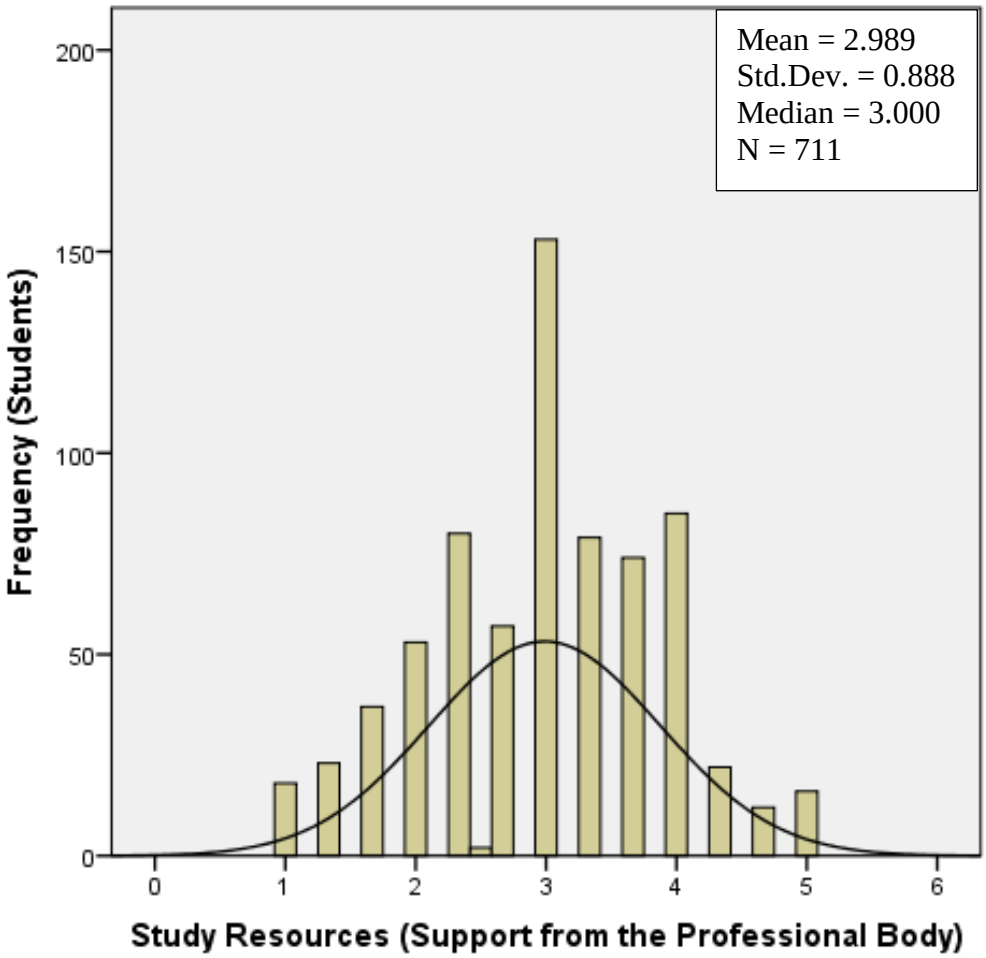
Variable 6: Study Resources (Clear Exam Guidelines)



1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Refer to questionnaire in Appendix C: Questions 59, 70, 74, 75

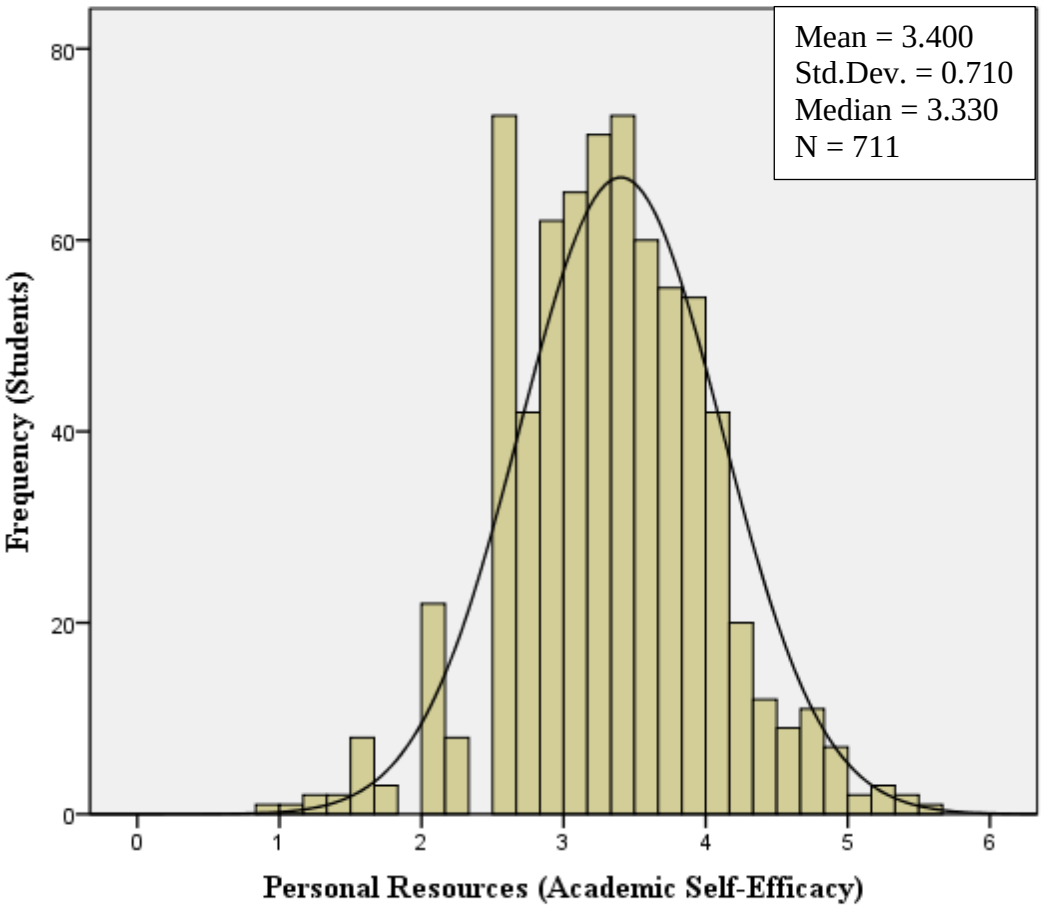
Variable 7: Study Resources (Support from the Professional Body)



1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Refer to questionnaire in Appendix C: Questions 56, 63, 65, 76

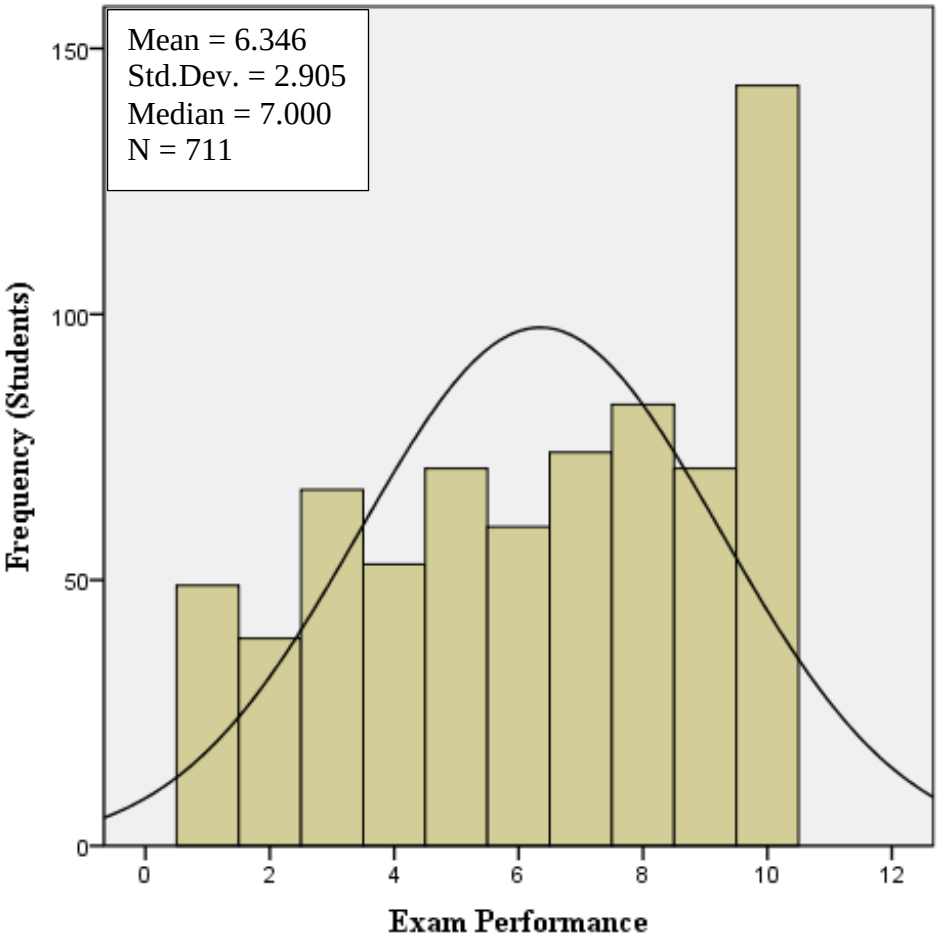
Variable 8: Personal Resources (Academic Self-Efficacy)



0 = Never, 1 = Almost Never, 2 = Rarely, 3 = Some-times, 4 = Often, 5 = Very Often, 6 = Always

Refer to questionnaire in Appendix C: Questions 33, 35, 38, 41, 48, 49

Variable 9: Exam Performance



Class Ranking

1 = Bottom 10%.....10 = Top 10%

APPENDIX I: INTERVIEW GUIDE

Introduction

[Aim: Thank participant, explain interview process, and allow for questions].

