Chinese Postgraduate Accounting Students' Learning in Australian Universities: Their Backgrounds, Learning Orientations and Learning Approaches

Yuxi Wei

Business School

Thesis submitted for the degree of Doctor of Philosophy in Business

February 24, 2021

Table of Contents

List of Tables

List of Figures

Abstract

This thesis reports the process and findings of an empirical study conducted in an Australian university focused on Chinese postgraduate accounting students' learning. This study was conducted in the context of a preponderance of Chinese students' in Australian postgraduate accounting programs and recently tightened migration policies. Prior studies on Chinese students' learning in Western universities have treated Chinese students as a homogenous group but, as Chinese students increase in number and become the majority in postgraduate accounting programs of many Australian universities, the diversity within the group needs to be investigated to obtain a more comprehensive understanding of Chinese students' learning. This study thus treats Chinese students as a diversified group and aims to understand Chinese postgraduate accounting students' backgrounds, learning orientations and learning approaches in Australian universities.

This study uses the Student Learning in Context model (Ramsden 2003) to interpret the relationships between students' backgrounds, learning orientations and learning approaches. Students' learning orientations are measured and analysed using the Self-Determination theory (Deci & Ryan 1985, 1991), while students' learning approaches are measured and analysed with the Students' Approaches to Learning (SAL) model (Biggs 1987). Prior research found that Chinese students are strongly motivated to study accounting in Australian universities by favourable migration policies (McGowan & Potter 2008). This extrinsic learning orientation, language barriers and the teacher-centred learning context in China resulted in Chinese students' adoption of surface learning approaches in Western universities (Evans, Burritt & Guthrie 2010). This learning approach does not fit the Australian accounting education context that promotes deep learning approaches through a student-centred learning context (Wong, Cooper & Dellaportas 2015).

This study adopts a quantitative approach to answer three research questions: What are the backgrounds, learning orientations and learning approaches of Chinese students in Australian postgraduate accounting programs? What background and learning orientation factors help explain the differences in Chinese students' learning approaches? How do Chinese students' learning orientations and approaches change during the time they study in Australian universities? Longitudinal surveys are used to collect data from 428 postgraduate accounting students at the University of Adelaide, including 316 Chinese students and 112 other students.

The findings describe unique characteristics of, as well as diversification within, Chinese students' backgrounds, learning orientations, and learning approaches. The relationship between Chinese students' backgrounds, learning orientations, and learning approaches are illustrated. The comparison between semesters found that Chinese students' extrinsic learning orientations decrease over the length of the study. Their adoption of surface learning approaches increases in the second semester and then decreases to its lowest level in the third semester.

This study provides insights to future researchers by treating Chinese students as a diversified group and proposing a combined model that measures and analyses students' learning orientations and approaches. The empirical findings can help Australian universities better understand their largest international student group and help accounting educators promote deep learning. This study is limited by its small sample, which is a result of environmental restrictions, especially the COVID-19 outbreak in 2020.

Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

I give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

I acknowledge the support I have received for my research through the provision of an Australian Government Research Training Program Scholarship.

Yuxi Wei

February 24, 2021

Acknowledgements

I would like to express my gratitude and appreciation to everyone who has provided me with support. I would not have made this far without each and every one of them.

First and foremost, I want to thank both of my supervisors, Associate Professor Robyn Davidson and Professor Bryan Howieson. I simply could not find words to describe how much I appreciate everything they have done for me over the past eight years. They supervised me since my research masters degree and my first job at the university. They not only helped me with my research and career development but also provided much needed emotional support along this difficult long journey of PhD. I am very grateful to have had both of them as my mentors and role models to whom I will always look up. They are now leaving the university to start a new chapter of their lives, I will forever remember their professionalism and kindness and wish them all the best for the future. I only wish I could work with them for a bit longer and become in the future an academic 75% as successful and respected as they are.

I would also like to thank my partner, my best friend and my closest family member Rachel for tolerating and supporting me for the past 10 years. She has always believed in me and encouraged me when I felt lost and defeated. She saved me from myself on countless occasions and made me a better and stronger person. I would not have been here without her clumsy but sincere comforting words and silent but reliable company. Speaking of company, I extend my appreciation to our two cats and all 50 foster animals who stayed late with me and tried to help me with typing. I received much spiritual support from these four-legged angels in the darkest nights.

There are countless of people to whom I would like to express my gratitude. I want to thank all research participants and the academics who provided feedback on my research so I could make this thesis possible. I want to thank Eric Scott for editing my thesis. I want to thank Dr Sabine Schuhrer, Dr Su Kim, Dr Max Bessell and Dr VG Sridharan for giving me teaching opportunities so I that I can make a living while doing my favourite job. I want to thank Carolyn Stain, Patrick Ye, Lisa Holloway and other faculty staff of the Business School for providing resources so I could complete my study alongside my teaching work. I want to thank all of my students for giving me warm comments and kind encouragement so I can keep motivated and continue to improve. This list goes on.

Chapter One

Introduction

This study treats Chinese students as a diversified group and investigates their backgrounds, learning orientations and learning approaches in an Australian university's postgraduate accounting program. The research objectives include describing the characteristics and diversification of Chinese students' backgrounds, learning orientations and learning approaches, explaining how Chinese students' backgrounds and learning orientations affect their learning approaches, and identifying their changes in learning orientations and learning approaches during their study in an Australian postgraduate accounting program. This chapter introduces the background that motivated this study and provides an overview of the thesis.

1.1 The Environmental Background of the Study

This section introduces the environmental background of the Australian accounting education sector. It describes the key issues facing the sector and the changes in the last decade. This forms the environmental background for this study. It also explains why this study chose to focus on Chinese students' learning in Australian postgraduate accounting programs.

1.1.1 The Accounting Education Industry in Australia

Following the global trend of treating university education as a marketable product, since the 1980s, the Australian Federal Government has supported higher education to become a major commercial export industry of the Australian economy (Evans, Burritt & Guthrie 2010). In 2018, annual revenue of $32.8 billion was generated by 43 institutions in higher education. The majority of this revenue was generated by business schools, with the major revenue of business schools coming from accounting programs (Munro-Smith 2018).

In 2004, accounting was included in the Migration Occupation in Demand list, which opened the door for international graduates to receive Australian permanent residency with a university degree in accounting. According to the migration occupation assessment criteria (CPA Australia 2020), a graduate with an Australian Bachelor's degree or 12-unit Master's

degree in accounting is eligible to apply for Australian permanent residency as an accountant. Compared with the 3-year undergraduate programs, the postgraduate coursework programs are especially popular with international students because they usually take only 1.5 to 2 years and therefore save much time and costs for the potential migrants (McGowan & Potter 2008). As a result, many universities have expanded their accounting programs, especially postgraduate coursework accounting programs, to attract full-fee-paying international students (Ekanayake & Jackling 2014). This move proved to be a success since international enrolment in postgraduate commerce coursework programs increased by 40.39% between 2004 and 2009 (the Australian Trade and Investment Commission (Austrade) 2018). For many international students, the opportunity of migration was one major selling point of Australian postgraduate accounting programs.

Government policy changes in the early 21st century have not only boosted international enrolments but also pushed the universities to rely on international students' tuition fees to survive, while declining government funding in the higher education sector pressured the universities to rely on self-generated funds. Since international students are charged higher tuition fees than domestic students, they are seen as a major source of industry revenue (Munro-Smith 2018). To attract more international enrolments, and consequently more income, Australian universities have an increasing need to understand the international student market, especially students' backgrounds, the main reasons that attracted them to study in Australia, and how they study in Australian universities.

1.1.2 Chinese Students and Australian Accounting Programs at the Beginning of the 21st Century

There are over 44,000 international students enrolled in Australian universities' accounting programs, 37% of them (over 16,000) are from China, making Chinese students the single largest group of international students (Austrade 2018). The high enrolment of Chinese students in accounting programs is a result of the previously discussed environmental and institutional changes in the Australian higher education sector. With the growth in the size of China's middle class during the same period, Chinese enrolments brought the Australian higher education industry an enormous revenue increase in the first decade of the 21st century (Marginson 2011). In 2010, Chinese students' enrolments reached 55% of all international

enrolments in Australian postgraduate accounting programs (Austrade 2018). The high proportion and increasing number of Chinese enrolments make Chinese students a major group of interest in accounting education research.

Though the increased Chinese student enrolment brought much needed funding to Australian universities through accounting programs, the income growth is fragile and unsustainable. An external policy or environmental change can strike heavily on enrolment numbers and income, as demonstrated by the recent impact of the COVID-19 pandemic on the Australian higher education sector. Many educators are also concerned that reliance on Chinese enrolments may bring challenges to the quality of Australian universities' accounting programs (Evans, Burritt & Guthrie 2010; McGowan & Potter 2008). This concern comes from the difficulties Chinese students face when studying in Australian universities as well as their preponderance in number. Chinese students come from a highly-structured teaching environment that emphasises memorisation and transmission of knowledge (Rao, Chi & Cheng 2010; Wang 2005). Australian universities, on the other hand, often use unstructured student-directed learning activities, such as case studies, to encourage active participation and emphasise the need for understanding and the application of knowledge (Wong, Cooper & Dellaportas 2015). Facing a different learning environment and language barriers, Chinese students often rote-learn course materials and have difficulty in understanding and relating subject knowledge in Australian accounting programs (Bhattacharyya 2010; Charlesworth 2008; Pang, Ho & Man 2009). As Chinese students continued to grow in number and proportion in Australian accounting programs, their strong migration-based learning orientations allegedly pushed universities to change the content, assessment and delivery of accounting programs to maintain pass rates and graduation targets (Evans, Burritt & Guthrie 2010). As a result, it has been suggested that the accounting programs, especially postgraduate accounting programs, in Australian universities are losing their reputation in both Australian and overseas labour markets because the graduates fail to meet employers' expectations (Blackmore, Gribble & Rahimi 2017; Yap, Ryan & Yong 2014).

Concerns about declining education quality and reputation have forced the Federal Government to make policy changes in the second decade of the 21st century. Concurrently, a slowdown in the Australian economy has intensified employment competition for accounting graduates. The government thus reassessed the migration policy towards international accounting graduates, especially after receiving reports from the employers claiming that the

international graduates cannot satisfy accounting skill shortages (Blackmore et al. 2014). The policy changes from both education and migration departments have caused much turbulence in Australian accounting education programs (Marginson 2011). The following section will present the policy changes in detail and explain their effects.

1.1.3 Environmental Changes in the 2010s

In 2011, as educators continued to raise concerns about the unsustainable growth pattern of the Australian higher education sector, the Federal Government established the Tertiary Education Quality and Standards Agency (TEQSA) to assure higher education quality and safeguard the reputation of Australia's higher education sector (TEQSA 2017). To improve course quality, accounting educators proposed addressing student-centred learning in curriculum design (Evans, Burritt & Guthrie 2010). In a student-centred learning environment, students are expected to actively engage in learning activities and obtain knowledge through understanding in the learning process (Wong, Cooper & Dellaportas 2015). Curriculum development in the following years received positive feedback from students. According to the Graduates Careers Australia's statistics, the overall satisfaction of course quality in undergraduate accounting graduates increased from 63.5% to 84.2% from 2009 to 2015 (Carroll 2016; Coates & Edwards 2010). The positive student feedback has, in turn, supported further curriculum development in the same direction. Australian accounting programs are expected to maintain a student-centred teaching style and continue to address learning-through-understanding in the future. For Chinese students who are trained in a teacher-centred education environment and rely on memorisation in learning, the challenges of the different learning environment may be intensified.

In addition to the curriculum changes in the universities, migration policy changes for accounting graduates have also increased the pressures felt by Chinese students. As discussed in previous sections, the favourable migration policies were a major incentive behind international accounting enrolments. However, since 2011, a series of migration policy changes have significantly restricted international accounting graduates from receiving Australian permanent residency (Munro-Smith 2018). As the invitation quota for accountants shrank from over 10,000 in 2011 to fewer than 1,000 in 2020 (Department of Home Affairs 2019), the chance to receive a permanent residency invitation has been heavily reduced. For many

Chinese accounting students, this means migration is no longer a practical option after graduation (Blackmore, Gribble & Rahimi 2017).

Without a permanent residency visa, Chinese accounting graduates will be forced to seek employment back home (Blackmore, Gribble & Rahimi 2017). Chinese employers, however, have also raised their expectations of the skills and attributes of overseas graduates in recent years (Hao & Welch 2012). This employment environment change urges Chinese students to focus more on acquiring the ability to apply and relate knowledge from their overseas studies to improve their competitiveness in the future job market.

The changes in Australian universities, Australian migration policies and the Chinese employment market indicate that Chinese accounting students' main reasons for studying accounting in Australia and the ways they study accounting in Australian universities may change and must change to adapt to the new environment. To obtain sustainable growth in the higher education industry, accounting educators must understand and respond to these changes. This study is motivated by the interest to obtain an understanding of the Chinese students' learning in Australian postgraduate accounting programs in the context of the changing external environment of the late 2010s.

1.2 Gaps in Prior Literature

Under the environmental changes identified in Section 1.1, it is possible that the prior research findings on Chinese students' learning no longer apply in the new environment. In addition, gaps exist in prior theories and models explaining how students learn in universities and in prior empirical studies of Chinese students' learning. This section briefly introduces the gaps that this study aims to close and introduces the theoretical framework that underlies the approach of this study. It should be noted that prior studies do not always use the same terminology to describe the same aspect of student learning. To avoid confusion, this study uses one set of terminology based on the theoretical framework adopted for the study. The terminology used in this study is summarised in Table 1.1. A more comprehensive discussion of the development and verification of the theories and the findings of prior empirical studies can be found in Chapter Two.

Table 1.1 Terminology Used in this Study

Terminology	Meaning	Model/Theory adapted from
Learning Orientations	The reason why a student chooses to enrol in a university	Student Learning in Context model (Ramsden 2003)
Intrinsic Learning Orientation	To experience the pleasure and satisfaction in the learning process	Self-Determination theory (Deci & Ryan 1985, 1991)
Extrinsic Learning Orientation	Seeing higher education as a means to an end	
Amotivation	Lack of motivation, neither extrinsically nor intrinsically motivated	
Learning Approaches	The combination of learning motives and learning strategies: Learning motives: the reasons to adopt a certain learning strategy Learning strategies: how to prepare for and complete learning tasks	Students' Approaches to Learning (Biggs 1987)
Surface Approach	Learning through memorisation and repetition without understanding; motivated by fear of failure and pressure to pass	
Deep Approach	Learning through understanding, relating and applying knowledge; motivated by internal interests	
Achieving Approach	Learning through hard work and organised schedules; motivated by the desire to achieve good results	

1.2.1 Gaps in the Theories that Explain Student Learning

Prior studies have many theories and models to explain how students learn in universities. This study constructs a theoretical framework based on the theories and models that are most useful to observe and explain students' learning when they are in a new learning context. The Student Learning in Context model (Ramsden 2003) is such a model, because it focuses on explaining differences in students' learning approaches by their background, learning orientation and learning context. It addresses the role the current learning context plays in shaping students' learning approaches and it posits that students can gradually change their learning approaches under the influence of the current learning context. Another key factor that shapes students' learning approaches is their learning orientations, which are developed under the influence of their background factors.

The Student Learning in Context model provides general descriptions about how learning orientations affect learning approaches. For example, extrinsic learning orientations lead to the adoption of surface learning approaches, whereas intrinsic learning orientations

relate to deep learning approaches. However, the Student Learning in Context model does not provide further explanation about what extrinsic and intrinsic learning orientations are. It adopts the Students' Approaches to Learning (SAL) model (Biggs 1987) to define and classify learning approaches, but it does not have a model that defines and classifies learning orientations. To better understand how different types of students' learning orientation affect their adoption of different learning approaches, a more detailed model is needed to identify the types of learning orientation.

To close this gap, this study incorporates the Self-Determination theory (Deci & Ryan 1985, 1991) into the theoretical framework to measure and classify students' learning orientations, so that the relationship between learning orientations and learning approaches can be investigated in further detail. This theory was selected because it sees students' learning orientations on a continuum from a lack of self-determination to the highest level of self-determination. Both the Student Learning in Context model and the Self-Determination theory, and other theories and models relevant to the development of them, are further explained in Chapter Two.

1.2.2 Gaps in Empirical Findings of Chinese Students' Learning

Chinese students have been attracting researchers' interest because of their unique background and growing numbers in Western universities. This subsection briefly summarises the key prior findings with regard to the characteristics of Chinese students' backgrounds, learning orientations and learning approaches and identifies the conflicts and gaps in the findings.

Prior research that focused on Chinese students' cultural and educational backgrounds has mixed conclusions about their learning orientations. For example, one study found that, under the influence of the traditional Confucian values, Chinese students believe a model learner should have intrinsic learning orientations (Li 2002). However, recent empirical studies found that Chinese students are often extrinsically oriented by pressure from family members' expectations (McMahon 2011) and migration opportunities (Ekanayake & Jackling 2014). Chinese students can also be amotivated because their parents often make education-related decisions for them (Wang & Byram 2011). Another recent study also found that Chinese students become amotivated over time because of stress (Liu 2015). These inconsistent conclusions about Chinese students' backgrounds and learning orientations are partially a result

of treating Chinese students as a homogenous group. In prior studies, the term "Chinese students" was used to represent students from various countries and regions, including mainland China, Hong Kong, Taiwan, Singapore and Malaysia (Watkins & Biggs 1996). Given the differences in the education context among these countries and regions, treating students with different backgrounds as the same group can cause confusion and produce inaccurate conclusions. Prior investigations found that even within mainland China, the education context differs between urban and rural areas (Rao, Chi & Cheng 2010). Given the impact of students' backgrounds on their learning orientations and learning approaches, to obtain a better understanding of Chinese students' learning, their backgrounds should be differentiated.

In prior literature, Chinese students' learning approaches have been discussed intensively with reference to their backgrounds. As mentioned in Section 1.1.2, the learning context in China features highly-structured learning under the teachers' guidance and memorisation and repeating practice are emphasised (Rao, Chi & Cheng 2010; Wang 2005). Students under such a learning context tend to adopt surface learning strategies and have difficulties in adopting deep learning strategies (Wang & Byram 2011). As for learning motives, Chinese students who study overseas are under much pressure to succeed and see failing a subject as unacceptable (Wang & Byram 2011). With these surface motives and language difficulties, Chinese students were found to adopt surface learning, such as reliance on memorisation, as a survival approach in Western universities (Bhattacharyya 2010; Jackling et al. 2012; Pang, Ho & Man 2009). Some researchers discussed Chinese students' use of memorisation in more depth and argued that using memorisation in learning does not automatically classify a Chinese student as a surface learner (Biggs 1993; Cooper 2004). This is because Chinese students were trained in China to utilise memorisation as a strategy to enhance understanding. The understanding of the text is renewed and deepened with each repetition (Biggs 1996a, 1996b). A more recent study confirmed this argument in finding that Chinese students can use seemingly surface strategies to achieve deeper understanding over time (Patel, Millanta & Tweedie 2016). Other recent studies found that Chinese students have high achieving motives and can adjust their learning strategies to adapt to the Australian learning context (Sikkema & Sauerwein 2015; Wong, Cooper & Dellaportas 2015).

The gap in the prior findings about Chinese students' learning approaches is a lack of longitudinal studies. Though some prior findings confirmed that Chinese students can adapt to the Western learning context and adjust their learning approaches as time passes (Sikkema &

Sauerwein 2015; Volet, Renshaw & Tietzel 1994; Wong 2004), very few studies have followed the same group of Chinese students to understand how they adjust their learning approaches over time. Existing longitudinal studies used short investigation periods that are unlikely to be long enough for changes to occur and/or did not focus on mainland Chinese students (Cooper 2004; Wang & Byram 2011). To have a comprehensive understanding of Chinese students' learning approaches in Western universities, a longitudinal study that follows the same group of students throughout their study programs is needed.

Prior empirical studies of Chinese students' learning orientations and learning approaches are also limited by the scope of the Student Learning in Context model (Ramsden 2003). As mentioned in Section 1.2.1, the Student Learning in Context model lacks clear definitions and classifications of learning orientations. Empirical studies that used this model thus often mix the concept of learning orientations and learning motives (for example, Honkimaki, Tynjala & Valkonen 2004; Ramburuth & Mladenovic 2004), and the conclusions lack a detailed description of what learning orientation is related to which learning approach.

Based on the gaps identified above, this study focuses on mainland Chinese postgraduate accounting students and treats them as a group with diversified backgrounds, so that the impact of the students' backgrounds on their learning can be explained in more detail. When investigating Chinese postgraduate accounting students' learning orientations, this study incorporates the Self-Determination theory to more clearly define, measure and classify students' learning orientations, so that the relationship between learning orientations and learning approaches can be described more comprehensively. To better understand Chinese postgraduate accounting students' learning approaches in Western universities, this study conducted a longitudinal investigation that follows the same group of students throughout their postgraduate accounting programs, and compares their orientations and learning approaches between different semesters.

1.3 Research Overview

1.3.1 The Research Questions

To close the gaps identified in Section 1.2.3, this study has the following research questions:

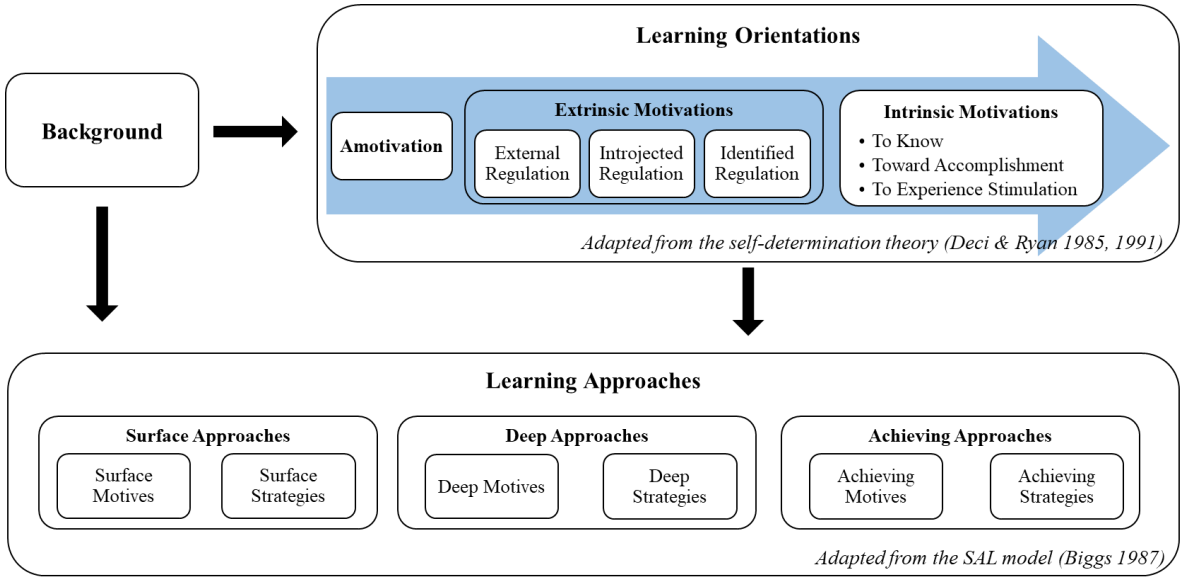
1. What are the backgrounds, learning orientations and learning approaches of Chinese students in Australian postgraduate accounting programs?
2. What are the relationships between Chinese postgraduate accounting students' backgrounds, learning orientations and learning approaches? How do their background factors affect their learning orientations and shape their learning approaches?
3. How do Chinese postgraduate accounting students' learning orientations and approaches change during the time in Australian universities?

These research questions will be readdressed in Chapter Three. The research aims and objectives are also presented in Chapter Three.

1.3.2 Theoretical Framework

This study uses a theoretical framework developed based on the Student Learning in Context model (Ramsden 2003) to identify the relationships between students' backgrounds, learning orientations and approaches. Students' learning orientations are captured and analysed using the Self-Determination theory (Deci & Ryan 1985, 1991), and the students' learning approaches are measured and discussed using the SAL model (Biggs 1987). The theoretical framework is presented in Figure 1.1. Further explanations of the theoretical framework and the hypotheses' development can be found in Chapter Three.

Figure 1.1 The Theoretical Framework of the Study



Adapted from the Student Learning in Context Model (Ramsden 2003)

1.3.3 Research Design

To answer the research questions, this study takes a quantitative approach and deductively identifies the relationships between the variables. To better describe Chinese students' backgrounds, learning orientations and learning approaches, Chinese students' characteristics are compared with other students in the same learning context. Surveys were distributed to all postgraduate accounting students in an Australian university to collect data. In this study, Chinese students are defined as the students who completed high school and undergraduate study in mainland China. Students who completed high school study in mainland China but completed their undergraduate degrees overseas are identified as Chinese-overseas students, while the remaining students (who did not complete high school study in mainland China) are identified as non-Chinese students. The non-Chinese student group includes Australian domestic students and other international students. Domestic students are not identified as a separate group because their sample size (17) is not high enough to support a reliable quantitative analysis for the purpose of this study. They are also not the focus of this study.

Four hundred and twenty-eight students participated in the data collection. The numbers of Chinese students, Chinese-overseas students and non-Chinese students are 316, 43 and 69, respectively. Unfortunately, because of the COVID-19 outbreak in early 2020, the data collection progress was forced to end early. Only 43 students, including 40 Chinese students

and three non-Chinese students, completed all three surveys over three semesters. 94 students completed two surveys and 291 students completed only one survey. Nevertheless, all students who completed at least one survey had their responses recorded and their data were used in the analysis for the first two research questions.

Descriptive statistics for the survey responses are presented and discussed to answer the first research question. Mann-Whitney U tests are performed to compare the distribution of Chinese students' responses with Chinese-overseas students' and non-Chinese students' responses so that Chinese students' characteristics can be described in comparative terms. Multinominal logistic regression analyses are performed to answer the second research question, which concerns the relationships between Chinese students' backgrounds, learning orientations and learning approaches. To answer the third research question, the surveys were distributed to the same group of students to collect information about their learning orientations and approaches over three semesters. The Friedman Two-way Analysis of Variance (ANOVA) by Ranks tests are performed to identify any changes in learning orientations and learning approaches for the same student group through the different semesters. Justifications for and further details of the research methods, including data collection procedures, ethics approvals and regression models, are presented in Chapter Four.

1.4 A Summary of Research Findings and Recommendations

1.4.1 The Answers to Research Question One

This study observed diversity in the backgrounds of the Chinese student group. The locations of Chinese students' prior education institutions range from the most developed cities in China to rural areas with very limited education resources. From high school to universities, Chinese students have a trend to move to more developed areas for higher education. Chinese students' prior accounting knowledge is also very diverse, but the distribution is not significantly different from other student groups at the 0.05 level. Chinese students also have some unique background characteristics that differentiate them from other student groups. The gender distribution of Chinese students is significantly different from other student groups, where the female students' proportion is much higher for the Chinese student group. Chinese students are also the youngest student group and consequently have less working experience and rely more

on family financial support. Their English competency is significantly lower than for the other student groups at the 0.05 level.

The findings on Chinese students' learning orientations reflect Chinese students' changes in the new environment, especially the tightened migration policies of Australia. As introduced in Section 1.1.3, since 2011, the opportunity for international accounting graduates to obtain Australian permanent residency has been significantly reduced. This study's participants commenced their study between 2017 and 2019 and were under the influence of this environmental change. Their responses in regard to learning orientations suggest that, compared with non-Chinese students (including domestic students and other international students), Chinese students' migration-related orientation is not significantly stronger at the 0.05 level. Although 76.6% of Chinese students still considered the migration opportunities when deciding to study an accounting Master degree in Australia, migration is no longer one of the strongest learning orientations for Chinese students. Compared with non-Chinese students, Chinese students are more extrinsically motivated by career-related learning orientations and less intrinsically motivated by an interest in accounting knowledge and the pleasure they may experience in learning. It is also easier for Chinese students to feel lost and become amotivated after spending some time in postgraduate accounting programs. Overall, Chinese students have both extrinsic and intrinsic learning orientations, but their extrinsic learning orientations are stronger.

Consistent with prior findings of Chinese students' use of memorisation (Biggs 1996b), this study finds that Chinese students use memorisation as a common strategy regardless of which learning approach is adopted. It should be noted that their reliance on memorisation is not significantly higher than for other student groups at the 0.05 level. Compared with non-Chinese students, Chinese students scored higher on surface learning approaches and scored lower on deep learning approaches because they have more difficulties in understanding and relating course materials. However, they are also more willing to take a critical stance and learn through understanding, which is a deep learning motive. As for achieving approaches, Chinese students are less determined to excel and less organised than non-Chinese students, but they are better with time management than Chinese-overseas students. Overall, Chinese students score high on deep and achieving approaches, though not as high as non-Chinese students. Surface learning approaches are the least adopted approaches by Chinese students, but the scores are still higher than for non-Chinese students.

Research question one is answered by the findings from the descriptive statistics of 49 variables and 45 comparisons between three student groups. The details of these analyses are presented in Chapter Five.

1.4.2 The Answers to Research Question Two

The answers to the second research question focus on the diversification within the Chinese student group. The findings of relationships between Chinese students' backgrounds, learning orientations and learning approaches can help explain Chinese students' unique characteristics described in the answers to the first research question.

Chinese students' background factors were found to affect some of their learning orientations and learning approaches, whereas personal background factors' do not affect as much the learning orientation and approach variables as institutional background factors do. The only difference between female and male students is that female students score higher on achieving learning approaches. Students' age positively affects their intrinsic learning orientations and the adoption of deep learning approaches. Given that Chinese students are the youngest student group, this relationship helps explain their lower scores on intrinsic learning orientations and deep learning approaches. Another finding that can help explain Chinese students' learning orientation characteristics is the effect of English competency. English competency is found to positively affect intrinsic learning orientations and negatively affect extrinsic learning orientations. Given that Chinese students' English competency is significantly lower than that of the other student groups, it is not surprising to see them scoring lower on intrinsic learning orientations and higher on extrinsic learning orientations. A background variable that can help explain the differences within the Chinese student group is prior accounting knowledge. Chinese students who have more academic accounting knowledge before coming to Australia are more motivated by intrinsic learning orientations. However, the effect of prior accounting knowledge on deep and achieving learning approaches cannot be explained well in a linear model. Chinese students' places of origin do not have a strong effect on their learning orientations except that students who graduated from universities in less developed areas are more extrinsically oriented to use an Australian accounting Master degree to prove their capabilities.

As stated in the Student Learning in Context model (Ramsden 2003), Chinese students' learning orientations heavily affect their learning approaches. However, the relationships identified in this study do not completely agree with prior findings. While some extrinsic learning orientations, such as to find more prestigious jobs and to prove one's capability, positively affect Chinese students' surface learning approaches, migration-related learning orientation is found to negatively affect surface learning approaches. One intrinsic learning orientation, to experience the pleasure of accomplishment, positively affects deep learning approaches, but the effects of some other intrinsic learning orientations, including the interest to know and the pleasure to experience stimulation, are not explained well in linear models. Amotivation was found to positively affect the adoption of surface learning approaches.

The relationships between Chinese students' background, learning orientations and learning approaches are complicated. Some relationships, especially the relationships between some learning orientation and learning approach variables, cannot be explained by linear models. Chapter Six presents the regression results and provides more detailed explanations of the relationships.

1.4.3 The Answers to Research Question Three

The third research question is answered by comparing Chinese students' learning orientation and learning approach responses for different semesters. As mentioned in Section 1.3.3, only 40 Chinese students provided responses to make the comparison over three semesters. The comparison results show that Chinese students' extrinsic learning orientations and surface learning approaches are lower in the third semester than in the first semester. While the change of extrinsic learning orientations follows a steadily decreasing trend, the change in surface learning approaches follows a bell curve. Chinese students' adoption of surface learning approaches increases in the second semester and then decrease to its lowest in the third semester. The increase in surface approaches could be explained by an increase in the complexity of subject materials in the second semester. However, after one year's study (two semesters), Chinese students' concerns in coping and understanding the course material and reliance on memorisation are reduced to their lowest level. More details are presented in Chapter Six.

1.4.4 Recommendations

Based on the study's findings, this thesis makes recommendations to Australian accounting educators, student support and student recruitment departments of Australian universities, as well as to future researchers. The detailed recommendations and discussions can be found in Chapter Seven.

The recommendations for Australian accounting educators focus on how to efficiently promote deep learning in class. It is important to understand that Chinese students' reliance on memorisation is not equivalent to rote-learning. Chinese students do have a strong deep learning motive to understand what they need to learn. It is their limited English competency that creates difficulties for them to understand and cope with course materials. Educators can reinforce Chinese students' deep learning motives by keeping an open communication channel and encouraging them to ask questions. It is also important to provide academic support, including more detailed explanations of practice solutions and timely feedback, so that the students can take their time reading and enhancing their understanding of subject knowledge and better organise their study. The first semester is of particular importance and thus needs to include assessments that focus on understanding fundamental concepts instead of replication of journal entries or calculations. This can help Chinese students adapt to the Australian education context faster and so avoid a steep learning curve in the second semester. In the meantime, student support services of Australian universities should provide additional guidance to help international students understand the student-centred teaching environment in Australia, so that students can receive help when they feel lost and confused in their new learning context. Additional support in English language, time management and stress-relief counselling will also be helpful to reduce the risk of students becoming overwhelmed and frustrated when transiting to the different learning environment. These recommendations are consistent with the ones provided in prior accounting education research (Chan & Ryan 2013; Quan, He & Sloan 2016; Wu 2015), but this study has provided the reasons why these practices can help enhance Chinese students' learning by understanding.

Some recommendations are made for the student recruitment departments of Australian universities to maintain a sustainable operation in the recruitment of Chinese students, especially after the COVID-19 pandemic. The findings suggest that, although they are no longer strongly motivated by migration opportunities, Chinese students will still choose Australian Master degrees to prove their capabilities and gain a competitive advantage in the

Chinese job market. This is especially true for Chinese students from more rural areas and with higher prior academic performance, lower English competency as well as some working experience.

This study also has some recommendations for future research that focuses on understanding student learning. Firstly, caution must be taken when using the SAL model (Biggs 1987) to interpret students' learning approaches. For Chinese students, scoring high in memorisation does not automatically classify them as surface learners. A student can have learning motives and learning strategies from different categories of learning approaches, such as a critical stance to learn by understanding (deep motive) and a strategy to learn through memorisation and repetition (surface strategy). When describing a student's learning approach, the interpretation should focus the extent to which the student adopts surface, deep and achieving approaches instead of simply labelling them as solely a surface learner or a deep learner. To provide such a detailed description of a student's learning approach, their adoption of each type of learning motive and learning strategy should be measured individually. Secondly, student groups with diverse backgrounds and that are many in number, such as Chinese students, should not be treated as a homogenous group in analysis. Identifying and analysing the diversity in the group can produce more useful information and provide a more comprehensive understanding of the students. Thirdly, to better understand the relationship between learning orientations and learning approaches in the Student Learning in Context model (Ramsden 2003), it is necessary to understand and classify students' learning orientations at the same level of detail as the students' learning approaches. Having clear definitions and classifications can help researchers better capture the components of the model and test more aspects of the relationships. The Self-Determination theory used in this study is a suitable model to measure students' learning orientations. Lastly, this study found that linear models cannot capture very well all the relationships identified in the Student Learning in Context model very well. Future studies should consider constructing non-linear models to test the relationships between learning orientations and learning approaches.

1.5 Contributions and Limitations

This study makes theoretical contributions to the accounting education literature and practical contributions to accounting education practice. The study incorporates two models from

different disciplines to better capture and analyse Chinese students' learning. It also provides a different approach to treating Chinese students as a diverse group to gain a more comprehensive understanding of this student group. The findings provide a more comprehensive understanding of Chinese students' background, learning orientation and learning approach characteristics in a new external environment. Especially, it adds to the literature by describing the diversity in the Chinese student group. The findings also illustrate the relationship between different aspects of Chinese students' backgrounds, learning orientations and learning approaches with details that prior research does not have. Furthermore, the longitudinal study provides new findings on the changes in Chinese students' learning orientations and learning approaches over one year of study. The recommendations made based on the study's findings can help Australian accounting educators promote deep learning in class, help student services provide more efficient support to Chinese and other international students, and help Australian universities to maintain a sustainable operation in the recruitment of Chinese students.

The limitations of this study come from both the external environment and the research methods. The small sample size that resulted from a series of environmental restrictions, especially the COVID-19 pandemic, may reduce the reliability of the conclusions. This study used only one university to collect data, so the findings may not necessarily apply to a larger population. The data analysis used only constructed linear regression models to test the relationships between Chinese students' backgrounds, learning orientations and learning approaches. Some findings suggest that the relationships between some aspects of learning orientations and learning approaches cannot be captured well in a linear model. The discussions of these limitations and delimitations can be found in Chapter Seven.

1.6 Thesis Structure

This thesis has seven chapters. The structure of the remaining six chapters is as follows.

Chapter Two reviews the prior literature. It starts with a detailed introduction of prior theoretical developments on student learning. The discussion covers the theories and models used to develop the theoretical framework of this study as well as other widely used theories. It also provides the justification of this study's theoretical base. The literature review then turns to prior empirical findings on Chinese students' learning. The final part of Chapter Two

identifies the gaps and limitations in the prior literature and further justifies the focus of this study.

Chapter Three elaborates upon the research questions and objectives. The study's theoretical framework is described and the 23 hypotheses that are used to answer the second and third research questions are derived.

Chapter Four covers the study's design. The introduction and justification of the research methods, including data collection and data analysis, are covered in this chapter. The chapter explains the measures used to capture Chinese students' background, learning orientation and learning approach variables and the development of the survey questions. The ethics clearance information is also included in the chapter. The chapter ends with the description of the 62 regression models used to answer the second research question.

The research findings are presented in Chapters Five and Six. The findings in Chapter Five are used to answer the first research question and the findings in Chapter Six are used to answer the second and third research questions.

Chapter Seven is the last chapter of the thesis. It starts with a discussion of the key findings presented in Chapters Five and Six and then presents a series of recommendations. The contributions and limitations of this study are included at the end of Chapter Seven.

Chapter Two

Literature Review

2.1 Introduction

This chapter discusses the key findings from prior literature. It starts with a summary of the key theories, models and tools developed to explain student learning in higher education. The models are then critically discussed to justify the choice of the theoretical models used in this study. This is followed by a summary of empirical findings on Chinese student learning, including the Chinese learning context and how Chinese students learn in Western, particularly Australian, universities. The last part of the chapter identifies the gaps and the limitations in the prior literature as justification for the focus and scope of this study.