Firstly, I want to say thank you for taking the time to meet with me today. Before we get started, I'll give you a brief introduction about the purpose and format of the interview.

The interview will consist of broad questions about your experience of studying for the Final Admitting Exams (FAE) of Chartered Accountants Ireland. There are no right or wrong answers, I'm just looking for your personal opinion. If you prefer not to answer any questions that is completely fine, and we can stop the interview at any time.

If it is okay with you, I will audio record the interview on this device. Please be assured that all information shared is completely confidential and your name will not be revealed at any stage of this research. When transcribed the interview will be kept in a secure location until the completion of the research, at which point it will be destroyed.

The interview should last between 20 and 30 minutes. Have you any questions before we start?

Interview Questions

Broad Introduction Question:

1. Can you tell me about your experience of studying for the FAE exams?

Exploration of the relationship between exhaustion and engagement/performance:

2. Can you tell me about your experience of working full time and studying part time during your FAE year and how did this influence your engagement in your studies (and performance in exams*)?

Exploration of the relationship between study resources and engagement/performance:

3. How did the support provided by CAI (e.g. lecturers, exam guidelines, extra support) influence your study engagement (and performance in exams*)?

Exploration of their approach to studying and the factors they consider most important for success in the FAE exams:

4. If a FAE student asked for your advice on the best way to prepare for the FAE exams, what advice would you give them?

Potential areas for future research:

5. Are there any improvements that CAI could make to the FAE education programme to enhance the learning experience?

*Only relevant to those who have already sat the exams

APPENDIX J: INTERVIEW ANALYSIS

Code	Themes/Variables
WE	Work Exhaustion
SE	Academic Self Efficacy
ETP	Effective Teaching Practices
CEG	Clear Exam Guidelines
SPB	Support from the Professional Body
BE	Behavioural Study Engagement
CE	Cognitive Study Engagement
AE	Affective Study Engagement
PERF	Exam Performance
Other	Other

Participant	**Quotes**	**Themes/Variables**										**Relationship Explained**
		WE	**SE**	**ETP**	**CEG**	**SPB**	**BE**	**CE**	**AE**	**PERF**	**Other**	
1	From the period of January up to April, it was very difficult to balance busy season, studying, continuous assessments and actually having a life. However, I would rather get an average rating at work and pass my exams than come out with an excellent rating and not pass my exams.	✓					✓	✓				WE to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
1	I definitely found a mix in the quality of lectures. A poor lecture for me was one that was very technical and went by the book where the lecturer was reading rules and standards and I remember thinking, 'this is not how a student learns' a student learns by doing questions or examples that reinforces the theory behind it. While you need to know the principles, sitting down reading the rules out of a book is not going to make me learn.			✓	✓		✓	✓	✓			ETP/CEG to BE/CE/AE
	There were definitely clear guidelines given but I did not think that one set of guidelines suits everyone. I found, talking to my peers whether it be in work or my college friends, far more beneficial, and especially talking to those who had gone through it a year or two before as you could ask them what worked for them and what did not and what to expect or just little pieces of advice that you are not really given [in lectures].				✓		✓	✓		✓	✓	CEG/Other to BE/CE, BE to PERF, BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
1	I did use the online videos of the lectures when I could not make it [a lecture]. I would read the slides myself, learn the theory and then go to the part of the video that did the question. It comes down to personal preferences and the way you learn and what suits you, so yes, I would have used a mixed approach.						✓	✓		✓	✓	BE to PERF, BE and CE, CE to PERF, Other to BE/CE
	I studied in work, there was 12 of us who were very close and all doing the FAE. We studied on the same floor. We would pass around questions and then correct them together. It was so so good, I found it really beneficial.						✓	✓		✓	✓	BE to PERF, BE and CE, CE to PERF, Other to BE/CE
	There was a little doubt there, but I would always be of the opinion that if I put the work in, I know I am going to get over the line.		✓					✓				SE to CE
	I would have always gone to lectures because in the back of my head, as I walk into an exam hall, I know that I have done all I can to get there […] So, it's more of a confidence, reassurance thing.		✓				✓					SE to BE, BE to SE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
1	I probably would have reached out to work before reaching out to them [CAI] if I did have work or academic difficulties.					✓		✓	✓			SPB to CE/AE
	I think some of our lecturers were too old-school in their approaches, as their style was just pure lecturing. I think engagement in class is key to actually ensuring that the student is learning and taking something out of it and is not just sitting there on their phone for an hour listening to you because they have to be there.			✓			✓	✓	✓			ETP to BE/CE/AE
2	I was the kind of person who tends to go to lectures. Even if I am exhausted, I might sleep through half of it, but I will pick up something.			✓			✓	✓		✓		BE to PERF, BE and CE
	They [the lectures] are very useful just because the nature of the exam is so different from what you are used to that you kind of need somebody to explain it to you dozens of times over before you realise, “Oh, that’s what they are looking for”.				✓		✓	✓		✓		BE to PERF, BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
2	It's unpleasant, I will not lie, it's very unpleasant [the experience of working full time and studying].	✓							✓			WE to AE
	Your primary goal is to get your qualification, but your primary energy is devoted to your job, so that's your focus. It's hard. So, you are using your spare time to do your study which you ideally want to do when you're full of beans […] so, you are wrecked. You are just going from place to place to place with no break and no rest and it's just hard.	✓						✓	✓			WE to CE/AE
	You would do the minimum to keep up, for example attend lectures […] but you wouldn't do, say the advance reading […] there just aren't enough hours in the day to do it or energy to devote to doing that type of thing.	✓					✓		✓			WE to BE/AE
	I had a support network […] they [the training firm] would bring in people from the Institute and they would give us day sessions […] we did our own internal training […] there was a designated study area						✓	✓		✓	✓	BE to PERF, BE and CE, Other to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
2	[in work], I had my own fixed desk and I could put all my books there […] I got some notes from other people who had done the FAEs years before […] that makes a huge impact, I think, that it gives you somewhere where you can hit the ground running when you hit the study leave.											
	FAE is more forgiving than others [CAP 1 and CAP 2 exams] because there is not that much new material […] but by and large, you are just looking at the information in a different way […] so, I guess the most important thing with those lectures was just understanding the exam and just understanding how the cases work and seeing the techniques for answering cases.			✓	✓		✓	✓				ETP/CEG to BE/CE, BE and CE
	The case study lectures were probably the best. At the beginning of the year you think […] "Where do I start? How do I structure that? I have no idea" […] but as time goes on and you go through all these workshops you see, "Oh OK,			✓	✓		✓	✓				ETP/CEG to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
2	that's what they mean" or "That's how you're supposed to approach it".											
	Our first point of call [if we needed support] would tend to be people within our peer group or the people who were direct in learning and education before you would think about, "Oh, I should go to the Institute" […] but I probably did not need that support anyway.					✓		✓	✓		✓	SPB/Other to CE/AE
	If I am given a problem, I usually want to understand exactly what the problem is. It's not enough for me to just have the answer. It's like, "Well, why?" you know, and so I just keep digging and digging until, "Oh, OK, finally, I get what that means," you know?							✓		✓		CE to PERF
	Out of all of the professional exams, the FAE is the most interesting because the cases are generally written either with some dry humour in them or they are actually interesting business problems […] I would be thinking							✓	✓			CE and AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
2	about, "How would I solve that if that was in practice?" […] so, you're engaging your brain into the way you would be thinking when you actually have those problems in work.											
	I would say I was pretty confident generally from having done CAP1 and CAP2 successfully so that gives you a bit of reassurance when you go into the exams but the problem with FAE is […] it was one of those ones [exams] where it did not matter how smart you were or it did not matter how hard you worked; it was still quite easy to fail.		✓				✓	✓	✓			SE to BE/CE/AE
	Ideally you want to spend a lot of time practising questions because that's what's going to get you through the exam. FAE is just different from all the other exams, the way it's structured […] just practice the cases because it's all well and good knowing all the technical issues but the way it's							✓		✓		CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
2	presented is completely non-standard in the exam.											
	The mocks are a horrendous experience […] I understand why it's good to have hard, really complex mocks […] but it ruins your confidence and you think, "What's the point?"		✓					✓	✓			SE to CE/AE
	You are training your mind to think […] that's the aim.							✓		✓		CE to PERF
3	Getting up on a Saturday morning for a class was an effort […] because I did find myself shattered.	✓					✓					WE to BE
	There was a bank of lectures online and this was a really, really good tool, I think it was fantastic […] I could rewind them and watch them at home […] so definitely [it impacted on my attendance] […] [I also found them useful as] I would never be confident enough to ask questions in class.					✓	✓	✓		✓	✓	CE to PERF, BE and CE, SPB/Other to BE, Other to CE
	By the time I got to the FAEs, I felt, "I know what I am doing" […]		✓					✓	✓			SE to CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
3	I would learn by myself quite effectively.											
	[The most useful resources were a] combination of […] speaking to people in the firm who had done them before […] and the case days.				✓			✓		✓	✓	CE to PERF, CEG/Other to CE
	I probably would not have reached out that much [to CAI], if I am honest […] in saying that, what I did like was their online portal, it was really well organised. Everything was very accessible. I really thought the lecture videos were really good and the content was always really, really useful. That said, our firm had put in place their own training […] so that was your first port of call and they were really good. But they [the lecturers] are all from the Institute, so it was xx and xx and they were fantastic.					✓		✓	✓			SPB to CE/AE
	So, to be totally honest with you, Caroline, my attendance was not great […] I am a bit of a bookworm if I am honest […] I learn by myself quite effectively […] I was keeping myself ticking						✓	✓		✓		CE to PERF, BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
3	over perhaps without attending lectures as much.											
	I think I had built up a really good knowledge foundation from CAP1 and CAP2 so that allowed me attend less.						✓	✓			✓	Other to BE
	I really enjoyed the xx modules […] there was much more discussion […] they were less about learning standards […] they were much more commercial […] we had a lecturer […] he was very engaging […] and to be honest with you, not everyone enjoyed him as much as I did […] but I thought he was brilliant and I really would have made an effort for his class […] I retained a lot more information from his classes […] because he used real world examples of everything he was trying to convey […] I was actively more engaged […] I really enjoyed that a lot because it was very relevant to my day-to-day.			✓			✓		✓			ETP to BE/AE, BE and AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
3	I am a self-starter […] I was more engaged in certain modules and it was probably largely dictated by the content and the lecturer.			✓			✓	✓				ETP to BE. BE and CE
	My attendance was below average and my results were good […] It's an ability thing […] not to sound big headed, I knew, I was confident in my ability […] I had a really good knowledge and foundation from CAP 1 and CAP 2, so whenever I started going to FAE classes, I realised we were not learning new things, so I felt like I did not need to go [to classes] […] I honestly think that coming through CAP1 and 2 was the best thing I did although it was more exams […] I had a much better double entry booking knowledge and financial reporting knowledge than people coming in straight [from a Masters] at FAE […] The other thing is that I do take a lot of personal responsibility for my learning so while I was not in class, I was still learning.		✓				✓	✓		✓	✓	BE/CE to PERF, BE to CE, SE to CE, Other to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
4	It was long and it was tough […] I have definitely tried to block it out.	✓							✓			WE to AE
	I had to repeat one at CAP1 and repeat one at CAP2 […] I never struggled with any kind of exams before, so that was a bit of a shock to the system to […] I said to myself "I am going to stay on top of this" [by attending lectures].		✓				✓					SE to BE
	I had moved from a point of trying to do particularly well in work and instead trying to balance doing well in both work and my exams […] I did my work and I did my fair share, but instead of trying to do more than my fair share and looking to impress, I was like, "I am just going to take care of myself."	✓						✓				WE to CE
	I had gone from a four-year degree to three-and-a-half years of constant exams […] then I had to repeat so I never got a break the whole time […] I was absolutely wrecked. I was wrecked […] I was shattered […] The work-life balance was dreadful.	✓							✓			WE to AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
4	I did not lose focus because of the exhaustion. If anything, it kind of propelled me to just focus on the exams […] I had a very narrow vision of "Just get through the exams. This is the light at the end of the tunnel" […] it probably was not my most stellar year of work, but the focus was to just get through them [the exams].	✓						✓				WE to CE
	I did not find the lectures as helpful as they had been in previous years […] I think that the tutorial style classroom/case study approach was definitely what prepared you better for the exam.			✓	✓		✓	✓				ETP/CEG to BE/CE
	The FAEs is much more independent […] that said my attendance at lectures was still pretty high.			✓			✓	✓		✓		BE to PERF, ETP to BE/CE
	I guess I got more enthusiastic when I could understand something, not because I thought it was particularly interesting but because I knew that if I was given that information in a different way, I would know how to approach it or							✓	✓		✓	CE and AE, Other to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
4	interpret it […] however, enthusiastic is a bit generous but I was more interested when I had a proper grasp of it [the material] and the more I understood the material, the more I was engaging with it. And that was more related to my degree and I did enjoy that a little bit more.											
	I had two setbacks [failing one exam at CAP 1 and another at CAP 2] […] I would not say I was under-confident; I was not worried […] I mean, I was worried. It's just that I was not actively anxious. I wanted to make sure that I had done everything.		✓				✓	✓				SE to BE/CE
	We had a core group of three to four people and we worked well together […] we kept on top of each other and not necessarily meeting up or anything but just checking in daily or every second day, and I think that that was very helpful.						✓	✓		✓		CE to PERF, BE and CE
5*	You are working all week and then you have to get up at the weekend	✓					✓					WE to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
5*	and go to lectures. It was quite tough going [led to feelings of exhaustion].											