2.2 Prior Literature on Student Learning in Higher Education

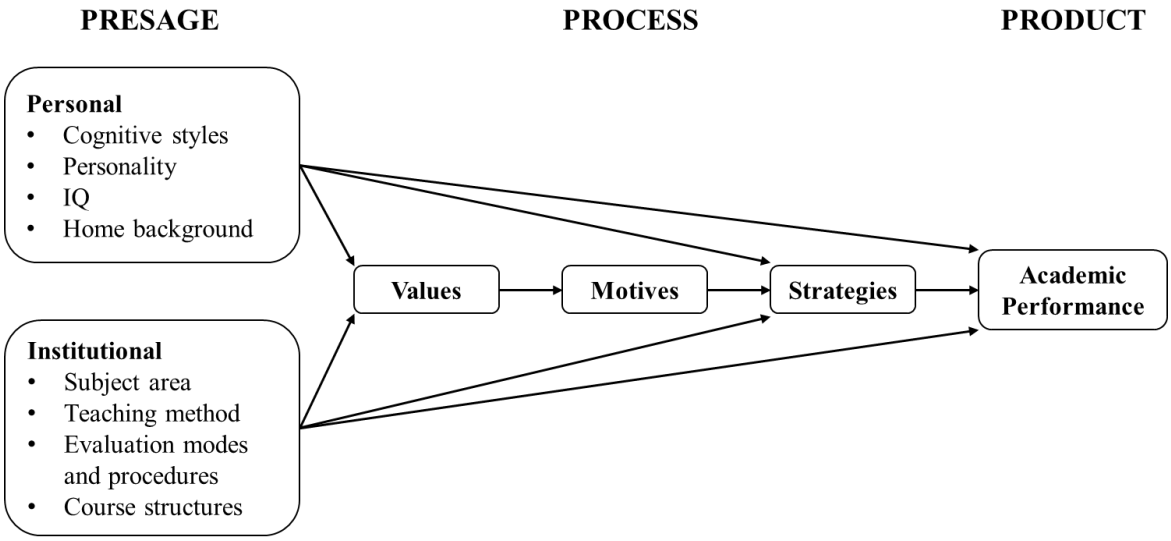
2.2.1 Early Theories that Contribute to the Development of the Students' Approaches in Learning (SAL) Model and the Student Learning in Context Model

Research that focuses on understanding how students learn in universities emerged in the 1970s. Miller and Parlett (1974) started by surveying how students prepare for different assessment tasks and classified students into different types based on how they approach the learning tasks. Marton and Säljö (1976a, 1976b) further explored students' learning approaches in different assessments in experiments and found that students can change their learning approaches to adapt to the learning tasks. That is, students' learning approaches can be shaped by their learning environment. Through experiments and interviews, Marton and Säljö (1976a) identified two distinguishable types of learning approaches in university students: deep-level and surface-level processing. Students who adopt a deep-level processing approach to learning focus on understanding the meaning, capturing the key logic and ideas, and draw their own conclusions. With the surface-level processing approach, however, students see learning as a reproductive task and simply accept and memorise course materials without obtaining a thorough understanding of the key ideas and connections. Furthermore, Marton and Säljö (1976b) changed the assessment design in their experiment and found that students would swap between surface-level and deep-level processing as the assessment design changed. However, they found that it is harder to use assessment design to change students from surface-level to

deep-level processing than the other way around. These findings formed the foundation of the theories that interpreted student learning in the following decades.

Biggs (1978) looked further into the contextual factors that could affect students' adoption of surface and deep learning and proposed a general model to explain the effects. This model classifies student learning into three stages: presage, process and product, thus was referred to as the 3Ps model (Figure 2.1). The presage stage includes both personal and institutional factors, such as the student's home background, personality, education institution and discipline. These presage factors directed the motives students have to undertake further education, which determine their learning strategies in the learning process. The motives and strategies of student learning form the learning process, which directly affects students' performance.

Figure 2.1 The General Model of Study Processes (the 3Ps model)



(Source: Biggs 1978, p. 267)

Using factor analysis, Biggs (1978) identified three different approaches to learning in the learning process stage: reproducing, internalising and organising. Each of these approaches to learning is a combination of values, motives and strategies with similar characteristics. The characteristics of reproducing and internalising learning are like the surface-level and deep-level processing described by Marton and Säljö (1976a, 1976b), but Biggs provided further details to describe the characteristics of each learning approach through values, motives and strategies. In each identified learning approach, the values describe a student's conception of higher education, the motives refer to the reason why students adopt certain strategies, and

strategies capture students' study behaviours. Under the reproducing approach, students see higher education as a means to some other end, are anxious about assessments, and rely heavily on lecturers' detailed instructions. Conversely, under the internalising approach students see universities as a place to question and discover values, are intrinsically motivated, and study by understanding and relating materials. Under the organising approach, students are eager to show their excellence in universities and are motivated by high achievement. As a result, they study in a well-structured, organised manner.

Further research was conducted to identify the contextual factors that could explain the differences in students' learning processes. Ramsden (1979) focused on institutional factors and found students' perceptions of their disciplines and lecturers strongly affected how they approached learning tasks. He also confirmed the existence of the organising learning approach described in Biggs's study (1978), that some students are strategic with assessments – they adjust their learning approaches to adapt to the learning context of learning. He argued that the type of learning approaches, such as surface, deep and achieving, are not used to describe the characteristics of the student, but to describe the student's learning in certain contexts. Under different learning contexts, the same student's learning approaches can be different.

Entwistle and Ramsden (1982) also investigated why students approach learning tasks differently and identified four categories of learning orientations: meaning, reproducing, achieving and non-academic. Each learning orientation describes an attitude, conception or motivation for learning. It should be noted that a student can have more than one type of learning orientation at the same time. For example, meaning orientation was consistently related positively to achieving orientation. Entwistle and Ramsden (1982) found that meaning orientation is related to deep-level learning approaches and reproducing orientation is related to surface-level approaches. Students with achieving orientations are ready to adopt either deep-level or surface-level approaches, whereas students with non-academic orientations study in a disorganised and dilatory manner.

The early studies use different terms to describe the distinctive factors that can explain the differences in students' learning process. These terms include students' approaches to learning (Marton & Säljö 1976b; Miller & Parlett 1974; Ramsden 1979), styles and strategies of learning (Pask 1976), values, motives and strategies in study processes (Biggs 1978), conceptions of learning (Säljö 1979), and orientations to studying (Entwistle & Ramsden 1982). These terms have overlapping meaning and similar classifications because the studies

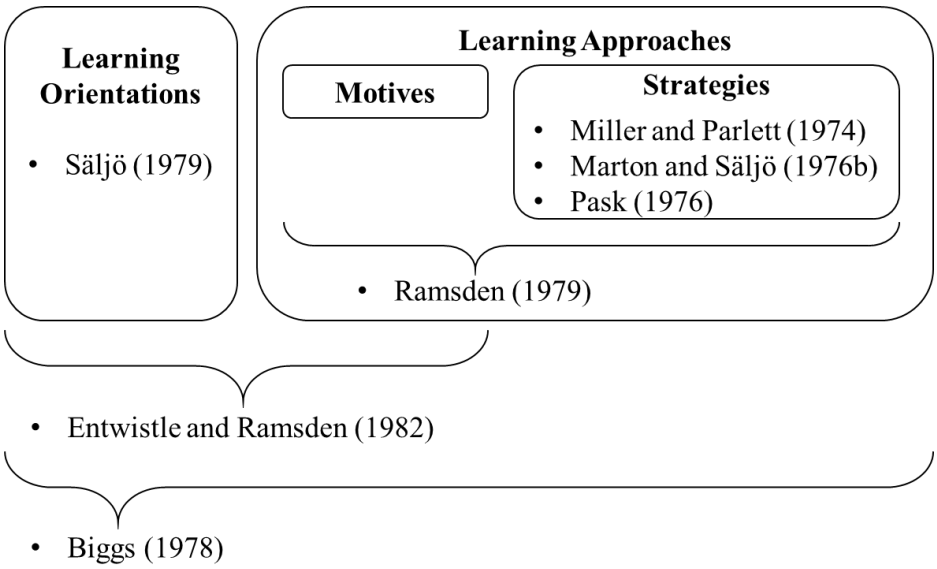
are related and have a similar focus. Table 2.1 summarises the meaning and classification of these terms used in early studies to explain the differences in students' learning process.

Table 2.1 Terms Used to Explain the Differences in the Learning Process

Literature	Term used	Scope	Classification
Miller and Parlett (1974)	Students' approaches to learning	How students react to and prepare for different assessment tasks	• Cue-consciousness • Cue-deaf • Cue-seekers
Marton and Säljö (1976b)	Students' approaches to learning	How students prepare for different assessments	• Deep-level processing • Surface-level processing
Pask (1976)	Styles and strategies of learning	How students reach the same level of understanding in different ways	• Serialist • Holist
Biggs (1978)	Values, motives and strategies in study processes	Values: students' motivation to enter university Motives: reasons to adopt certain strategies in learning Strategies: activities performed to process course materials	• Reproducing approach • Internalising approach • Organising approach
Ramsden (1979)	Students' approaches to learning	How students prepare for different assessment tasks	• Deep approach • Surface approach • Strategic approach
Säljö (1979)	Conceptions of learning	Students' subjective understanding of the nature of learning	• Taken for granted • Thematic
Entwistle and Ramsden (1982)	Orientation to studying	Students' attitudes and motivations to learning	• Meaning orientation • Reproducing orientation • Achieving orientation • Non-academic orientation

To avoid confusion, this study uses "learning approaches" to represent the different types of student learning process, which focuses on the strategies adopted to tackle learning tasks and the motives for the strategies. The term "learning orientations" is used to represent students' general conceptions and motivations to learning. Figure 2.2 illustrates the focus of prior literature with these terms. The next subsection summarises the development of the instruments that capture the different types of students' learning approaches and explains the factors that affect students' adoption of learning approaches.

Figure 2.2 Prior Literature's Focus on Learning Orientations and Learning Approaches



2.2.2 Students' Approaches to Learning and the Factors Affecting Them

The students' approaches to learning (SAL) model is a widely recognised theory that identifies and explains the differences in students' learning processes (Biggs 1987). The SAL model defines students' learning approaches as the combination of learning strategies and motives, where learning strategies are the methods used in the learning process and learning motives are the reasons behind the students' strategies. Following the early classifications of learning approaches (Biggs 1978; Entwistle & Ramsden 1982; Marton & Säljö 1976a, 1976b; Ramsden 1979), Biggs (1987) proposed three different learning approaches: surface, deep and achieving. The surface learning approach consists of reproductive learning strategies that result from surface motives, such as meeting minimum requirements and fear of failure. The deep learning approach is motivated by intrinsic interest in the subject knowledge and includes meaningful learning strategies such as wide reading and relating knowledge across different topics. The achieving approach describes the motives and behaviours of what Biggs referred as a "model student"; they are keen to obtain the highest grades and can use both surface and deep strategies in a well-organised way. A key characteristic that differentiates achieving strategies from the surface and deep strategies is the organisation of the adopted strategies. Though both surface and deep strategies describe how students engage with the learning context, the achieving strategies are highly organised actions to adapt to the learning context. A highly organised rote-

learning strategy is thus classified as a surface-achieving strategy whereas reading for meaning in an organised way is classified as a deep-achieving strategy.

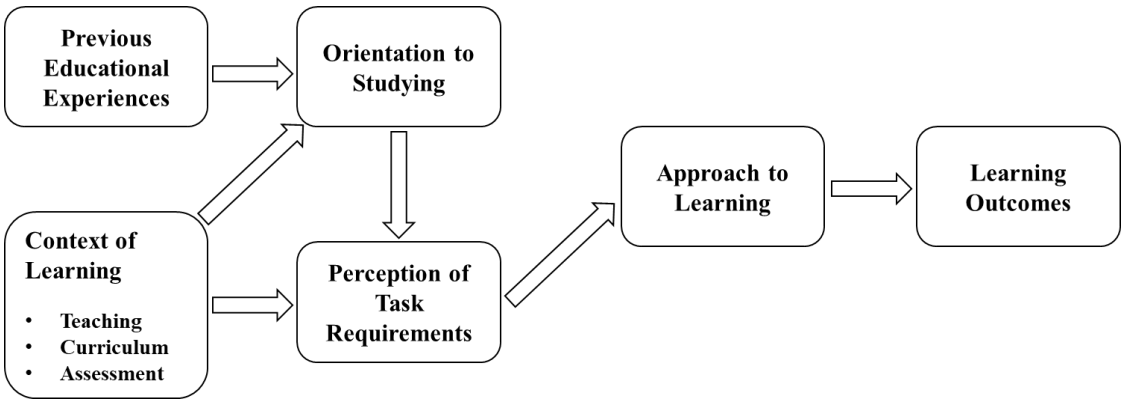
In the SAL model, Biggs (1987) stated that students may adopt any or all of the surface, deep and achieving motives to any extent. For example, a student with high performance tends to have both deep and achieving motives. Although a student can have surface and deep motives simultaneously, it is unlikely that they will rote-learn and seek meaning simultaneously. It is also possible for a student to change their motivational mix and consequent strategy from time-to-time.

The SAL model has been used and interpreted in many studies. Many studies applied the SAL model in the investigation of students' learning under certain learning contexts, especially Asian students' learning in Western universities (for example, Biggs 1996a; Niles 1995; Volet, Renshaw & Tietzel 1994). These empirical studies confirmed Biggs' earlier arguments, that students' adoption of surface and deep learning approaches differ under different learning contexts. Section 2.3.2 provides a summary of the key findings that are relevant to Chinese students' learning.Ramsden (2003) proposed that one key interpretation of students' learning approaches is that the meaning of surface and deep approaches may not be the same in different subject areas. For example, a deep approach in the history discipline may address the intention to interpret and relate materials in a personal way from the beginning, but a more 'technical' discipline, such as physics, may involve an initially narrow concentration on details before making relations. Deep learning approaches are particularly important for professional disciplines, as Ramsden (2003) stated that the learning approaches used in these disciplines are also a part of the learning outcomes. Since professional disciplines involve a large number of problem-solving activities, a deep approach would include establishing relations that link observations in practice to theoretical knowledge, whereas a surface approach would focus only on isolated observations and the replication of existing procedures to reach a result.

In addition to adding interpretations to the SAL model (Biggs 1987), Ramsden (2003) modified Biggs's 3Ps model (1978) and presented the Student Learning in Context model (see Figure 2.3). Compared with the original 3Ps model, Ramsden's model reduced the personal factors in the presage stage to focus only on educational experiences and replaced values with orientation to study. Ramsden stated that learning approaches are attached to specific learning tasks rather than to a student, since the same student can learn differently in different situations.

He also identified students' perceptions of task requirements as another key factor that connects the learning presage factors to the learning process (Ramsden 1979). Nevertheless, the orientation to studying plays a critical role in shaping students' general learning approaches – a meaning orientation is linked to a deep approach whereas a reproducing orientation leads to a surface approach. Ramsden (2003) also used the term 'learning outcomes' instead of academic performance to represent the learning product. He stated that the learning outcome of a surface approach would be an unstructured accumulation of disparate knowledge. In Ramden's (2003) view, only a deep approach can help students develop flexible and adaptive skills, which are the proper learning outcomes of higher education.

Figure 2.3 The Student Learning in Context Model



(Source: Ramsden 2003, p. 82)

Though both the 3Ps model (Biggs 1978) and the Student Learning in Context model (Ramsden 2003) identified several factors that affect students' learning approaches, it should be noted that these models are heuristic and not deterministic. The relationships presented in Figures 2.1 and 2.3 should be seen as a chain of interactions at different levels of generality instead of inevitable causal sequences (Ramsden 2003).

The Student Learning in Context model (Ramsden 2003) focuses on explaining how learning context and learning orientation affect students' adoption of different learning approaches. While describing the relationship between learning context, learning orientation and learning approaches, the model adopts Biggs's SAL model to classify and measure learning approaches. However, it does not have a systematic measure to capture the different aspects of learning context and students' learning orientations. This makes it difficult to clearly identify and examine the relationship between different aspects of learning context, learning orientations, and learning approaches. Following the Student Learning in Context model,

researchers developed a variety of instruments to capture students' learning approaches, but there is a lack of development in measuring learning orientations. The instruments used to measure students' learning approaches are discussed in the following section (Section 2.2.3).

2.2.3 The Development of Instruments Used to Capture Students' Learning Approaches

The theories discussed above have generated a body of research that aims to understand differences in student learning. These studies often adopted quantitative methods and used questionaries to collect data. Several similar questionnaires were developed for different purposes and reflect the different conceptual bases described above. This subsection briefly summarises the development of some key instruments that focus on capturing students' learning approaches.

Based on the understanding of students' learning processes obtained from early studies and the 3Ps model, Biggs (1978) developed a study process questionnaire (SPQ) to capture differences in students' learning processes. The original SPQ had 80 Likert questions sorted into 10 unidimensional scales to capture students' different values, motives and strategies in their learning processes. Based on Biggs's SPQ (1978) and findings from earlier interviews (Entwistle, Hanley & Hounsell 1979), Entwistle and Ramsden (1982) revised the 3Ps model and developed a 64-item approach to studying inventory (ASI) following the revised model. The SPQ was later revised by Biggs (1987) and was restructured to 42 items and six sub-scales drawn from the SAL model. The six sub-scales are surface motives, surface strategies, deep motives, deep strategies, achieving motives and achieving strategies. The ASI was also revised by Tait and Entwistle (1996) with a more balanced number of items, more transparent expressions, clearer distinctions between different sub-scales and an additional academic self-confidence sub-scale. The revised approach to studying inventory (RASI) has 52 items sorted into 13 sub-scales and three types of learning approaches (surface, deep and achieving) from the SAL model. The items in RASI continued to be revised and were later included as a section of the Approaches and Study Skills Inventory for Students (ASSIST) (Tait, Entwistle & McCune 1998). Following the SAL model (Biggs 1987), both the SPQ and RASI assess students' use of the surface, deep and achieving learning approaches based on their motives and strategies, whereas ASSIST follows the 3Ps model (Biggs 1978) and includes two more

sections to assess students' conceptions of learning and their preferences for different types of course and teaching.

Since their introduction, SPQ, RASI and ASSIST have been extensively tested for their psychometric properties with a variety of student groups in different geographical areas and disciplines. SPQ was found to be able to clearly distinguish between the surface, deep and achieving learning approaches with Asian and Western student cohorts (Biggs 1993; Bolen, Wurm & Hall 1994; Burnett & Dart 2000). SPQ was also found to have good reliability and validity in longitudinal studies (Murray-Harvey 1994) and with South-east Asian students who study in Australian universities (Volet, Renshaw & Tietzel 1994). However, with the rising number of international students, one study argued that some SPQ items needed rewording for clarification (Zeegers 2002).

Being an instrument developed using some SPQ items, RASI has also been found to have high construct validity with the surface, deep and achieving learning approaches sub-scales (Tait & Entwistle 1996). Other studies that examined the validity of ASSIST confirm clear identification of surface, deep and achieving learning approaches for the items adopted from the RASI (Byrne, Flood & Willis 2004). A more recent Australian study with Chinese students as the largest international student group (35%) also verified that the ASSIST was a valid measure of students' learning approaches with this student cohort (Bilgin et al. 2014).

Though SPQ, RASI and ASSIST are all found to be psychometrically robust instruments, their full versions contain 42, 52 and 66 items. Considering that the large questionnaires may reduce the response rate and burn out participants, some researchers have reduced the number of items in these questionnaires and assessed the validity of the shorter versions. Fox, McManus and Winder (2001) reduced SPQ to 18 items and found good validity in a longitudinal study with medical students. A shorter version of the ASSIST that also contains 18 items was found to be valid and robust in a more recent Norwegian study (Pettersen 2010). For RASI, Duff (2004a) excluded the items from the sub-scales that had been found to have a poor factorial structure in his earlier studies (1997) and tested the psychometric properties for this shorter version of RASI. This shorter RASI has 30 items and focuses on measuring surface, deep and achieving approaches. Duff (2004a) tested the shorter RASI with business and management students and recommended using this shorter version of RASI to measure students' learning approaches. This study followed this recommendation and developed survey questions based on the shorter version of RASI.

Theories that describe and explain students' learning approaches continue to be developed and amended alongside the development of the questionnaires. With the amendment of SPQ, Biggs (1987) proposed the students' approaches to learning (SAL) model. The 3Ps model proposed by Biggs (1978) was also modified and incorporated into a Student Learning in Context model by Ramsden (2003). Both the SAL model and the Student Learning in Context model have been widely used in later studies to capture and interpret differences in students' learning. The next subsection introduces and discusses the key developments of these two models.

2.2.4 Research on Students' Learning Orientations

Students' learning orientations has been identified in earlier studies as a key factor that explains differences in students' learning approaches. In general, students' orientations to learning are interpreted as their motivations to enrol in universities, while the motivations are described as intrinsic or extrinsic (Entwistle & Ramsden 1982; Ramsden 2003). The intrinsic and extrinsic classification describe students' different psychological drives, but prior education studies that used learning orientations to explain the differences in learning approaches seldom used psychological instruments for measurement purposes. SPQ has some items that measure students' motives as a part of their learning approaches, but the motives focus more on the specific reasons behind the adopted strategies instead of psychological drives. Some researchers thus found that the differentiation between motives and strategies is less clear (Bolen, Wurm & Hall 1994). Items that measure motives, especially surface motives in SPQ, have been found to have low reliability (Biggs 1993; Zeegers 2002). A more reliable psychological assessment instrument may better capture students' learning orientations and explain the differences in students' learning approaches. This subsection, therefore, reviews some psychological literature to introduce a theory and its related instrument to capture students' learning orientations.

Psychological researchers argue that a theory of motivation must be able to explain behaviours that are motivated by rewards that do not satisfy fundamental physiological needs (Eisenberger 1972). Such rewards could be pleasure or enjoyment that is not from the external environment and such motivation is described as intrinsic motivation. Based on empirical psychological studies, Deci and Ryan (1985, 1991) developed an organismic theory of human

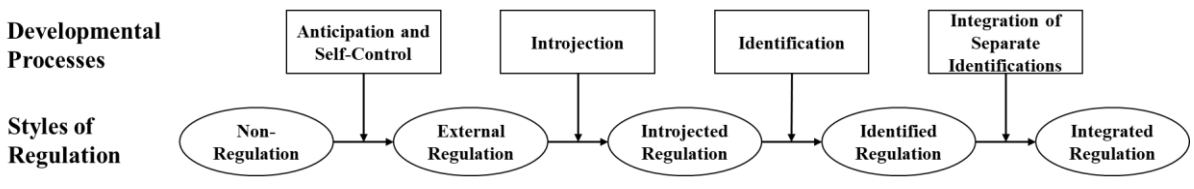
motivation, the Self-Determination theory. This theory focuses on the development of an individual's motivation via continuous interaction with the environment. The Self-Determination theory is particularly helpful to education practice because it is concerned with promoting students' interest in learning through the internalisation process via the external learning context (Deci et al. 1991). The internalisation process describes a continuum in which an individual changes behaviour and beliefs under a constant environmental influence over a long period of time. This theory led to the development of an instrument that measures students' learning orientations, the Academic Motivation Scale (AMS). The AMS captures students' motivation towards education through seven sub-scales, including three intrinsic motivations (to know, to accomplish, and to experience sensations), extrinsic motivation (external regulation, introjected regulation, and identified regulation) and amotivation (Vallerand et al. 1992). The meaning of these terms is explained below.

The Self-Determination theory classifies human motivations into intrinsic and extrinsic. Psychologically, intrinsic motivation is defined as an innate need for competence and self-determination that energises behaviours and psychological processes for which the primary rewards are the experiences of effective interactions (Deci & Ryan 1985, p. 32). Practically, an intrinsically motivated person does an activity for pleasure and satisfaction and not for reward or requirement. For example, a student's intrinsic motivation can be the pleasure of gaining new knowledge or the satisfaction of accomplishing difficult learning tasks, but not a higher grade or a better career opportunity. The opposite of intrinsic motivation is extrinsic motivation, which derives from external reward and pressure. Extrinsically motivated behaviours are thus instrumental in nature – they are performed because one believes they are a means to some separable consequence (Deci & Ryan 1991). It should be noted that the perception of the existence of pressure plays a key role in determining whether a behaviour is extrinsically motivated. The individual may suspect that some consequence awaits and be extrinsically motivated even in the absence of any apparent external award or regulation (Deci et al. 1991). In education research, Ramsden (2003) has a similar argument, that students' perception of the learning tasks plays a key role in determining how they approach them.

One contribution of the Self-Determination theory for education practice is that it explains an internalisation process where extrinsically motivated students can gradually integrate external regulation and eventually become fully self-determined (Deci et al. 1991). Based on the extent of autonomous self-regulation in the internalisation process, Deci and Ryan

(1985, 1991) identified four types of extrinsic motivation: external regulation, introjected regulation, identified regulation and integrated regulation. External regulation represents the least self-determined form of extrinsic motivation, where the behaviours are driven by an existing external reward or punishment. For example, a student with external regulation motivation may choose to enrol in a university to receive a degree. Introjected regulation involves some internalisation of the external demand, so it does not require the existence of external contingencies, but it still involves pressure or self-aggrandisement and requires management of conflicting impulses. A student's introjected regulation motivation of enrolling in a university can be to prove one's capabilities or to avoid feeling inferior to their peers. Identified regulation involves more self-regulation and less internal conflict, where a person identifies with and accepts the regulatory process. In this stage, a person has partially internalised the regulatory process and thus values the behaviour and does the activity more willingly. An example of identified regulation is a student who chooses to study accounting to become a more competent accountant. It should be noted that, although identified regulation is considered more self-determined, it is still an extrinsic motivation because the fundamental drive comes from the external environment instead of internal pleasure and satisfaction. The most developmentally advanced form of extrinsic motivation is integrated regulation, where the regulatory process is fully integrated with one's values, needs and identity so the behaviour is an expression of who the individual is and what is important to the individual. With this motivation, a student would enrol in a university degree because becoming a university student is very important to them. Integrated regulation has some similarity to intrinsic motivation because both are forms of autonomous self-regulation. It is distinguished from intrinsic motivation because intrinsically motivated activities are performed by an interest in the activity itself, whereas integrated regulated activities are performed for a valued outcome (Deci et al. 1991). Nevertheless, the internalisation process provides opportunities for educators to promote values and self-determination to students by creating appropriate external regulation. Figure 2.4 illustrates this internalisation process as described by Deci and Ryan (1985).

Figure 2.4 The Internalisation Process



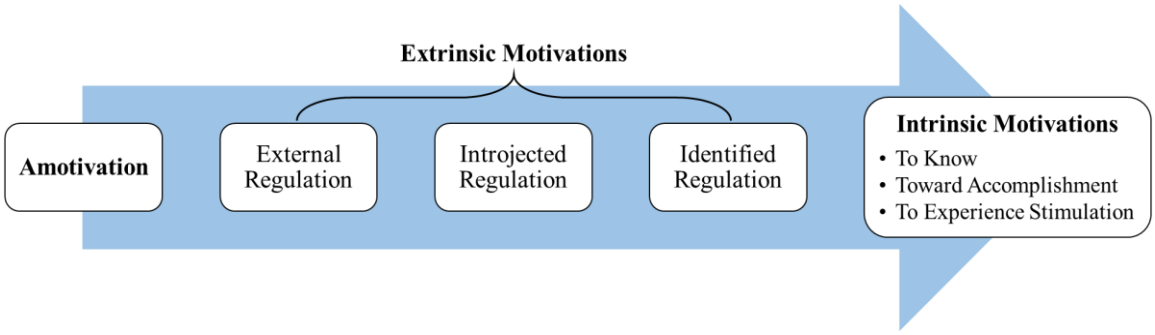
(Source: Deci & Ryan 1985, p. 139)

Although Deci and Ryan (1985) identified four types of extrinsic motivation, the Academic Motivation Scale (AMS) included only the first three as the sub-scales. Integration regulation was not included because: (a) empirical studies revealed that integrated regulation is not a perceived reason for students to join universities; (b) in the experiments and development of the AMS, integrated regulation did not distinguish itself from identified regulation; and (c) psychologists argue that university students may be too young to have achieved a sense of integration to school activities (Deci & Ryan 1985; Deci et al. 1991; Vallerand et al. 1992).

Drawing on the early literature that classifies intrinsic motivations (Vallerand et al. 1989), AMS also included three sub-scales for intrinsic motivation: to know, toward accomplishment, and to experience stimulation. Though all three types of intrinsic motivation are related to pleasure and satisfaction, the causes of such pleasure are different. A student who is intrinsically motivated to know would choose to study in universities for the pleasure that they experience while learning new knowledge. A student who is intrinsically motivated toward accomplishment would also study for pleasure, but the pleasure comes from the experience of accomplishing something challenging. If a student is intrinsically motivated to experience stimulation, then pleasure could be from a stimulating class discussion. The three intrinsic motivations are considered to be at the highest end of the self-determination motivational continuum, that is, engage the greatest extent of self-determination (Carbonneau, Vallerand & Lafrenière 2012).

The last sub-scale of the AMS measures, amotivation, is a concept that describes the situation where a person is neither extrinsically nor intrinsically motivated. Deci and Ryan (1985) used this term to identify motivation where there is no perceived outcome related to an activity. A student with amotivation would have a sense of incompetence and perceive enrolment in the university as caused by forces out of personal control. Such a student may eventually stop participating in academic activities (Vallerand et al. 1992). Compared with extrinsic motivations, amotivation has an even lower level of self-determination in the self-determination motivations continuum (Zhang et al. 2016). Figure 2.5 shows where the seven sub-scales in AMS sit on the self-determination motivational continuum.

Figure 2.5 The Self-Determination Motivational Continuum



(Source: Zhang et al. 2016, p. 16)

Like SPQ, RASI and ASSIST, AMS has been validated by a variety of empirical studies in different languages and with different student cohorts. The original French version of the AMS, l'Échelle de Motivation en Éducation (EME), and the English AMS were both found to have satisfactory internal consistency and high stability with Western university students (Vallerand et al. 1989; Vallerand et al. 1992). The reliability and validity of AMS have also been supported by several studies in different Western countries, including Canada (Guay et al. 2015), the US (Cokley et al. 2001) and Europe (Barkoukis et al. 2008). A more recent test conducted in China supported the seven-factor structure of the questionnaire and found the questionnaire to be psychometrically robust to apply to Chinese students (Zhang et al. 2016).

Subsections 2.2.1 to 2.2.4 discussed the key theories and models of students' learning orientations and approaches. Many other studies have also attempted to describe and explain differences in students' learning. The next subsection will provide a brief introduction to the findings and arguments of these studies.

2.2.5 Other Theories that Contribute to Explaining Student Learning

In addition to the development of the theories and measurement instruments of learning orientations and approaches, researchers also attempted to explain the dynamics of learning with other theories. The learning orientations and approaches studies discussed in previous subsections focus on students' differences in learning under the impact of external elements, such as external regulations, prior education experience and their current learning context. A different perspective to explain students' differences in learning is to focus on the impact of internal elements, such as cognitive styles and personality types. Investigations that take this

perspective often use “learning styles” to describe the different ways students react to a learning environment (James & Blank 1993).

The concept of learning styles was used to describe an individual’s cognitive learning style in experiential learning theory (Kolb 1984). In this theory, the learning process is described as a cycle of translating experience into concepts and then using the learned concepts as guidance in responding to new experiences. Learning styles are thus defined as students’ preference for employing different phases of this learning cycle (Kolb & Kolb 2005). Kolb (1984) identified four different learning styles in students: diverging, assimilating, converging and accommodating. These learning styles are distinguished from each other on the basis of cognitive capabilities and personalities. For example, a student with a diverging learning style is best at viewing things from many different perspectives. They tend to be social, imaginative and emotional and prefer arts disciplines. A student with a converging learning style is best at applying concepts and theories. They prefer technical tasks than interpersonal issues and are effective in technology disciplines. Kolb found that students’ styles are influenced by personality and education discipline. The learning styles are relatively stable and tend not to change under the impact of learning context (Biggs, Kember & Leung 2001). Given that this study investigates Chinese students in the same discipline (accounting) with a focus on their learning under a certain context (Western universities), the experiential learning theory is considered unsuitable for this study’s scope.

Some other researchers argue that the definition of learning style in experiential learning theory is too narrow and they suggest that the term be broadened to include cognitive, affective and physiological styles (Keefe & Monk 1986). The cognitive styles dimension is similar to Kolb’s learning styles and focuses on students’ information processing habits and preferences. Affective styles describe students’ motivational preferences such as the preference for a given discipline, whereas physiological styles focus on students’ biological differences such as personal health. This three-dimension model of learning styles was developed by the National Association of Secondary School Principals (NASSP) and is often referred as the NASSP Task Force model (Keefe 1985). Although with a broader scope than the experiential learning theory, the NASSP Task Force model describes the different conditions under which a student learns best, such as brainstorming discussions (cognitive), visual presentations (affective) or in the morning (physiological). The NASSP Task Force model is unsuitable for the purpose of this study because the learning styles in the NASSP Task Force model focus on

describing how learners "most efficiently and most effectively perceive, process, store and recall what they are attempting to learn" (James & Blank 1993, p. 48). This study, however, aims to contribute knowledge to help Chinese accounting students adapt to Australian universities' learning context, not to find or create multiple different conditions that are best suitable for different learning styles. In addition, following different learning style models such as the NASSP Task Force model, several instruments were developed and used to measure students' learning styles, but researchers argued that the validity and reliability of them are inconsistent and questionable (James & Blank 1993; Murray-Harvey 1994).

Another study that used the "learning styles" term but took a different perspective is the development of the Inventory of Learning Styles (ILS) (Vermunt 1998). This study used an approach similar to the 3Ps model (Biggs 1978, 1987) and the Student Learning in Context model (Ramsden 2003) and identified four integrated aspects of learning: cognitive processing strategies, regulation strategies, students' views of learning, and orientations to learning. It should be noted that, although the term "learning styles" is used, Vermunt's (1998) theory mainly concerns the relationship between students' motives and strategies, which is different from the focus and scope of Kolb's experiential learning theory and the NASSP Task Force model. In addition, the instrument developed by Vermunt to measure students' learning styles, the ILS, has some sub-scales that are similar to the surface and deep learning motives and strategies in SPQ (Biggs 1987) and RASI (Tait & Entwistle 1996). Therefore, the meaning of "learning styles" in Vermunt's study (1998) is similar to the concept of learning approaches (Entwistle & McCune 2004). Vermunt's study distinguished itself from other learning approaches studies in its data analysis method. Though most studies, including the ones using the ILS, used factor analysis to identify students' learning approaches, Vermunt (1998) also used regression analysis to examine the links between the different aspects of learning. Using factor analysis, Vermunt identified four distinct learning styles: meaning-directed, reproduction-directed, application-directed and undirected. The first three learning styles have similar meaning to the deep, surface and achieving learning approaches in the SAL model (Biggs 1987) and the fourth style represents a lack of regulation and learning orientation. An empirical study argued that Vermunt's four-factor model had a better fit than a three-factor model (Boyle, Duffy & Dunleavy 2003) in distinguishing students' learning approaches. However, the same study did not fully support Vermunt's regression findings of the relationships between different aspects of learning. Boyle et al. (2003) argue that learning orientations have a stronger impact on students' learning strategies than Vermunt suggested.

There were also some concerns regarding the reliability of the items in the learning orientation sub-scale. Although Vermunt's learning model did not focus on the impact of the external context on students' learning motives and strategies, and is thus less relevant to this study's scope, it provided an approach to understanding student learning as an integrated process. That is, it constructed a measurement instrument that captures different aspects or stages of learning and examines the relationships between those aspects or stages through regression analysis.

2.2.6 The Selection and Justification of the Theoretical Models

Based on the discussions regarding different theories and models that describe student learning, the Student Learning in Context model (Ramsden 2003) was chosen as the main theoretical framework of this study. The focus of that model is most relevant to this study because this study aims to understand student learning in a very specific context. The students who are the subject of interest in this study have been learning in a Chinese education environment for over 15 years and then moved to an Australian university to study in postgraduate accounting programs. This study also aims to use the findings to help such students adapt to the Australian education environment in their 1.5 to 2 years programs. This study thus needs a theoretical model of learning than incorporates students' previous education experience and current learning context into how students learn in universities. The Student Learning in Context model satisfies this requirement and thus was adopted for this study.

A limitation of the Student Learning in Context model (Ramsden 2003) is that, although it identified students' learning orientations as a key factor explaining student learning, it did not explore students' learning orientations with the same depth as used for students' learning approaches. The study uses the SAL model (Biggs 1987) to identify and explain students' learning approaches in detail, but that did not provide a clear model to analyse students' learning orientations. This study thus adopted a psychology model to identify and classify students' learning orientations. The Self-Determination theory (Deci & Ryan 1985, 1991) was selected because it views students' learning orientation as a developing process (Deci et al. 1991). As shown in Figures 2.4 and 2.5, with appropriate stimulation from the external environment, students' learning orientations (motivations) can engage more self-determination and progress to the right-hand end of the motivational continuum in Figure 2.4 (Deci & Ryan 1985). This view of changes under the impact of context is consistent with the Student Learning

in Context model (Ramsden 2003). In addition, the seven-factor model of the Self-Determination theory has also been found to be suitable to measure Chinese students' learning orientations (Zhang et al. 2016). The Self-Determination theory was thus adopted to fill the gap with regard to learning orientations in the Student Learning in Context model.

2.2.7 Empirical Findings Regarding Accounting Student Learning

When studying accounting students typically try to learn terminology and basic concepts with more surface strategies such as memorising textbook contents and reproducing tutorial practices (Chan & Ryan 2013; Lynn 2013). Under the threshold concepts theory developed by Meyer and Land (2003, 2005), only after students have understood the fundamental accounting concepts and procedures can they progress to application and analysis, which are classified as higher levels of understanding. As a result, in accounting education, students are found initially inclined to use surface learning approaches before incorporating surface strategies into deep learning (English, Luckett & Mladenovic 2004; Hall, Ramsay & Raven 2004). As a result, in comparison to students from other disciplines such as arts, education and science, accounting students were found to have higher scores in surface learning approaches (Booth, Luckett & Mladenovic 1999; Eley 1992).