	We had seven days, case days and we had to attend, I think, it was like five out of the seven of them or something. But outside of those, I think I probably would have attended maybe half, maybe a little bit less than half […] I think I would always find that my own study was better but I thought they were good just in terms of exposing you to the material and kind of just getting you starting to think about stuff [the exams] […] But you still have to sit down and learn it [the material] yourself.			✓	✓		✓	✓				ETP/CEG to BE/CE, BE and CE
	Our firm brought in a guy to talk to us about how to approach it [The FAE's] […] it was a revision day and he gave us a really good structure and framework of how to approach the case studies, so I would have used that structure.				✓		✓	✓		✓	✓	BE and CE, CE to PERF, CEG/Other to CE
	They [case days] were supposed to expose us to the actual exam style			✓	✓			✓				ETP/CEG to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
5*	but I did not really find those very effective […] They had revision lectures at the end that I went to that I thought were quite good.											
	I do not think I would stress out as much maybe as other people […] I am quite calm when it comes to exams maybe because I have found them OK in the past.		✓					✓				SE to CE
	I think they [CAI] had a mentorship programme […] I did not really use any of that […] It did not seem like something I wanted to do.					✓		✓	✓			SPB to CE/AE
	When I was studying for the summer, I linked up with three other people that were sitting them as well and we used to do a case ourselves and then come together and correct it together […] we all came from kind of different backgrounds so that was really helpful […] I actually found that really good, and even just in terms of after studying for the day because we would generally meet in the evenings, just to kind of sit						✓	✓		✓	✓	CE to PERF, BE and CE, Other to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
5*	around and give out and talk about it.											
6*	Because I was working in the Big Four, I had to compartmentalise […] I was either working long hours or studying. Our busy season is September to December, so I did nothing as regards studying for the exams as I was working such long hours […] I switched my focus in December as we had our interim financial reporting exam in mid-December, so about 10 days before that I really really honed in and focused a lot on that as my aim was to do well in the interim.	✓						✓				WE to CE
	It's tough going [working and studying] […] I had done it for the Tax exams and for the FAEs and I just found that you burn out because you are either really busy in work or you are really busy studying and you just do not have any down time to yourself.	✓						✓	✓			WE to CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
6*	Working full time 100% had a negative effect on my lecture attendance […] I just had no interest in it [lectures and studying] because I was working and that was draining all my energy. I needed to be re-energised through socialising with my friends or through sport so the last thing I wanted to do was to sit down with the books and do a day of study on a Saturday when I have already worked Monday to Friday for long hours.	✓					✓		✓			WE to BE/AE
	For the first set [interim exam], I took two or three days' leave off work […] so that I had a four-day run into the exam […] I wanted to get through that full financial reporting book […] I had done it once. I was told to do it twice which was good advice, as I had done it once and gotten everything wrong […] I found that getting a good run at it right before the exam and going back over everything gave me the upper hand on the day, and I again did everything under	✓						✓	✓			WE to CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
6*	time pressure […] I just found that with the FAEs, you had to do it under time pressure or you were wasting your time […] It was in the run-up to Christmas but yeah, I was wiped by Christmas.											
	FAEs is one thing but the anxiety is actually what I would say a lot of students struggle with most and the pressure that's put on them. It's this overwhelming feeling that you are going to fail, and these are people that have never failed exams in their lives. Everyone convinces themselves that they are going to fail because you keep hearing these horror stories about people that have always done well and then suddenly on the day it goes wrong and I think it's all the external pressure brought in from the Big Four in terms of how important it is to pass. It is really important to pass. But I do not think that you need to be told about it every day […] every person has their own study methodology that works. I		✓				✓	✓	✓			SE to BE/CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
6*	mean, it's not our first rodeo. We have all done so many different exams before in the past so it's knowing what suits you and working to that rather than against it.											
	Support-wise from the Institute […] there is a lot of it but to what extent it's actually helpful to the students, I do not know.					✓	✓					SPB to BE
	I went to every case day and I found those beneficial […] they were the only things [lectures] that I found beneficial […] they are the only thing [lectures] that you are engaged in. Everything else is a lecturer speaking to you and it's after a work day or it's 9am on a weekend and you want to be out doing something with your friends and you're literally going to sign in just to have your name on the list and you're just not taking anything in […] whereas with the case days, you are actually engaged in a much smaller setting. You are in the room with the lecturer and you have to go			✓	✓		✓	✓		✓		BE to PERF, CE to PERF, CEG/ETP to BE/CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
6*	off with your group and chat about an indicator and report back basically and talk about it to the class. So, I found those days beneficial.											
	I would go in [to lectures] with a 100% phone battery and come out with a dead battery two hours later. I took in nothing in those lectures. I found them so mundane, so I went to them because you have to go to them. Your attendance is monitored by the Big Four […] Overall, I was awful at attending lectures.				✓		✓	✓				BE to PERF, CE to PERF, ETP/CEG to BE/CE/AE
	Our firm organised a session with a lecturer from the Institute […] he had only done the exams maybe three or four years previous […] I found his approach good. Certainly, if I was at his lectures, he probably said all that [the same exam tips] in the lectures as well, but I just was not there.						✓	✓	✓		✓	CE to AE, Other to BE/CE
6*	I found him [case study lecturer] really insightful and because he came from industry and had so much external knowledge to bring			✓	✓			✓	✓		✓	CEG/Other to CE, CE to AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
	to it [lectures], I found it really interesting.											
	We knew that we were going to get anything [in-house training] that we needed [to help us prepare for the exam] [this was an incentive not to attend lectures] […] also, the students are all sharing the material between them [from the in-house training].							✓	✓		✓	BE and CE, Other to BE/CE
	I used to get so distracted in the classes and I just did not really want to be there on a Saturday so, I definitely found the online material more helpful.				✓	✓		✓		✓	✓	CEG to CE, CE to PERF, SPB to BE
	I would advise CAI to cut down the number of lectures […] I do appreciate that some people are going to want that technical help but I would probably change those type of technical lectures to an online forum.										✓	Advice to CAI
	I find it [the FAE] really interesting and how it all interlinks together.							✓	✓			CE and AE
6*	I actually created a study group at the very start of the summer and we met once a week […] we mapped						✓	✓		✓		CE to PERF, BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
	out the cases in advance […] we would do them on a Tuesday and then meet on a Tuesday evening and all cross-mark each other's […] we would call out any points that someone in the group had said that we thought were good points and I just found I was building knowledge that way.											
	I was confident in my academic abilities in that when I was writing case solutions and I compared it to the sample answer, it was not necessarily the same but I was still happy with what I had put together if that makes sense.		✓					✓				SE to CE
6*	I mapped out the whole solution before I started writing anything and linked all the indicators so that when I was under pressure and I only had five minutes left on an indicator, I could just splash down the points really quickly and make sure that I was actually getting down everything I wanted to and link it on to the next indicator and then move on. I used a stopwatch				✓			✓		✓		CEG to CE/PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
	the whole summer which I thought was hilarious back when xx [in-house lecturer] told us to do that, but honestly, he was so good.											
	The reason I would put down to me doing well was practising the case studies firstly under time pressure and secondly in full, writing out my answers in full […] You had to be at a competent level across all [subjects] so […] I was always going to be excellent at tax, but I had to bring up Audit or I would have failed if I had not studied it really well. Financial reporting, I would have always been good at but the Finance, I absolutely would have failed, and Management Accounting would have been borderline. So, it was about me bringing those up and focusing on those.							✓		✓		CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
7*	It was not so much a conscious decision [to not attend lectures] […] I did at times get that bit of guilt of like, "I should really be doing something." But I was working long enough hours. I would not really have been home most evenings before 7. When you have been in work from 9 until 7, it's difficult to then make yourself want to do anything else and then I felt on the weekends, there was more fun things to do […] There were some evening lectures and I remember some colleagues going to them and me saying, "Well, either I am still in work" or "I am too tired from work so I am not going to go."	✓					✓	✓				WE to BE/CE
	I don't think I attended more than a maximum of five lectures over the entire year […] I didn't find them in any way beneficial. I have always been best at self-directed learning so I would rather have gone through something myself at the weekend and be done with it			✓	✓		✓	✓		✓		ETP/CEG to BE/CE, CE to PERF, BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
7*	[…] I really did not like the fact that you would be sitting in a lecture hall for a whole day and the pace might be pretty slow […] For the case study days, you had to go to maybe five out of seven […] you were in smaller groups […] it was to get you practising, how to approach a case study because it is obviously a slightly different type of exam to what you might be used to before and learning how to pick out indicators […] So, they were helpful to be fair.											
	Practicing a case study as opposed to sitting down and doing more traditional study was so much easier […] my day went much faster and I did not feel as mentally tired as I would have had I been trying to learn stuff off.							✓	✓			CE to AE
	Part of the reason why I and other people would not really have engaged with lectures is that they [CAI] throw a lot at you and they almost overwhelm you saying, "Oh, you need to be at a lecture every					✓		✓				SPB to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
7*	single weekend. You need to be doing this. You need to be doing that" […] What they tell you that you need to be doing is not necessarily realistic. So, most people are going to feel like, "Well, you know, I am not going to be able to do that every week so I am just not going to do any of it" […] they make it seem like it's far more of a mountain to climb […] they are trying to warn people to engage […] but I think they put people off by doing that to be honest.											
	I think having a full day lecture on the weekend is just a terrible idea when your students are all in work Monday to Friday and want to enjoy their weekends […] I obviously appreciate that from their [CAI's] perspective, a certain amount needs to be covered and they would probably say that you need to spend a certain amount of time on everything. I get that, but I think they also do need to balance it with the reality of life.	✓					✓					WE to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
7*	Getting advice from people who have done it before was really reassuring […] the vast majority of people that I know did not go to lectures so it's reassuring when you have got people saying, "Well look, I did not go to lectures and it was all fine in the end".						✓				✓	Other to BE
	We had gotten helpful advice from people who had been through the process before […] we had people in work talk to us and the feedback was, "Just practice, practice, practice case studies. Do not worry so much about the technical because you have done your CAP2s […] you do the case studies; things will come back to you".						✓	✓			✓	Other to BE/CE, BE and CE
	There was definitely the comment made a good few times around, you know, "If you do the Masters, you are at a disadvantage" […] So, because of that, I gave the financial reporting mid-term more attention and then when I went on study leave, because I did not really have anything done in terms of studying		✓				✓	✓				SE to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
7*	until this point […] until I kind of got into the swing of it slightly concerned […] I think throughout the process, the more you practiced, the more confident you got and the more engaged you felt.											
	Everyone studies in different ways. But to be honest, the lectures are a waste of time and you should do as much of the case study days as you can and during your study leave […] just practice them [the cases] and you will pick it up in the end.						✓	✓		✓	✓	BE and CE, CE to PERF, Other to BE
8	I was quite good at going to lectures because if for nothing else […] I would not feel guilty […] There were plenty of lectures that I went to and I felt, "There is no point in me being here."			✓			✓			✓		ETP to BE, BE to PERF
	The Institute provided the lecturers, they designed the content […] but they did not really give any guidelines. […] I do not recall there being a session with them going through how you approach a case. Now arguably the case days should have been a bit like that.			✓	✓							ETP and CEG