Accounting students' adoption of surface learning approaches were also found to be linked to the environmental background of accounting education in Western universities. As introduced in Section 1.1.1, with the rapid growth in international students, Western accounting educators are faced with the challenge of increasing class sizes, deterioration in staff-student ratios and many students with limited English language proficiency (Arkoudis et al. 2009; Parker 2002, 2011). The reduced staff-student ratios reduced accounting students' opportunities to interact with teaching staff and this has a negative impact on students' engagement in learning. For international students, the language barrier created further challenges for them to actively engage in accounting classes and cope with the academic requirements (Arkoudis & Tran 2010; Bhattacharyya 2010; Sawir 2005). Furthermore, the differences in tertiary teaching and education systems between their prior and current learning environment add even more difficulties to international (especially Asian) students' learning (Wong 2004). Nevertheless, recent studies found that international students have high scores in both surface and deep learning approaches. (Bobe & Cooper 2020; Chan & Ryan 2013).

Many empirical studies examined the relationship between students' background, learning orientations and learning approaches and their conclusions varies. The findings from these studies are discussed in Section 3.5.

Section 2.2 discussed the key theories and instruments developed to understand student learning and justified the models selected for this study. The next subsection (Section 2.3) will discuss the empirical findings from existing studies that adopted the selected models. Because this study focuses on understanding Chinese students' learning in Australian accounting programs, the discussion will primarily focus on the studies that have a similar scope.

2.3 Empirical Findings Regarding Chinese Student Learning

2.3.1 The Chinese Learning Context

Section 2.2 introduced the Student Learning in Context model (Ramsden 2003) and explained why it is a suitable model to analyse Chinese students' learning in Western universities. In this model, students' learning approaches are determined by the combination of their prior learning experience and current learning context. Several researchers have stated that Chinese students' learning approaches must be interpreted with an understanding of their cultural backgrounds (Biggs 1993; Cooper 2004; Watkins & Biggs 1996). Although the Chinese students in prior studies have been treated as a homogenous group regardless of their nationality and language used in learning, the findings still provide valuable general information about Chinese students' backgrounds. This subsection starts with a review of Chinese students' previous learning environment before entering Western universities – the Chinese education environment. The limitation of omitting the diversity within the Chinese student group will be discussed in Section 2.4.

Education is highly valued in traditional Chinese culture (Ho 1994). Chinese people see higher education as both a process of personal advancement and an opportunity to improve the family's position in the social class hierarchy (Chen, Lee & Stevenson 1996). For Chinese parents and students, overseas degrees are seen as more prestigious and can help secure higher-paid employment (Bodycott & Lai 2012). Chinese parents are willing to invest a large amount of time and resources in their children's education and have very high expectations for their children's academic success. As Chinese culture also has an emphasis on hard work and

diligence, Chinese parents believe that academic achievement is possible with the investment of sufficient time and effort, regardless of their children's ability (Rao, Moely & Sachs 2000). Chinese students thus feel obliged to achieve high levels of success and have a fear of failure in their learning orientations (Li 2002). They link their academic achievement to their family's pride and often have a feeling of guilt and shame if they do not meet their parents' high standards (McMahon 2011; Rao, Moely & Sachs 2000; Watkins & Biggs 1996). This aspect of their learning orientations meets the description of extrinsic learning motivation in the Self-Determination theory (Deci & Ryan 1985, 1991).

Chinese parents play a dominant role in making the decision for their children to study overseas. When choosing the major and university to study, Chinese students are often influenced by their family, friends, and peers (Bodycott & Lai 2012). Bodycott and Lai (2012) found that when the decision to study overseas was made under the strong influence of others instead of under students' own interests and will, the student often feel unmotivated and unsatisfied with their studies. This finding can be explained by Deci and Ryan's (1985, 1991) Self-Determination theory, where the students' learning orientation would be classified as amotivation.

Chinese students are also subject to a cultural influence that promotes intrinsic motivations in learning. The Confucian tradition sees the search for knowledge and truth as one's purpose in life. The meaning of learning is linked to continuous self-improvement (Li 2002). This belief matches the description of integrated regulation in the Self-Determination theory, which is a form of extrinsic motivation that is the closest to the intrinsic motivations on the motivational continuum (Deci & Ryan 1985, 1991; Zhang et al. 2016). A model learner in the Confucian tradition has an inner desire and love for learning and is thus seen as an intrinsically motivated learner (Li 2002). From the learning orientation perspective, it seems that Chinese students can be both extrinsically and intrinsically motivated in learning. It should be noted that a study that adopted the Self-Determination theory (Deci & Ryan 1985, 1991) found a negative relationship between Chinese students' stress level and intrinsic motivation. Students who experience more academic stress were also found to become amotivated over time (Liu 2015).

The traditional education environment in China emphasises the transmission and consolidation of knowledge. The teacher's role is closer to a transmitter of knowledge than a facilitator in learning. From elementary school to university, the pedagogy is teacher-centred

and emphasises practising procedures as well as memorising theories (Rao, Chi & Cheng 2010; Wang 2005). Assessments carry a connotation that focuses more on differentiating the "smart" from the "inferior" than providing feedback and encouraging reflection (Wang 2005). Since examinations play a critical role in determining one's academic success, Chinese students are prompted to become test-wise regardless of their ability or interest in studying (Rao, Moely & Sachs 2000). Test questions are often closed-ended and involve little opportunity for critical thinking, with most questions requiring the students to recall theories, formulas and procedures but very few start with "why" (Rao, Chi & Cheng 2010). The result is that Chinese students tend to acquire solid fundamental knowledge without knowing the links between different parts of that body of knowledge or considering how that knowledge can be applied. There is a lack of the ability to organise knowledge and build relationships among topics (Wang & Byram 2011). In the SAL model (Biggs 1987), this would be treated as a typical example of surface learning.

The limitation of this traditional way of teaching was acknowledged by the Chinese government. In 2001, the Ministry of Education initiated a curriculum reform with unprecedented scope, intensity and speed. The reform aimed to phase out the traditional exam-oriented pedagogy and promote new instruction styles that encourage creativity and build connections between textbook knowledge and practice. Teachers are required to focus on enhancing students' understanding of the theories and procedures through class interaction. As a result, students in the reformed classrooms were observed to gradually develop the habit of thinking independently and become more daring in expressing their ideas (Wang 2005). However, it is also evident that the classroom, after the reform, is still teacher-centred, because the questions and discussions in class are initiated by the teachers instead of the students (Rao, Chi & Cheng 2010; Zhang & Zhou 2003). This phenomenon could be related to Chinese culture that discourages students from asking questions in the classroom (McMahon 2011). In an interview with Chinese university students, participants described good students' characteristics as "respectful, modest and humble", whereas inquisitive and assertive students were seen as "nuisances" in a Chinese class (Wang & Byram 2011, p. 414). This does not mean that Chinese students do not engage in independent thinking and raise questions in learning. Researchers found that the students are more used to ask questions after class because teachers in Chinese universities do not require an appointment for a consultation and often have a closer relationship with the students than their Western peers (McMahon 2011).

Nevertheless, recent studies still found that the Chinese universities still largely rely on the traditional assessments which push students into rote-learning strategies (Dai, Matthews & Reyes 2019). To receive good marks in the assessments, Chinese university students are expected to mechanically reproduce what have been taught in the lectures (Wu 2015) The learning approaches of Chinese university students are described as a lack of autonomy, replicating templates and exam-oriented, all of which are characteristics of surface learning (Dai 2020; Dai, Matthews & Reyes 2019).

It seems that the curriculum reform in China provides some opportunities for students to relate and apply knowledge as well as to think independently, which are characteristics of deep learning (Biggs 1987). However, Chinese society gives students strong extrinsic learning motivations, including pressure from the family and fear of failure (Li 2002; Rao, Moely & Sachs 2000). According to the Student Learning in Context model (Ramsden 2003), these extrinsic learning motivations together with the teacher-centred and exam-oriented learning context push Chinese students to surface learning.

2.3.2 Chinese Student Learning Approaches in Western Universities

As discussed in Chapter One, Chinese students in Western universities are challenged by the combination of language barriers and a different learning context that promotes student-centred learning and deep learning. These challenges and their growing group size have been attracting researchers' interests in studying Chinese students' learning in Western universities. This subsection focuses on the literature about Chinese students' learning in Western universities, especially in accounting programs.

Discussions about Chinese students' backgrounds so far has described a situation that leads to the adoption of surface learning strategies under the Student Learning in Context model (Ramsden 2003): an exam-oriented and teacher-centred education background, a foreign learning context and a language barrier combined with extrinsic learning orientations. It would seem to be very difficult for Chinese students to thrive in a Western education environment where the objective of higher education is largely tied to deep learning (Evans, Burritt & Guthrie 2010; Ramsden 2003). However, researchers found that Chinese students are often among the top performers in cross-national comparisons across a range of disciplines, especially science related disciplines (Chen, Lee & Stevenson 1996; Cooper 2004). They have

shown a capability to adapt to the new learning environment by utilising a skill that they have mastered in their earlier education – memorisation (Donald & Jackling 2007).

The discussion about how to interpret Chinese students' use of memorisation in learning started over three decades ago. Though Chinese students were commonly seen as rote-learners because of their extensive use of memorisation and repetition in learning, Biggs (1993) argued that their memorisation strategy must be interpreted with an understanding of their cultural background. While it is true that memorisation and repetition are heavily emphasised in traditional Chinese education, the purpose is to help students establish a solid knowledge base so that they can develop thinking skills and better understand more complex concepts and procedures (Meyer 2000; Watkins & Biggs 1996). This is particularly evident in science subjects, where memorising formulas and theorems allows Chinese students to solve problems rapidly in the early stage of their learning (Zhang & Zhou 2003). From a learning motivations perspective, the practice of memorisation and repetition helps students become more confident about their competence and more persistent in their later studies (Rao, Moely & Sachs 2000). From a learning strategies perspective, when memorisation and repetition are used to deepen understanding and achieve higher academic performance, they should not be classified as a surface learning strategy (Biggs 1993; Cooper 2004). Biggs (1996a, 1996b) found that when a Chinese student memorises a text through repetition, a different aspect of the text is focused on with each repetition so that the understanding is deepened over time. This is supported by a later study that focused on Chinese students' learning in a UK university (Wang & Byram 2011), which argues that learning in a foreign language involves repeating and memorising the material to make sense of it. The same study also found that Chinese students believe that acquired knowledge should be reflected on through repetition. These prior findings suggest that Chinse students adopt memorisation and repetition as a deep learning strategy (to enhance understanding), but some researchers also found that, when facing language difficulties and having extrinsic learning orientations, Chinese students are pushed to adopt rote-learning as a survival strategy in Western universities (Bhattacharyya 2010; Jackling et al. 2012; Pang, Ho & Man 2009). Chan and Rao (2009) provided a different perspective, arguing that while surface and deep approaches are generally considered to be two different ends of a scale, among Chinese students, they can be intertwined.

Chinese students' increasing use of understanding in learning over time can also be explained by the theory of threshold concepts (Meyer & Land 2003, 2005). The theory states

that most disciplines have complex concepts that are challenging for students to fully comprehend when first encountered. These concepts are considered as the thresholds of the discipline as they are critical to students' future learning in the discipline. Meyer and Land (2005) addressed that once a student acquired the threshold concepts, they will be able to shift their way of thinking and have a systematic and internalised view of the subject matter. Since this deepened understanding can only be achieved after acquiring the threshold concepts, it would take some time for the students to be able to learn through understanding. Considering that Chinese students are studying in a foreign language, they may need a substantial amount of time to comprehend the threshold concepts before using their understanding of these concepts in future learning.

The language difficulties and extrinsic learning orientations of Chinese accounting students in Australian universities are evident in many studies. An investigation involving Chinese accounting students in an Australian university found that the language barrier makes it very difficult to participate in tutorials, to understand teachers' speech and for students to express their thoughts (Bhattacharyya 2010). Watty, Jackson and Yu (2009) argued that English competency is the most important factor influencing international accounting students' learning approaches in Australian universities. They found that language difficulties require Chinese students to spend more time reading the course materials and translating their thoughts to English. In the meantime, Chinese students are also under more pressure from their family, who are the primary supporter of their tuition fees and living costs. These pressures give them more test anxiety and fear of failure, all of which are surface learning motives. Chinese accounting students in Australia were also found to have a general extrinsic learning orientation to learning – the opportunity to obtain permanent residency in Australia (Birrell & Healy 2008; Ekanayake & Jackling 2014; Evans, Burritt & Guthrie 2010). In the Self-Determination theory, this type of learning orientation is classified as an extrinsic motivation by external regulation – the form of extrinsic learning orientation that involves the least amount of self-determination (Deci et al. 1991). As a result, Chinese accounting students in Australian universities were found to have a heavy adoption of surface learning approaches (Bhattacharyya 2010; Cooper 2004; Watty, Jackson & Yu 2009).

Although Chinese accounting students in Australian universities were found in some studies to score high on surface learning scales, they have also shown some characteristics of deep and achieving learning. In Cooper's (2004) study, despite showing high scores on the

surface approach scales, Chinese accounting students also scored higher in deep and achieving approach scales than their Australian peers. This finding agrees with another earlier study that compared Asian students (mainly Singaporean Chinese) with Australian students (Volet, Renshaw & Tietzel 1994), in which the Asian students scored higher than Australian students in surface and achieving approaches. The same study also found that Asian students had adjusted their learning approaches to adapt to the learning context in a similar manner to Australian students. More recent studies found that although Chinese accounting students have a higher score on surface learning, they are capable of deep learning. In particular, Chinese accounting students can use some seemingly surface strategies to achieve a deeper understanding over time (Patel, Millanta & Tweedie 2016). Chan and Rao (2009) argued that Chinese students have a strong ability to adapt to new learning environment with the skills and strategies they learned in prior education environment, such as memorisation through understanding and revision through collaboration. Although driven by extrinsic learning orientations, Chinese students have strong motivations for high achievement and are capable of adjusting their learning to adapt to the Australian learning context (Sikkema & Sauerwein 2015; Wong, Cooper & Dellaportas 2015). Recent studies found that Chinese students shifted their thinking and have more deep learning motivations, more actively engaged and are not different from the domestic students in terms of the adoption of deep learning approaches (Bobe & Cooper 2020; Dai, Matthews & Reyes 2019).

This subsection summarised the key findings of Chinese students' learning, including the Chinese learning context and Chinese students' learning in Western universities. The next subsection will critically discuss the limitations of the earlier findings and identify gaps in the literature.

2.4 The Gaps in and Limitations of Previous Studies

Though the prior literature has produced some conclusions about Chinese students' learning in Australian and other Western universities, gaps still exist in some areas. This subsection will discuss the gaps and limitations of the prior literature within the three components of the Student Learning in Context model (Ramsden 2003), namely backgrounds, learning orientations and learning approaches.

One of the reasons why educators are keen to understand Chinese student learning is their different background from their Western peers. However, the term "Chinese learner" in the prior literature is associated with people of Chinese descent from various countries and regions, including mainland China, Hong Kong, Taiwan, Singapore and Malaysia (Watkins & Biggs 1996). Students from the same culture and in the same discipline do not necessarily learn in the same way(Arkoudis & Tran 2007). Although sharing the Confucian-heritage culture, the political structures, education systems and instructional language are very different among those countries and regions (Cooper 2004; Rao, Moely & Sachs 2000; Smith 2001). Consequently, it is expected that the learning approaches of students from these various backgrounds also differ. For example, Smith (2001) compared the learning approaches of Chinese students from Hong Kong, Singapore and Malaysia. She found that Hong Kong students experience more pressure, Singaporean students are better at using logic to present ideas and concepts, while Malaysian Chinese students are more dependent on their teachers in their learning. Even within mainland China, different areas were found to have different teaching methods. Rao, Chi and Cheng (2010) found that teachers in urban classes ask more challenging questions and use more different forms of activity in class than their rural counterparts. Though urban teachers tend to use class activities to make abstract concepts meaningful to the students, rural teachers focus more on requiring students to follow fixed procedures to solve problems. These differences could be explained by the fact that urban teachers have better access to professional training, pedagogical content knowledge and modern teaching aids than rural teachers. Despite the differences in their background and the potential influence on their learning, Chinese students from different countries and regions were often treated as a homogenous group in previous studies (for example, Donald & Jackling 2007; Wang & Byram 2011). In an earlier paper that discusses the misconceptions of Chinese students, Ryan (2010) addressed the need to reject simplistic and homogenising rhetoric and focus more on individual or small group-based features. However, little research has discussed the effects of different backgrounds on Chinese student learning and no prior study treated mainland Chinese students as a diverse group and discussed the differences in learning approaches within the group in reference to their diverse backgrounds.

Though learning orientations was identified as a key factor shaping students' learning approaches in the Student Learning in Context model (Ramsden 2003), the discussion and analysis of Chinese accounting students' learning orientations in prior literature did not provide sufficient in-depth discussion to classify different learning orientations. This limitation is

related to the lack of clear definitions for different general learning orientation types in the Student Learning in Context model. Ramsden (2003) stated that extrinsic learning orientations are linked to surface learning approaches and intrinsic learning orientations are linked to deep learning approaches, but the definitions of extrinsic and intrinsic learning orientations, and any other type of learning orientations, were not discussed in detail. Empirical studies often mix students' motives in learning approaches with their general learning orientation in their discussion (for example, Honkimaki, Tynjala & Valkonen 2004; Ramburuth & Mladenovic 2004), while the former refers to the specific reasons why students adopt certain strategies in learning tasks and the latter refers to the primary motivations for enrolling in a university program (Biggs 1987; Ramsden 2003). This limitation is also related to a lack of a measurement instrument for students' learning orientation in the Student Learning in Context model. Prior studies frequently use SPQ (for example, Donald & Jackling 2007; Volet, Renshaw & Tietzel 1994) and RASI (for example, Duff 2004a; Smith & Smith 1999), both of which focus on measuring students' learning approaches instead of learning orientations. The studies that did discuss Chinese accounting students' general learning orientation mainly focus on their extrinsic migration-related orientations and did not provide a comprehensive view of the broad range of learning orientations Chinese students may have (Ekanayake & Jackling 2014; Evans, Burritt & Guthrie 2010; McGowan & Potter 2008).

Limited findings about Chinese accounting students' learning approaches in Australian universities mainly come from a lack of longitudinal studies. The Student Learning in Context model describes learning approaches as a result of the combined impact of students' prior learning experiences and current learning context (Ramsden 2003). As Chinese students progress further in their Australian accounting programs, their experience of learning in Australian universities from previous semesters becomes a part of their prior learning experiences. It is thus expected that the effect of the Australian learning context would become stronger as time passes and Chinese students would be influenced to adopt learning approaches that involve more understanding. As mentioned in Section 2.3.2, some prior studies argue that Chinese students are capable of changing their learning approaches to adapt to new learning contexts (Sikkema & Sauerwein 2015; Volet, Renshaw & Tietzel 1994; Wong 2004). However, there lacks a detailed description about these changes by, for example, comparing changes in the same cohort of students over different semesters. It is unclear how Chinese students' learning approaches change over their 1.5 to 2 years postgraduate accounting programs in Australian universities.

In addition to the limitations in the prior literature that have been discussed above, the recent changes in migration policies and job market have also created gaps in the understanding of Chinese students' learning orientations and approaches. As discussed in Chapter One, from the early 2010s, migration policy changes and increasing competition in the Australian job market have greatly reduced the chance of working and staying in Australia for Chinese accounting graduates (Blackmore, Gribble & Rahimi 2017; Munro-Smith 2018). It is thus questionable whether Chinese students still have strong migration-related learning orientations after knowing that the chance of migration with an Australian accounting Master degree is much lower than in the past. With the expectation of seeking employment back home, Chinese students may now have different learning orientations and approaches to those that applied at the time of prior research.

The scope and focus of this study were determined with the intention of closing the gaps identified above. This study focuses on mainland Chinese students in Australian postgraduate accounting programs because they are the single largest international student group in the programs (Austrade 2018). It treats mainland Chinese students as a diverse group and considers the impact of their diverse backgrounds on their learning orientations and learning approaches. Though the Student Learning in Context model was chosen as the theoretical structure, the Self-Determination theory and its relevant measuring instrument, AMS, were used to measure and analyse Chinese accounting students' learning orientations. In addition to describing students' backgrounds, learning orientations, learning approaches and the relationships among these aspects of learning, this study also aims to identify changes in learning orientations and learning approaches through a longitudinal study.

2.5 Summary

This chapter summarised the key theoretical structures and findings in the literature with regard to the research topic. The first half of the chapter introduced the theories and measurement tools related to students' learning with a focus on models that describe students' learning approaches. Through comparing and discussing the focus, scope and validity of prior models and theories, this study chose the Student Learning in Context model (Ramsden 2003) and the Self-Determination theory (Deci & Ryan 1985, 1991) as the bases of the theoretical framework.

Some key empirical findings of Chinese students' learning were summarised in the second half of the chapter. The summary is in two parts, the first part focuses on the cultural and environmental background of Chinese education and the second part discusses how Chinese students learn in Western universities. At the end of this chapter, the limitations of, and gaps in, previous studies were explained to justify the scope and the focus of this study.

The main limitation of prior theories and models is that there is a lack of clear definitions and classifications for students' learning orientations in the Student Learning in Context model. This limitation results in the lack of a detailed description of the relationship between students' learning orientations and learning approaches in empirical studies. Other major gaps in prior empirical studies are the omission of the diversity within the Chinese student group, and a lack of longitudinal study that focuses on changes in students' learning orientations and learning approaches throughout their learning processes. To close these identified gaps, this study incorporates the Self-Determination theory (Deci & Ryan 1985, 1991) into the Student Learning in Context model (Ramsden 2003), treats Chinese students as a diversified group, investigates the relationships among the different aspects of learning orientations and learning approaches, and takes a longitudinal approach to identify Chinese students' changes in learning orientations and learning approaches throughout their postgraduate accounting programs.

The next chapter introduces the research questions and the specific research aims and objectives. It also illustrates the development of the hypotheses in detail.

Chapter Three

Research Questions and Hypotheses

3.1 Introduction

This chapter presents the research questions and objectives, followed by a description of the theoretical framework adopted to answer the research questions and achieve the research objectives. The hypotheses are developed and justified based on the theoretical framework adapted from the Student Learning in Context model (Ramsden 2003). The research background introduced in Chapter One and the prior research findings summarised in Chapter Two are also taken into consideration. These hypotheses form the foundation of the research design, which is described in Chapter Four.

3.2 Research Questions

As described in Chapter One, the research questions are:

1. What are the backgrounds, learning orientations and learning approaches of Chinese students in Australian postgraduate accounting programs?
2. What are the relationships between Chinese postgraduate accounting students' backgrounds, learning orientations and learning approaches? How do their background factors affect their learning orientations and shape their learning approaches?
3. How do Chinese postgraduate accounting students' learning orientations and approaches change during the time in Australian universities?

3.3 Research Aims and Objectives

To answer the research questions, this study has the following objectives:

Objective 1: To investigate the backgrounds of Chinese postgraduate accounting students in Australian universities. Specifically, this study focuses on gaining an understanding of the diversity within the Chinese student group.

Objective 2: To discover Chinese students' learning orientations and approaches. This study aims to understand the primary reason why Chinese students choose to enrol in postgraduate accounting programs in Australian universities and the learning approaches they adopt while studying accounting at Master level in Australian universities.

Objective 3: To discover the connections between Chinese students' backgrounds, orientations and approaches to learning. The purpose is to see how students' background in their home country and learning orientations may jointly affect the way they learn in Australian universities.

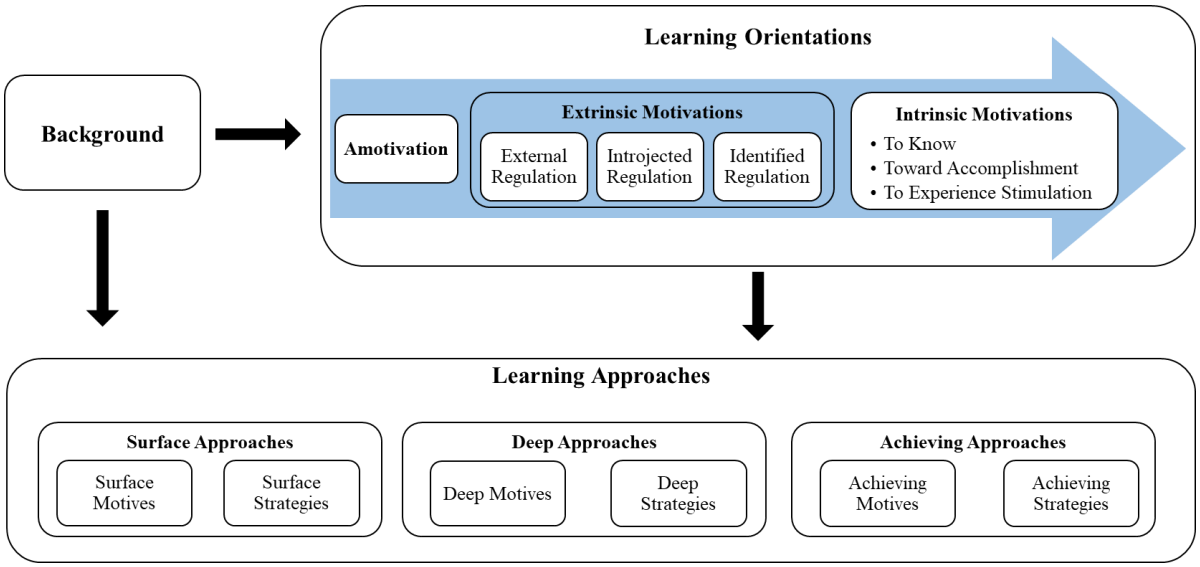
Objective 4: To compare students' approaches to learning in different semesters. The purpose is to summarise whether and how Chinese students change their learning approaches in the Australian context as they spend longer in the program. This also includes determining whether and how the impact of Chinese students' backgrounds and learning orientations on SAL change from the commencement to the completion of their postgraduate accounting programs in Australian universities.

3.4 The Theoretical Framework and Definitions

As explained in Section 2.2.6, this study's theoretical framework is adapted from the Student Learning in Context model (Ramsden 2003), with learning orientations defined and classified after the Self-Determination theory (Deci & Ryan 1985, 1991). This theoretical framework is determined by the study's focus and aims. Section 2.2.3 described how the Student Learning in Context model explains students' learning approaches and the effects of their background and learning orientations and the current learning context. Since this study focuses on a student group (Chinese students) with a diverse education background in a foreign learning context (Australian universities) and aims to understand their learning approaches under the impact of these factors, the Student Learning in Context model provides the most appropriate framework for the research design. This study also aims to understand Chinese students' learning orientations in Australian accounting Master programs. However, the Student Learning in Context model does not provide a framework to identify and classify students' learning orientations. As a result, the Self-Determination theory is used as the framework to capture and analyse Chinese students' learning orientations. This study uses the Self-Determination theory because it views people's motivations as a continuum (Deci & Ryan 1985). Since this study

aims to observe students' changes in learning orientations over different years of study, the Self-Determination theory provides an appropriate framework. The theoretical framework of this study is presented in Figure 3.1.

Figure 3.1 Theoretical Framework



(Adapted from Ramsden 2003; Zhang et al. 2016)

To ensure consistency in data collection and interpretation, this study applies the definitions as in the SAL model (Biggs 1987), the Student Learning in Context model (Ramsden 2003) and the Self-Determination theory (Deci & Ryan 1985, 1991) to this specific research context. A student's learning orientation is defined as the reasons why a student chooses to study an accounting Master-level degree in an Australian university. Students' learning approaches are defined as the combination of learning motives and learning strategies. Learning strategies involve the activities and methods chosen by a student in studying accounting subjects and the learning motives describe the specific reasons for adopting certain learning strategies.

3.5 Hypotheses Development

The first research question is descriptive in nature and thus does not need to be tested with hypotheses. Only the second and the third questions are answered with the results of hypothesis tests. This section presents 23 hypotheses concerning the relationship between Chinese students' backgrounds, learning orientations and learning approaches. The background

variables are Chinese students' gender, age, financial support from family, locations of prior education institutions, prior academic performance, English competency, and prior accounting knowledge. These variables were chosen based on the theoretical framework of this study, prior empirical research findings, the unique background of Chinese students, and the characteristics of postgraduate students. Justification for the variable selection is presented below.

3.5.1 Gender's Impact on Learning Approaches and Learning Orientations

Previous studies often include the demographic variable "gender" when investigating student learning approaches (for example, Byrne & Willis 2009; Rao, Moely & Sachs 2000). There are mixed findings regarding the relationships between gender and learning approaches in accounting students. Byrne and Willis (2009) compared female and male accounting students' learning approaches and found female students scored higher in deep and achieving learning approaches. In addition, although female students showed higher fear of failure, which is a surface learning motivation, they scored lower in exam-focused learning strategies (surface learning) than male students (Byrne & Willis 2009; Lucas & Meyer 2005). However, not all studies agree with these conclusions. Some researchers have found quite the opposite, that female accounting students scored significantly higher on surface approaches (Flood & Wilson 2008), whereas other researchers did not find any significant difference between the two genders' learning approaches in accounting subjects (Ballantine, Duff & McCourt Larres 2008; Rao, Moely & Sachs 2000). Duff (2004b) suggested that some learning approach inventories might be sensitive to gender. The following hypotheses are developed based on inconsistent empirical findings:

> H1a (null hypothesis): Students' learning approaches are not different between genders.
>
> H1b (alternative hypothesis): Students' learning approaches are different between genders.

Although there is little research directly investigating the relationship between gender and learning orientations, according to the Student Learning in Context model (Ramsden 2003), students' background factors affect students' learning approaches indirectly through learning orientations. To take this indirect relationship into consideration, the following

hypotheses regarding learning orientations are proposed in addition to the two hypotheses above:

H2a (null hypothesis): Students' learning orientations are not different between genders.

H2b (alternative hypothesis): Students' learning orientations are different between genders.

3.5.2 Age's Impact on Learning Orientations and Learning Approaches

With regard to the relationship between students' age and learning orientations, early education research found that the older students joined higher education programs with fewer motivations about receiving a degree or meeting expectations that younger students. Their learning orientations are more related to "learn just for the sake of learning" (Wolfgang & Dowling 1981, p. 642). According to the classification of learning orientations in the Self-Determination theory (Deci & Ryan 1985), the former motivations would be seen as extrinsic learning orientations, while the latter would be classified as intrinsic motivations. The Self-Determination theory also implies that a person's motivations can become more intrinsic as they spend more time in an appropriate context (Deci & Ryan 1985). Two sets of hypotheses are developed to examine the relationships between age and learning orientations:

H3a (null hypothesis): Students' age does not affect their extrinsic learning orientations.

H3b (alternative hypothesis): Students' age has an effect on their extrinsic learning orientations.

H4a (null hypothesis): Students' age does not affect on their intrinsic learning orientations.

H4b (alternative hypothesis): Students' age has an effect on their intrinsic learning orientations.

In the SAL model (Biggs 1987), age is positively related to the application of deep learning but not to other learning approaches. This relationship has been confirmed by studies

with undergraduate accounting students (Duff 2004b; Sadler-Smith 1996). However, although older students generally score higher on deep learning and organised learning, the differences between different age groups are rather small (Richardson 2013). Intuitively, it might be expected that the age variance of postgraduate students would be larger than undergraduate students, it is possible that age would contribute to variation in their learning approaches. The relevant hypotheses are:

> H5a (null hypothesis): Students' age does not have any effect on their adoption of deep learning approaches.

> H5b (alternative hypothesis): Students' age has an effect on their adoption of deep learning approaches.

3.5.3 Financial Support Received from Family's Impact on Learning Orientations and Learning Approaches

Most Chinese students studying overseas are financially supported by their family, while some are supported by a combination of salaries from part-time employment and family funding (Wang et al. 2015). Under the traditional Chinese culture of valuing and respecting higher education, Chinese parents have a high expectation of academic success by their children and often provide instructions or suggestions for their children's education choices (Wang & Byram 2011). The students who primarily rely on their parents' financial support may therefore enrol in higher education programs to please their parents or to follow their parents' instructions. Under the Self-Determination theory (Deci & Ryan 1985) students who enrol in postgraduate accounting programs because of external environmental factors' influences (including parents' expectations) are classified as extrinsically motivated. In addition, sometimes the decision was made by the parents with little contribution from their children – that is, the student did not show much motivation in studying for an accounting Master degree. These students' learning orientations would be classified as amotivation. The hypotheses that consider the impact of family financial support on both extrinsic motivations and amotivation are:

> H6a (null hypothesis): Students' financial support from their family does not affect their extrinsic learning orientation.

H6b (alternative hypothesis): Students' financial support from their family affects their extrinsic learning orientations.

H7a (null hypothesis): Students' financial support received from their family does not affect their amotivation.

H7b (alternative hypothesis): Students' financial support received from their family affects their amotivation.

With regard to the learning approaches, Chinese overseas students who are financially supported by their families are under greater pressure to succeed and have a higher fear of failure. They feel they have an obligation to repay their family with academic success and see failing to graduate as an unacceptable situation (McMahon 2011). Under the SAL model, such pressure and fear belong to surface learning motives and would push students to adopt surface learning strategies (Biggs 1987). This leads to the following hypotheses:

H8a (null hypothesis): Students' financial support from their family does not affect their adoption of surface learning approaches.

H8b (alternative hypothesis): Students' financial support from their family affects their adoption of surface learning approaches.

3.5.4 Location of Prior Education Institution's Impact on Learning Orientations and Learning Approaches

Chinese citizens are bound by the Hukou system to the land they (or their parents) were born on and people with different Hukou do not have equal access to education resources (Bodycott & Lai 2012). Students from less developed provinces not only have limited education resources in high schools but also require a higher Gaokao (the National College Entrance Examination) result to enter the same university program as their peers from more developed provinces. The result is that the high school students from less developed areas face much more intense competition and need to outperform more of their peers to enter universities, especially universities in more developed areas. These differences in educational background may have a lingering effect on students' future learning. Students who completed prior education in less developed areas are more likely to see further education as a means to an end, such as an

opportunity to live in more developed areas or to access better resources (Bodycott & Lai 2012). This type of learning orientations is typically extrinsic. The hypotheses for the relationship between the locations of prior education institutions and learning orientations are:

> H9a (null hypothesis): The location of students' prior education institution does not affect their extrinsic learning orientations.
>
> H9b (alternative hypothesis): The location of students' prior education institution affects their extrinsic learning orientations.

In addition to having more extrinsic learning orientations, students from less developed areas may also be under higher pressure and have more fear of failure, both of which are characteristics of surface learning motives. Prior research also found that the urban teachers in China focus more on promoting deep learning in teaching, whereas rural teachers' teaching tends to address the use of surface learning strategies (Rao, Chi & Cheng 2010). The relevant hypotheses are:

> H10a (null hypothesis): The location of students' prior education institution does not affect their adoption of surface learning approaches.
>
> H10b (alternative hypothesis): The location of students' prior education institution affects their adoption of surface learning approaches.

3.5.5 Prior Academic Performance's Impact on Learning Orientations and Approaches

The Student Learning in Context model suggests that students' previous academic performance, as a factor in students' prior academic experience, will affect students' learning orientations and learning approaches (Ramsden 2003). Prior investigation with undergraduate business students in China found that, under the outcome-based teaching and learning environment in Chinese universities, Chinese students develop a strong capability to strategically adopt the learning approaches that helps maximise academic results (Pang, Ho & Man 2009). This helps explain why the adoption of surface learning strategies is not necessarily linked to poor academic performance in Chinese students (Cooper 2004). In the absence of a clear conclusion from prior studies, it is unclear how or whether Chinese students' prior

undergraduate performance in Chinese universities affects their learning orientations and learning approaches in Western universities. The relevant hypotheses are:

H11a (null hypothesis): Students' prior academic performance does not affect their learning orientations.

H11b (alternative hypothesis): Students' prior academic performance affects their learning orientations.

H12a (null hypothesis): Students' prior academic performance does not affect their learning approaches.

H12b (alternative hypothesis): Students' prior academic performance affects their learning approaches.

3.5.6 English Competency's Impact on Learning Approaches and Learning Orientations

English competency is considered the most important factor influencing accounting students' learning approach in Australian universities (Watty, Jackson & Yu 2009). Chinese accounting students often find it difficult to understand teachers' speech and to express their thoughts. Therefore, they tend to adopt rote-learning as a survival strategy (Bhattacharyya 2010; Pang, Ho & Man 2009; Volet, Renshaw & Tietzel 1994). The hypotheses with regard to learning approaches are:

H13a (null hypothesis): Students' English competency does not affect their adoption of surface learning approaches.

H13b (alternative hypothesis): Students' English competency affects their adoption of surface learning approaches.

As illustrated in the Student Learning in Context model (Ramsden 2003), students' background factors may indirectly affect their learning approaches by affecting their learning orientations. Students with lower English competency may experience less pleasure and more stress in their learning processes, which could reduce their intrinsic learning orientations and

increase amotivation (Deci & Ryan 1985). In addition to the hypotheses above, to capture the effect of English competency on learning orientations, the hypotheses are:

H14a (null hypothesis): Students' English competency does not affect their learning orientations.

H14b (alternative hypothesis): Students' English competency affects their learning orientations.

3.5.7 Prior Accounting Knowledge's Impact on Learning Orientations and Approaches

Previous studies show that the relationship between prior subject knowledge and students' final academic performance is not simple or linear (Xiang & Gruber 2012). According to the Student Learning in Context model (Ramsden 2003), this is because the subject knowledge acquired before entering the current learning context belongs to the background factors in the model. The background factors do not directly affect students' learning product (outcome) but affect the learning orientations and learning approaches (Dochy, de Rijdt & Dyck 2002). This study thus includes prior accounting knowledge as a variable that may affect students' learning orientations and approaches. The hypotheses are:

H15a (null hypothesis): Students' prior accounting knowledge does not affect their learning orientations.

H15b (alternative hypothesis): Students' prior accounting knowledge affects their learning orientations.

H16a (null hypothesis): Students' prior accounting knowledge does not affect their learning approaches.

H16b (alternative hypothesis): Students' prior accounting knowledge affects their learning approaches.

3.5.8 Learning Orientations and Learning Approaches – Surface and Deep Approaches

According to the Student Learning in Context model (Ramsden 2003), students' learning approaches are shaped by an integrated effect of their background characteristics and their learning orientations. This study therefore investigates the relationship between learning orientations and learning approaches. A recent study found significant correlations between learning orientations and learning approaches in undergraduate accounting students. Intrinsic orientations are positively correlated with deep learning approaches and negatively correlated with surface learning approaches. Extrinsic orientations are also positively correlated with deep learning approaches (Everaert, Opdecam & Maussen 2017). The finding with regard to intrinsic learning motivations is consistent with the Student Learning in Context model (Ramsden 2003), while the finding for extrinsic motivations seems surprising because, from a theoretical perspective, extrinsically motivated students see education only as a means to an end. Researchers argue that this is because the students comprehend that to pass the assessment they need to learn the subject content by understanding (Everaert, Opdecam & Maussen 2017). This study thus forms similar hypotheses below:

> H17a (null hypothesis): Students' extrinsic learning orientations does not affect their adoption of surface learning approaches.
>
> H17b (alternative hypothesis): Students' extrinsic learning orientations affects their adoption of surface learning approaches.
>
> H18a (null hypothesis): Students' intrinsic learning orientations does not affect their adoption of deep learning approaches.
>
> H18b (alternative hypothesis): Students' intrinsic learning orientations affects their adoption of deep learning approaches.

3.5.9 Learning Orientations and Achieving Learning Approaches

In addition to surface and deep learning approaches, achieving approaches may also be related to learning orientations. Achieving learning motivations focus on obtaining good results from assessments (Entwistle & Tait 1994). This characteristic can be linked to both extrinsic and intrinsic learning orientations. A student who is extrinsically motivated typically sees education

as a means to an end, such as to receive a degree or find better employment (Vallerand et al. 1992) and, therefore, needs better academic results. On the other hand, intrinsically motivated students who are interested in course content would also want to perform well in the assessments. The following hypotheses are therefore formed for both extrinsic and intrinsic learning orientations.

> H19a (null hypothesis): Students' extrinsic learning orientations does not affect their adoption of achieving learning approaches.
>
> H19b (alternative hypothesis): Students' extrinsic learning orientations affects their adoption of achieving learning approaches.
>
> H20a (null hypothesis): Students' intrinsic learning orientations does not affect their adoption of achieving learning approaches.
>
> H20b (alternative hypothesis): Students' intrinsic learning orientations affects their adoption of achieving learning approaches.

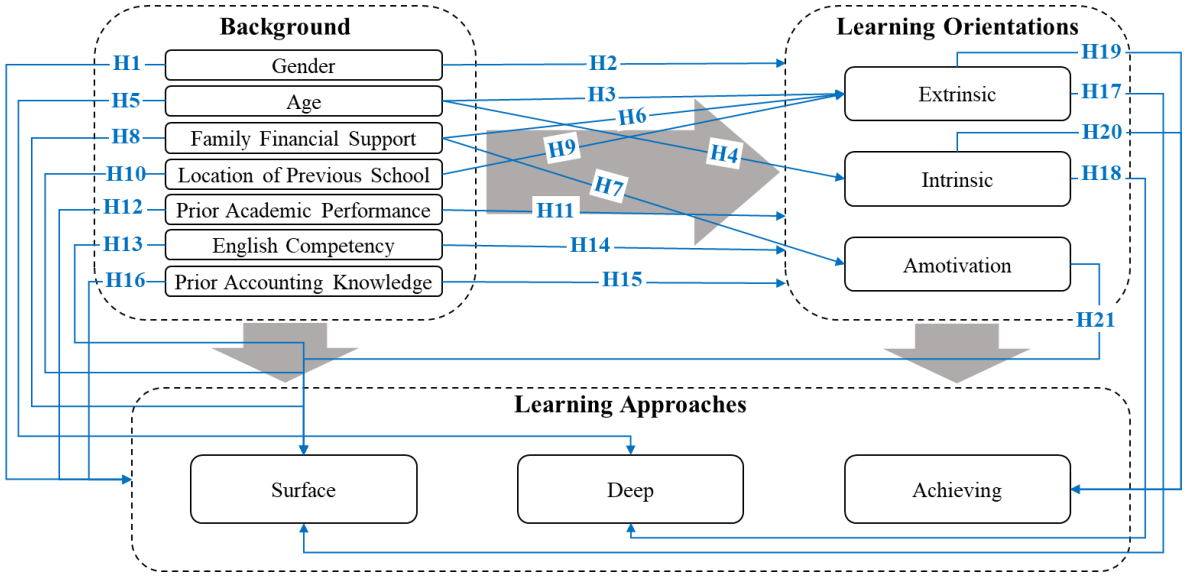
3.5.10 Amotivation and Surface Learning Approaches

Amotivation is different from extrinsic and intrinsic orientations because it covers students who lack specific reasons for studying at university (Vallerand et al. 1992). Students whose learning orientations fall into this category typically feel lost and that they "drifted" into universities without a particular motivation. This lack of motivation may lead to the adoption of surface learning. The hypotheses are:

> H21a (null hypothesis): Students' amotivation does not affect their adoption of surface learning approaches.
>
> H21b (alternative hypothesis): Students' amotivation affects their adoption of surface learning approaches.

Hypotheses H1 to H21 examine the relationship between students' backgrounds, learning orientations and learning approaches. The findings of the tests can be used to answer the second research question. Figure 3.2 summarises these hypotheses and illustrates their positions in the study's theoretical framework. To answer the third research question, hypotheses H22 to H25 were formed to determine the differences between the learning orientations and learning approaches over the different years of study.

Figure 3.2 Theoretical Framework and Hypotheses H1 to H22



3.5.11 Changes in Learning Orientations Over Time

In the Student Learning in Context model, students' learning orientations are affected by both their prior education experience and their current learning context (Ramsden 2003). It should be noted that students' current learning context becomes a part of their prior education experience as time passes. For Chinese students studying overseas, the impact of the Western learning context in the first year is reinforced in the following years of study as a part of their prior learning experiences. Although prior investigations rarely compare Chinese students' learning orientations between different years of study in Western universities, it is expected that, as the impact of Chinese students' background factors decreases over time, the impact of the Western learning context will increase. The relevant hypotheses are:

H22a (null hypothesis): Chinese students' learning orientations are not different between early and later semesters of study in Australian accounting Master programs.

H22b (alternative hypothesis): Chinese students' learning orientations are different between early and later semesters of study in Australian accounting Master programs.

3.5.12 Changes in Learning Approaches Over Time

In the Student Learning in Context model, Ramsden (2003) argued that students' learning approaches are subject to change during their learning processes. Similar to the learning orientations, students' learning approaches are expected to be affected more heavily by the current learning context and less heavily by the prior learning backgrounds as time passes. The hypotheses are:

H23a (null hypothesis): Chinese students' learning approaches are not different between early and later semesters of study in Australian accounting Master programs.

H23b (alternative hypothesis): Chinese students' learning approaches are different between early and later semesters of study in Australian accounting Master programs.

3.5.13 Hypotheses Summary

Subsection 3.5 introduced 23 sets of hypotheses. H1 to H21 were derived to answer the second research question. The null hypotheses are that there is no relationship between the dependent variables and the independent variables. The alternative hypotheses are that the independent variables have an effect on the dependent variables. H22 and H23 were developed to answer the third research question, with H22 concerning changes in learning orientations and H23 concerning changes in learning approaches. The null hypotheses are that there is no difference between earlier and later semesters' responses. The alternative hypotheses are that earlier

semesters' responses are different from later semesters'. Table 3.1 provides a summary of H1 to H23.

Table 3.1 Hypotheses Summary

Research Question	Hypothesis	Independent Variable	Dependent Variable
Research Question 2: What are the relationships between Chinese postgraduate accounting students' backgrounds, learning orientations and learning approaches?	H1	Gender	Learning approaches
	H2		Learning orientations
	H3	Age	Extrinsic learning orientations
	H4		Intrinsic learning orientations
	H5		Deep learning approaches
	H6	Financial support received from family	Extrinsic learning orientations
	H7		Amotivation
	H8		Surface learning approaches
	H9	Location of prior education institution	Extrinsic learning orientations
	H10		Surface learning approaches
	H11	Prior academic performance	Learning orientations
	H12		Learning approaches
	H13	English competency	Surface learning approaches
	H14		Learning orientations
	H15	Prior accounting knowledge	Learning orientations
	H16		Learning approaches
	H17	Extrinsic learning orientations	Surface learning approaches
	H18	Intrinsic learning orientations	Deep learning approaches
	H19	Extrinsic learning orientations	Achieving learning approaches
	H20	Intrinsic learning orientations	Achieving learning approaches
	H21	Amotivation	Surface learning approaches
Research Question 3: How do Chinese postgraduate accounting students' learning orientations and approaches change during the time they study in Australian universities?	H22	-	
	H23	-	

3.6 Chapter Summary

This chapter introduced the research questions developed based on both the research background introduced in chapter one and the gaps in previous literature identified in Chapter Two. The research aims and objectives are to answer each specific research question. The theoretical framework was adapted from the Student Learning in Context model and the Self-Determination theory. A brief explanation was provided to justify the models and theory selection. The main part of this chapter presented the hypotheses formed using the same definitions and classifications as in the Student Learning in Context model and the Self-

Determination theory. These hypotheses were formed to examine the relationships between students' background, learning orientation and learning approach variables. The hypotheses section also provided the justification of the formed hypotheses that come from a combination of the theoretical framework, research background and literature findings. The next chapter describes and justifies the research design, including the methods, tools, samples and measurements used in the investigation.

Chapter Four

Research Design

4.1 Introduction

This chapter explains and justifies the research design and research methods. It starts by explaining why this study adopted a quantitative methodology, followed by an introduction to the sample selection criteria and data collection procedures. The survey design, including justification of the measurement choices and the development of survey questions, are then explained. Next, the validity and reliability of the survey items are demonstrated. The last section of this chapter introduces the data analysis methods and models used in the hypotheses tests.

4.2 Research Methods

Since the research questions focus on identifying and examining the relationships of different aspects of student learning and changes over time, this study used questionnaires as the data collection tool and adopted a longitudinal data collection approach. A series of online questionnaires were used to collect students' learning information over the period of their study in an Australian postgraduate accounting program. The collected data were analysed using quantitative methods, such as Mann-Whitney U tests, multinominal logistic regression and Friedman's 2-way ANOVA ranked test.

The use of online questionnaires was determined by the nature of the research topic and the characteristics of the target population. Since this study focused on students' backgrounds, learning orientations and learning approaches, a questionnaire assisted the researcher to collect first-hand information from the students' perspective. In addition, considering that the participants were university students whose available time and location varied, an online questionnaire provided the flexibility that allowed the researcher to collect sufficient data from as large a number of participants as possible in the limited time frame. Online questionnaires were especially useful since the study required the investigation of the same group of students repeatedly as they progressed through their study program. The variety of their study plans required the questions to be flexible to suit students' current progress. The online questionnaires efficiently provided this flexibility by navigating students to different sections

according to their responses. The data collected by an online survey system were directly exported to analysis software, which was time-efficient for data analysis and convenient for review purposes and for safeguarding the data. An online self-administered questionnaire was therefore considered the most cost-effective method for longitudinal data collection.

Data analysis adopted a deductive logic, where correlation and regression statistics were used to test the hypotheses. These quantitative methods were determined by the nature of the adopted theoretical framework, the research design and the collected data. All analyses were performed using SPSS.

4.3 Data Collection

4.3.1 Sample Selection

This study investigates students' learning in a certain context and, therefore, it was critical to specify the contextual condition of the population. The survey population was students who have completed undergraduate study in China and then enrolled in a postgraduate accounting program in an Australian university. Their current learning environment – Australian universities' postgraduate accounting programs – had a high proportion of Chinese enrolments. The context facing the target population reflects the current learning environment in Australian university postgraduate accounting programs.

The eligible questionnaire participants were the students who:

- had completed their undergraduate study in a Chinese university and
- were enrolled in a postgraduate accounting program at the University of Adelaide when filling in the questionnaire.

In the Student Learning in Context model, pedagogy design, as a part of learning context, has an impact on students' approaches to learning (Ramsden 2003). Therefore, the differences in pedagogy between universities may add noise to students' responses. As a result, this study chose only one university for data collection. The chosen university (the University of Adelaide) is a member of the Group-of-Eight and is AACSB International accredited. It was therefore expected to provide high-quality accounting programs in Australia. At the University of Adelaide, over 90% of the enrolled postgraduate accounting students were from mainland

China (The University of Adelaide 2017). From the context perspective, the selected sample was representative of the target population. Another major reason for choosing only one university was the practical difficulty and obstacles experienced by the student researcher – most universities were reluctant to share their student information with external researchers, especially when the researcher was a PhD student without many connections or experience in the industry. The sensitive nature of student information also created challenges in obtaining the necessary ethics approvals.

The major limitation from choosing only one university is that the impact of this university's pedagogy design and entrance requirements are confounding factors. As a result, the conclusions may not be representative of the Chinese student population, which includes students in other Australian universities. This is especially true for Chinese students' prior academic performance, since all participants would have fulfilled the entry requirements of the University of Adelaide, which may reduce the likelihood of finding differences across students. This limitation was partially managed by involving other students in the same classroom in the data collection. By comparing the responses from different student groups, the impact of the university's specific pedagogy can be observed and minimised.

4.3.2 Ethics Clearance

This study was conducted with the approval of the Human Research Ethics Committee (HREC) (HREC Approval Number: H-2017-005). A copy of the HREC ethics approval letter is attached (Appendix 3). All potential risks including the confidentiality of identity and responses of participants are under the control of appropriate safeguards. The surveys were distributed only after obtaining HREC approval.

4.3.3 Survey Distribution and Sample Size

The data collection was completed by administering three questionnaires to participants over their 1.5 to 2 years' postgraduate accounting programs. At the end of each semester, the first questionnaire was sent to the eligible students to collect information about their backgrounds, learning orientations and learning approaches in the accounting subjects they completed in that

semester. Students were asked to provide their student ID as the identifier to match their responses over later semesters. Students who completed the first questionnaire then received the second and the third questionnaires at the end of the following semesters to collect their learning orientation and learning approach information in the relevant semesters. To encourage Chinese students' participation and to help reduce misunderstanding caused by language barriers, the questionnaires were presented in both English and Mandarin Chinese.

To include non-Chinese students who studied in the same program as the Chinese students, similar questionnaires were distributed to these students to collect information about their backgrounds, learning orientations and learning approaches. These students included domestic Australian students, international students from countries other than mainland China as well as students who were from mainland China but who had completed their undergraduate degrees outside mainland China. These students' responses were then compared with those of the Chinese students with regard to backgrounds, learning orientations and learning approaches. It should be noted that the objective of such a comparison was not to summarise the differences between different student groups but to describe Chinese student's characteristics in comparative terms. Given the stated research questions, it was not the focus of this study to compare different student groups.

HREC required the recruitment emails with the link to the questionnaires to be distributed only from a faculty administration email address. In this way, students were approached by a department independent from the teaching staff so that the students were not under any perceived pressure to participate. On one hand, this scheme helped encourage students to answer the questions truthfully in the self-administered questionnaire. On the other hand, this reduced the response rate because most students perceived faculty administration emails to be system-generated and tended to ignore them. To further encourage student participation without violating HREC's requirements, this study compensated participants for their time with gift cards and used multimode contacting in the recruitment stage. To raise the survey's response rate, the researcher advertised the research project via social media, on-campus flyers, and with informal classroom speeches. It should be noted that, although the survey was advertised via multiple communication channels, the survey links were distributed only via faculty emails as per the HREC requirement.

The target sample size was 200 at the beginning of the data collection. Unfortunately, because of the COVID-19 pandemic in early 2020, data collection was forced to cease as

international students were no longer allowed to enter Australia and the learning mode for existing students changed to online. More detrimentally, the pandemic also substantially increased the challenges involved in contacting and encouraging students to continue their participation in the study. This unprecedented event severely affected the number of responses collected. Since each complete set of responses takes three semesters to collect, many participants received only one or two questionnaires from the series and therefore could provide only partial information. Nevertheless, all responses were retained and included in selected relevant sections of data analysis. The numbers of valid responses collected from the questionnaires are presented in Table 4.1.

Table 4.1 Collected Responses over Three Semesters

Number of Questionaries Completed			Total Participants	Total Number of Enrolled Students[1]	Response Rate
1	2	3			
291	94	43	428	1436	29.81%

4.4 Variable Measurements and Survey Questions

As discussed in Section 3.5, many variables included in this study have been used in previous research. This study, however, did not always use the same measurements as in prior studies. Variable measurements were determined based on the nature of the variable, the characteristics of Chinese postgraduate accounting students, and the related hypotheses formed in Section 3.5. The survey questions were designed to help capture the variable information using the determined measurements. This subsection introduces and justifies the variable measurements and the survey questions.

4.4.1 Gender

A close-ended multiple-choice question was used to capture the gender variable. As a fundamental demographic variable, sex or gender has been commonly included in social research surveys. Though sex and gender are often seen as synonyms, the term "gender" is a socially constructed feature and may include more than the binary male and female biological categories (Tolland & Evans 2019). With recent developments in gender research, many social

[1] Information obtained from university enrolment records.

researchers have asked participants to respond to the sex question by providing their self-declared gender identifier instead of their biological gender (Sullivan 2020). The term "gender" was therefore used in the survey question to measure participants' self-identified gender. To include all possibilities and respect participants' potential preference of non-disclosure, in addition to the most common "female" and "male" choices, "other" and "rather not say" were included in the choices. The survey question was:

What is your gender? ◯ Female ◯ Male ◯ Other ◯ Rather not say

4.4.2 Age

In previous studies investigating the relationship between students' age and learning, participants were asked to provide their age group (Duff 2004b; Richardson 2013; Sadler-Smith 1996). This method can help test hypotheses that compare different age groups' learning, such as whether mature students adopt more deep learning approaches than non-mature students (Sadler-Smith 1996). However, since this study focused on investigating whether and how students' age is correlated to their learning orientations and approaches, a more precise age capture is required. The survey question therefore was open-ended and asked the students to enter their year of birth. Their year of age information was then calculated using the year the participants responded to the survey less the participants' year of birth. The online survey format allowed the system to include a validation test in the responses – the system was set to accept only four-digit numerical inputs for this question. The survey question was:

What is your year of birth (e.g. 1995)? □□□□

4.4.3 Financial Support Sources

Hypotheses H6 and H7 in regard to students' financial support sources focused on the tuition fee and living costs paid by their parents and other family members. However, since the first research question obtains information about the student's backgrounds, the survey questions also needed to collect information about students' other financial support sources. Considering that the tuition fees and living costs depend on students' success in courses and living style, the financial support sources measure used percentage figures rather than the dollar amount.

The survey question had two parts to capture information on this variable. The first part listed several common sources of financial support with an additional "other (please specify)" choice and asked the participants to select all of their financial support sources. This was to ensure all possible sources of financial support had been considered by the participant and therefore a more accurate estimate of percentages could be obtained. The second part of the question asked participants to provide an estimated percentage of each financial support source listed in the first part. Two validity checks were included in this question: the percentage of the unselected choices in the first part must be 0; and the total percentages from all financial support sources must be 100%. The survey question was:

What are the sources of your tuition fee and living costs for your postgraduate study? What percentage of total tuition and living costs are from these financial sources?

☐ My parents and relatives	**%**
☐ My own savings	**%**
☐ My part-time work during my study in Australia	**%**
☐ University scholarships	**%**
☐ Government or sponsor's scholarships/allowance/grant funds	**%**
☐ Hecs-Help/Borrowings	**%**
☐ Other (Please specify)	**%**

4.4.4 Locations of Prior Education Institutions

As discussed in Section 3.5, the hypotheses concerning the location of students' prior education institutions were based on the unequal allocation of education resources among different areas in China. A proxy that can be used to measure access to education resources was the city's education ranking published in each year's Chinese university application guide (Zhao, Cai & Dang 2019). The most recent and available ranking (for 2019) was used, but the city rankings are relatively stable over years. This guide ranked all cities in China from 1 to 247 (including tied ranking) based on each city's universities' rank and was widely used as a reference for the Gaokao candidates.

Four survey questions were used to collect information about the location of students' prior education institutions. The first question was a close-ended question used to identify the student group to which the participant belongs. As discussed in Section 4.3.2, the survey was distributed to all postgraduate accounting students with the aim of describing Chinese students'

characteristics in comparative terms. In this study, Chinese students were identified as ones who completed both high school and undergraduate education in mainland China. Students who completed high school in mainland China and completed their undergraduate education outside mainland China were identified as Chinese-overseas students. It should be noted that some students started their undergraduate study at a Chinese university, and then transferred to an overseas university to complete their study. These students were also identified as Chinese-overseas students in this study. Students who did not complete high school in mainland China were identified as non-Chinese students. This classification method was determined by the research questions and objectives. Identification of Chinese students was not determined by students' ethnicity or nationality, but by their educational background. The second survey question was an open-ended question that asked Chinese and Chinese-overseas students to enter the name of the city in which they completed high school. For non-Chinese students, the question asked them to provide the name of the country in which they completed their high school. The next question was close-ended and further distinguished between the Chinese and Chinese-overseas students by asking whether they had completed their undergraduate study in mainland China. This question was not shown to non-Chinese students. The last question was open-ended and asked Chinese students to enter the name of the city in which they completed their undergraduate education and asked other students to enter the name of the country. The combination of these four questions provided further opportunities for validity checking: in the second question, the Chinese and Chinese-overseas students should enter a Chinese city's name whereas non-Chinese students should not enter "China"; in the last question, Chinese students should enter a Chinese city's name and Chinese-overseas students should not enter "China". These four questions were:

Q1: Did you complete your high school in mainland China (PRC)? ◯ Yes ◯No

(If answered "yes")

Q2(a): In which city/town of China did you complete your high school? (e.g., Beijing) _____

(If answered "no")

Q2(b): In which country/district did you complete your high school? (e.g., Australia) _____

Q3: Did you complete your undergraduate degree in China (PRC)?

◯ Yes ◯No ◯Other (e.g., first two years in China and last year(s) overseas)

(If answered "yes")

Q4(a): In which city/town of China did you complete your undergraduate study? (e.g., Beijing) _____

(If answered "no" or "other")

Q4(b): In which country/district did you complete your undergraduate study? (e.g., Australia) _____

4.4.5 Prior Academic Performance

Most previous research in accounting student learning used GPA as the proxy to measure prior academic performance (Al-Twaijry 2010; Byrne & Flood 2008; Everaert, Opdecam & Maussen 2017). However, since this study's participants had diversified backgrounds, it was inappropriate to use GPA as the only academic performance measure because pedagogy and assessment design vary between universities and programs. This study used more comprehensive measures to capture Chinese students' prior academic performance, which included the level of students' undergraduate institutions as well as their comparative academic performance.

Chinese universities are essentially classified into three tiers based on the required Gaokao results, with tier 1 having the highest university ranking and requiring the highest Gaokao marks. Each province has its own required Gaokao results for the three tiers. High school students can apply for the relative university tiers only if their Gaokao result is higher than the required mark for their province. Some tier 1 universities require even higher Gaokao results than other tier 1 universities because they are of higher rankings and receive additional support from the government. These universities are referred as "985" and "211" universities. The "985" universities have the highest ranking and receive direct support from the federal government and, therefore, are seen as the most prestigious universities in China. The "211" universities receive similar support from local governments and are also seen as places for outstanding students. Participants were asked to specify the tier of their undergraduate

universities. For tier 1 universities, participants were also asked to specify if their universities were a “985” or “211” university. This information was collected to capture Chinese students’ prior academic performance and their undergraduate learning environment. The survey question was close-ended with a text input area for students whose universities were not included in the three-tier category, such as military academies and specialised art schools, or who were not sure of their universities’ tier, which is a rather rare situation. This question was shown only to the Chinese participants. The survey question was:

My undergraduate educational institution in China was:

◯ “985” university
◯ “211” university
◯ Other tier 1 university
◯ Tier 2 university
◯ Tier 3 university
◯ College
◯ Other (please specify) _____

The other measure to capture students’ prior academic performance was their comparative GPA in undergraduate programs. Since the assessment criteria and rubrics differ between different universities and different disciplines, participants were not asked to provide their GPA, but to provide their comparative academic performance in their own undergraduate program. Participants were asked to self-assess their GPA ranking in their undergraduate classes. Though this method may attract self-report bias, it provided an opportunity to capture students’ perception of their learning. Considering that this study took the students’ perspective to analyse their learning, the self-reported GPA carried more meaning than an objective GPA score. The question was close-ended and the available responses included different ranges of ranking and a “I don’t know” option. This question was shown to all participants and around 23% of the participants chose the “I don’t know” option. The survey question was:

My academic performance compared with my classmates at my previous educational institution before coming to Australia was:

◯ In the top 10% of the class
◯ In the top 10% to 20% of the class

◯ In the top 20% to 40% of the class
◯ In the top 40% to 60% of the class
◯ In the bottom 20% to 40% of the class
◯ In the bottom 10% to 20% of the class
◯ In the bottom 10% of the class
◯ I don't know

4.4.6 English Competency

The level of English competency was measured by students' IELTs score (8.0, 7.0, 6.0, 5.0 and below) when they entered their current postgraduate accounting programs. This question was closed-ended with "English is my first language" and "I cannot speak English at all" representing the highest and lowest English competency. The IELTs score interval was chosen based on the IELTs grade description, where scores 8.0 to 5.0 represent very good, good, competent and modest user respectively. An IELTs score higher than 8.0 is equivalent to first language competency. Although the minimum entry requirement of a postgraduate accounting program is IELTS 6.0, students with a lower IELTS result can still enter the program after completing 10 to 20 weeks' Academic English program. The lowest score was chosen as 5.0 because this was the minimum language competency requirement for international students to be granted a student visa in Australia. The choice of "I cannot speak English at all" was provided for response validation purpose, as no student should have chosen this response. The survey question was:

When starting my current postgraduate accounting program in Australia, my English competency was:

◯ English is my first language
◯ IELTS 8.0 or equivalent
◯ IELTS 7.0 or equivalent
◯ IELTS 6.0 or equivalent
◯ IELTS 5.0 or equivalent
◯ Below IELTS 5.0 or equivalent
◯ I cannot speak English at all

4.4.7 Prior Accounting Knowledge

Measurement of students' prior accounting knowledge comprised two aspects: academic knowledge and practical knowledge. Both aspects were captured by closed-ended questions. The available responses for the academic accounting knowledge question described the extent of accounting academic knowledge in terms of degrees and self-education to reduce the self-report bias. These responses can provide more precise information than the commonly used vague descriptions such as "I have expert accounting knowledge" and "I have some accounting knowledge". The available responses for practical accounting knowledge were described in terms of the length of working experience, both accounting and non-accounting related. Two close-ended questions were used to collect this information. The first question asked the participants to select the category that described the length of their working experience, then the second question asked the length of accounting-related working experience. The available responses were determined by the intervals used in the criteria of Australian permanent residency assessment (Department of Home Affairs 2020): less than one year, one year to three years, and more than three years, with an additional "no experience at all" option. The two survey questions concerning working experience provided an opportunity for validity checking, since participants' responses to the second question should not be longer than their response to the first question. The survey questions were:

My accounting-related academic knowledge before enrolling in the current postgraduate accounting program was:

◯ I have a Bachelor degree in accounting[2]
◯ I have a Diploma in accounting
◯ I have a Bachelor degree in business but not in accounting
◯ I have a Diploma in business but not in accounting
◯ I have completed some accounting training courses but do not have a degree
◯ I have not received any formal accounting training but I have some self-taught knowledge in accounting
◯ I do not have any accounting knowledge

[2] International students with a Bachelor degree in accounting are allowed to enter a postgraduate accounting program in Australian universities.

My working experience before enrolling in the current postgraduate accounting program was:

◯ More than 3 years in any industry
◯ 1 to 3 years in any industry
◯ Less than 1 year in any industry
◯ I do not have any working experience

(If selected one of the first three options:)
My previous working experience involved working in an accounting related job for:

◯ More than 3 years
◯ 1 to 3 years
◯ Less than 1 year
◯ Not at all

4.4.8 Learning Orientations

Following the Student Learning in Context model (Ramsden 2003), the concept of students' learning orientations in this study was limited to the primary reason why the student chose to enrol in a postgraduate accounting program in an Australian university. The relevant survey question asked the participants to correspond to several statements that described different students' learning orientations using 7-item Likert scales. The statements were developed based on the Academic Motivation Scale (AMS) (Vallerand et al. 1992). As introduced in Section 2.2.4, the AMS is a questionnaire designed to measure students' learning orientations under the Self-Determination theory (Deci & Ryan 1985, 1991). It has been widely used in prior studies and has shown to be a valid, suitable tool to capture Chinese students' learning orientations (Zhang et al. 2016). There were 28 statements in the AMS that described why students go to university. These 28 statements measured three types of extrinsic learning orientations (external regulation, introjected regulation, and identified regulation), three types of intrinsic learning orientations (to know, toward accomplishment, and to experience stimulation) and amotivation under the Self-Determination theory, with four statements measuring each type. To reduce the length of the survey and to make the statements more relevant to the research context, the four statements in each of the seven learning orientation

types were reformed into two statements, totalling 14 statements. Since the migration advantages have been found to be a key reason that attracted Chinese students to study accounting in Australia (McGowan & Potter 2008), one statement measuring "extrinsic motivation – external regulation" was reworded to incorporate the migration-related orientations. The final version of the question asked students to correspond to 14 statements that described their reasons for enrolling in postgraduate accounting programs at the University of Adelaide. To avoid confusion, the question and statements did not use the word "motivation" in the learning orientation section because the word is used in the learning approaches section below. Table 4.2 lists the original 28 AMS statements and the 14 statements used in the survey. The validity of the modified survey items is discussed in Section 4.5. The survey question was:

Why did you choose to enrol in a postgraduate accounting program at the University of Adelaide?

Using the scale below, please indicate to what extent each of the following statements corresponds to one of the reasons why you chose to enrol in a postgraduate accounting program at the University of Adelaide. There is no good or bad answer, please simply choose the item that truly reflects your thoughts.

Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Disagree	Strongly Disagree
○	○	○	○	○	○	○

Table 4.2 Statements for Students' Learning Orientations

Learning Orientation		**AMS Statement (**Vallerand et al. 1992**)**	**Statement Used in Survey**	**Variable Code**
Classification	Type			
Intrinsic motivation	To know	Because I experience pleasure and satisfaction while learning new things. For the pleasure I experience when I discover new things never seen before. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me. Because my studies allow me to continue to learn about many things that interest me.	Because I experience pleasure and satisfaction while learning new things in accounting.	O-I-ToKnow1
			Because this program allows me to continue to learn about many things that interest me.	O-I-ToKnow2
Intrinsic motivation	Toward accomplishment	For the pleasure I experience while surpassing myself in my studies. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities. Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.	For the pleasure I experience while surpassing myself in my studies.	O-I-Accomplishment1
			For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	O-I-Accomplishment2
Intrinsic motivation	To experience stimulation	For the intense feelings I experience when I am communicating my own ideas to others. For the pleasure that I experience when I read interesting authors. For the pleasure that I experience when I feel completely absorbed by what certain authors have written. For the "high" feeling that I experience while reading about various interesting subjects.	For the intense feelings I experience when I am communicating my own ideas to other students and lecturers.	O-I-Stimulation1
			For the pleasure that I experience when I read interesting accounting knowledge.	O-I-Stimulation2
Extrinsic motivation	Identified regulation	Because I think that a college education will help me better prepare for the career I have chosen. Because eventually it will enable me to enter the job market in a field that I like. Because this will help me make a better choice regarding my career orientation. Because I believe that a few additional years of education will improve my competence as a worker.	Because eventually it will enable me to enter the job market in a field that I like.	O-E-Identified1
			Because I believe that a few additional years of education will improve my competence as an accountant.	O-E-Identified2

Learning Orientation		**AMS Statement (**Vallerand et al. 1992**)**	**Statement Used in Survey**	**Variable Code**
Classification	Type			
Extrinsic motivation	Introjected regulation	To prove to myself that I am capable of completing my college degree. Because of the fact that when I succeed in college I feel important. To show myself that I am an intelligent person. Because I want to show myself that I can succeed in my studies.	To prove to myself that I am capable of completing an Australian postgraduate degree in accounting.	O-E-Introjected1
			To show myself that I am an intelligent person.	O-E-Introjected2
Extrinsic motivation	External regulation	Because with only a high-school degree I would not find a high-paying job later on. In order to obtain a more prestigious job later on. Because I want to have "the good life" later on. In order to have a better salary later on.	In order to obtain a more prestigious job later on.	O-E-Regulation1
			In order to work and live in Australia after graduation.	O-E-Regulation2
Amotivation	N/A	Honestly, I don't know; I really feel that I am wasting my time in school. I once had good reasons for going to college; however, now I wonder whether I should continue. I can't see why I go to college and frankly, I couldn't care less. I don't know; I can't understand what I am doing in school.	I cannot see why I go to an Australian university for postgraduate study, and frankly, I could not care less.	O-A-LackofDirection
			I once had good reasons for studying this program, but now I wonder whether I should continue.	O-A-LostDirection

4.4.9 Learning Approaches

Similar to the learning orientation section, this section of the questionnaire asked participants to indicate the extent to which they relate to the statements on 7-item Likert scales. All statements were adopted from the Revised Approaches to Studying Inventory (RASI) (Tait & Entwistle 1996), with wording modifications to make the questions fit the research context. As discussed in Section 2.2.2, RASI has been used and revised by many prior researchers in learning approach studies (for example, Duff 1997; Fox, McManus & Winder 2001). The most updated version for business university students was revised by Duff (2004a), who also provided support for the validity and reliability of his revised version of RASI. To find a balance between the length and the validity of the survey, this study adopted two statements from each empirical indicator of surface, deep and achieving learning approaches in the Duff's (2004a) revised RASI revised by, resulting in 24 statements in this section. Six statements from RASI were left out because they had the lowest factor pattern matrix coefficients in learning approach indicators in a prior validity and reliability test conducted with business students (Duff 1997). Table 4.3 lists Duff's RASI statements and the 24 statements used in the survey. The validity of the modified survey items is discussed in Section 4.5.

The survey questions first asked participants to recall their recent learning experience of the accounting course in which they have invested most effort. This was because the study focuses on investigating students' learning. It was assumed that the pattern students show in the course that they invested the most effort captures more characteristics of learning than other courses. This question was close-ended with all accounting subjects in the participants' programs listed in the responses to limit the questions in the research context. The next question then asked the participants to correspond to the 24 learning approach statements with their experience in the chosen accounting subject. The survey questions were:

Please recall your learning experience in this semester. Which accounting subject of the following did you spend most effort in learning?

◯ Accounting Concepts and Methods
◯ Intermediate Financial Reporting
◯ Advanced Financial Accounting
◯ Management Accounting
◯ Accounting Systems and Processes
◯ Auditing and Assurance Services

In the course I selected above, my experience is:

Using the scale below, please indicate to what extent each of the following items corresponds to your learning in an accounting course. There is no good or bad answer, please simply choose the item that truly reflects your experience.

Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Disagree	Strongly Disagree
◯	◯	◯	◯	◯	◯	◯

Table 4.3 Statements for Accounting Students' Learning Approaches

Students' Learning Approach	RASI Statement	Statement Used in Survey	Variable Code
Surface learning approach – relying on memorising	I spend quite a lot of my time repeating or copying out things to help me remember them.	I spend quite a lot of time repeating or copying out things to help me learn them.	A-S-Memorise1
	I find I have to concentrate on memorising a good deal of what I have to learn.	I find I have to concentrate on memorising a good deal of what I have to learn.	A-S-Memorise2
Surface learning approach – concern about coping	Often I feel I am drowning under the sheer amount of material we're having to cope with on this course.	Often I feel I am drowning in the sheer amount of material I have to cope with on this course.	A-S-NotCope1
	Often I lie awake worrying about the amount of work I think I won't be able to do.	Sometimes I worry about whether I will ever be able to cope with the work properly.	A-S-NotCope2
	Sometimes I worry about whether I will ever be able to cope with the work properly.		
	I often seem to panic if I get behind with my work.		
Surface learning approach – difficulty in making sense	I often have trouble making sense of the things I have to remember.	I often have trouble in making sense of the things I have to learn.	A-S-NotMakingSense1
	Often I find myself reading things without really trying to understand them.	Often I find myself reading things without really trying to understand them.	A-S-NotMakingSense2
Surface learning approach – unrelatedness	Although I can remember the facts and details, I often cannot see the overall picture.	Although I can remember facts and details, I often cannot see the overall picture.	A-S-Unrelate1
	I am not sure what is really important, so I try to get down as much as possible during lectures.	I am not really sure what is important, so I try to get down just as much as I can in lectures.	A-S-Unrelate2
Deep learning approach – active interest/critical stance	I am not prepared just to accept things I am told; I have to think them out for myself.	I am not prepared just to accept things I am told, I have to think them out by myself.	A-D-Critical
	Sometimes I find myself thinking about ideas from the course when I am doing other things.	Sometimes I find myself thinking about ideas from the course when I am doing other things.	A-D-Interest
Deep learning approach – Using evidence and logic	When I am reading, I examine the details carefully to see how they fit in with what is being said.	When I am reading, I examine the details carefully to see how they fit in with what is being said.	A-D-Logic1
	It is important to me to be able to follow the argument or see the reasoning behind something.	I look at the evidence carefully and then try to reach my own conclusions about things I am studying.	A-D-Logic2
	I look at the evidence carefully and then try to reach my own conclusion about things I am studying.		
Deep learning approach – looking for meaning	When I am reading an article or book, I try to work out for myself exactly what is being said.	When I am reading course material, I try to work out for myself exactly what is being said.	A-D-Meaning1
	I usually set out to understand for myself the meaning of what we have to learn.	I usually set out to understand for myself the meaning of what I have to learn.	A-D-Meaning2

Students' Learning Approaches	RASI Statements	Statements Used in Survey	Variable Code
Deep learning approach – relating and organising ideas	I try to relate ideas I come across to other topics or courses whenever possible. When I am working on a new topic, I try to see in my own mind how all the ideas fit together. Ideas in course books or articles often set me off on long chains of thought about what I am reading.	I try to relate ideas I come across to other topics or other courses whenever possible.	A-D-Relate1
		When I am working on a new topic, I try to see in my own mind how all the ideas relate to each other.	A-D-Relate2
Achieving learning approach – effort in studying	I put a lot of effort into making sure I have the most important details at my fingertips. I work hard when I am studying and generally manage to keep my mind on what I am doing.	I put a lot of effort into making sure I have the most important details at my fingertips.	A-A-Effort1
		I work hard when I am studying and generally manage to keep my mind on what I am doing.	A-A-Effort2
Achieving learning approach – determination to excel	I know what I want to get out of this course and I am determined to achieve it. It is important for me to feel I am doing as well as I really can on the courses here.	I know what result I want to get out of this course and I am determined to achieve it.	A-A-Excel1
		It is important to me to feel I am doing as well as I really can in the course.	A-A-Excel2
Achieving learning approach – organised studying	One way or another I manage to get hold of books or whatever I need for studying. I make sure I find conditions for studying which let me get on with my work easily. I think I am quite systematic and organised in the way I go about studying.	I make sure I find good conditions for studying which enables me get on with my work easily.	A-A-Organised1
		I think I am quite systematic and organised in the way I go about studying.	A-A-Organised2
Achieving learning approach – time management	I organise my study time carefully to make the best use of it. I generally try to make good use of my time during the day. I work steadily throughout the course, rather than leaving everything to the last minute.	I organise my study time carefully to make the best use of it.	A-A-TimeManage1
		I work steadily throughout the course, rather than leaving everything until the last minute.	A-A-TimeManage2

4.4.10 Additional Information for the Longitudinal Study

The third research question aimed to identify any changes in students' learning orientations and learning approaches. As explained in Section 4.3.2, the same survey was administered at the end of every semester to collect longitudinal data. To track the same participant's responses over three semesters, an identifier was assigned to each participant. With permission from HREC, the last question in the survey asked the students to provide their student ID as the identifier. The benefit of using student ID as the identifier was that it reduced the chance of the participant forgetting or providing a wrong identifier in later semesters. The main disadvantage of this was that participants may be concerned about the safety of their identity. Following the requirement of HREC, the survey provided several reassurances that the provided information would be kept confidential. Eighteen participants completed all questions except this last question. These participants were assigned a random identifier and their responses were treated as if they answered only one survey.