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
8	We had a couple of in-house classes in how to go through a case. You do need a bit of advice […] he [the in-house lecturer] gave a proper one [lecture] on how to approach answering this [exam] paper, even to the minutiae detail of, "Do you do a table of contents, and if you do, where does it go?" […] the order in which to address the indicators, linkages […] he just brought more of a direct, applicable approach.				✓		✓	✓		✓	✓	CEG to CE, CE to PERF, BE and CE, Other to BE/CE
	Myself and my housemate are examples of people who did not do much [study], during the year. I did loads in the summer. He did not do as much. We both passed.							✓		✓	✓	CE/Other to PERF
	I personally did not do a whole lot of study during the year, oh, except when I was studying for the AAFRP [financial reporting assessment in December] […] I would come in at 7, pick an empty meeting room and I would study until 9 for two or three weeks […] that was tough, but it was not for a						✓	✓				

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
8	very long period of time […] I did a bit of weekend study before the elective assessment [second interim assessment in April] and I was able to take some annual leave days.											
	I was in advisory, but we had to do audit experience and I did mine in the States for four weeks. So, I did not have a choice [other than to miss lectures].	✓					✓					WE to BE
	The timing of the exams was the middle of August and so on the August Bank Holiday weekend, just over two weeks out, our peer group and a few others went into work on that weekend and did the core on the Saturday and Sunday and did the elective on the Monday […] we took in all the books we were going to bring in [to the real exam], with the suitcase, laid it all out […] to see did we pass […] doing that in enough time, meant that if we messed up, we had enough time to fix it.						✓	✓		✓		CE to PERF, BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
8	I would never get overconfident. That's not really my style, my personality, but I would know if I am able to do something. So, I knew I could pass them. I did not know I would pass them, and I did not want to get complacent either […] I had a friend who failed […] a very smart guy, a very hard worker, so that puts doubts in your mind, and you think, "I need to be all over this".		✓				✓	✓				SE to BE/CE
	If there is a problem with work that's down to the firm to help deal with it.					✓		✓	✓			SPB to CE/AE
	We had a very ridiculously busy period and I was working from 9 to 1am for four weeks […] I passed out in work and banged my head […] I had to be taken to hospital […] During this time, I was sitting the elective assessment […] I did not do any study up to the week before because I knew I was off for a week but during my week off I was studying from 9-5, going back into work staying there to 1am and	✓						✓				WE to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
8	then going back to study the next morning. The morning of the exam I sat it at 9.30, finished at 12 or 12.30pm on a Saturday and went back into the office at 1pm […] the Wednesday after I collapsed […] It was all work related.											
	I had a week back in work which was an easy week. It was a handover week […] so, there was about three weeks between that happening and me going on study leave [so it did not have a knock-on effect during study leave]"	✓						✓				WE to CE
	You can only take so much [learn] from other people because they have their own style. I did my own timetable, right, and then I passed it on to somebody who panicked and freaked out about it.						✓	✓		✓		BE and CE, CE to PERF
	I did pay for a Chartered Grind School audit class because while I did not go to the lectures, I felt if I had, I would not have got much out of it […] they are a peace of mind thing as much as anything else. You learn something in it, and you						✓	✓		✓	✓	BE and CE, Other to CE, CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
8	are studying for that topic by going to it.											
	There is a lecturer bias as well, like xx [Lecturer] did the xx [module] so you would want to go to that one because xx [lecturer] is brilliant, in my opinion.			✓			✓					ETP to BE
9	My only issue with the lectures was I used to find it hard to focus when I had been working for an eight or ten-hour day and then to go in and to try to take in more information […] my head used to be a bit fried so I did not really go to any lectures.	✓					✓			✓		BE to PERF, WE to BE
	The online lectures were pretty good when I was studying […] if there was anything technical that I wanted, I used to be able to just go to the specific topic and kind of look at it, you know, so I didn't have to sit through a three-hour lecture to get a 10-minute explanation.					✓	✓	✓		✓	✓	BE and CE, CE to PERF, SPB to BE, Other to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
9	I thought the case days were quite good in general […] I got a bit of an approach on how to answer them [case studies].			✓	✓		✓	✓		✓		ETP/CEG to BE/CE, CE to PERF
	I trained in xx [firm] in Dublin and there would have been maybe 20 in our intake and four of us would have been quite close […] we would talk on a regular basis and compare answers.						✓	✓		✓		BE and CE, CE to PERF
	Working full-time in Audit is long hours […] so, I did not really do anything until I was on study leave […] I did quite a bit coming up to the interim exams alright […] they basically wrote my weekends off.	✓						✓				WE to CE
	As a trainee you were leaving saying, "Really, I should not be leaving when there is an awful lot of work to do." So, I think that definitely affects it [lecture attendance].	✓					✓					WE to BE
	I could not engage my brain for three hours after I would be in work from 8 and working all day […] what I used to actually do instead was […] I would have just stayed	✓					✓	✓	✓			WE to BE/CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
9	on an hour after work and do say the tax question myself.											
	They [CAI] gave us maybe 90 cases […] so, I did the 90 of them and I did about 60 of them under exam conditions.				✓			✓		✓		CEG to CE, CE to PERF
10	I look at my FAE study leave in two halves. The first half when I was working it was awful, I hated it, so intense. I was feeling so negative and then it basically came to a point where I just gave up and I was like, I am not going to get these [the FAE exams]. It's just too hard. There is too much to cover […] then my thinking changed after I talked to a few people.	✓							✓			WE to AE
	I think it's hard to balance both [working and studying] […] depending on the hours that you are working, so if you are working overtime, you are tired, you are stressed out, you are working long hours anyway, then you just have this added anxiety on top of, "You have got exams coming up and you	✓							✓			WE to AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
10	do not have enough time to study for them".											
	The later point of my study leaves somewhat enjoyable and satisfying because I could see how I was improving.							✓	✓			CE and AE
	If I was really having an absolute stumbling block, I was able to throw her [institute lecturer] an email and sure, within, an hour, she had the handwritten solution to back me, so unreal.					✓	✓					SPB to BE
	I attended the Chartered Grind School […] It was like additional support and encouragement […] I actually do not think I learnt really anything extra from those nor did I really add to my notes because I would have received notes, the notes before […] It was encouraging and therapeutic.						✓	✓		✓		BE and CE
	You need to take the first couple of weeks of your study leave off, just to take it kind of handy […] to catch up on sleep.	✓						✓				WE to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
10	I would have had a lot of notes from CAP2/CAP1. So, to caveat this from a FAE perspective, I may not have attended a lot, but I would have had handwritten notes from CAP2/CAP1.						✓	✓				BE and CE
	I had never done these kinds of exams before […] it was really isolating […] when it came to CAP2 there was a group of friends studying every day in Smurfit so I went in and studied every day with them and then they were the same group I had then for the FAEs and it made all the difference […] we were able to discuss, "God, that was a hard one. You should really look at this one" or "That one has that subject in it. Make sure you look over that one".						✓	✓				BE and CE
	There were lectures put on that […] I didn't go to […] the style of them frightened me […] you would do a paper and then hand it to the person beside you and they would correct it. The thought of that would have just freaked me out even though we						✓	✓				BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
10	were basically doing the same thing in Smurfit informally.											
	We had xx and she was our liaison between the Institute and work, so if we had any difficulties, it would have gone through her.					✓		✓	✓			SPB to CE/AE
	If I was working late would have to make my lecture, I would not be eating until half-nine, ten or something. I would have no interest in sitting through […] so, for these lectures, I would have watched them back online. So, I actually did think that feature was beneficial […] I mentor someone who is a bit more of an introverted type. She would prefer to be at home in her apartment on her own. Once they are online, she really just does not have the interest in going to the lectures.					✓	✓	✓			✓	BE and CE, SPB to BE, Other to BE/CE
11	The first time around, I was in a Big Four firm and I had the							✓		✓		CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
11	extended study leave of about three months and I found it – I had done the CAP2s previously – and I had found it a big change in the style of studying […] I was more of a kind of technical studier. I learned facts and I found it quite hard to adapt […] The FAE was more applying it and more practicing, and I think that contributed to why I failed it the first time.											
	I never got particularly much out of lectures. I was more, I was kind of like a self-learner […] I would find that I would just get quite bored being in lectures and especially if you are working up to half-seven or eight o'clock most nights and then you have to sit in a lecture hall for three hours, it can be quite draining.	✓					✓	✓	✓			WE to BE/AE, BE and CE, BE to PERF
	One thing I did prefer though, I re-watched the lectures and they put the lectures up online to watch […] and that was much better because I could actually concentrate myself on watching them […] I could do it in my own time and I would be	✓				✓	✓	✓		✓	✓	WE to BE, WE to CE, BE and CE, BE to PERF, SPB to BE, Other to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
11	more alert and less jaded after work.											
	When you are at college, you might have a part-time job so you are kind of used to managing that but it's a big step up […] I worked for xx [Firm] in Audit and it was quite demanding hours […] I could be in to 10 o'clock some nights during the busy season for four months of the year, from January to April […] we had one exam before Christmas and sometimes you just had to prioritise your own study above work and sometimes you would have to go home at 6 o'clock and study for two hours. It was quite draining.	✓						✓	✓			WE to CE/AE