4.5 Validity and Reliability

The survey questions for students' learning orientations and learning approaches were adopted from two widely used surveys – AMS for learning orientations and RASI for learning approaches – with minor word modifications. As discussed in Sections 2.2.2 and 2.2.4, the reliability and validity of AMS and RASI have been supported by prior studies with different student cohorts (Duff 2004a; Zhang et al. 2016). However, since this study modified the two questionnaires, some tests were performed to verify the validity and reliability of the measures.

The face validity of the survey was established before formal use in the study by asking four accounting lecturers and three students to provide feedback on the survey questions. The translated version of the survey was given to several Chinese accounting PhD students to confirm that the survey questions captured the concepts in the theoretical framework. A 7-point Likert scale was used to collect responses because it had been used in the original AMS and can provide higher validity than a 5-point Likert scale (Krosnick & Presser 2010). In addition, as discussed in Section 4.4, several survey questions were designed with validity check opportunities. Table 4.4 summarises these validity checks and the results from the collected responses. The results show that the survey questions have good validity.

Table 4.4 Validity Checks of Survey Questions

Survey Question	Validity Check	Result
Age	The responses should be four-digit numbers.	All responses satisfy this requirement.
Financial support resources	The percentage of the unselected choices in the first part must be 0.	83 (19%) responses do not satisfy this requirement.
	The total percentages of all financial support sources must be 100%.	All but two responses (less than 1%) satisfy this requirement.
Locations of prior education institutions	The Chinese and Chinese-overseas students should enter a Chinese city's name while the non-Chinese students should not enter "China" in Q2.	All responses satisfy these requirements.
	Chinese students should enter a Chinese city's name while the Chinese-overseas students should not enter "China" in Q4.	All but one response satisfies these requirements.
English competency	No one should choose the last option "I cannot speak English at all".	All responses satisfy this requirement.
Prior accounting knowledge	The participants' responses in the second working experience question should not be a longer time period than their response in the previous question.	All but two responses (less than 1%) satisfy this requirement.

The validity of the measures was also supported by some correlations between variables. Kendall's tau correlation coefficients were calculated for the ordinal variables. For example, in the background section, working experience is significant (at the 0.01 level) correlated with age with a positive correlation coefficient of 0.356. This indicated good concurrent validity in the background measures. Some correlations between different sections also indicated good predictive validity. For example, English competency in the background section was significantly (at the 0.01 level) correlated with A-S-NotMakingSense1 in the learning approaches section with a negative correlation coefficient of -0.193. This relationship was consistent with anecdotal observations and previous research findings (Bobe & Cooper 2019), suggesting that the relevant measures are valid. The correlation coefficients between all variables are presented in Chapter Five.

Cronbach's alpha was calculated for the learning orientations and learning approaches measures to evaluate their internal reliability. A Cronbach's alpha of 0.80 is generally adopted as a rule of thumb for an acceptable level of internal reliability, though slightly lower figures have been accepted by many researchers (Bryman 2011). Cronbach's alpha was 0.79 for the learning orientation measures and 0.83 for the learning approach measures. As presented in Tables 4.5 and 4.6, no item caused Cronbach's alpha to decrease to an unacceptable level. The measures were therefore considered reliable.

Table 4.5 Cronbach's Alpha for Learning Orientation Measures

Cronbach's Alpha for All Learning Orientation Measures			0.791
Measure	Cronbach's Alpha if Measure Deleted	Measure	Cronbach's Alpha if Measure Deleted
1	0.781	8	0.763
2	0.782	9	0.799
3	0.778	10	0.804
4	0.758	11	0.801
5	0.766	12	0.779
6	0.766	13	0.777
7	0.767	14	0.761

Table 4.6 Cronbach's Alpha for Learning Approach Measures

Cronbach's Alpha for All Learning Approaches Measures			0.832
Measure	Cronbach's Alpha if Measure Deleted	Measure	Cronbach's Alpha if Measure Deleted
1	0.831	13	0.821
2	0.83	14	0.823
3	0.832	15	0.824
4	0.827	16	0.823
5	0.833	17	0.824
6	0.83	18	0.823
7	0.826	19	0.82
8	0.824	20	0.819
9	0.831	21	0.827
10	0.828	22	0.824
11	0.823	23	0.823
12	0.82	24	0.819

4.6 Data Analysis

4.6.1 Data Coding

The collected survey responses were first coded into numerical values. The coding details are presented in Table 4.7. It should be noted that the education institution locations for some participants are in rural areas that were not considered in the 1 - 247 city ranking. These locations were coded as 248.

Table 4.7 Data Coding Details

Variable Name	Coding Detail		Data Type
	Response	Value	
Gender	Female	2	Categorical – Nominal
	Male	1	
	Rather not say	0	
Age	Year of birth: 1969-1999	Year of survey – Year of birth: 21-48	Continuous – Ratio
Financial support from family	% of total tuition fee and living costs	0% to 100%	Continuous – Ratio
Location of Education Institutions	City name: texts	City ranking: 1-248	Categorical – Ordinal
University Tier	"985" universities	6	Categorical – Ordinal
	"211" universities	5	
	Other tier 1 universities	4	
	Tier 2 universities	3	
	Tier 3 universities	2	
	Colleges	1	
Comparative GPA	Top 10% of the class	7	Categorical – Ordinal
	Top 10% – 20% of the class	6	
	Top 20% – 40% of the class	5	
	Top 40% – 60% of the class	4	
	Bottom 20% – 40% of the class	3	
	Bottom 10% – 20% of the class	2	
	Bottom 10% of the class	1	
English Competency	English as first language	7	Categorical – Ordinal
	IELTS 8.0 equivalent	6	
	IELTS 7.0 equivalent	5	
	IELTS 6.0 equivalent	4	
	IELTS 5.0 equivalent	3	
	Below IELTS 5.0	2	
	Cannot speak English at all	1	
Academic Accounting Knowledge	Bachelor degree in accounting	7	Categorical – Ordinal
	Diploma in accounting	6	
	Bachelor degree in business but not in accounting	5	
	Diploma in business but not in accounting	4	
	Completed some accounting training courses only	3	
	Some self-taught knowledge only	2	
	No accounting knowledge at all	1	
Working Experience	More than 3 years in accounting	7	Categorical – Ordinal
	1 to 3 years in accounting	6	
	Less than 1 year in accounting	5	
	More than 3 years in non-accounting	4	
	1 to 3 years in non-accounting	3	
	Less than 1 year in non-accounting	2	
	No working experience	1	
Likert scales	Strongly agree	7	Categorical – Ordinal
	Agree	6	
	Somewhat agree	5	
	Neither agree nor disagree	4	
	Somewhat disagree	3	
	Disagree	2	
	Strongly disagree	1	

HREC required the deletion of a participant's responses if he/she did not agree to have their information used in this study. One participant's responses were deleted following this requirement. All other participants who completed at least one section of one survey have had their responses saved and coded as illustrated in Table 4.7. No participant was identified as an outlier since most variables were ordinal and did not follow a normal distribution. Details of the distribution of variables are provided in the next subsection.

4.6.2 Exploratory Analysis

The first step in data analysis was to test for linearity and normality. The Kolmogorov–Smirnov and Shapiro–Wilk tests were conducted for all ordinal variables. As presented in Table 4.8, the results show that none of the ordinal variables follows a normal distribution. This suggests that only non-parametric tests can be performed with these variables.

Descriptive statistics for the Chinese students' responses were generated as a part of the answers to the first research question and are presented in Chapter Five. Descriptive statistics were also generated for the other participants' responses for use when describing the Chinese students' backgrounds, learning orientations and learning approaches in comparative terms. Mann-Whitney U tests were performed to compare the distributions of the variables between different student groups. This statistic was selected because it allows the comparison of distributions between independent groups of different size. It had also been used in a prior study to compare Chinese and Australian students' learning approaches (Cooper 2004). The test statistics were produced by SPSS for students' gender, age, GPA ranking, financial support sources, English competency, prior academic accounting knowledge, prior working experience, learning orientations and learning approaches.

Table 4.8 Tests of Normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Gender	0.445	316	0.000	0.588	316	0.000
City of University	0.297	316	0.000	0.522	316	0.000
City of High School	0.236	316	0.000	0.727	316	0.000
Level of Uni	0.214	312	0.000	0.907	312	0.000
Comparative GPA	0.192	249	0.000	0.884	249	0.000
English Competency	0.406	316	0.000	0.686	316	0.000
Academic Accounting Knowledge	0.252	316	0.000	0.810	316	0.000
Working Experience	0.294	316	0.000	0.758	316	0.000
O-E-Identified1	0.222	293	0.000	0.891	293	0.000
O-E-Identified2	0.268	293	0.000	0.868	293	0.000
O-E-Introjected1	0.243	293	0.000	0.880	293	0.000
O-E-Introjected2	0.184	293	0.000	0.930	293	0.000
O-E-Regulation1	0.265	293	0.000	0.863	293	0.000
O-E-Regulation2	0.180	293	0.000	0.913	293	0.000
O-I-Accomplishment1	0.185	293	0.000	0.912	293	0.000
O-I-Accomplishment2	0.200	293	0.000	0.912	293	0.000
O-I-Stimulation1	0.159	293	0.000	0.927	293	0.000
O-I-Stimulation2	0.212	293	0.000	0.918	293	0.000
O-I-ToKnow1	0.202	293	0.000	0.923	293	0.000
O-I-ToKnow2	0.195	293	0.000	0.909	293	0.000
O-A-LackofDirection	0.183	293	0.000	0.908	293	0.000
O-A-LostDirection	0.140	293	0.000	0.943	293	0.000
A-S-Memorise1	0.220	308	0.000	0.908	308	0.000
A-S-Memorise2	0.233	308	0.000	0.908	308	0.000
A-S-NotCope1	0.213	308	0.000	0.932	308	0.000
A-S-NotCope2	0.219	308	0.000	0.903	308	0.000
A-S-NotMakingSense1	0.258	308	0.000	0.915	308	0.000
A-S-NotMakingSense2	0.184	308	0.000	0.938	308	0.000
A-S-Unrelate1	0.221	308	0.000	0.924	308	0.000
A-S-Unrelate2	0.226	308	0.000	0.916	308	0.000
A-D-Critical	0.240	308	0.000	0.876	308	0.000
A-D-Interest	0.225	308	0.000	0.926	308	0.000
A-D-Logic1	0.203	308	0.000	0.903	308	0.000
A-D-Logic2	0.210	308	0.000	0.900	308	0.000
A-D-Meaning1	0.234	308	0.000	0.868	308	0.000
A-D-Meaning2	0.182	308	0.000	0.916	308	0.000
A-D-Relate1	0.227	308	0.000	0.890	308	0.000
A-D-Relate2	0.247	308	0.000	0.883	308	0.000
A-A-Effort1	0.222	308	0.000	0.882	308	0.000
A-A-Effort2	0.228	308	0.000	0.904	308	0.000
A-A-Excel1	0.229	308	0.000	0.900	308	0.000
A-A-Excel2	0.215	308	0.000	0.912	308	0.000
A-A-Organised1	0.292	308	0.000	0.850	308	0.000
A-A-Organised2	0.222	308	0.000	0.923	308	0.000
A-A-TimeManage1	0.199	308	0.000	0.905	308	0.000
A-A-TimeManage2	0.206	308	0.000	0.922	308	0.000

In addition to comparing the responses for each individual variable, data analysis included calculating correlations to test for the existence of relationships between the variables in the same component of learning (backgrounds, learning orientations and learning approaches) for Chinese students. For the continuous variables, Pearson's correlation

coefficients were used. However, as shown in Figures 4.1 to 4.5, scatterplots show that the relationships between the continuous variables was not linear and did not show any particular pattern. In addition, the histograms (Figures 4.6 to 4.11) show that the continuous variables did not follow a normal distribution. As a result, Pearson's correlation coefficients would not be able to provide a meaningful conclusion in this study. Both Spearman's correlation coefficient and Kendall's tau correlation coefficient can be used when variables do not meet the linearity and normality requirement (Field 2017). Kendall's tau was chosen because it is more suitable when there are multiple tied rankings in the responses and a small sample size (Field 2017, p. 355). Kendall's tau is also suitable for calculating correlations between ordinal variables. As a result, Kendall's tau was used to show correlations between all continuous and ordinal variables for Chinese students. One variable (financial support – sponsorship) was excluded in the analysis because all Chinese students answered "0" for this question. The correlations and implications are discussed in Chapter Five.

Figure 4.1 Scatterplot of Chinese Students' Age and Financial Support from Family

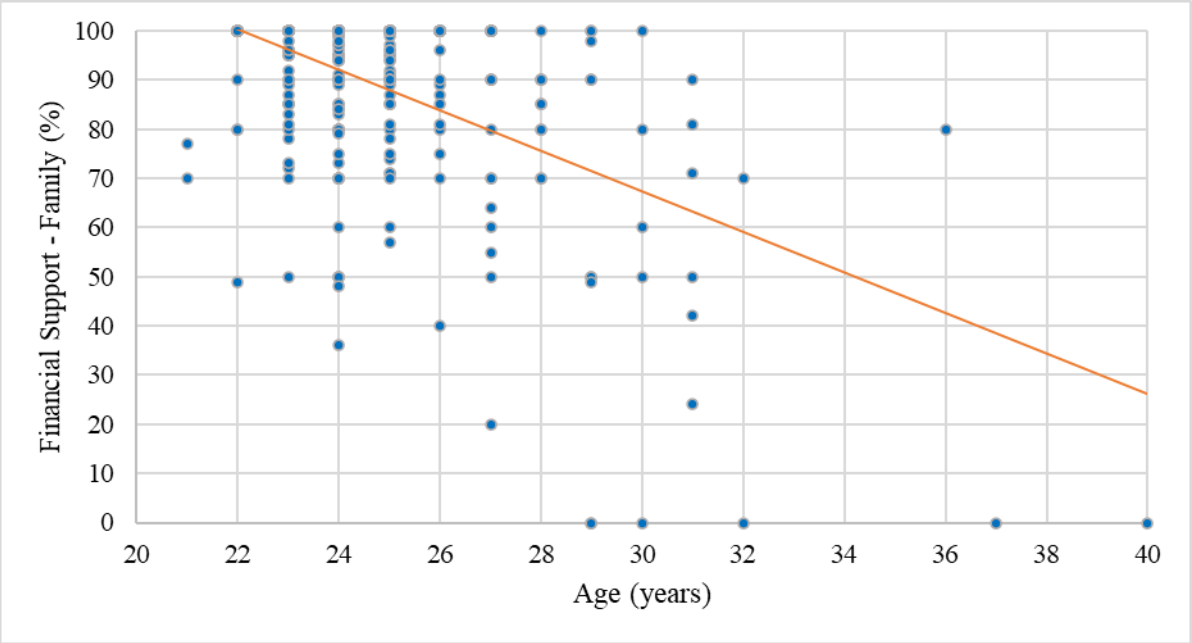


Figure 4.2 Scatterplot of Chinese Students' Age and Financial Support from Savings

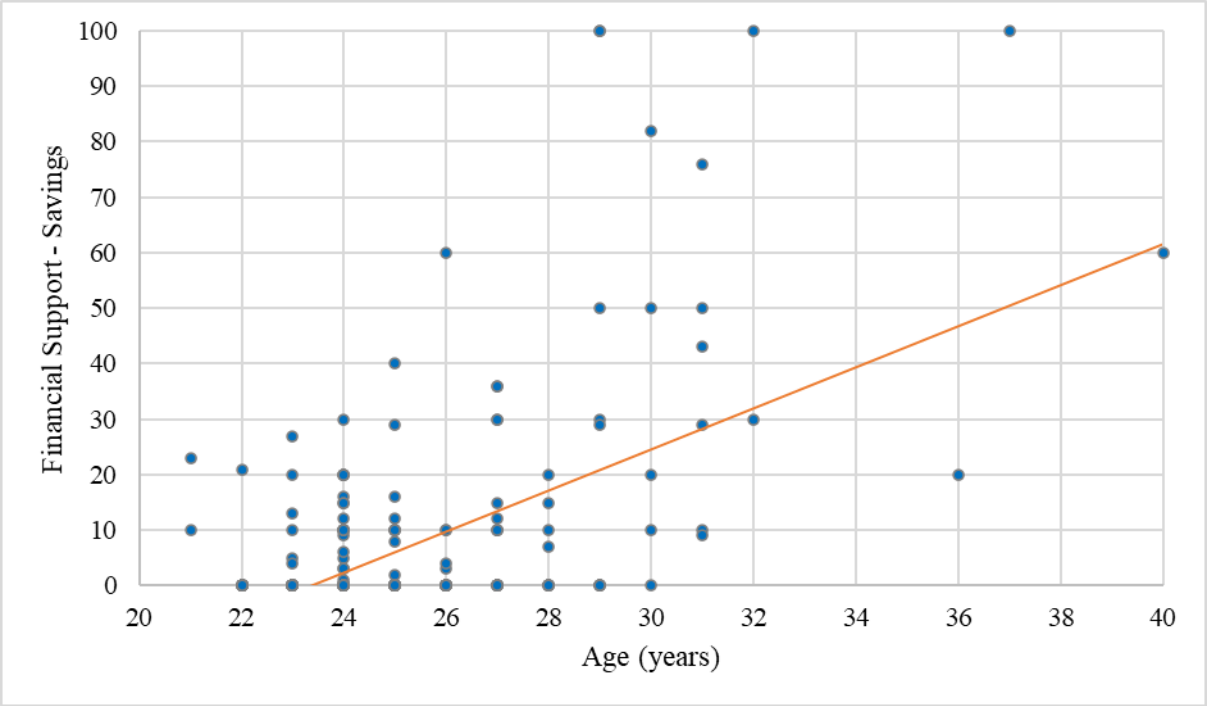


Figure 4.3 Scatterplot of Chinese Students' Age and Financial Support from Part-Time Work

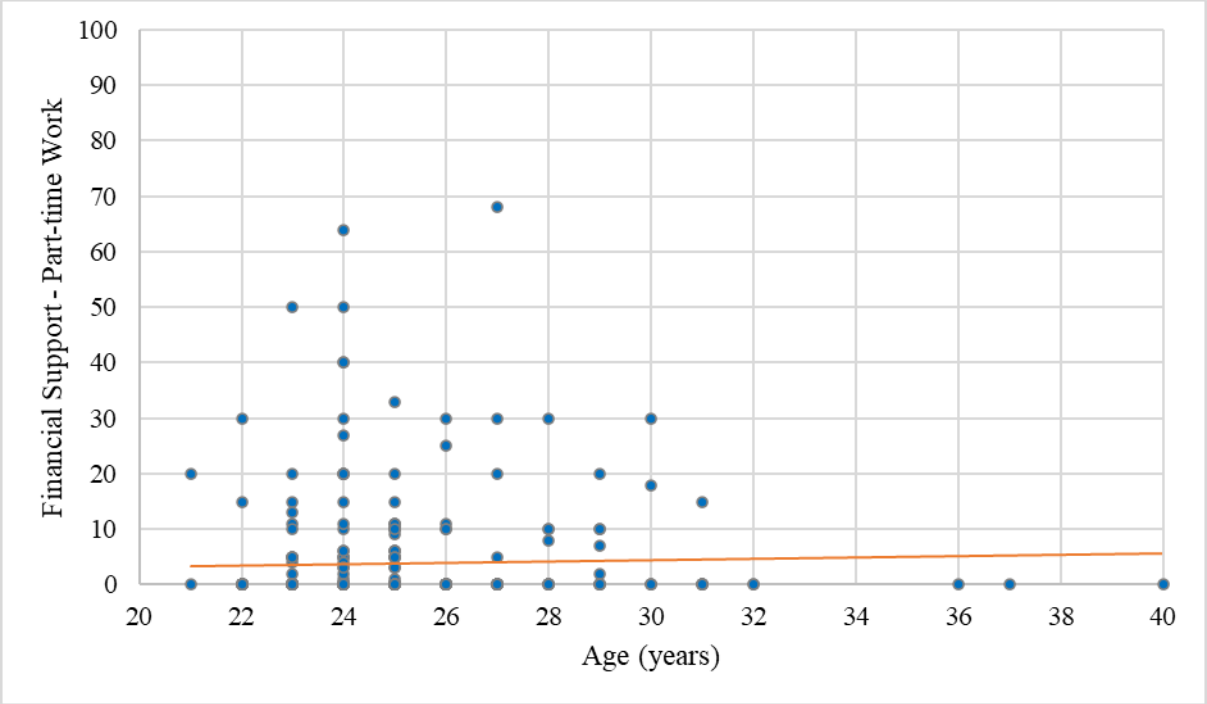


Figure 4.4 Scatterplot of Chinese Sstudents' Age and Financial Support from Scholarships

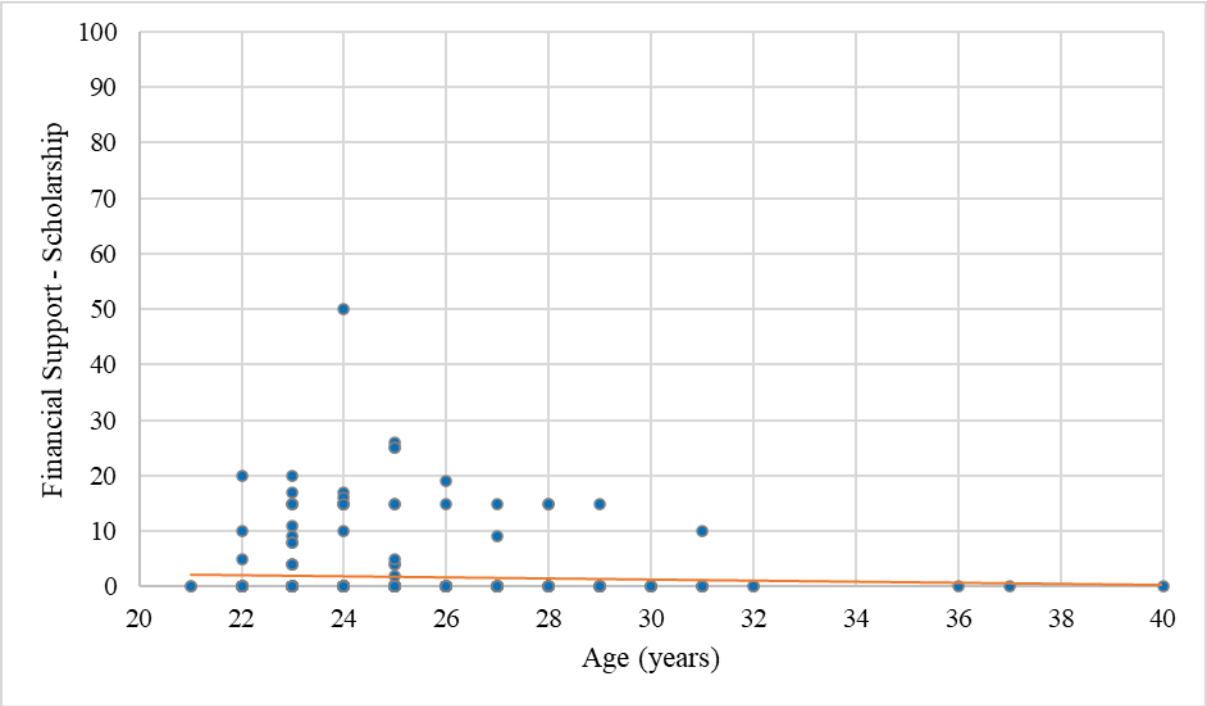


Figure 4.5 Scatterplot of Chinese Students' Age and Financial Support from Borrowings

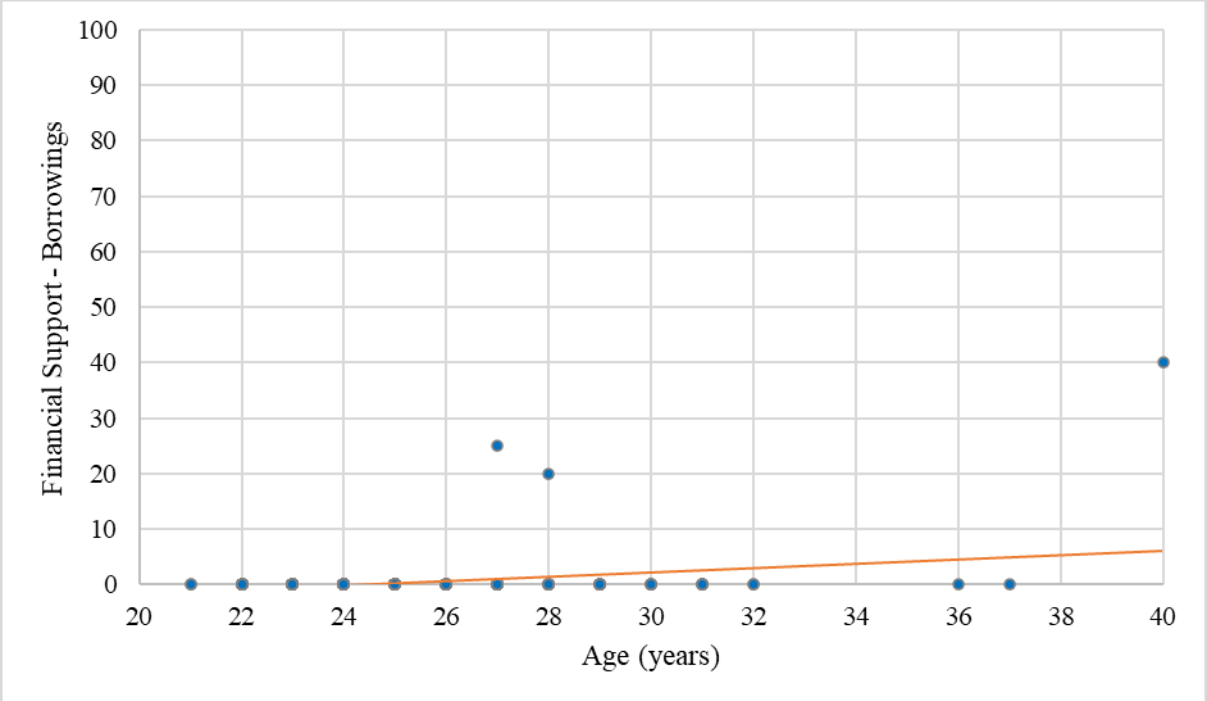


Figure 4.6 The Age Distribution of Chinese Students in the Sample

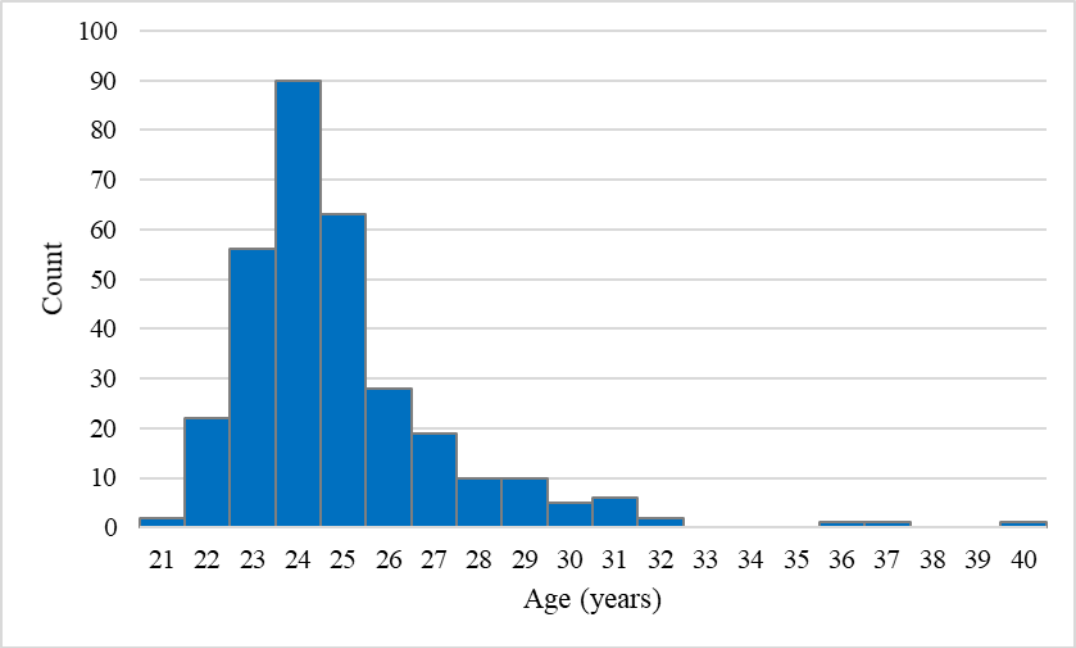


Figure 4.7 The Distribution of Chinese Students' Financial Support from Family

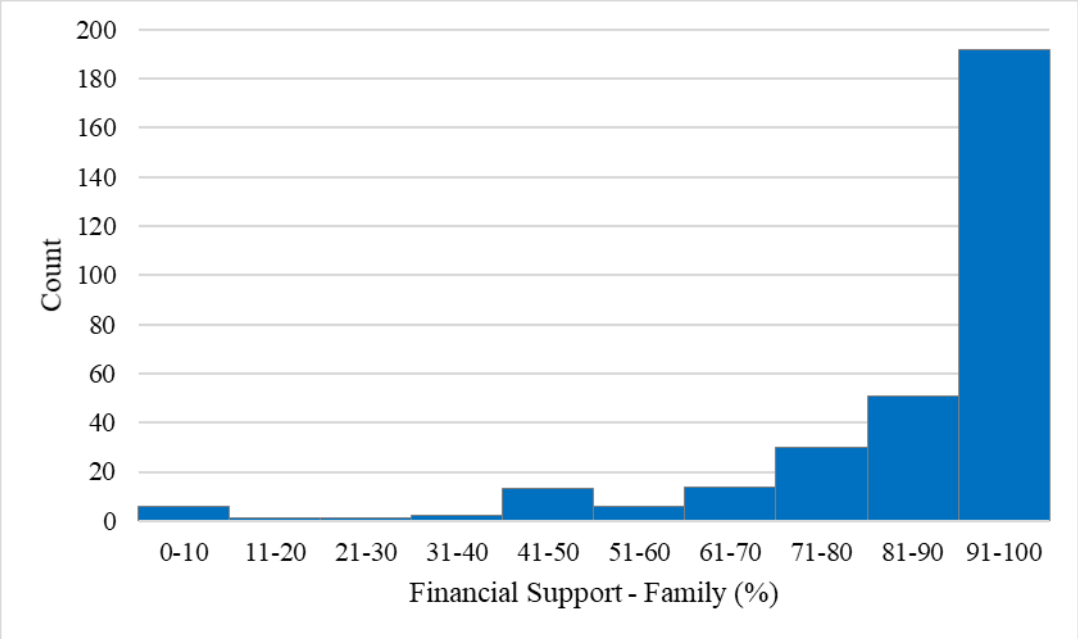


Figure 4.8 The Distribution of Chinese Students' Financial Support from Savings

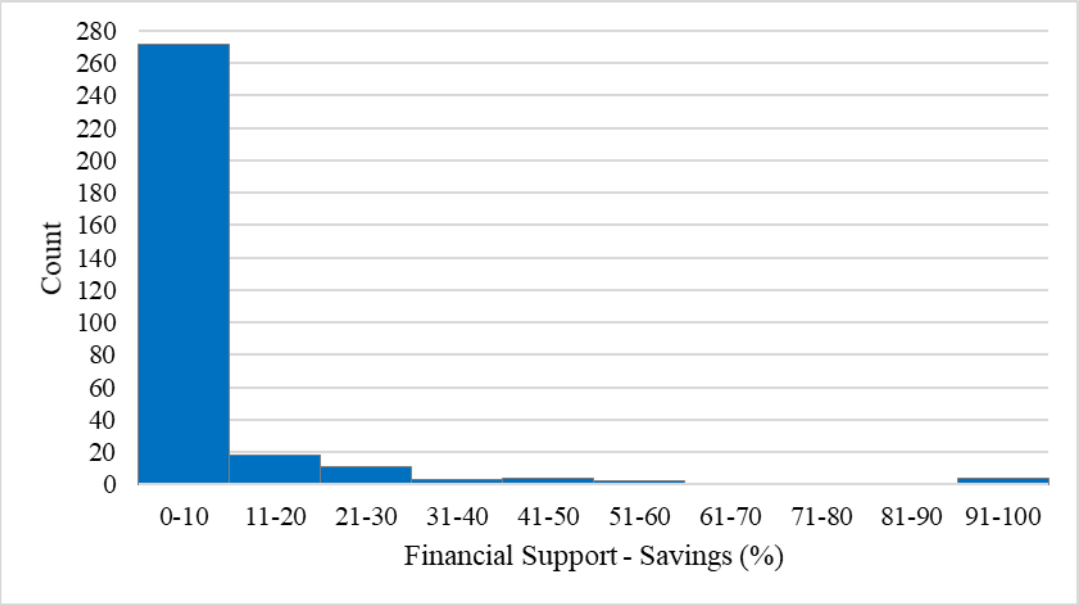


Figure 4.9 The Distribution of Chinese Students' Financial Support from Part-Time Work

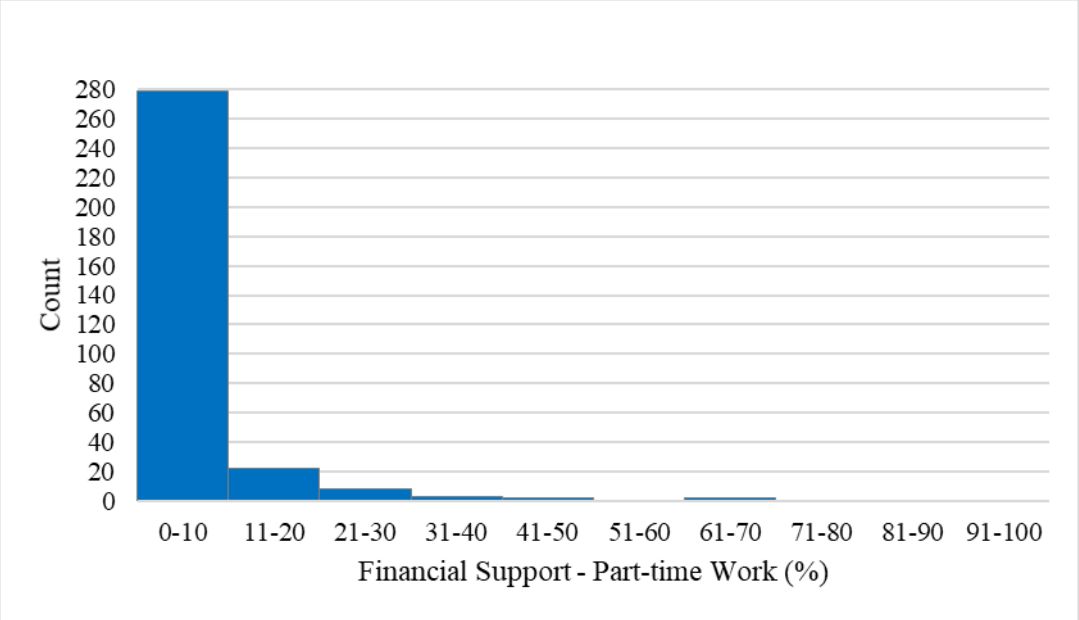


Figure 4.10 The Distribution of Chinese Students' Financial Support from Scholarships

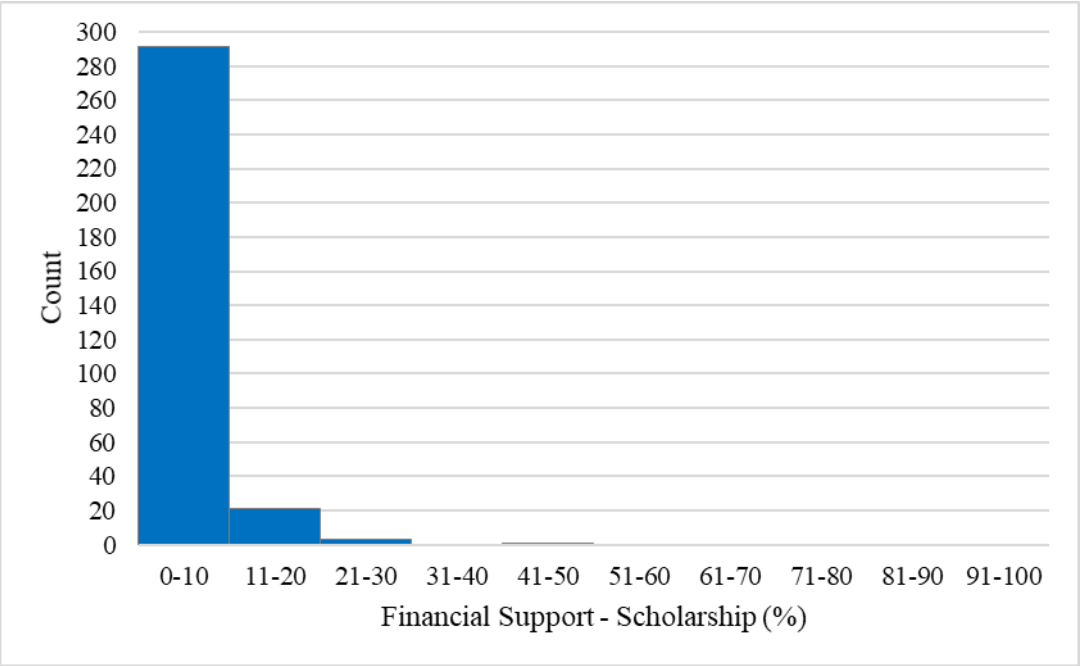
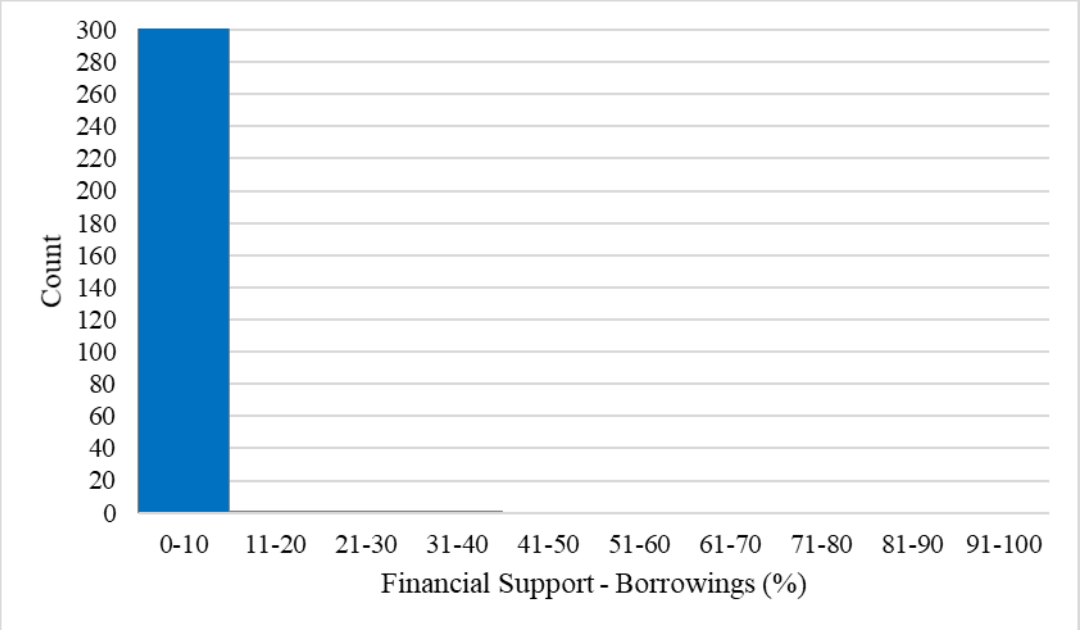


Figure 4.11 The Distribution of Chinese Students' Financial Support from Borrowings



4.6.3 Hypotheses Tests

As shown in Sections 4.6.1 and 4.6.2, all learning orientations and learning approaches variables were ordinal and do not follow a normal distribution. As a result, only non-parametric tests can be used to test the hypotheses (Field 2017). All tests were performed in SPSS.

Mann-Whitney U tests were performed to test H1 and H2 because female and male students do not have the same number of responses (Field 2017). In the tests for H1, all Chinese students' completed responses for the background and learning approach sections were included. Of the 478 responses used, 110 participants completed more than one survey over their two years' program and provided different responses to describe their learning approaches in the relevant current semester. These responses were included in the analysis because they help provide a comprehensive view of Chinese students' learning approaches across different accounting subjects and semesters. In the test for H2, the data were trimmed to delete duplicated observations because 23 participants completed multiple surveys in different semesters but provided the same responses to the learning orientation questions. The duplicated observations were excluded from the H2 test because it tests the difference between genders, not semesters. All unique responses were included in the analysis.

H3 to H21 involve the relationship between the background variables and learning orientations or learning approaches. Since the dependent variables (learning orientations and approaches) are all ordinal variables, multinomial logistic regressions were performed to construct the models in the hypothesis tests (Field 2017). Logistic regression was selected because it is a suitable model to predict categorical outcomes from categorical and continuous predictors. When the relationship between independent and dependent variables is not linear, which applied in this study, logistic regression can express the non-linear relationship in a linear way by transforming the data to logarithmic terms (Field 2017, p. 880). Although the logistic regression model does not require the assumption of a linear relationship between variables, it still requires the data to have no multicollinearity. To ensure this assumption is satisfied, before performing the logistic regressions, variance inflation factors (VIFs) were calculated to examine whether multicollinearity would bias the regression model (Field 2017). As presented in Table 4.9, all VIFs are between 1 and 10, indicating that there is no multicollinearity between the independent variables.

Table 4.9 Variance Inflation Factors (VIFs)

Background Variable	VIF	Learning Orientation Variable	VIF
Age	1.735	O-E-Identified1	1.464
City of University	1.152	O-E-Identified2	1.638
City of High School	1.145	O-E-Introjected1	1.379
Level of Uni	1.218	O-E-Introjected2	1.352
Comparative GPA	1.049	O-E-Regulation1	1.418
Financial support from family	1.346	O-E-Regulation2	1.065
English Competency	1.060	O-I-Accomplishment1	2.982
Academic Accounting Knowledge	1.137	O-I-Accomplishment2	2.389
Working Experience	1.577	O-I-Stimulation1	2.252
		O-I-Stimulation2	2.734
		O-I-ToKnow1	2.780
		O-I-ToKnow2	2.009
		O-A-1	1.289
		O-A-2	1.276

H22 and H23 involved differences in learning orientations and learning approaches between three related groups, which were the same students' survey responses from three different semesters. Friedman's 2-way ANOVA test was selected as the appropriate non-parametric test in such conditions. Friedman's 2-way ANOVA test was used because it can compare differences between multiple related groups with the same number of observations. (Field 2017, p. 321). The data used to test H22 and H23 fit this description.

To test the hypotheses, 62 regression models were formed following the study's theoretical framework. The models and the relevant hypotheses are listed in Tables 4.10 to 4.16.

Table 4.10 Regression Models for Background and Learning Orientation Variables

Model		Hypotheses Tested
(1)	O-E-Identified1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H3, H6, H9, H11, H14, H15
(2)	O-E-Identified2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H3, H6, H9, H11, H14, H15
(3)	O-E-Introjected1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H3, H6, H9, H11, H14, H15
(4)	O-E- Introjected2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H3, H6, H9, H11, H14, H15
(5)	O-E-Regulation1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H3, H6, H9, H11, H14, H15

(6)	O-E-Regulation2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H3, H6, H9, H11, H14, H15
(7)	O-I-Accomplishment1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H4, H11, H14, H15
(8)	O-I-Accomplishment2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H4, H11, H14, H15
(9)	O-I-Stimulation1= $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H4, H11, H14, H15
(10)	O-I-Stimulation2= $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H4, H11, H14, H15
(11)	O-I-ToKnow1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H4, H11, H14, H15
(12)	O-I-ToKnow2= $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H4, H11, H14, H15
(13)	O-A-LackofDirection = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H7, H11, H14, H15
(14)	O-A-LostDirection = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H7, H11, H14, H15

Table 4.11 Regression Models for Background and Surface Approach Variables

Model		Hypotheses Tested
(15)	A-S-Memorise1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H8, H10, H12, H13, H16
(16)	A-S-Memorise2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H8, H10, H12, H13, H16
(17)	A-S-NotCope1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H8, H10, H12, H13, H16
(18)	A-S-NotCope2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H8, H10, H12, H13, H16
(19)	A-S-NotMakingSense1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H8, H10, H12, H13, H16

(20)	A-S-NotMakingSense2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H8, H10, H12, H13, H16
(21)	A-S-Unrelate1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H8, H10, H12, H13, H16
(22)	A-S-Unrelate2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H8, H10, H12, H13, H16

Table 4.12 Regression Models for Background and Deep Approach Variables

Model		Hypotheses Tested
(23)	A-D-Critical = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H5, H12, H16
(24)	A-D-Interest = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H5, H12, H16
(25)	A-D-Logic1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H5, H12, H16
(26)	A-D-Logic2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H5, H12, H16
(27)	A-D-Meaning1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H5, H12, H16
(28)	A-D-Meaning2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H5, H12, H16
(29)	A-D-Relate1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H5, H12, H16
(30)	A-D-Relate2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H5, H12, H16

Table 4.13 Regression Models for Background and Achieving Approach Variables

Model		Hypotheses Tested
(31)	A-A-Effort1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H12, H16
(32)	A-A-Effort2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H12, H16

(33)	A-A-Excel1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H12, H16
(34)	A-A-Excel2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H12, H16
(35)	A-A-Organised1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H12, H16
(36)	A-A-Organised2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H12, H16
(37)	A-A-TimeManage1 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H12, H16
(38)	A-A-TimeManage2 = $\beta_0 + \beta_1$Age + β_2CityofHighSchool + β_3CityofUniversity + β_4LevelofUni + β_5GPA + β_6FS-Parent + β_7English + β_8AccKnow + β_9Work + ε	H12, H16

Table 4.14 Regression Models for Learning Orientation and Surface Approaches

Model		Hypotheses Tested
(39)	A-S-Memorise1 = $\beta_{10} + \beta_{11}$O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H17, H21
(40)	A-S-Memorise2 = $\beta_{10} + \beta_{11}$O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H17, H21
(41)	A-S-NotCope1 = $\beta_{10} + \beta_{11}$O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H17, H21
(42)	A-S-NotCope2 = $\beta_{10} + \beta_{11}$O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H17, H21

	Model	Hypotheses Tested
(43)	A-S-NotMakingSense1 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O- E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E- Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I- Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I- ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A- LackofDirection + β_{24}O-A-LostDirection + ε	H17, H21
(44)	A-S-NotMakingSense2 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O- E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E- Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I- Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I- ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A- LackofDirection + β_{24}O-A-LostDirection + ε	H17, H21
(45)	A-S-Unrelate1 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H17, H21
(46)	A-S-Unrelate2 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H17, H21

Table 4.15 Regression Models for Learning Orientation and Deep Approaches

	Model	Hypothesis Tested
(47)	A-D-Critical = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H18
(48)	A-D-Interest = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H18
(49)	A-D-Logic1 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-	H18

Model			Hypothesis Tested
		Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	
(50)	A-D-Logic2 =	β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H18
(51)	A-D-Meaning1 =	β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H18
(52)	A-D-Meaning2 =	β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H18
(53)	A-D-Relate1 =	β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H18
(54)	A-D-Relate2 =	β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H18

Table 4.16 Regression Models for Learning Orientation and Achieving Approaches

Model			Hypotheses Tested
(55)	A-A-Effort1 =	β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H19, H20

Model		Hypotheses Tested
(56)	A-A-Effort2 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H19, H20
(57)	A-A-Excel1 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H19, H20
(58)	A-A-Excel2 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O-E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E-Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H19, H20
(59)	A-A-Organised1 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O- E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E- Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H19, H20
(60)	A-A-Organised2 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O- E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E- Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I-Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I-ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A-LackofDirection + β_{24}O-A-LostDirection + ε	H19, H20
(61)	A-A-TimeManage1 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O- E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E- Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I- Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I- ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A- LackofDirection + β_{24}O-A-LostDirection + ε	H19, H20
(62)	A-A-TimeManage2 = β_{10} + β_{11}O-E-Identified1 + β_{12}O-E-Identified2 + β_{13}O- E-Introjected1 + β_{14}O-E-Introjected2 + β_{15}O-E- Regulation1 + β_{16}O-E-Regulation2 + β_{17}O-I- Accomplishment1 + β_{18}O-I-Accomplishment2 + β_{19}O-I-Stimulation1 + β_{20}O-I-Stimulation2 + β_{21}O-I- ToKnow1 + β_{22}O-I-ToKnow2 + β_{23}O-A- LackofDirection + β_{24}O-A-LostDirection + ε	H19, H20

In the regression analysis, some categories of the dependent variables have very few responses, where some independent variables' values are constant in that category. When these conditions exist in the regression, SPSS presents the following warning in the multinominal logistic regression result: "Unexpected singularities in the Hessian matrix are encountered. This indicates that either some predictor variables should be excluded or some categories should be merged." Following this warning, the categories that have constant independent variable values were merged with the neighbouring category of the dependent variable. If the merged category still had a constant independent variable, the category was further merged to the next neighbouring variable, until the independent variable of each category was not a constant. The merge details are presented in Table 4.17.

Table 4.17 Variable Category Merge Details

Dependent Variable	Constant Independent Variables	Category of Dependent Variable	Merged to
O-E-Identified1	English	Strongly disagree	Disagree
O-E-Identified2	FS-Parent	Disagree	Somewhat disagree*
O-E-Regulation1	FS-Parent, English	Strongly disagree, Disagree	Somewhat disagree
O-I-Accomplishment1	English	Strongly disagree	Disagree
O-I-ToKnow1	FS-Parent	Strongly disagree	Disagree
O-I-ToKnow2	Age, FS-Parent, English, Work	Strongly disagree	Disagree
A-S-Memorise1	English, O-E-Identified2, O-E-Regulation1, O-E-Regulation2, O-I-Accomplishment2	Strongly disagree	Disagree
A-S-Memorise2	FS-Parent, English, O-E-Introjected2, O-I-Stimulation1	Strongly disagree	Disagree
A-S-Unrelate2	O-E-Regulation2	Strongly disagree	Disagree
A-D-Logic1	FS-Parent	Strongly disagree	Disagree
A-D-Meaning2	O-E-Regulation2, O-A-LackofDirection, O-A-LostDirection	Strongly disagree	Disagree
A-D-Relate2	FS-Parent, English	Strongly disagree, Disagree	Somewhat disagree
A-A-Effort2	Age, English, O-E-Regulation1, O-I-Stimulation1	Strongly disagree	Disagree
A-A-Organised1	English	Disagree	Somewhat disagree*
A-A-Organised2	All independent variables**	Strongly disagree	Disagree
A-A-TimeManage1	O-E-Identified1, O-E-Identified2, O-E-Introjected2, O-I-Accomplishment2, O-I-Stimulation1, O-I-ToKnow2	Strongly disagree	Disagree
A-A-TimeManage2	FS-Parent, English, AccKnow	Strongly disagree	Disagree
*There is no response in "strongly disagree" categories for these two variables. **There is only one response in the category			

4.7 Summary

This chapter explained the study's research design and methodology. It started with an introduction and justification for the research method, which includes longitudinal surveys for data collection and quantitative methods for data analysis. Data collection procedure was explained, including the sample selection criteria, the survey distribution method, the compromised sample size because of COVID-19's impact and details of the ethics clearance. The survey questions were presented with details of how the variables were measured. This was followed by a discussion of the validity and reliability of the collected data. Finally, the data analysis methods used to answer the research questions were explained and justified, including the data coding, the quantitative analysis methods and regression models. The study's findings are presented in the next chapter.

Chapter Five

First Research Question – Findings

5.1 Introduction

This chapter presents the data analysis, test results and answers to the first research question: What are the backgrounds, learning orientations and learning approaches of Chinese students in Australian postgraduate accounting programs? This question is answered with the descriptive statistics of Chinese students' survey responses and a comparison of the descriptive statistics between Chinese students and other student groups.

5.2 Chinese Students' Background Characteristics

This section describes Chinese students' background characteristics using comparative terms. The comparison was made between Chinese students (who completed undergraduate study in mainland China), Chinese-overseas students (who completed high school in mainland China and completed undergraduate study outside mainland China) and non-Chinese students (who completed high school and undergraduate education outside mainland China).

5.2.1 Gender

As shown in Figure 5.1, of the 316 Chinese students who completed the background section of the survey, 71% (224) were female, 28% (90) are male, and less than 1% (2) chose not to disclose their gender. A Chi-square test shows that the gender distribution of Chinese students is significantly different from other student groups at the 0.05 level[3]. The proportion of female Chinese students is higher than the other student groups. The frequency statistics and the Chi-square test statistics are presented in Table 5.1.

[3] A significance level of 0.05 is chosen for all comparison tests between student groups as it is a commonly used significance level in quantitative analysis. The sample size is also adequate.

Figure 5.1 The Gender Distribution of Chinese Students

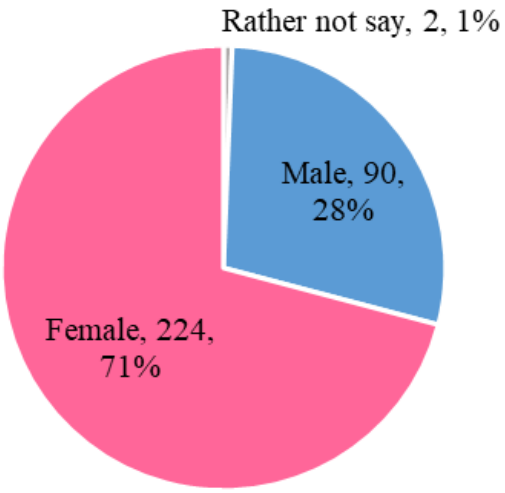


Table 5.1 The Statistics for the Gender of the Different Groups

	Chinese Students	Chinese Overseas Students	Non-Chinese Students
Female	70.89%	57.66%	53.62%
Male	28.48%	42.34%	46.38%
Rather not say	0.63%	0.00%	0.00%
Total N	316	43	69
Degree of Freedom	-	2	2
Chi-Square Test Statistic	-	12.048	11.947
Significance	-	0.002	0.003

5.2.2 Age

The age of the Chinese students ranges from 21 to 40 years. The distribution (Figure 5.2) is heavily skewed to the right with a median of 24. As shown in Figure 5.3, compared with the other student groups, Chinese students are younger. A Mann-Whitney U test shows that the age distribution of Chinese students is significantly different from other student groups at the 0.05 level. The descriptive statistics and Mann-Whitney U test statistics are presented in Table 5.2.

Figure 5.2 The Age Distribution of Chinese Students in the Study

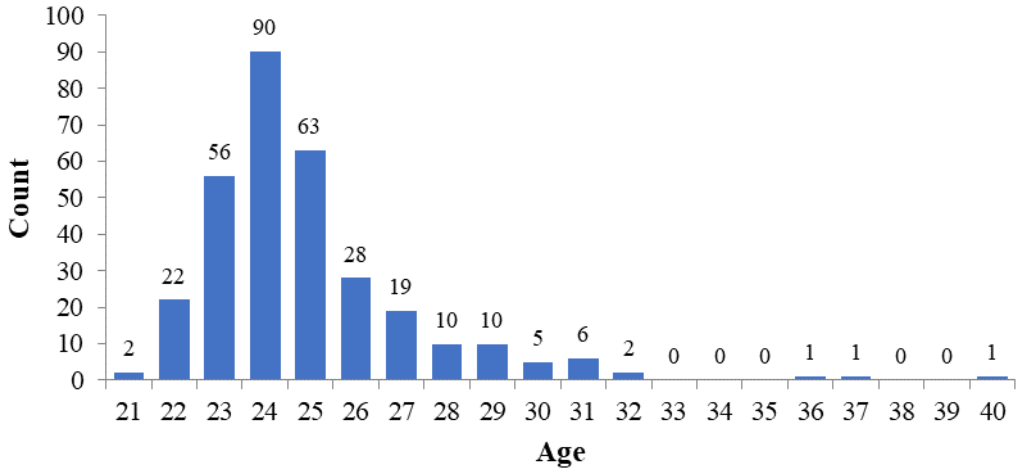


Figure 5.3 The Age Distribution of All Student Groups in the Study

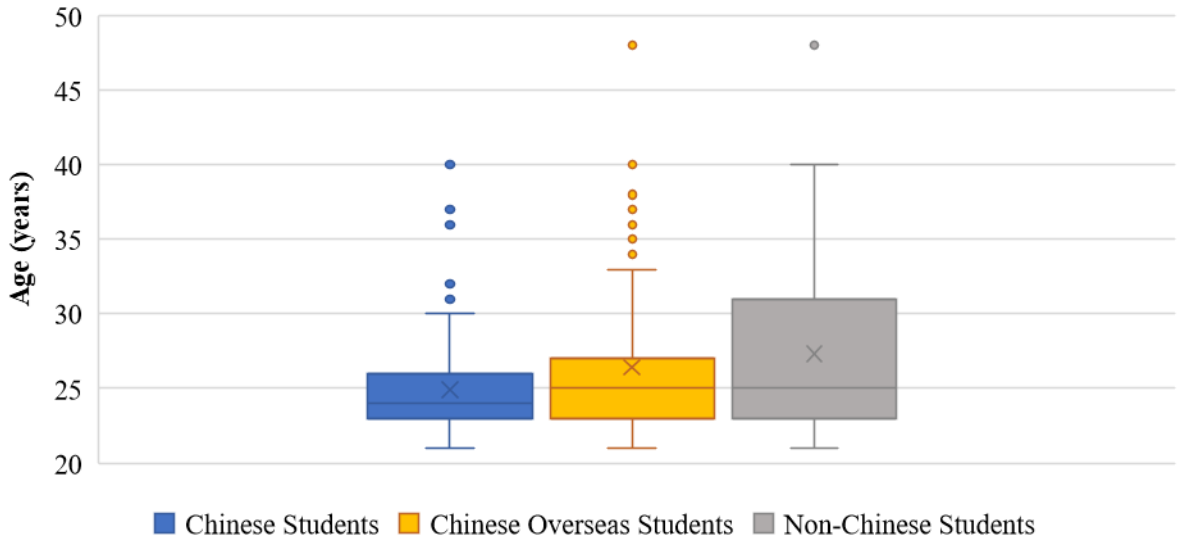


Table 5.2 The Age Statistics of All Groups in the Study

	Chinese Students	Chinese Overseas Students	Non-Chinese Students
Total N	316	43	69
Mean	24.91	26.41	27.32
Median	24	25	25
Mode	24	23	25
Standard Deviation	2.407	4.678	5.537
Skewness	2.140	1.729	1.264
Kurtosis	7.752	3.832	1.626
Mann-Whitney U Test Statistic	-	2.133	2.376
Significance	-	0.033	0.017

5.2.3 Locations of Prior Education Institutions

The Chinese students completed their undergraduate degree and high school education in a wide variety of locations from the most developed cities (ranked first) to the most rural areas (not listed on the city ranking and coded as the 248). The distributions of both high school and university locations are heavily skewed to the right with medians of 27 and 13.5. This indicates that most Chinese students are from more developed areas where education resources are easier to access. Figures 5.4 and 5.5 present the distribution for city of high school and university, respectively. To observe the movement trend of Chinese students from high school to university, a movement score was calculated using the ranking of the high school location less the ranking of the university location. A positive number indicates movement from a less developed area to a more developed area and vice versa. The movement has a median of 0 and a slightly right-skewed distribution. Although the movement distribution has a high standard deviation (81.60) and a wide range (from -241 to 247), as presented in Figure 5.6, most Chinese students moved to more developed areas. In addition, 40.2% (127) of the Chinese students stayed in the same city. The descriptive statistics for the locations of Chinese students' prior educational institutions are presented in Table 5.3.

Figure 5.4 City of High School Distribution of Chinese Students

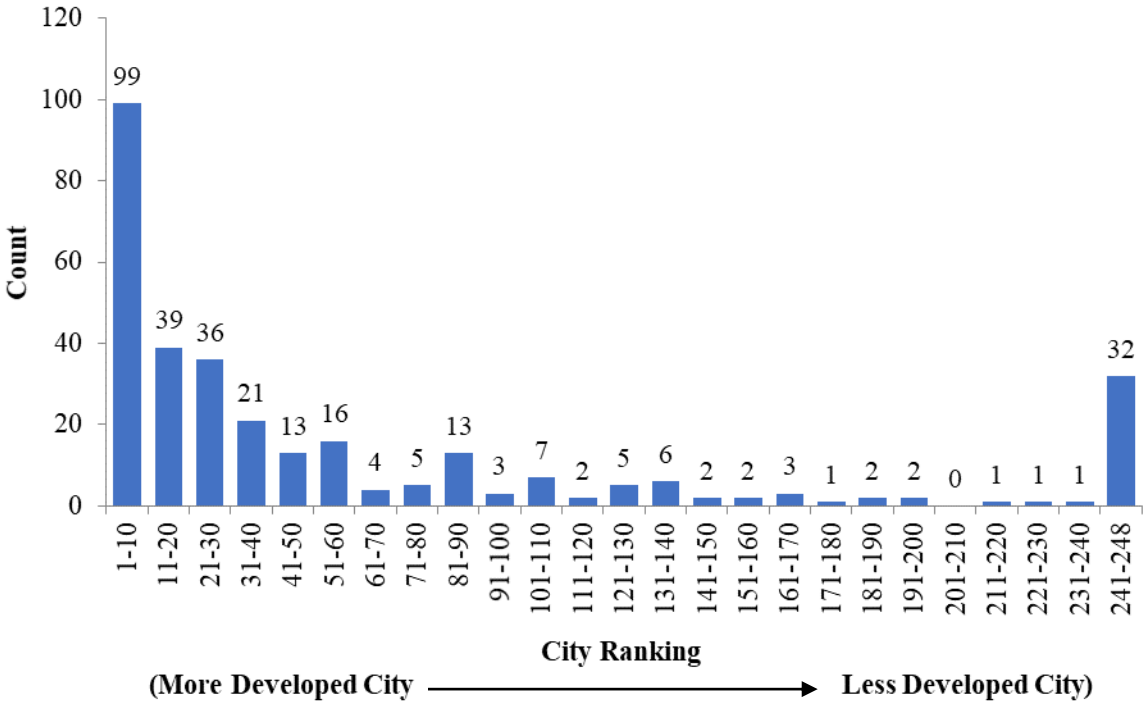


Figure 5.5 The Distribution of the City of the University of Chinese Students

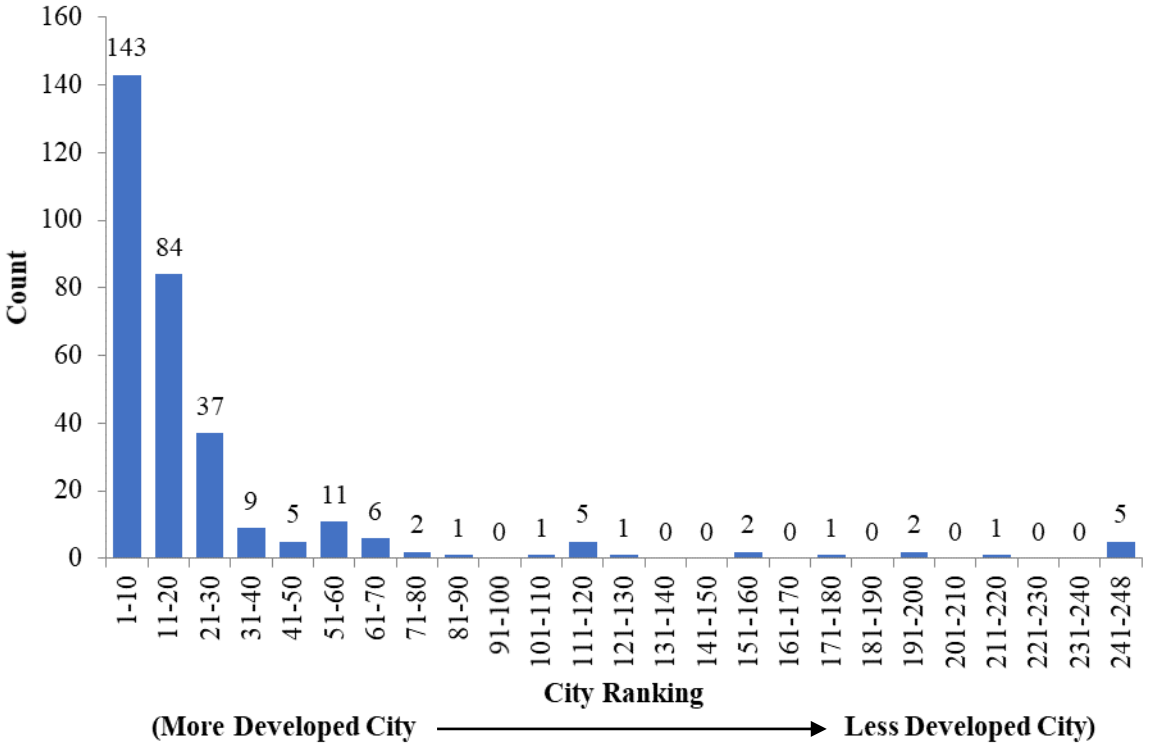


Figure 5.6 Movement Distribution of Chinese Students between High School and University

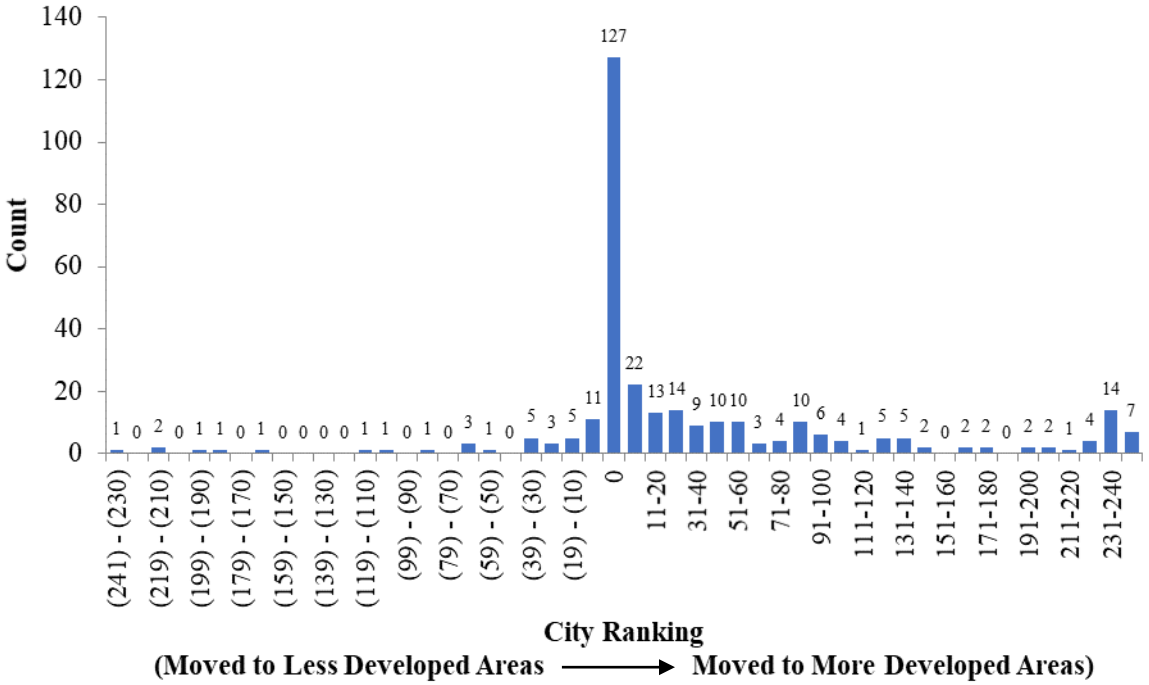


Table 5.3 The Descriptive Statistics of the Locations of Prior Education Institutions of Chinese Students

	N	Min.	Max.	Mean	Mode	Median	Standard Deviation	Skewness	Kurtosis
City of High School	316	1	248	60.98	248	27	77.231	1.526	1.039
City of University	316	1	248	24.60	1	13.5	42.165	3.678	14.664
Movement	316	-241	247	36.38	0	0	81.597	0.814	1.931

5.2.4 Prior Academic Performance

Chinese students' academic performance in undergraduate institutions is described by a combination of the tier of their university and their comparative GPA in their academic programs. Four Chinese participants' universities are not in the three-tier system because they are military training institutions or specialised art schools. Five Chinese participants did not know their university tier but provided the name of their university. This allowed the researcher to find the tier information of these universities and complete the dataset. The descriptive statistics show a slightly right-skewed distribution with a median of 3, indicating that, on average, the Chinese students were from tier 2 or lower-ranked universities. Students who entered tier 2 universities typically did not receive a high enough Gaokao result for them to enter a tier 1 university. It should be noted that variation in the responses is expected to be low because this study chose only one Australian university to collect the data so is subject to the specific entrance requirements of that university.

As for the comparative GPA, 67 Chinese students did not know their comparative GPA performance in their undergraduate programs. For the 249 students who did know, the distribution is slightly skewed to the left with a median of 5. This means these students believe they ranked in the top 40% or higher in their undergraduate programs, with the average ranking between the top 20% and 40%. The distribution of Chinese students' GPA ranking is not significantly different from other student groups. This is not unexpected since all surveyed students were from the same university and thus met that university's entry requirements. Table 5.4 presents the descriptive statistics and the Mann-Whitney U test statistics for prior academic performance variables. Figures 5.7 and 5.8 are histograms showing the distribution of the two prior academic performance variables for Chinese students. Figure 5.9 uses box and whisker plots to show the distribution of comparative GPA for all three student groups.

Figure 5.7 University Tier Distribution of the Sampled Chinese Students

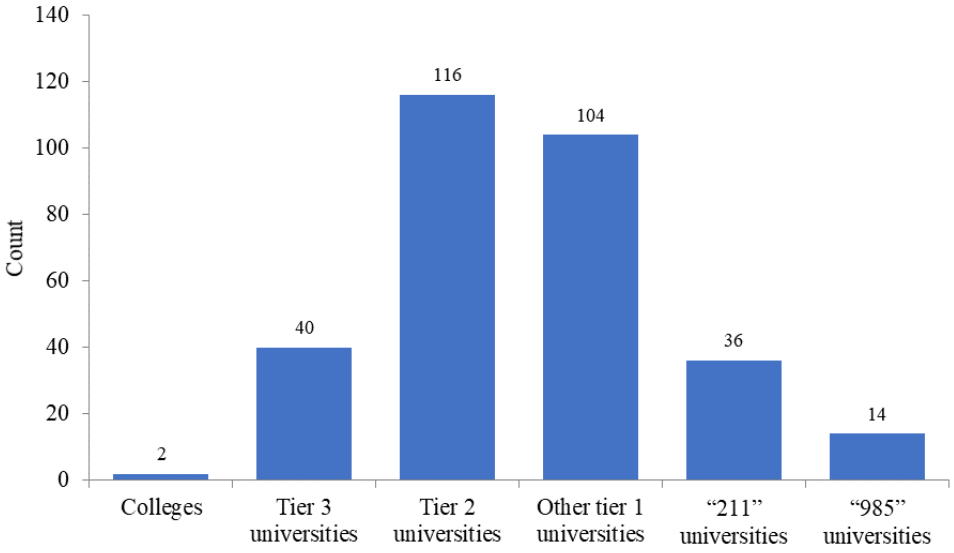


Figure 5.8 Comparative GPA Distribution of the Sampled Chinese Students

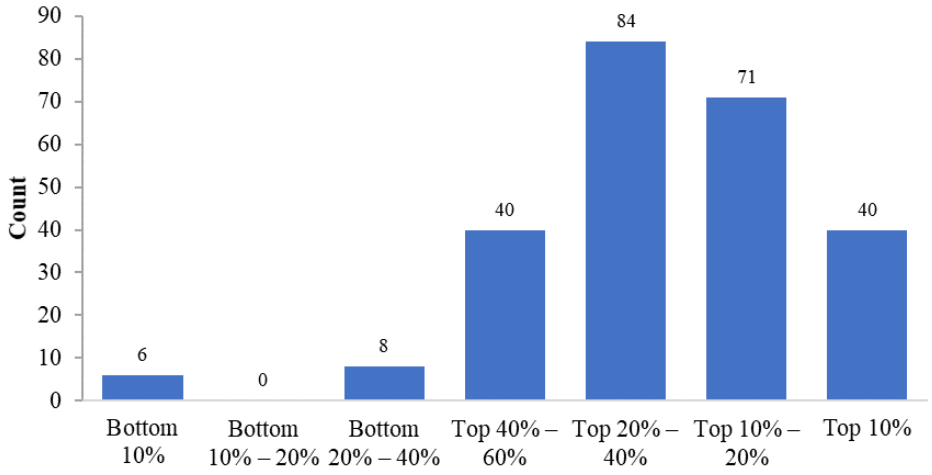


Figure 5.9 Comparative GPA Distribution of All Sampled Student Groups

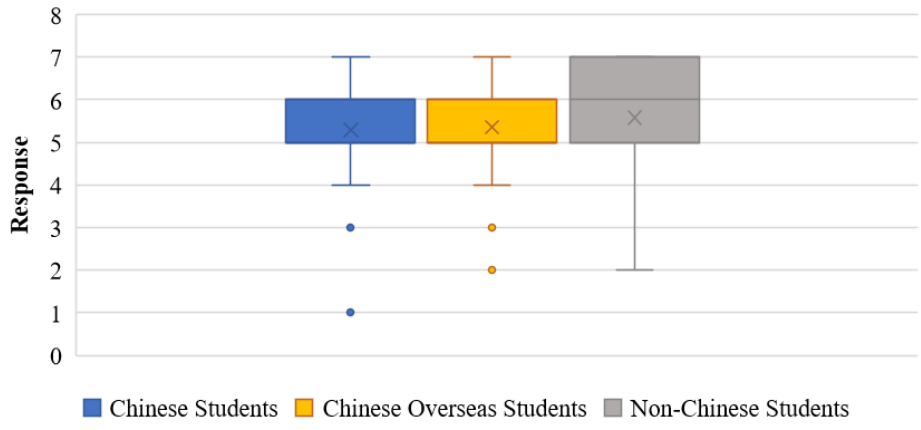


Table 5.4 The Statistics of Prior Academic Performance

	University Tier – Chinese Students	Comparative GPA		
		Chinese Students	Chinese Overseas Students	Non-Chinese Students
Valid N	312	249	76	52
Missing N	4	67	35	17
Total N	316	316	43	69
Mean	3.56	5.29	5.36	5.58
Median	3	5	5	6
Mode	3	5	5	5
Standard Deviation	1.022	1.236	1.314	1.194
Skewness	0.352	-0.919	-0.618	-0.621
Kurtosis	-0.056	1.772	-0.013	0.187
Mann-Whitney U	-	-	0.538	1.551
Significance	-	-	0.591	0.121

5.2.5 Financial Support Sources

As expected, Chinese students predominantly rely on their family to pay for tuition fees and living costs during their study in Australia. On average, 88.33% of the financial support is from Chinese students' families, 5.89% is from students' personal savings before coming to Australia, and other financial support sources (part-time work, scholarship and borrowings) contribute less than 5%. No Chinese student was sponsored by an employer, government or other institution. Compared with the other student groups, Chinese students significantly rely more on their families' financial support and less on other financial support sources. The descriptive statistics and Mann-Whitney U test statistics for all student groups are presented in Tables 5.5 and 5.6. The bold numbers indicate the student groups whose distribution for the measure is significantly different from Chinese students at the 0.05 level.