	My attendance was quite poor after Christmas […] I would say that I attended 10% of the classes because simply you had the pressure from work […] They would be like, "Oh, you can go" but they are going to judge you for not going and then you would still	✓					✓	✓	✓	✓	✓	WE to BE/CE/AE, Other to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
11	have to make up the work you missed. So, my focus was, "Well, I'll still have to get this work done and I can watch the lecture anyway." So, I guess that was just my attitude to it and it was a lot of people's attitude in the Big Four because it's very hard. You can make a stand, but I guess the culture in the company I worked was, "You have to work at all costs" which I was not a big fan of.											
	I would say for probably the first month [of study leave], I was still coming down from the stress of work.	✓						✓				WE to CE
	It [working full time] made studying a chore.	✓							✓			WE to AE
	I was not putting myself outside of my comfort zone and that's what I eventually learned.							✓		✓		CE to PERF
	[At my third attempt] I sought help off a tutor […] I paid for him to mark my papers to get an outside perspective on it […] it was a large contributor to achieving the right						✓	✓		✓		BE and CE, CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
11	mindset to approach the exams and to my success.											
	You had to attend at least five out of seven [case study lectures]. Otherwise, it would impact on your ability to sit the exam […] I was more that you had to go rather than why you were going. I thought that the majority of them were pretty good, but it would depend a lot on the lecturer and whether they went thinking about exam technique.			✓	✓			✓	✓			ETP/CEG to CE/AE
	I think the first year-round, I felt relatively good, confident. I was always confident studying […] When I failed, I was really devastated, and I felt really embarrassed […] I had to get an outside perspective from the tutor to build up my confidence […] because I would get quite stressed because I guess the final time repeating, I knew that I had to pass.		✓					✓			✓	SE to CE
	I found xx [subject] more interesting […] the lecturer was always giving real-world examples			✓			✓		✓			ETP to BE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
11	and that made it easier in terms of, what I was learning, and actually applying it, while if it's a list of slides […] it's just boring.											
	The xx [module] was so detailed and even though I did not mind detail, it's quite hard to sit through a lecture tired.	✓					✓					WE to BE
	I knew that I was going to get notes anyway [at the in-house training] so I thought, "Well, what is the point in going to a lecture really when we are going to get the notes anyway?".						✓	✓		✓	✓	BE and CE, CE to PERF, Other to BE/CE
	They [the technical lectures] did not really benefit myself because I just could not see, coming in after work and using up your whole Saturday to go to a lecture for eight hours was not going to make me motivated to study because at the end of the day, I still have to sit down and study myself […] I thought the online lectures […] was a flexible way of learning, where you learn at your own pace.	✓			✓		✓	✓			✓	WE to BE, CEG to CE, BE and CE, CE and PERF, Other to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
12	I went to lectures to get the information I needed. I used the tools that I was given in that everything was online that I needed. I was able to figure out quite quickly which lectures were useful and which ones were really just a tick box exercise.			✓			✓	✓				ETP to BE, BE and CE
	We had to complete some smaller exams [interim assessments during the year] so my focus would have been on preparing for those […] I studied the whole way through and then doing the exams, it was pressurised […] I just did what I had to do to get through it.	✓						✓				WE to CE
	I enjoyed the material I was studying so once I was able to make the time […] the studying piece was not stressful. If anything, it was my hobby.							✓	✓			CE and AE
	It [working and studying] was tough because I was working in a management position […] I had two young kids as well so to be honest, yeah, I mean, I just, it was just another thing on my list to do.	✓						✓				WE to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
12	So, work had to happen, study had to happen, family had to happen.											
	I was certainly always very confident with my ability to learn the material […] I have to assume my confidence certainly helped, that if I had not been confident, I probably would not have gotten through the three years. And I probably would have stopped after one year.		✓					✓				SE to CE
	If you have a particularly strong lecturer, you are not going to miss that lecture because that is better than any form of study.			✓			✓					ETP to BE
	There were certain subjects that were more technical in nature where you really had to get into the lecture and have the benefit of having the lecturer to ask specific questions off, whereas, there were other subjects that were less technical and if you were following the lectures online or using your questions and the solutions that			✓		✓	✓	✓		✓	✓	ETP to BE, BE to PERF, CE to PERF, SPB to BE, Other to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
12	were provided […] To be honest, that was enough.											
13	I was a good attender [at lectures] really […] I would have missed a few. I was travelling with work a good bit.	✓					✓					WE to BE
	The material [FAE] itself is OK to get through […] it's an extension of the CAP2 material […] in terms of the level of the material, it was not that much more difficult or that much more technical than CAP2. It's just how it's applied is completely different […] I would say that if somebody was coming in from a masters straight into doing the FAEs, it would be more difficult to get on to that train. But with me, I had done some CAP1s, all the CAP2s.						✓			✓		BE to PERF
	The exam workshops [case study workshops] had dramatically different results […] they were really dependent on who was giving the workshop […] some of			✓	✓		✓	✓	✓			ETP/CEG to BE/CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
13	the people who gave us workshops were a lot more engaging than others which meant that when you are spending eight hours in a session studying case studies and trying to break them down, it's much easier to keep yourself focused on them.											
	There is the social element to it [lectures] as well […] There is a bunch of us […] over the couple of years would have gotten to know each other quite well […] it's not all punishment and then you would see people that you like and you would get to have a bit of a chat or have lunch.						✓		✓			BE and AE
	It's not the working full-time that's the problem. It's working more than full-time that's the problem so you know, I wasn't working a 40-hour week for January, February, March, and April in my FAE year. I was working considerably more than that every week and on top of that then, some of the clients that I was working for involved travel so	✓					✓					WE to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
13	that's taking off on a Saturday or a Sunday afternoon […] Sometimes if lectures were scheduled I would think "I can't do that this weekend. I have done 70 hours of work this week. I have been up all night. I have travelled. I am not going to lectures on Saturday." So, it definitely would have an impact [on lecture attendance] […] Sometimes logistically speaking, it was impossible to get to them and then to still get to the airport on time and then sometimes it was just energy levels or enthusiasm levels could dip dramatically after a really difficult week.											
	[When I went on study leave] it took me a couple of weeks to recover or to get past the exhaustion levels for having been working so hard for so long.	✓							✓			WE to AE
	The case-studies [lectures] are vital [to success in the FAE] in that they go beyond teaching you new material and start to teach you how to complete a case-study. So that				✓			✓		✓		CEG to CE, CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
13	was important, and I think as with everything, you are going to come across better and worse qualities of teaching there like you do in every job.											
	There is an awful lot of self-directed learning required to get up to speed						✓	✓		✓		CE to PERF, BE and CE
	Mostly because of work and sometimes because of just life outside of work [I did not get a chance to study during the year] but mostly it was the drain on time and on energy that working such long hours and working for kind of difficult clients, that left you with a quite limited opportunity to sit down for a couple of days or hours of focused worthwhile study. So, I found it quite difficult and that has led to then the feeling of being behind when study leave came […] there was a lot of reliance on study leave as the time to get everything done.	✓					✓		✓			WE to AE
	The integrated case study format is really interesting […] it does not							✓	✓			CE and AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
13	really examine how much you know to the same degree. It examines how you take what you know and how you can apply it.											
	I think if you are too confident, it can lead to potentially a sense of complacency as well […] I was well aware of the gaps in my preparation so that impacted on my confidence, not in my ability to get through it at the end, but there is always the wonder of, "Have I enough time to get to the level that I need to be to get through these?" By the time I was going in, I think I had almost got to the point where I was like, "I actually cannot … I actually cannot do any more here."		✓					✓				SE and CE
	It was a difficult year all around because there was just a lot happening. You know, you are working full-time, and you are studying as much as you can and then adding travel and extra hours and demanding clients and more, even more demanding managers	✓						✓	✓			WE to CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
13	and you know, it's a pretty tough gig.											
14	I would probably have studied seven days a week […] really every spare minute I had.							✓		✓		CE to PERF
	So, the material I learned from my degree actually helped me with the FAE.						✓	✓				BE and CE
	I made sure I attended the majority of classes. Some lecturers were brilliant and then others would not be great. Those that were good had an actual discussion with you and broke it down so that I had an actual good understanding of what's actually being portrayed. Those that were not engaging used the books which was a weakness and I was disappointed because when you are going and you are giving up your time to go to a class, the last thing you want to be doing is reading a book.			✓			✓					ETP to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