Table 5.5 Descriptive Statistics of the – Financial Support Sources of Chinese Students

	N	Min.	Max.	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis
Family	316	0	100	88.33	100	100	19.432	-2.528	7.384
Savings	316	0	100	5.89	0	0	15.800	4.005	18.175
Part-Time Work	316	0	68	3.77	0	0	9.457	3.677	16.250
Scholarship	316	0	50	1.75	0	0	5.478	4.160	23.123
Borrowings	316	0	40	0.27	0	0	2.874	11.507	140.047
Sponsorship	316	0	0	0	0	0	0	-	-

Table 5.6 The Statistics of Financial Support Sources of Other Students

Sources	Student Group	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis	Test Statistic	Sig.
Family	Chinese Overseas Students	43	67.00	85	100	39.183	-0.883	-0.898	-4.857	**0.000**
	Non-Chinese Students	69	51.97	60	0	42.694	-0.156	-1.738	-6.333	**0.000**
Savings	Chinese Overseas Students	43	7.99	0	0	19.062	3.437	13.220	0.996	0.319
	Non-Chinese Students	69	11.14	0	0	23.159	2.725	7.675	1.768	0.077
Part-Time Work	Chinese Overseas Students	43	6.22	0	0	15.609	3.573	14.871	0.615	0.539
	Non-Chinese Students	69	9.54	0	0	18.990	2.720	8.351	2.293	**0.022**
Scholarship	Chinese Overseas Students	43	3.31	0	0	7.119	2.077	3.093	2.369	**0.018**
	Non-Chinese Students	69	2.43	0	0	6.206	2.666	6.338	1.060	0.289
Borrowings	Chinese Overseas Students	43	7.01	0	0	21.586	3.198	9.516	5.429	**0.000**
	Non-Chinese Students	69	11.28	0	0	26.551	2.323	4.316	7.112	**0.000**
Sponsorship	Chinese Overseas Students	43	8.48	0	0	26.993	2.951	6.943	5.662	**0.000**
	Non-Chinese Students	69	13.64	0	0	33.275	2.105	2.581	7.191	**0.000**

5.2.6 English Competency

Table 5.10 presents the statistics of English competency for all student groups. The median Chinese students' IELTS score is 6.0, which is the minimum language requirement to enter postgraduate coursework accounting programs at the University of Adelaide. 6.96% of the students did not meet this language requirement when entering their programs[4]. In general, Chinese students' English competency is lower than that of other student groups. Mann-Whitney U test results show that the distribution of Chinese students' English competency is significantly different from other students. Figure 5.10 shows the distribution of English competency for Chinese students in histograms. Figure 5.11 shows the distribution of the three student groups in box and whisker plots.

[4] International students with an IELTS score over 5.0 but under the required mark for the academic program can enter the program after completing 10 to 20 weeks' academic English program.

Figure 5.10 The English Competency Distribution of Chinese Students

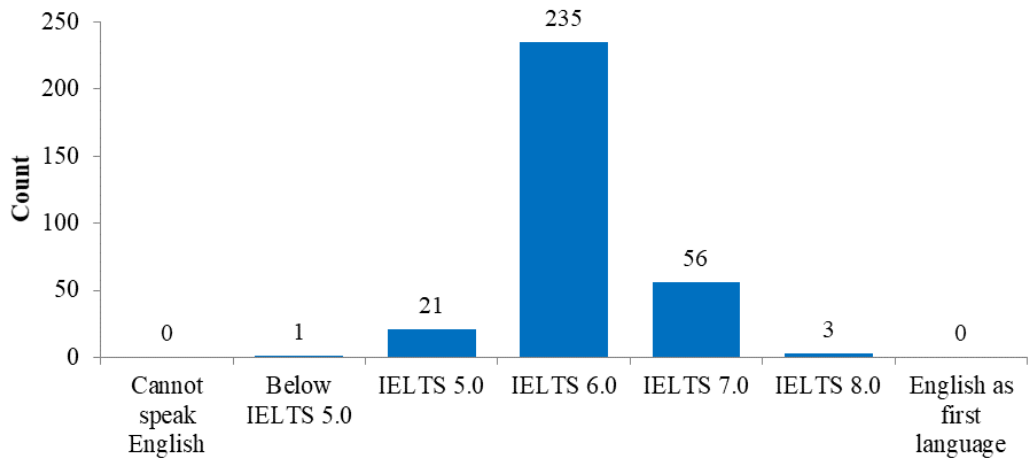


Figure 5.11 The English Competency Distribution of All Student Groups

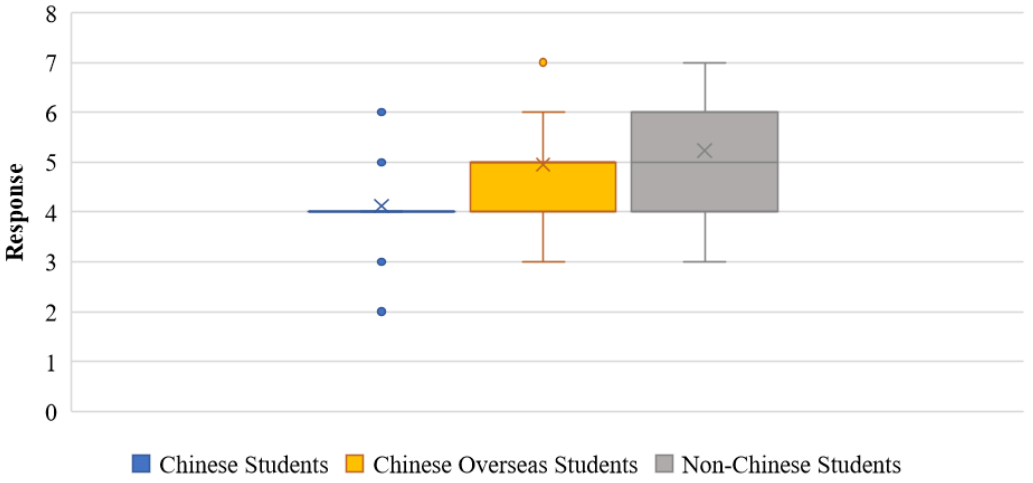


Table 5.7 The Statistics of English Competency of All Sampled Groups

	Chinese Students	Chinese Overseas Students	Non-Chinese Students
N	316	43	69
Mean	4.12	4.95	5.23
Median	4	5	5
Mode	4	5	5
Standard Deviation	0.529	1.025	1.113
Skewness	0.383	0.728	0.379
Kurtosis	2.095	-0.268	-0.956
Mann-Whitney U Test Statistic	-	8.807	9.150
Significance	-	0.000	0.000

5.2.7 Prior Accounting Knowledge

Students' prior accounting knowledge is described by two variables: academic accounting knowledge and work experience. As presented in Figure 5.12, the distribution of students' academic accounting knowledge shows a wide dispersion. This is because students are required to have a Bachelor degree to apply for postgraduate study in Australia. As a result, very few students selected the responses that are related to diplomas when asked about prior degrees. The mode score of the Chinese students' responses is 7, which represents a bachelor degree in accounting. While the mode of the other two student groups is 5 (Bachelor degree in business but not in accounting), (see Table 5.8), the distribution of Chinese students' responses is not significantly different from the other student groups at the 0.05 level.

Figure 5.12 The Academic Accounting Knowledge Distribution of Chinese Students

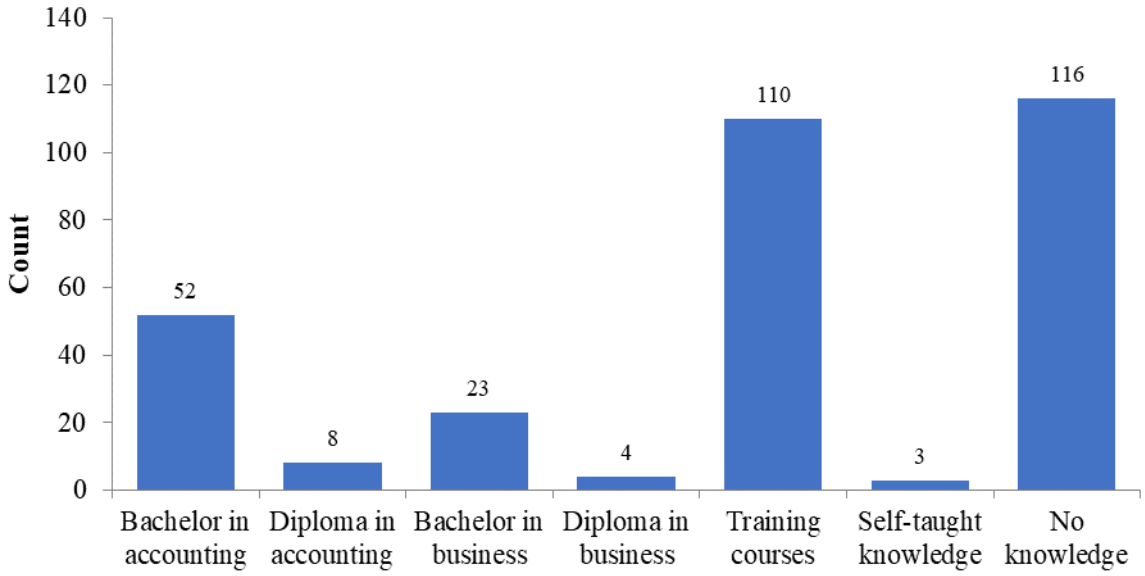


Table 5.8 Statistics of Academic Accounting Knowledge of All Sampled Students

	Chinese Students	Chinese Overseas Students	Non-Chinese Students
N	316	43	69
Mean	4.85	4.79	4.67
Median	5	5	5
Mode	7	5	5
Standard Deviation	2.153	2.149	2.194
Skewness	-0.688	-0.750	-0.653
Kurtosis	-0.812	-0.691	-0.890
Mann-Whitney U Test Statistic	-	-0.341	-0.687
Significance	-	0.733	0.492

For work experience, the majority of the Chinese students (51.27%) did not have any experience at all before entering their postgraduate accounting program. For the Chinese students who did have some work experience, only 9.8% have more than 1 year's experience in accounting. The distribution of Chinese students' work experience is presented in Figure 5.13. Figure 5.14 uses box and whisker plots to show the distribution of all three student groups. Compared with other student groups, Chinese students have less work experience. The Mann-Whitney U test shows that the distribution of Chinese students' work experience is significantly different from other student groups. The descriptive and Mann-Whitney U test statistics for work experience are presented in Table 5.9.

Figure 5.13 The Working Experience Distribution of Chinese Students

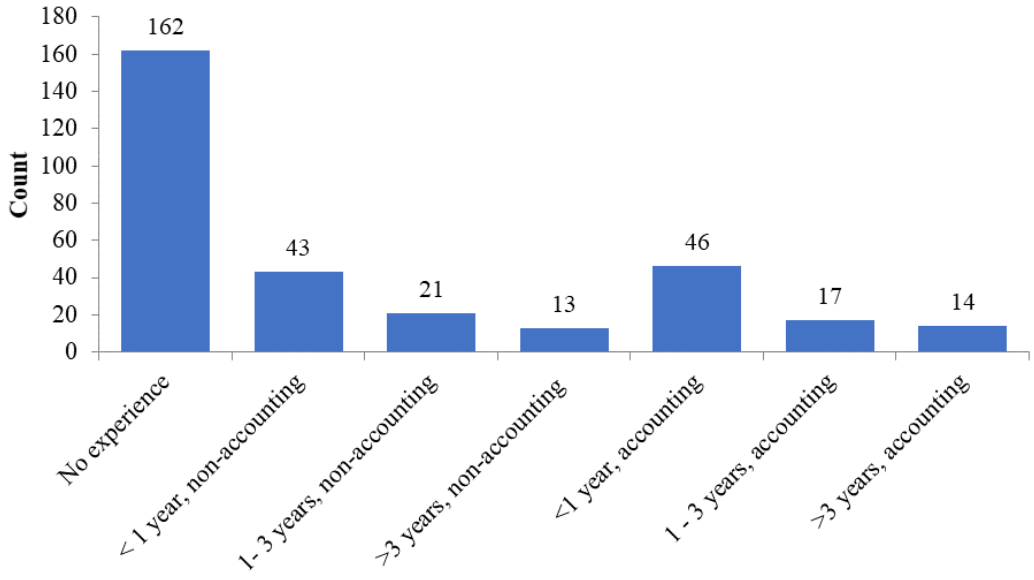


Figure 5.14 The Working Experience Distribution of All Student Groups

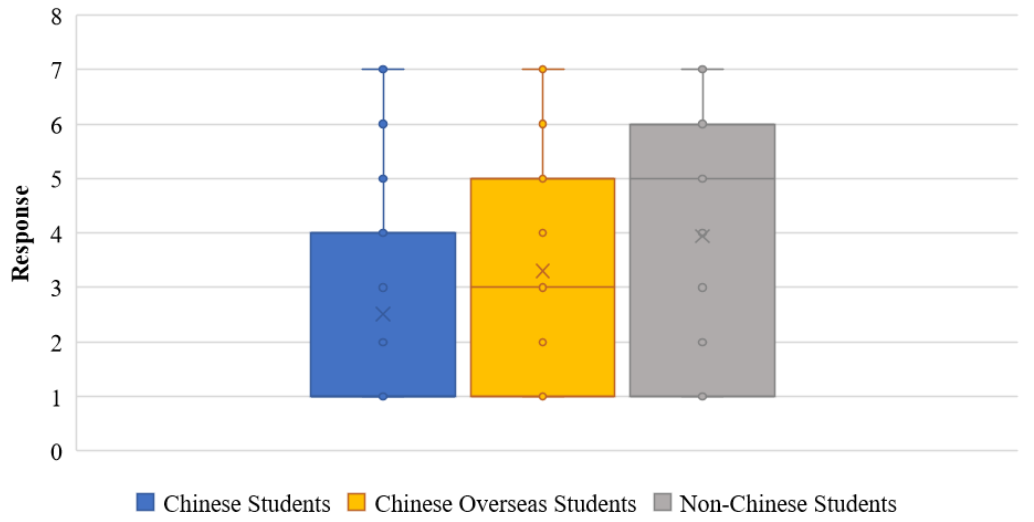


Table 5.9 The Statistics of Working Experience for All Sampled Groups

	Chinese Students	Chinese Overseas Students	Non-Chinese Students
N	316	43	69
Mean	2.51	3.31	3.94
Median	1	3	5
Mode	1	1	1
Standard Deviation	1.943	0.064	2.300
Skewness	0.951	0.344	-0.136
Kurtosis	-0.554	-1.467	-1.531
Mann-Whitney U Test Statistic	-	3.244	4.704
Significance	-	0.001	0.000

5.2.8 The Correlations between Background Variables for Chinese Students

Table 5.10 presents Kendall's tau correlation coefficients of all background variables for Chinese students. The bold numbers indicate the coefficients that are significant at the 0.05 level. FS-Sponsorship was not included in the calculation because all Chinese students' responses to this variable were 0. In addition to the findings discussed above, the correlations provide some more information regarding Chinese students' backgrounds. It should be noted that a significant correlation does not necessarily indicate a cause-and-effect relationship. The material provided below is intended to provide some additional information about Chinese students' characteristics and potential explanations of the differences between Chinese students and the other student groups. Some correlations meet the expectations and support the validity of the survey measures. The correlation coefficients that are significant at the 0.05 level are discussed below.

Gender

Two background variables have significant coefficients with gender. The positive coefficients indicate that female students have higher comparative GPAs and more academic accounting knowledge than male students.

Age

Age is negatively correlated with Chinese students' undergraduate university city. This indicates that the students who are from less developed areas are older. This negative relationship can be explained in that students from less developed areas need more time to save money before studying overseas. Other findings that are consistent with general observations,

and thus support the validity of the measures, are the relationship between age and financial support sources and age and work experience. As presented in Table 5.10, age is negatively correlated with FS-family and positively correlated with FS-Savings as well as work experience. Older Chinese students are expected to have more work experience, rely more on their savings and rely less on their family for financial support. Age is also found to be positively correlated with Chinese students' university level, that is, older students are more likely to be from higher-ranked Chinese universities.

Locations of prior education institutions

The two measures used in the locations of prior education institutions are positively correlated with each other. CityofHighSchool is positively correlated with Movement, indicating that students generally move upwards (from less developed areas to more developed areas). These relationships are consistent with the findings discussed in Section 5.2.3 regarding students' movements. Both location measures are negatively correlated with students' university level. This relationship fits the general situation about university rankings in China, that the universities in less developed areas are ranked lower. With regard to sources of financial support, FS-Savings is negatively correlated with CityofUniversity, indicating that Chinese students who graduated from less developed areas rely less on their savings. These correlations are expected and thus indicate a good level of validity for the survey measures. CityofUniversity is also negatively correlated with work experience. This may help explain the negative correlation coefficient between FS-Savings and CityofUniversity, that students who graduated from less developed areas have less work experience and therefore have less savings to support their overseas study.

Prior academic performance

The two variables that measure Chinese students' prior academic performance are negatively correlated. This indicates that the students who have higher GPAs than their undergraduate classmates are more likely to be from lower-ranked universities. Both prior academic performance variables are positively correlated with FS-Savings, whereas LevelofUniversity is also negatively correlated with FS-Family. Another variable that shows a significant correlation with students' university level is English competency. The positive coefficient suggests that students from better universities are more competent in English.

Financial support sources

As expected, FS-Family has a negative correlation with all other financial support sources. In addition, FS-Family is negatively correlated with Work while FS-Savings is positively correlated with Work. These correlations also suggest good validity of the survey measures. FS-Parent is also positively correlated with AccKnow and negatively correlated with Work. Combined with the findings of Chinese students' academic accounting knowledge above, this indicates that students who have an accounting or business degree are more likely to rely on family financial support. The only significant coefficient of FS-PTWork is English, indicating that students with higher English competency rely more on their part-time work income during their study in Australia.

Apart from the correlations discussed above, there are no other correlation coefficients between background variables that are statistically significant at the 0.05 level.

Table 5.10 The Correlations between the Background Variables of Chinese Students

		Gender	Age	Locations of prior education institutions			Prior Academic Performance		Financial Support Sources					English	Acc. Know.	Work
				City of Uni.	City of High School	Move.	Level of Uni.	GPA	FS-Family	FS-Saving	FS-PT Work	FS-Scho.	FS-Borr.			
Gender	Coeff.	1.000														
	Sig.	-														
Age	Coeff.	-0.056	1.000													
	Sig.	0.258	-													
City of University	Coeff.	-0.058	**-0.179**	1.000												
	Sig.	0.216	**0.000**	-												
City of High School	Coeff.	-0.041	-0.040	**0.356**	1.000											
	Sig.	0.374	0.331	**0.000**	-											
Movement	Coeff.	-0.040	0.063	-0.095	**0.622**	1.000										
	Sig.	0.407	0.141	0.019	**0.000**	-										
Level of Uni	Coeff.	-0.050	**0.138**	**-0.180**	**-0.125**	-0.022	1.000									
	Sig.	0.338	**0.003**	**0.000**	**0.004**	0.629	-									
GPA	Coeff.	**0.140**	0.017	0.005	0.034	0.073	**-0.147**	1.000								
	Sig.	**0.015**	0.743	0.910	0.481	0.148	**0.006**	-								
FS-Family	Coeff.	0.040	**-0.221**	0.071	0.008	-0.055	**-0.095**	-0.100	1.000							
	Sig.	0.422	**0.000**	0.089	0.840	0.202	**0.041**	0.052	-							
FS-Savings	Coeff.	-0.029	**0.269**	**-0.118**	-0.045	0.016	**0.114**	**0.110**	**-0.613**	1.000						
	Sig.	0.582	**0.000**	**0.008**	0.304	0.722	**0.021**	**0.044**	**0.000**	-						
FS-PT Work	Coeff.	-0.029	0.069	0.006	0.051	0.088	0.068	0.064	**-0.500**	0.074	1.000					
	Sig.	0.587	0.142	0.894	0.247	0.055	0.166	0.236	**0.000**	0.140	-					
FS-Scholarship	Coeff.	-0.007	-0.055	0.052	-0.022	-0.023	0.008	-0.006	**-0.341**	0.057	-0.034	1.000				
	Sig.	0.902	0.256	0.254	0.622	0.623	0.873	0.910	**0.000**	0.274	0.508	-				
FS-Borrowings	Coeff.	-0.009	0.127	-0.049	-0.001	0.035	0.082	0.041	**-0.130**	**0.104**	-0.053	-0.036	1.000			
	Sig.	0.878	0.010	0.298	0.975	0.474	0.116	0.480	**0.010**	**0.050**	0.318	0.510	-			
English	Coeff.	-0.062	-0.067	0.023	0.005	-0.019	**0.122**	0.030	-0.073	0.055	**0.110**	0.075	-0.018	1.000		
	Sig.	0.258	0.162	0.622	0.918	0.681	**0.016**	0.592	0.135	0.284	**0.033**	0.157	0.743	-		
Acc.Know.	Coeff.	**0.122**	-0.065	0.004	0.044	0.022	-0.053	-0.060	**0.110**	**-0.113**	0.016	-0.056	-0.066	0.010	1.000	
	Sig.	**0.018**	0.154	0.934	0.304	0.621	0.265	0.260	**0.017**	**0.021**	0.738	0.269	0.200	0.839	-	
Work	Coeff.	-0.047	**0.365**	**-0.153**	-0.061	0.006	0.052	-0.017	**-0.202**	**0.272**	0.057	-0.015	0.052	0.052	0.077	1.000
	Sig.	0.364	**0.000**	**0.000**	0.150	0.886	0.279	0.749	**0.000**	**0.000**	0.239	0.767	0.307	0.301	0.106	-

Section 5.2 summarised the key characteristics of Chinese students' backgrounds. Compared with other student groups, the proportion of female students is higher for Chinese students. Chinese students also rely more on their family's financial support, which is probably because they are younger, have less working experience and thus less savings. Chinese students also have a lower English competency than other students, including international students from other countries and regions.

5.3 Chinese Students' Learning Orientations

This section describes Chinese students' learning orientations in comparative terms. It continues to use the Mann-Whitney U test results to compare the distribution of Chinese students, Chinese-overseas students and non-Chinese students. Table 5.11 lists the variable names for each learning orientation statement used in the survey. The test statistics of the comparisons are included in Table 5.13.

Table 5.11 Learning Orientation Variable Names

Learning Orientation		Statement Used in Survey	Variable Name
Classification	Type		
Intrinsic motivation	Toward accomplishment	For the pleasure I experience while surpassing myself in my studies.	O-I-Accomplishment1
		For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	O-I-Accomplishment2
Intrinsic motivation	To experience stimulation	For the intense feelings I experience when I am communicating my own ideas to other students and lecturers.	O-I-Stimulation1
		For the pleasure that I experience when I read interesting accounting knowledge.	O-I-Stimulation2
Intrinsic motivation	To know	Because I experience pleasure and satisfaction while learning new things in accounting.	O-I-ToKnow1
Extrinsic motivation	Identified	Because eventually it will enable me to enter the job market in a field that I like.	O-E-Identified1
		Because I believe that a few additional years of education will improve my competence as an accountant.	O-E-Identified2
Extrinsic motivation	Introjected	To prove to myself that I am capable of completing an Australian postgraduate degree in accounting.	O-E-Introjected1
		To show myself that I am an intelligent person.	O-E-Introjected2
Extrinsic motivation	External regulation	In order to obtain a more prestigious job later on.	O-E-Regulation1
		In order to work and live in Australia after graduation.	O-E-Regulation2
		Because this program allows me to continue to learn about many things that interest me.	O-I-ToKnow2
Amotivation	N/A	I cannot see why I go to an Australian university for postgraduate study, and frankly, I could not care less.	O-A-LackofDirection
		I once had good reasons for studying this program, but now I wonder whether I should continue.	O-A-LostDirection

5.3.1 Intrinsic Learning Orientations

As presented in Figures 5.15 to 5.17, Chinese students reported high scores with intrinsic learning orientation statements. The median of all intrinsic learning orientations statements is 5 (somewhat agree). The statements that report a significant difference in distribution between Chinese students and non-Chinese students are O-I-Stimulation2 and O-I-ToKnow1. Compared with non-Chinese students, Chinese students reported a significantly lower score in these two statements that are related to ones' intrinsic interests in accounting. O-I-Stimulation2 measures students' pleasure in reading accounting knowledge, while O-I-ToKnow1 describes accounting programs as an opportunity for the students to learn about things that interest them. Figure 5.18 presents the box and whisker plots for the intrinsic orientation statements that show a significant difference (at the 0.05 level) between Chinese students and non-Chinese students.

Figure 5.15 The Distribution of Chinese Students' Intrinsic Orientations Toward Accomplishment

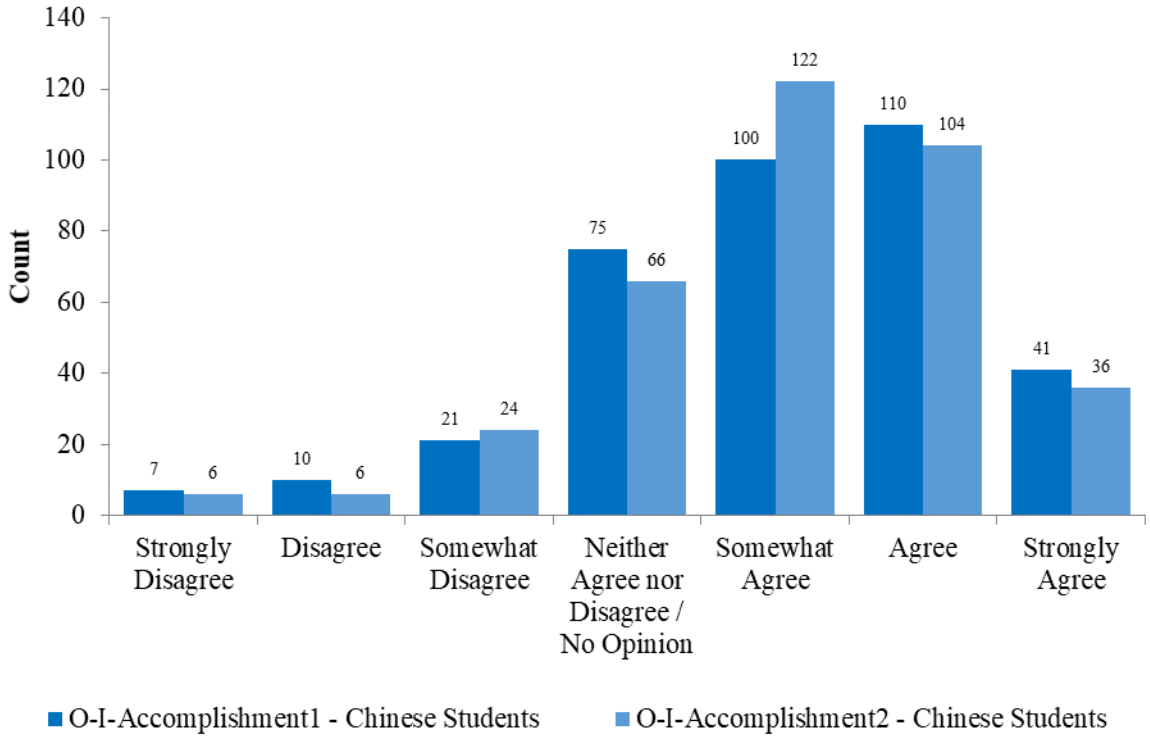


Figure 5.16 The Distribution of Chinese Students' Intrinsic Orientations to Experience Stimulation

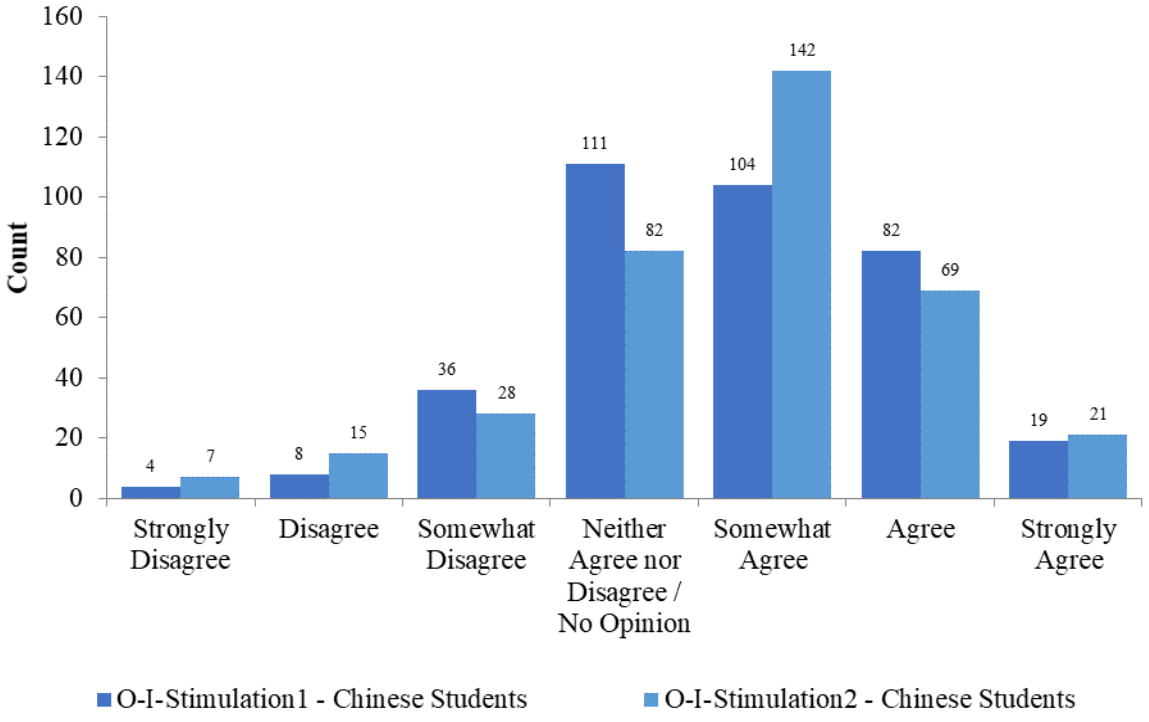


Figure 5.17 The Distribution of Chinese Students' Intrinsic Orientations to Know

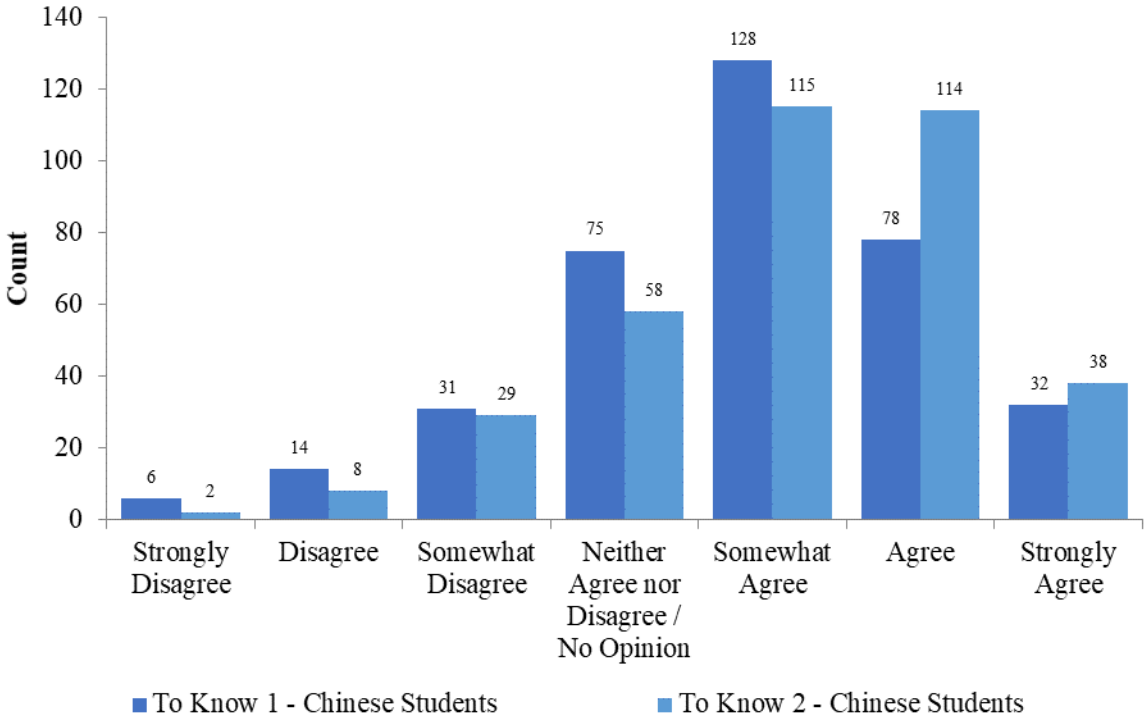
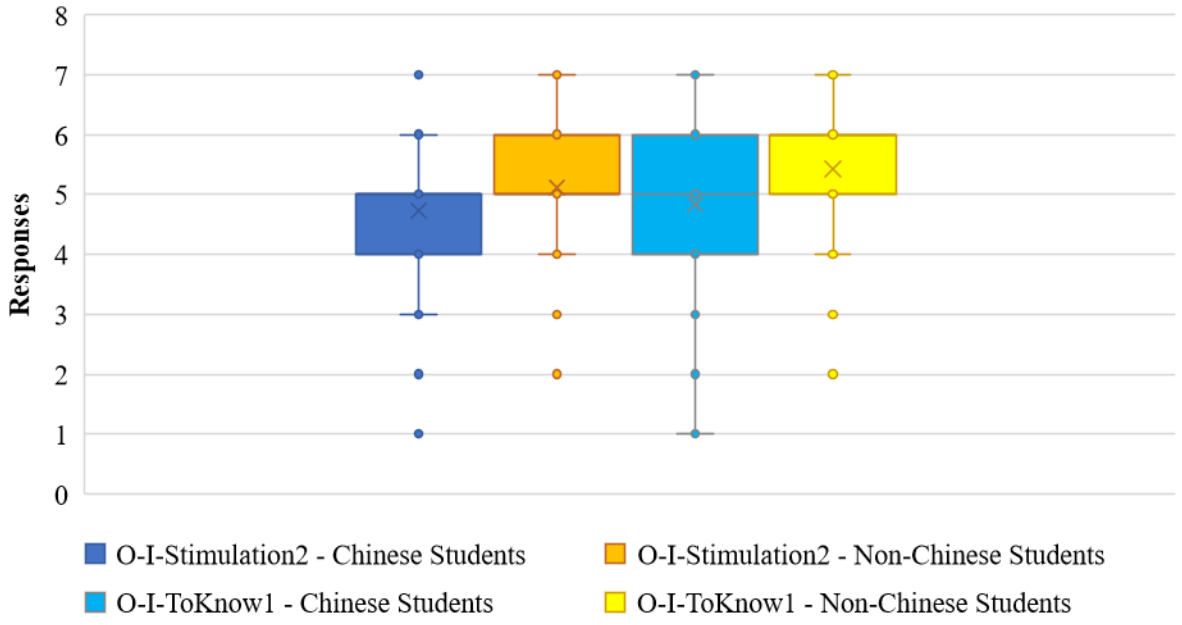


Figure 5.18 The Intrinsic Orientation Distribution Differences between Chinese and Non-Chinese Students



5.3.2 Extrinsic Learning Orientations

Figures 5.19 to 5.21 present the distribution of Chinese students' responses to extrinsic orientation statements. The descriptive statistics show that Chinese students score high on extrinsic learning orientations. The top three statements that received the most positive correspondence of all learning orientation statements, O-E-Identified2, O-E-Introjected1 and O-E-Regulation1, are all from the extrinsic orientations. Each of these three statements represents one aspect of extrinsic orientation: identified, introjected and external regulation. The median response to all of these three statements is "agree", with 87.1%, 86.8% and 79.4% of the participants at least partially agreeing with the survey statements. While Chinese students' response to the introjected statement is more concentrated and has a higher mean than non-Chinese students (see Figure 5.22), their responses to the other two statements are not significantly different from the other student groups at the 0.05 level. The distribution of Chinese students' response to O-E-Identified1 – to enter a job market in a field that I *like* – is significantly different from non-Chinese students at the 0.05 level. As presented in Figure 5.22, Chinese students' scores are less widely dispersed and have a lower mean. It is also worth mentioning that the Chinese students' responses to the statement that describes immigration-related learning orientation (O-E-Regulation2) is not significantly different from other student

groups. Nevertheless, the majority of Chinese students (66.5%) at least somewhat agreed with the statement that they chose to study in an Australian postgraduate accounting program to later work and live in Australia. The statement that received the lowest score in the extrinsic section is O-E-Introjected2 – "to show that I am an intelligent person". This statement has a positive correspondence rate of only 45.9% and a median of 4 (neither agree nor disagree).