14	I had passed the CAP2s, so I was like, "OK, I can do this. "But when I had the FAEs, then, you do find that it's a completely different exam to the CAP2s […] It's no longer your memory exam. It's now you are putting the practicality into it and you are kind of going, "Oh wow. Now it's the real world […] But I felt if I attended lectures and still worked hard, I could achieve the results.		✓				✓	✓				SE to BE/CE
	I did any extra classes that were going […] The competency statement also gave the direction of what you needed […] past students were also a great resource […] Also, the areas I was weak in, I invested a lot of time in the recorded sessions.						✓	✓		✓	✓	CE to PERF, BE and CE
	I loved studying as weird as it sounds […] I loved getting the marks and I loved getting the rewards.							✓	✓			CE and AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
15	My interim assessments were quite weak […] we had one interim assessment after Christmas and if I look at my result in that and my result in the one that was in March or April, straight after Christmas was a lot stronger […] it was due to the amount of work that I had put in but the amount of work I put in was based on how busy I was at work.	✓						✓				WE to CE
	So, I went into study leave quite relaxed and refreshed. Had I not taken that week off, I do not think I would have […] I would have probably gone into study leave tired and kind of fed up with the whole thing.	✓						✓	✓			WE to CE/AE
	I was not a great attender [at lectures]. The volume of lectures at FAE is not that much but they are generally on Tuesday and Thursday evenings as well as the weekends. I do not think Tuesday and Thursday evenings work. I know probably all the firms have a, "You can obviously leave if you want to go to	✓					✓					WE to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
15	lectures" but that in policy and that in practice are two very different things.											
	If I was going to a lecture, I wanted it to be exam-focused […] I would have no interest in the general knowledge of accounting […] I wanted it to be exam focused. Lecturers that just read off the slides […] I would just leave because I am like, "I could do that myself."				✓			✓		✓		CEG to CE, CE to PERF
	So we had in-house training on both the core and the elective […] I feel it was probably more exam-focused, exam-technique than what Chartered Accountants would have offered, so I enjoyed that and I thought that was quite helpful.							✓		✓	✓	CE to PERF. BE and CE, Other to BE/CE
16	I did not go to many lectures. I did my CAP2s and I had gone to lectures and I did not find them much use. So for the FAEs, I did not want to give up my weekdays or my weekends […] We had seven case days and we had to go to five of them in order to be able to even			✓			✓	✓		✓		ETP to BE, BE and CE, CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
16	sit the exams so I went to five to them and I did not go to the extra two […] I really did not engage with the lecturers or anything. I just did my own study, I felt it was more beneficial to do my own study.											
	Our busy season is until November and the AAFRP [first assessment] was the 9th of December, so I was very busy coming up to that time, so trying to study and work was very difficult […] I had two weekends before the AAFRP and I did OK so it was fine […] but I found that very difficult, trying to study for an interim and work at the same time.	✓						✓				WE to CE
	I just felt like I did a 9 to 5 job and then trying to get home and by the time you are home, had your dinner and settled down at 7 o'clock and then you're just wrecked and the last thing you want to do is to pull out your FR standards or your Tax book […] I just found it very, very hard to get motivated again to study	✓							✓			WE to AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
16	after a day of work and then at the weekends, I was like, "Oh, these are my weekends. I'm not giving them up."											
	A lot of people in the levels before me had done them [the FAE's] so they had given me a lot of advice on what to do. So I just did simple things like tabbing, to make me feel like I did something, or I tried to do a chapter a night but I found it very difficult […] getting closer, when there was only a week or so before the exam [the interim assessments], I really did put in the hours.	✓						✓			✓	WE to CE, Other to CE
	For the interim assessment, I actually got some flexibility in work […] I could work from 8 until 4 so it was much easier because by the time I got home and had my dinner, it was only 6 and I could sit down and I could see that I could still do 6 to 9 and I would get that extra hour in.	✓						✓				WE to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
16	While working I did not really do much study and I only studied for my interims and then after the April interim, I just took a break so I could be fresh for study leave and then during study leave, I just worked [studied].	✓						✓				WE to CE
	I would have asked the girl on the intake above me loads and I got her folders and I would have been in contact with her throughout the whole summer, and then my own intake, I would have been on to them constantly as well […] we would do them [the cases] ourselves and then if we were stuck, we would thrash it out between us just to see […] I felt that was way more beneficial than lectures.						✓	✓		✓	✓	Other to BE/CE, BE and CE, CE to PERF
	I think with these exams you have to apply yourself…. you have to sit down and do it yourself. I do not think that anyone can actually teach it to you, especially for the FAEs.						✓	✓		✓		BE and CE, CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
16	It [the material of the FAE] was really topical so, I felt that was interesting.							✓	✓			CE and AE
	We got really good notes in the grind schools, really, really good notes. Really you are only paying for the notes.						✓	✓		✓	✓	Other to BE/CE, BE and CE, CE to PERF
17	I went to one of the AAFRP workshops and one of the interim workshops and obviously my case days because I had to go to them, but no, my engagement with the lectures was pretty minimal […] you are working 60 or 70-hour weeks, so the last thing on your mind is a lecture.	✓					✓					WE to BE
	I do not find someone telling me information more useful than me just learning it if that makes sense.						✓	✓		✓		BE and CE, CE to PERF
	I work in Audit, so January through April is insanity […] I was not even aware of when lectures were on because sometimes you are working weekends, and sometimes your weekend is all you have […] I just was not really prioritising that [studying] […] as well, we were	✓					✓	✓				WE to BE, Other to BE/CE, BE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
17	just so aware of the fact that you have 12 weeks to kind of make up for it.											
	None of the material in the lectures was new.						✓			✓		BE to PERF
	There is something a lot more tiring about sitting down trying to listen to someone.						✓			✓		BE to PERF
	For the one [interim assessment] pre-Christmas because you were busy with work…...you were mentally telling yourself, "OK, here is the cut-off. I have to stop doing overtime".	✓						✓				WE to CE
	It's bleak […] you resented studying […] You finish your overtime or you're off the worst of the busy jobs and you're saying, "Oh OK, I'm finally free but I'm not because now I have to spend all those additional hours studying" […] Your brain is so fatigued from doing a minimum of 50-hour weeks for three months that the concentration just was not there when it came to studying […] That	✓						✓	✓			WE to CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
17	was reflected in my results in the interim compared to the other interim [second interim]. I passed both of them, but it was a huge margin of difference.											
	The lecturers of the case days were good, and they were all very good at teaching techniques. I would have used the techniques that I was given in the case days in my study and in my exams of just how to plan an answer.			✓	✓		✓	✓				ETP to BE, CEG to CE
	I went to one or two lectures and I did not find them all that useful, but I do think that was purely because I had already covered that content.						✓			✓	✓	BE to PERF, Other to CE/BE
	It's definitely in the back of your mind that "It's not do or die to go to a lecture when it's online."					✓	✓				✓	SPB to BE, Other to BE/CE
	I was not very worried, I was not really considering, "Oh no, I'll fail them." I did think like, "Look, I have loads of time. You know, I have always managed to get through OK" and I think I was kind of looking at the pass rates and		✓					✓				SE to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
17	saying you just have to not be in the bottom 10% and you're OK.											
	Definitely [in-house training lead to lower attendance] because sometimes it's the exact same lecturer. They would have the Chartered Accountant lecturers in.						✓	✓			✓	BE and CE, Other to BE
	I have never had to reach out to them [CAI] but I know that the person that takes charge of exams within xx [the firm], deals with our issues if we have any.					✓		✓	✓			SPB to CE/AE
	My peer group was a huge support - for example setting up the folders.						✓	✓			✓	BE and CE, Other to BE/CE
	I do think that the case days were huge in that it teaches you how to approach an actual case.				✓			✓				CEG to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
18	For the first interim I was a lot more engaged […] I put more hours in as we had more time after work to do so […] The result was quite good […] For the second interim, I did not put in a lot of hours […] it was busy season so I think I had about two weeks to actually put into it properly and coming up to that, you have lectures at the weekends and you just had very little time to study […] the results showed that as well […] it was a lot lower […] For the AAFRP [first assessment] I worked until half-five and clocked straight off and hit the books for two hours every evening […] for the second interim […] there was no evening study because you were working until 9 or 10 o'clock at night. So, you would have to just come into the office maybe on Saturdays and spend from 9 to 5 studying.	✓						✓				WE to CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
18	It's definitely very difficult. You definitely have very little time for anything else. You are definitely burned out by the end […] I did not find the first interim too bad because it was the first exam and it was a couple of hours every evening. We had time to do it after work. So, I was fine about that. The minute we got into the second interim; I did not have enough time to study with busy season […] But I do think we ultimately get enough time off for study leave to prepare ourselves for the exam.	✓						✓				WE to CE
	It was very top heavy so I went to a few at the start and I would say that once busy season started, I could probably count on one hand how many lectures I went to […] I was tired and had very little free time so the last thing I really wanted to be doing was going to lectures in that free time.	✓					✓					WE to BE
	The best ones were the cases, the case days or anything that was going through cases just because it				✓			✓		✓		CEG to CE, CE to PERF

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
18	was not something that we had ever done before and then that was, I guess, the end result was that we had to sit down and do a case on the day.											
	[when asked if working full time impacted on their interest and enthusiasm towards studying] 100%, yeah. It was just the last thing I wanted to do.	✓							✓			WE to AE
	I found the lecture, the lecture days quite long and arduous and not really taking anything in after if you are there for seven or eight hours.						✓			✓		BE to PERF
19	I did find some of the case studies good, but the only thing is that everyone does it differently.				✓			✓				CEG to CE
	I only really ever went to the case days […] I did not really find them [the lectures] that beneficial. Just because I took a year out from doing my CAP2s and then I did my FAEs and sometimes you were sitting in class and you do not really know what's going on […] There is no recap on topics […]			✓			✓					ETP to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
19	It's kind of straight in which was a bit hard to do.											
	I did it [the lectures] by distance so I was not going up and down to Galway all the time [for lectures] but it was tough. The last thing you want to do in the evenings [after work] at 7 or 8 o'clock is to come home and do study.	✓					✓		✓			WE to BE/CE
	The fact that I knew that I could get them online [would have been a factor influencing my attendance at lectures].					✓	✓				✓	SPB to BE, Other to BE/CE
	Some of the lecturers did give you their email address…... if you had any problems, you could go to them.					✓	✓	✓	✓			SPB to BE/CE/AE
	Getting close to exam time, I thought, "Yeah, I am ready. I just want the exam paper now" […] I was feeling more confident towards the end but definitely not at the beginning of the year.		✓					✓	✓		✓	CE to SE,
	I think that the case studies are quite good [interesting] because							✓	✓			CE and AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
19	they are what….. happens in the real world.											
	I am a bit of a self-learner as well so I kind of found that sometimes I would be sitting in the class and even daydreaming.						✓	✓		✓		BE to PERF, BE and CE, CE to PERF
20	I kind of took a lot of that advice from my friends or people I had worked with that had done the FAEs last year. So I just tried to talk to as many people as possible about the best way to do it in terms of doing a case or actually looking at content […] from CAP2, you are used to sitting down and doing sessions […] whereas you have less time to do that for FAE.						✓	✓		✓	✓	BE and CE, CE to PERF, Other to BE/CE
	The general opinion would have been that the lectures are not as helpful [as CAP 2] […] I just did not really intend on going to any of them […] I think it's only going to continue to be helpful if you have the time to go and practice everything for that session […] or else the notes are kind of irrelevant						✓			✓	✓	BE to PERF, Other to BE/CE, BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
20	so I found that I did not really use anything from the lectures.											
	I was unfortunate enough to be on the worst job in my department and I basically did 350 extra hours in about three months so there was literally no time from Christmas onwards to do anything, even if I had wanted to, because we were working Saturdays a lot of the time […] You weren't getting enough sleep, never mind even thinking about studying.	✓					✓	✓	✓			WE to BE/CE/AE
	To be honest, I did extremely little [study for the interim assessments]. It's kind of one of the reasons I knew I needed to go to the doctor is that I did not care about the exam at all.	✓							✓			WE to AE
	If I am run-down, that's going to take a while to get back to normal […] I would not say I felt back to normal after the two weeks, but it's been probably up to about now [fifth week of study leave].	✓							✓			WE to AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
20	I did not find the case days hugely helpful. I do think it depended on who you had, which lecturer […] some of them would go off on tangents […] I think it's easier when you go in and someone is like, "OK, this is how you approach this" […] [one lecturer who used this approach] […] He was extremely good.			✓	✓		✓	✓				ETP/CEG to BE/CE
	If I am struggling with one standard, I can just find that on the website and watch a video on it. I do agree that that would probably stop me going to lectures.					✓	✓	✓			✓	BE and CE, SPB to BE, Other to BE/CE
	[I used the Chartered Grind School] […] it was extremely helpful. It was a two-day course and they covered probably 9 or 10 topics […] They [the lecturer] were very practical […] and very to the point.						✓	✓			✓	BE and CE, Other to BE/CE
21	My FAE year is my third year of my training contract in xx [firm] so it's definitely been more full-on, than some of my peers who would have done their FAEs in their second year of their training	✓					✓					WE to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
21	contracts. There is obviously a little bit more responsibility workwise, so it does become more difficult as you become more senior in your role to get the time to invest into lectures or to invest into studying and particularly the interim assessments. Probably more so the interim assessment in April. The elective assessment would definitely have suffered, I think, because of the amount of work that goes on at the same time.											
	I think definitely there would have been a bit more stress this year and you are a little bit more kind of emotionally involved because you are tired, you are more kind of reactive to stresses in work and then as well when it comes to study you feel more stressed when you are not studying because you are working and then when you are studying you are thinking about work.	✓							✓			WE to AE
	Yeah, definitely [working full time impacted on lecturer attendance]. I	✓					✓					WE to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
21	think I only attended lectures at the very beginning of the year and then dropped off.											
	I did not really get a massive amount out of some of the lectures, particularly the ones that run during the week because you either cannot make them because you're not out of work before half-six or you cannot make them because you are just tired after work.	✓					✓		✓			WE to BE/AE
	I think your brain is very invested in work during the day and the last thing that you want to do is go and try and listen to a lecture for three hours. Sometimes you might listen for the first few minutes and you drop off and then you realise that you have not listened for 20 minutes because your mind has wandered off	✓					✓		✓	✓		WE to AE, BE to PERF
	The AAFRP [first assessment] was OK because it's not such a busy time in work […] it was not that long after the CAP2 either, so some of the FR [financial reporting] is still quite fresh in your head […]	✓						✓	✓			WE to CE/AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
21	The April elective assessment was different, the material is newer to you, it's more complex and you have not studied it before at CAP2 or CAP1 […] it's a different style of paper […] I think with work being busy as it was at the time, you just do not have the time to invest into it […] your brain capacity is not as good as it would be because you are so tired.											
	There are some lecturers obviously that are better than others and that are more approachable than others. I think the case days are kind of probably supposed to be the most helpful thing that you do, and they are mandatory. There is, I think you have to go to five out of seven. I went to six […] Some of them are excellent. You come out of them going, "OK, yeah, I can use that. That's great." But then other days, you are kind of just sat there going, "Why do I have to be here? This is a complete waste of time. This person is not helping me".			✓	✓		✓	✓				ETP/CEG to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
21	They [the lecturers that make the material interesting] engage you in the case study that they are doing and they make you think about it as opposed to somebody who just reads the case to you […] you do not have time to drift off but you are far more likely to partake because you are actually interested in what they are saying.			✓	✓		✓	✓	✓			ETP/CEG to BE/CE
	Once you get into the swing of something [cast study] and you start getting the hang of questions, it is more enjoyable because you kind of feel like you are actually achieving something.							✓	✓			CE and AE
	The online lectures recorded are really, really good. It's a great facility to be able to go in if you are really not getting something […] The fact that you know it's there [leads to lower attendance] […] in the in-house session, I learned more than I did all year.					✓	✓	✓			✓	SPB to BE, BE and CE, Other to BE/CE
	If you know you have got a brilliant lecturer lecturing you in the Institute, you are going to go to			✓			✓					ETP to BE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
21	their lectures but unfortunately, they vary so much.											
	I have not enrolled for any courses for the Chartered Grind School this year, but I do have the notes that somebody else got last year.						✓	✓			✓	BE and CE, Other to BE/CE
	I am currently working with a tax tutor […] walking through the main points of the topics with me and kind of explaining the more complicated stuff and then we are going through a question […] , it's definitely helpful that he goes through [the material] and makes me think about it.						✓	✓			✓	BE and CE, Other to BE/CE
	I find once I actually settled down to doing the content … it's doable […] I was probably the calmest that I have ever been going into an exam [first assessment] because I was definitely prepared for it.		✓					✓				SE to CE, CE to SE
	The case days that we do on block release are much smaller […] There is about 30 in every group. You learn so much more [than the case days with the large class sizes] […] The group case days during the						✓	✓				BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
21	year, might have 200 people […] in a classroom setting, you are always going to pay more attention.											
22	Throughout the year I did not really have much time to study to be honest with work. We had very, very long hours particularly January to April time. My attendance at lectures was pretty much non-existent except for our case days which you obviously had to go to.	✓					✓					WE to BE
	Bar maybe Business Leadership, most of the material is the same as CAP2 […] Even looking at the lecture slides, I was like, "Oh, I do not know if it will be useful to even go to them" […] then my peers were like, "Do not bother" so I just did not.						✓	✓			✓	BE and CE, Other to BE/CE
	The case days were useful depending on what lecturer you had, especially those that went through exam approach.			✓	✓		✓	✓				ETP/CEG to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
22	[I did not balance studying and working very well] Pre-Christmas I was not as busy in work so studying for the first assessment was OK […] I would be in at before 7 in the morning trying to study before work and then try to put in an hour after work or an hour and a half after work […] I think our exam was the weekend after Easter and I was working on Good Friday and Bank Holiday Monday, working 12, 13-hour days […] that was quite tough.	✓						✓				WE to CE
	When I did go in [to the lectures] after work at half-six […] I was literally falling asleep at the desk when the lecturer is talking and it's like, "OK, you've gone and signed in but you're not going to get any benefit from it".	✓					✓	✓	✓	✓		BE to PERF, WE to AE/CE
	In school I loved getting my balance sheet to balance but now I am less interested and enthusiastic about what I'm doing because of the amount of work I have on during	✓							✓			WE to AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
22	the week, I do not even want to look at questions now.											
	When working […] I would go into the office before 7 each morning and I would set myself two questions to do and then I would do extra hours in the evening […] But it was hard […] you know you have the exam coming up but you are so busy in work and it's hard to just actually prioritise it.	✓						✓				WE to CE
	The best lectures are those who engaged with you and did not just read off slides […] some lecturers give you scenarios they have dealt with in their day-to-day job and they are doing questions in class with you so that you actually understand the material. They are doing a step-by-step that you might not get from watching the lectures, the recorded lectures or from reading the lecture notes […] but then in other lectures you would just get someone reading off a list.			✓			✓		✓			ETP to BE, BE and AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
22	I know they do have support and they make, they always make that clear at the start of the year, that they have support for different things but yeah, I would say if I was having any issues, I would go probably to xx [in-house learning officer].					✓	✓					BE and CE, SPB to BE
23	I had no motivation to study for the interim assessment in April […] I was burnt out. I was dead from work […] Also, my elective subject was advisory, and it was like the strategy I had done in my final year of college […] I was comfortable with the material […] I actually did quite well on that in comparison to how much I studied for the AAFRP [first assessment].	✓						✓	✓			WE to AE/CE
	You are not able to study and work overtime, well I'm not […] it was not even the physical tiredness of overtime; it was the mental drain […]. When you get to our level […] you are given so much more responsibility.	✓							✓			WE to AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
23	I would not even have considered going to a lecture in busy season.	✓					✓					WE to BE
	Some people [lectures] were so unprepared for the classes and then you have the extreme opposite of some people [lecturers] were so prepared and so good […] [we had one lecturer]. He was brilliant. He just is to the point.			✓	✓		✓	✓				ETP/CEG to BE/CE
	When it came to May, I was exhausted and then when it came to the start of study leave, I just took two weeks off straight […]. There was no motivation.	✓							✓			WE to AE
	I studied through fear […]. However, I think that I was confident going into the AAFRP [first assessment] but I wanted to be really confident and that's why, that was the earliest I ever started studying.		✓					✓				SE to CE, CE to SE
	The others [my peer group] were all studying and it's so peer-pressured […] we shared notes, asked each other questions, I think it would be very hard if you were in a smaller firm and did not have this support.						✓	✓				BE and CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
23	If I did not make it to one of the lecture days I was like, "Oh, look, it's not the end of the world" and I just watched it another day [online].					✓	✓	✓			✓	BE and CE, SPB to BE, Other to BE/CE
24	I was finishing at 7pm and maybe getting a couple of hours in then so it was not ideal but you kind of, you manage it for the month.	✓						✓				WE to CE
	I would figure it out myself [if I had any study difficulties] or I might go to the online lectures. We have a few WhatsApp groups, so they are usually good to bounce questions off people.							✓	✓		✓	BE and CE, Other to BE/CE
	It is tough definitely [working and studying]. I think you do kind of need to force yourself sometimes to do it when you would rather be doing something else.	✓						✓				WE to CE
	I know that they [the firm] look at it [in-house training] like it's to be complemented with the Institute lectures, but often it's not the case […] in the back of your mind you're thinking, "Well, someone will probably explain this to me anyway."						✓	✓			✓	BE and CE, Other to BE/CE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
24	If you are studying in the office […] there's always someone there. You can pop in and ask someone a question if you are having trouble with it or and you will pass by and say, "Oh, try this one. You know, this is good, a good example" or whatever.						✓	✓			✓	BE and CE, Other to BE/CE
	[I drew on the experience of my peer group] a good bit […] I would have asked them what they had in their folders just to get an idea of what's useful to bring in and how they found it, what they thought was good or bad. Possibly, they may have influenced some of my lecture decisions as well.						✓	✓			✓	BE and CE, Other to BE/CE
	A lot of it is covered in CAP2 and it's just kind of applying it, so sort of be confident that you do know a lot more than you think you do on stuff.		✓					✓				SE to CE
	I definitely [became more interested in the material the more I studied it and understood it]. Even little things like […] I was reading							✓	✓			CE and AE

Participant	Quotes	Themes/Variables										Relationship Explained
		WE	SE	ETP	CEG	SPB	BE	CE	AE	PERF	Other	
24	the news and I was saying, "Alright, this relates here".											
	They were pretty good [the case study lectures] […] It depended on who you got.			✓	✓		✓	✓				ETP/CEG to BE/CE