Figure 5.19 The Distribution of Chinese Students' Extrinsic Orientations from Identified Regulation

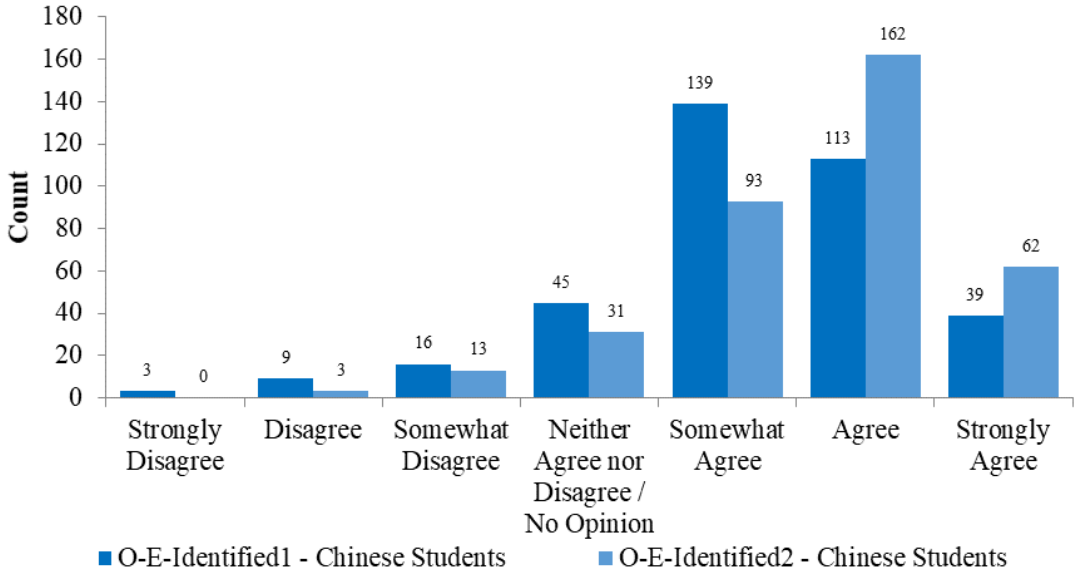


Figure 5.20 The Distribution of Chinese Students' Extrinsic Orientations from Introjected Regulation

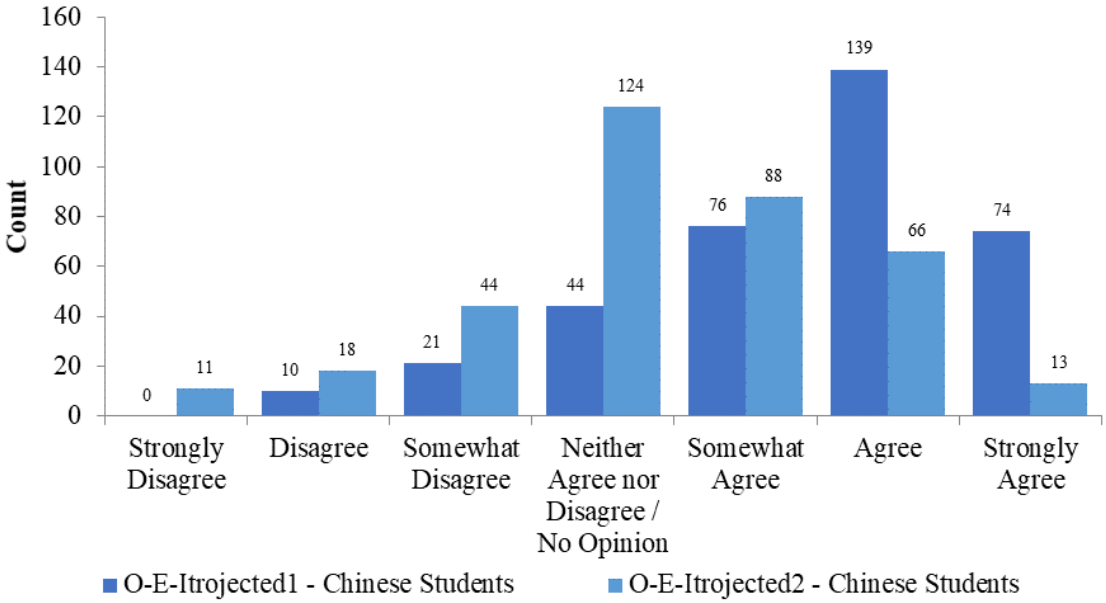


Figure 5.21 The Distribution of Chinese Students' Extrinsic Orientations from External Regulation

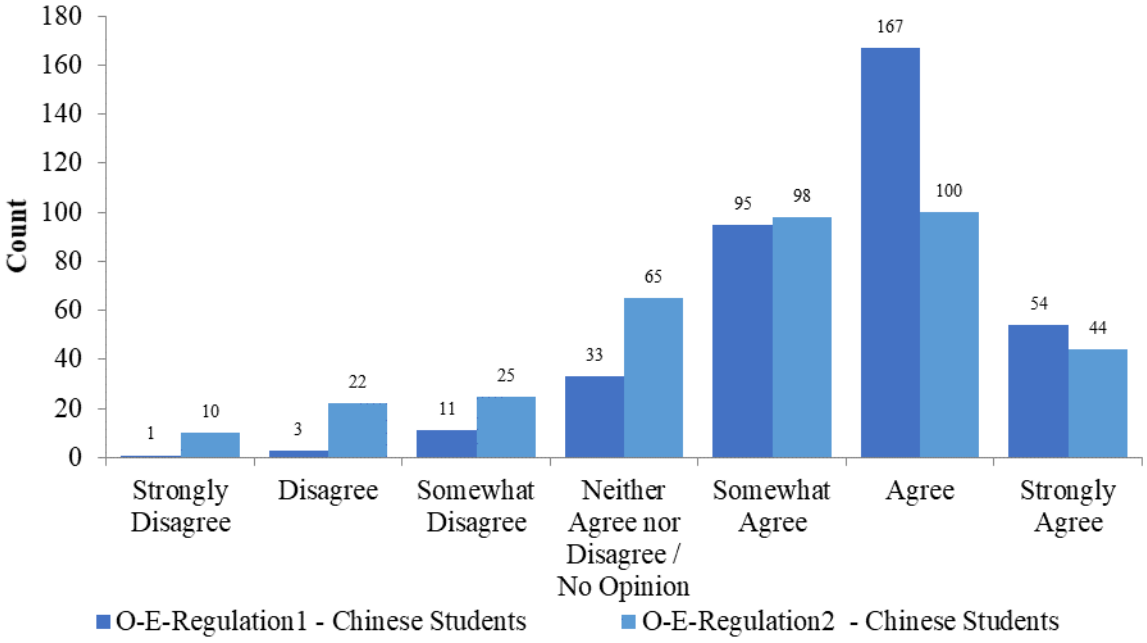
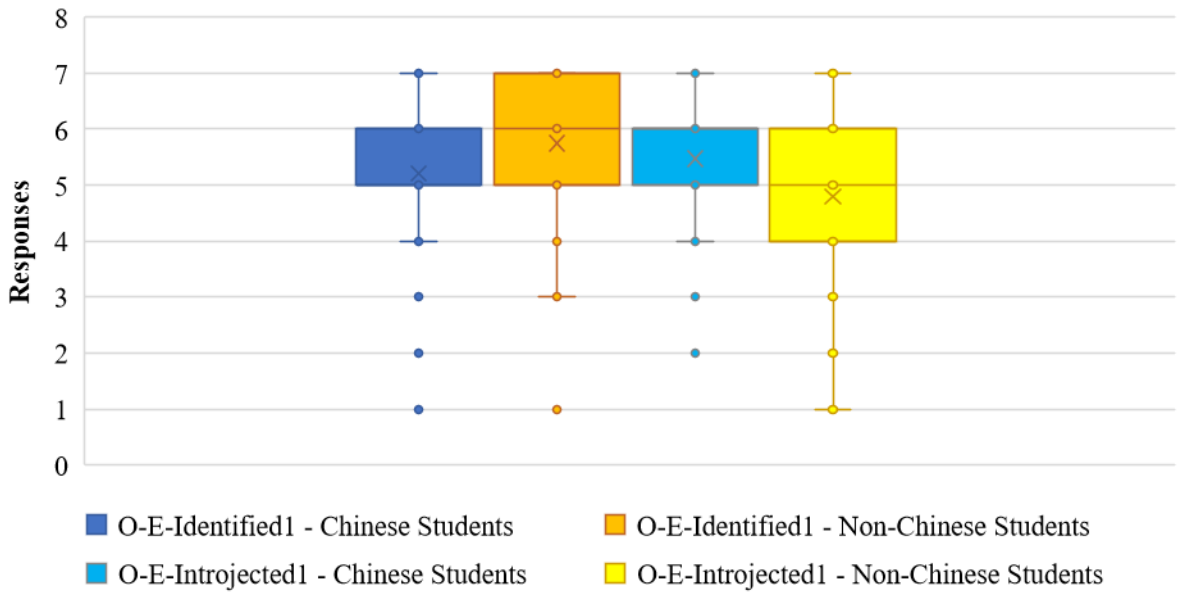


Figure 5.22 The Extrinsic Orientation Distribution Differences between Chinese and Non-Chinese Students



5.3.3 Amotivation

Some Chinese students corresponded positively to the amotivation statements 20.9% of Chinese students at least somewhat agree that they were not quite sure why they entered an Australian postgraduate accounting program, but their responses are not significantly different from other students. The more concerning finding is that 31.3% of Chinese students corresponded to the O-A-LostDirection statement, that they originally had a good reason when entering the program, but they are now not sure whether they should continue. As reported in Table 5.13, Chinese students' scores in this statement are significantly higher than for non-Chinese students at the 0.05 level. Figure 5.23 presents Chinese students' responses to the two amotivation statements, while Figure 5.24 presents the distribution of Chinese and non-Chinese students' responses to the O-A-LostDirection statement.

Figure 5.23 Amotivation Responses Distribution of Chinese Students

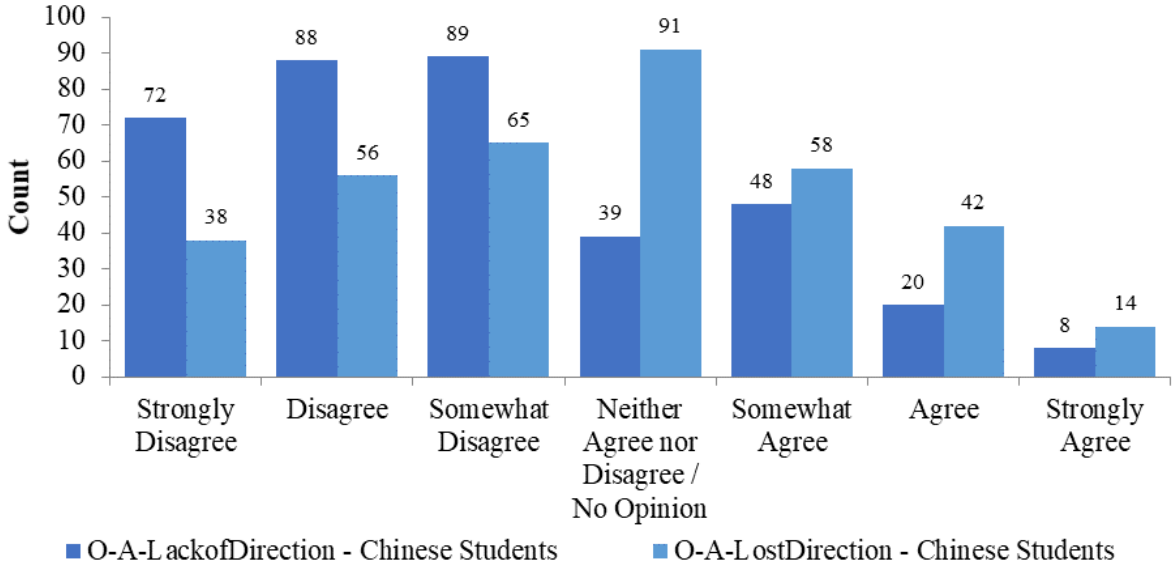
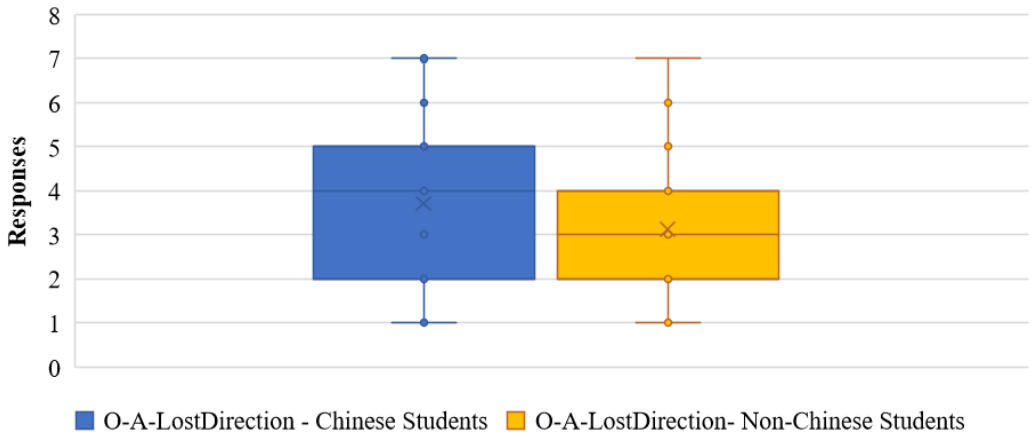


Figure 5.24 Amotivation Distribution Differences between Chinese and Non-Chinese Students



Tables 5.12 and 5.13 list the statistics for the learning orientation variables for all student groups. The bold numbers in Table 5.13 represent the Mann-Whitney U test results that indicate the distributions between the other student groups and Chinese students are significantly different at the 0.05 level.

Table 5.12 The Descriptive Statistics of Learning Orientations of Chinese Students

Classification	Variable	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis
Intrinsic Orientations	O-I-Accomplishment1	364	5.05	5	6	1.322	-0.734	0.540
	O-I-Accomplishment2	364	5.05	5	5	1.241	-0.731	0.818
	O-I-Stimulation1	364	4.72	5	4	1.197	-0.303	0.090
	O-I-Stimulation2	364	4.73	5	5	1.249	-0.636	0.645
	O-I-ToKnow1	364	4.83	5	5	1.303	-0.549	0.305
	O-I-ToKnow2	364	5.12	5	5	1.219	-0.617	0.209
Extrinsic Orientations	O-E-Identified1	364	5.21	5	5	1.164	-0.861	1.272
	O-E-Identified2	364	5.60	6	6	1.033	-0.856	0.822
	O-E-Introjected1	364	5.47	6	6	1.256	-0.833	0.190
	O-E-Introjected2	364	4.40	4	4	1.313	-0.360	0.068
	O-E-Regulation1	364	5.57	6	6	1.030	-0.991	1.558
	O-E-Regulation2	364	4.91	5	6	1.481	-0.708	0.045
Amotivation	O-A-LackofDirection	364	2.99	3	3	1.588	0.588	-0.485
	O-A-LostDirection	364	3.71	4	4	1.619	0.053	-0.782

Table 5.13 Descriptive Statistics of Learning Orientations – Other Student Groups

Classification	Statement	Student Group	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis	Test Statistic	Sig.
Intrinsic Orientations	O-I-Accomplishment1	Chinese overseas	53	4.75	5	5	1.440	-0.675	0.419	-1.411	0.158
		Non-Chinese	79	5.15	6	6	1.302	-0.754	-0.050	0.797	0.426
	O-I-Accomplishment2	Chinese overseas	53	4.83	5	5	1.383	-0.544	0.068	-1.092	0.275
		Non-Chinese	79	5.13	5	6	1.275	-1.196	1.324	0.952	0.341

Classification	Statement	Student Group	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis	Test Statistic	Sig.
	O-I-Stimulation1	Chinese overseas	53	4.53	5	4	1.265	-0.273	-0.037	-1.016	0.310
		Non-Chinese	79	4.35	5	4	1.511	-0.857	-0.092	-1.267	0.205
	O-I-Stimulation2	Chinese overseas	53	4.58	5	5	1.292	-0.722	0.493	-0.623	0.533
		Non-Chinese	79	5.11	5	5	1.251	-0.745	0.323	2.814	**0.005**
	O-I-ToKnow1	Chinese overseas	53	4.72	5	5	1.536	-0.725	-0.103	-0.082	0.934
		Non-Chinese	79	5.42	6	6	1.069	-0.974	1.480	3.988	**0.000**
	O-I-ToKnow2	Chinese overseas	53	4.75	5	5	1.543	-0.615	-0.458	-1.330	0.183
		Non-Chinese	79	5.29	6	6	1.302	-1.063	1.689	1.398	0.162
Extrinsic Orientations	O-E-Identified1	Chinese overseas	53	5.09	5	5	1.181	-0.626	0.464	-0.724	0.469
		Non-Chinese	79	5.75	6	6	1.171	-1.258	2.443	4.153	**0.000**
	O-E-Identified2	Chinese overseas	53	5.74	6	6	1.059	-0.755	0.149	0.969	0.333
		Non-Chinese	79	5.80	6	6	1.042	-1.461	3.366	1.761	0.078
	O-E-Introjected1	Chinese overseas	53	5.19	5	6	1.374	-0.724	-0.090	-1.424	0.154
		Non-Chinese	79	4.80	5	5	1.793	-0.742	-0.272	-2.932	**0.003**
	O-E-Introjected2	Chinese overseas	53	4.13	4	5	1.494	-0.234	-0.246	-1.199	0.230
		Non-Chinese	79	4.15	4	4	1.594	-0.528	-0.632	-0.808	0.419
	O-E-Regulation1	Chinese overseas	53	5.43	6	6	1.118	-0.686	0.449	-0.850	0.395
		Non-Chinese	79	5.53	6	6	1.164	-0.804	0.619	-0.082	0.935
	O-E-Regulation2	Chinese overseas	53	5.15	6	6	1.769	-0.974	0.080	1.683	0.092
		Non-Chinese	79	4.78	5	6	1.879	-0.715	-0.479	0.058	0.954
Amotivations	O-A-LackofDirection	Chinese overseas	53	2.96	3	2	1.480	0.844	0.280	0.026	0.979
		Non-Chinese	79	2.67	2	1	1.654	0.754	-0.515	-1.889	0.059
	O-A-LostDirection	Chinese overseas	53	3.81	4	5	1.699	-0.084	-0.860	0.521	0.602
		Non-Chinese	79	3.13	3	4	1.612	0.260	-0.933	-2.766	**0.006**

5.3.4 Correlations between the Learning Orientation Variables for Chinese Students

As presented in Table 5.14, all learning orientation variables are significantly correlated with at least one other variable at the 0.05 level. The bold numbers in Table 5.14 highlight the significant coefficients. These significant relationships are discussed below. Overall, these relationships are consistent with the classification of students' learning orientations in the Self-Determination theory (Deci & Ryan 1985, 1991) and the full version of AMS (Vallerand et al. 1992). This suggests that the AMS with reduced items still has good validity (Vallerand et al. 1992).

Intrinsic learning orientations

All intrinsic learning orientation variables are positively correlated with each other. This is expected since all three aspects of intrinsic orientation – to know, toward accomplishment and to experience stimulation – are conceptually at the same level on the self-determination continuum in the Self-Determination theory (Carbonneau, Vallerand & Lafrenière 2012). All intrinsic learning orientations are also positively correlated with all extrinsic learning orientations except for O-E-Regulation2, the statement that measures students' migration-related learning orientation. This indicates that Chinese students have both extrinsic and intrinsic learning orientations at the same time.

Extrinsic learning orientations

All extrinsic learning orientation variables are positively correlated with each other except for O-E-Regulation2. Instead of correlating with extrinsic learning orientations, O-E-Regulation2 is positively correlated with intrinsic orientations, including the orientations toward accomplishment and to experience stimulation. This shows that Chinese students with high migration incentives also have high interest in surpassing themselves and experience pleasure in their postgraduate accounting study in Australian universities.

Amotivation

Amotivation describes situations where students do not have much motivation to learn. As expected, the two measures are negatively correlated with many extrinsic and intrinsic learning orientations. O-A-LackofDirection is negatively correlated with all extrinsic and intrinsic learning orientations except for O-I-Introjected2 and O-E-Regulation2. This is expected as

students who are strongly motivated, extrinsically or intrinsically, are less likely to have no direction. O-A-LostDirection is negatively correlated with two extrinsic orientation statements that measure career-related learning orientations. This shows that students who enter programs for future career opportunities are less likely to lose direction in their study. O-A-LostDirection is also negatively correlated with O-I-Accomplishment1, O-I-Stimulation2, O-I-ToKnow1 and O-I-ToKnow2, indicating that Chinese students who are intrinsically motivated are less likely to lose direction. The only variable that is positively correlated with O-A-LostDirection is the other amotivation variable, O-A-LackofDirection. That is, students who did have a reason to enter their program are more likely to lose their direction after a while. This is consistent with prior research findings of amotivation (Vallerand et al. 1992).

Table 5.14 Correlations between Learning Orientation Variables – Chinese Students

		Intrinsic Learning Orientations						**Extrinsic Learning Orientations**						**Amotivations**	
		O-I-Acc.1	O-I-Acc.2	O-I-Sti.1	O-I-Sti.2	O-I-TK1	O-I-TK2	O-E-Ide1	O-E-Ide2	O-E-Int1	O-E-Int2	O-E-Reg1	O-E-Reg2	O-A-Lac.	O-A-Los.
O-I-Accomplishment1	Coeff.	1.000													
	Sig.	-													
O-I-Accomplishment2	Coeff.	**0.548**	1.000												
	Sig.	**0.000**	-												
O-I-Stimulation1	Coeff.	**0.469**	**0.572**	1.000											
	Sig.	**0.000**	**0.000**	-											
O-I-Stimulation2	Coeff.	**0.564**	**0.467**	**0.462**	1.000										
	Sig.	**0.000**	**0.000**	**0.000**	-										
O-I-ToKnow1	Coeff.	**0.613**	**0.436**	**0.370**	**0.597**	1.000									
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	-									
O-I-ToKnow2	Coeff.	**0.485**	**0.557**	**0.532**	**0.478**	**0.452**	1.000								
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-								
O-E-Identified1	Coeff.	**0.352**	**0.185**	**0.209**	**0.357**	**0.394**	**0.279**	1.000							
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-							
O-E-Identified2	Coeff.	**0.351**	**0.262**	**0.310**	**0.335**	**0.325**	**0.300**	**0.351**	1.000						
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-						
O-E-Introjected1	Coeff.	**0.291**	**0.277**	**0.281**	**0.314**	**0.359**	**0.218**	**0.280**	**0.360**	1.000					
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-					
O-E-Introjected2	Coeff.	**0.312**	**0.339**	**0.407**	**0.250**	**0.260**	**0.282**	**0.118**	**0.212**	**0.277**	1.000				
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.006**	**0.000**	**0.000**	-				
O-E-Regulation1	Coeff.	**0.253**	**0.218**	**0.271**	**0.203**	**0.227**	**0.237**	**0.218**	**0.462**	**0.206**	**0.173**	**1.000**			
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-			
O-E-Regulation2	Coeff.	**0.091**	**0.105**	**0.122**	**0.115**	0.016	0.049	-0.035	0.001	0.049	0.022	0.040	1.000		
	Sig.	**0.032**	**0.014**	**0.004**	**0.006**	0.701	0.250	0.409	0.985	0.246	0.598	0.360	-		
O-A-LackofDirection	Coeff.	**-0.117**	**-0.118**	**-0.097**	**-0.129**	**-0.118**	**-0.102**	**-0.134**	**-0.196**	**-0.090**	0.041	**-0.101**	0.006	1.000	
	Sig.	**0.005**	**0.005**	**0.021**	**0.002**	**0.005**	**0.016**	**0.002**	**0.000**	**0.032**	0.326	**0.019**	0.892	-	
O-A-LostDirection	Coeff.	**-0.136**	-0.082	-0.078	**-0.141**	**-0.103**	**-0.111**	**-0.130**	**-0.144**	-0.039	-0.009	-0.001	0.025	**0.345**	1.000
	Sig.	**0.001**	0.050	0.062	**0.001**	**0.014**	**0.008**	**0.002**	**0.001**	0.352	0.823	0.986	0.546	**0.000**	-

Section 5.3 discussed the characteristics of Chinese students' learning orientations. The findings suggest that Chinese students' are highly extrinsically and intrinsically motivated to study accounting Master programs in Australian universities. Compared with non-Chinese students, Chinese students have stronger introjected motivations and weaker identified motivations. This means they involve less self-determination and autonomy on the

motivational continuum than the non-Chinese students. It should be noted that Chinese students are not strongly motivated by migration-related orientations. They are not significantly more migration-oriented than other students, including Australian students.

5.4 Chinese Students' Learning Approaches

This section discusses the characteristics of Chinese students' learning approaches in comparative terms. The comparison tests and groups used are the same as in Sections 5.2 and 5.3. The variable names for each learning approach statement are listed in Table 5.15. The Mann-Whitney U test statistics are included in Table 5.17.

Table 5.15 Learning Approaches Variable Names

Students' Learning Approach Classification	Statement Used in Survey	Variable Name
Surface learning approach – Relying on memorising	I spend quite a lot of time repeating or copying out things to help me learn them.	A-S-Memorise1
	I find I have to concentrate on memorising a good deal of what I have to learn.	A-S-Memorise2
Surface learning approach – Concern about coping	Often I feel I am drowning in the sheer amount of material I have to cope with on this course.	A-S-NotCope1
	Sometimes I worry about whether I will ever be able to cope with the work properly.	A-S-NotCope2
Surface learning approach – Difficulty in making sense	I often have trouble in making sense of the things I have to learn.	A-S-NotMakingSense1
	Often I find myself reading things without really trying to understand them.	A-S-NotMakingSense2
Surface learning approach – Unrelatedness	Although I can remember facts and details, I often cannot see the overall picture.	A-S-Unrelate1
	I am not really sure what is important, so I try to get down just as much as I can in lectures.	A-S-Unrelate2
Deep learning approach – Active interest/critical stance	I am not prepared just to accept things I am told, I have to think them out by myself.	A-D-Critical
	Sometimes I find myself thinking about ideas from the course when I am doing other things.	A-D-Interest
Deep learning approach – Using evidence and logic	When I am reading, I examine the details carefully to see how they fit in with what is being said.	A-D-Logic1
	I look at the evidence carefully and then try to reach my own conclusions about things I am studying.	A-D-Logic2
Deep learning approach – Looking for meaning	When I am reading course material, I try to work out for myself exactly what is being said.	A-D-Meaning1
	I usually set out to understand for myself the meaning of what I have to learn.	A-D-Meaning2
Deep learning approach – Relating and organising ideas	I try to relate ideas I come across to other topics or other courses whenever possible.	A-D-Relate1
	When I am working on a new topic, I try to see in my own mind how all the ideas relate to each other.	A-D-Relate2
Achieving learning approach – Effort in studying	I put a lot of effort into making sure I have the most important details at my fingertips.	A-A-Effort1
	I work hard when I am studying and generally manage to keep my mind on what I am doing.	A-A-Effort2
Achieving learning approach – Determination to excel	I know what result I want to get out of this course and I am determined to achieve it.	A-A-Excel1
	It is important to me to feel I am doing as well as I really can in the course.	A-A-Excel2
Achieving learning approach – Organised studying	I make sure I find good conditions for studying which enables me get on with my work easily.	A-A-Organised1
	I think I am quite systematic and organised in the way I go about studying.	A-A-Organised2
Achieving learning approach – Time management	I organise my study time carefully to make the best use of it.	A-A-TimeManage1
	I work steadily throughout the course, rather than leaving everything until the last minute.	A-A-TimeManage2

5.4.1 Surface Learning Approaches

Figures 5.25 to 5.28 present the distribution of Chinese students' responses to the eight statements that measure the four aspects of surface learning. In general, Chinese students report high scores for surface learning approaches. The median and mode for the two statements that measure reliance on memorisation in learning are 5, that is, most Chinese students at least somewhat rely on memorisation in learning. In addition, 74.4% and 66.9% of Chinese participants at least somewhat agree with the two statements. Nevertheless, as shown in Table 5.17, this response is not significantly different from other student groups. The distribution of Chinese students' responses to concerns about coping is also not significantly different from other student groups. The majority (59.7%) of Chinese students feel they cannot cope with their current subject, while more (75.17%) of them are worried that they would never be able to cope with the work required by their programs. Chinese students' scores in other surface learning aspects, however, are significantly higher than for non-Chinese students. The box and whisker plot in Figure 5.29 shows the distribution of the two statements for which Chinese students' response is significantly different from non-Chinese students at the 0.05 level. The first statement is A-S-NotMakingSense1, on which 63.5% of Chinese students at least somewhat agree that they are having trouble making sense of what they have to learn. The second statement on which Chinese students scored higher than non-Chinese students is A-S-Unrelate1, with 58.7% of Chinese students finding it hard to see the overall picture of the subject knowledge.

Figure 5.25 The Distribution of Chinese Students' Surface Approaches Distribution – Relying on Memorising

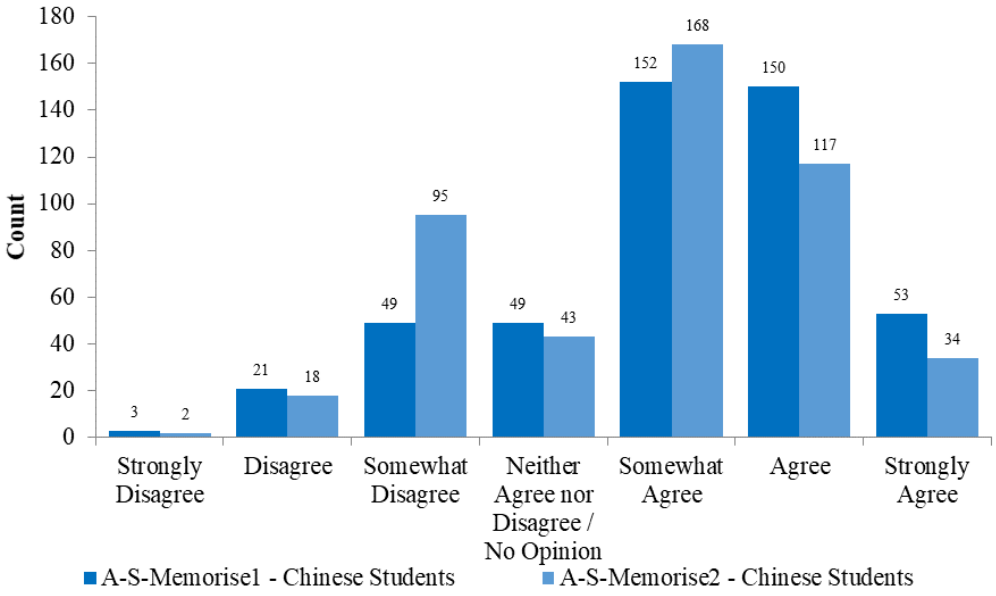


Figure 5.26 The Distribution of Chinese Students' Surface Approaches Distribution – Concern about Coping

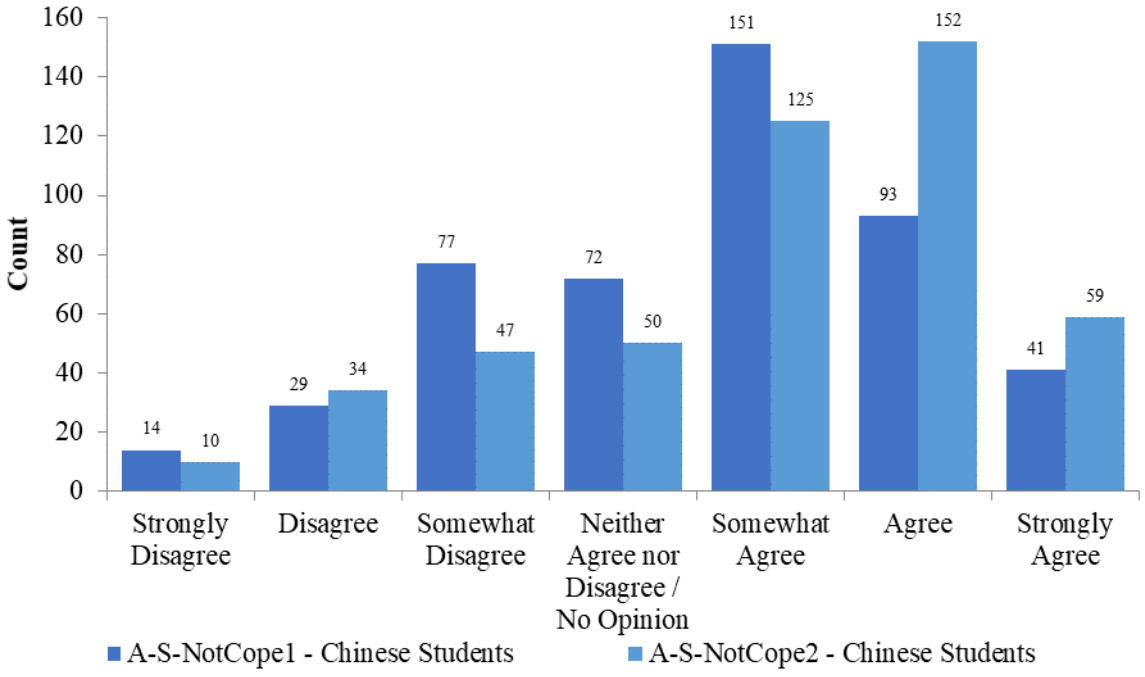


Figure 5.27 The Distribution of Chinese Students' Surface Approaches Distribution – Difficulty in Making Sense

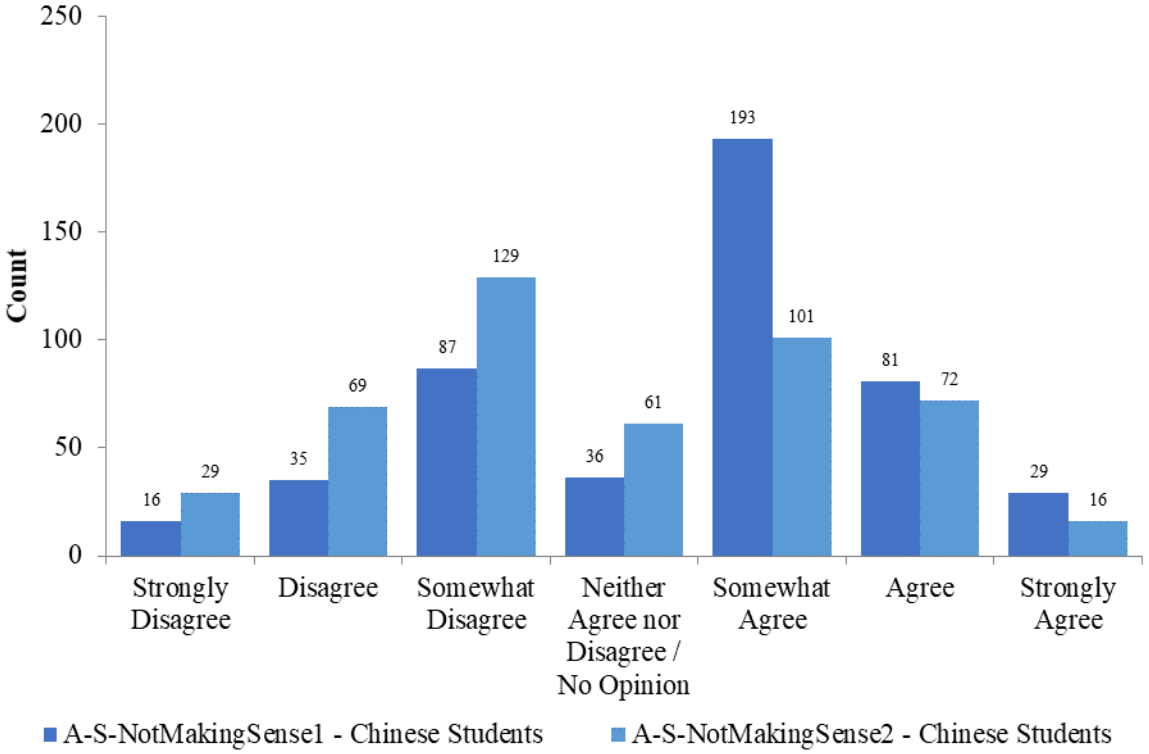


Figure 5.28 The Distribution of Chinese Students' Surface Approaches Distribution – Unrelatedness

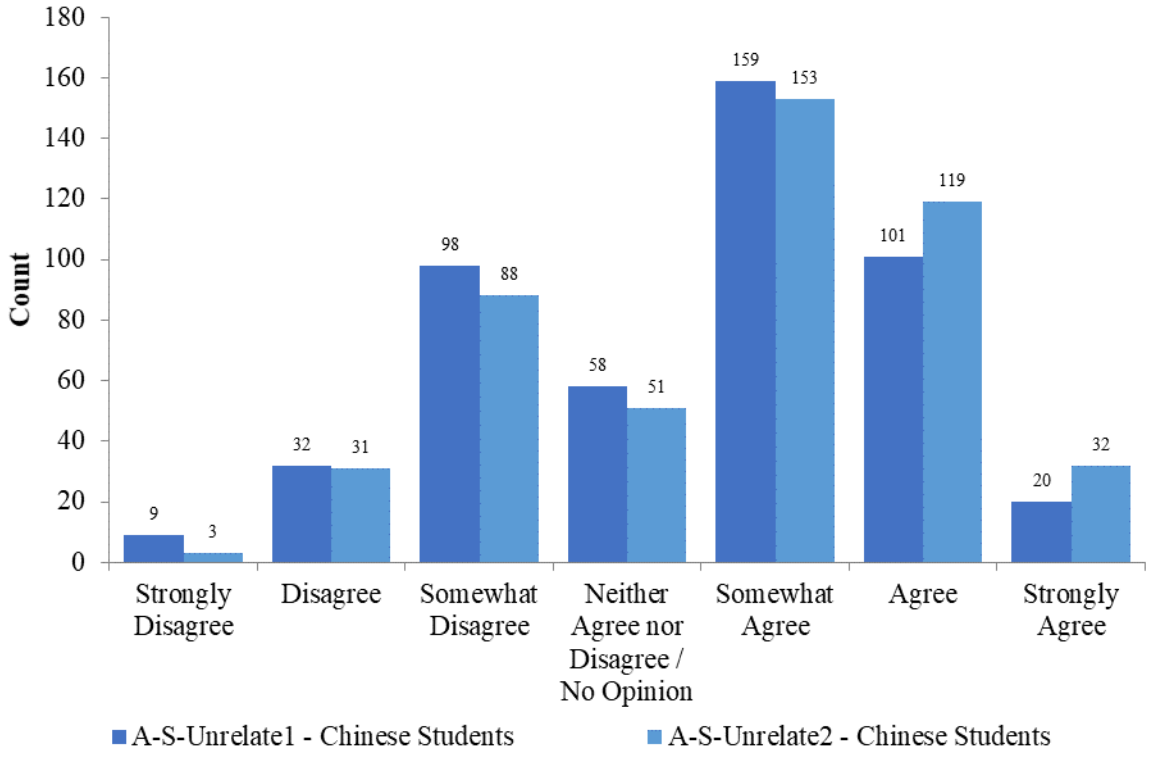
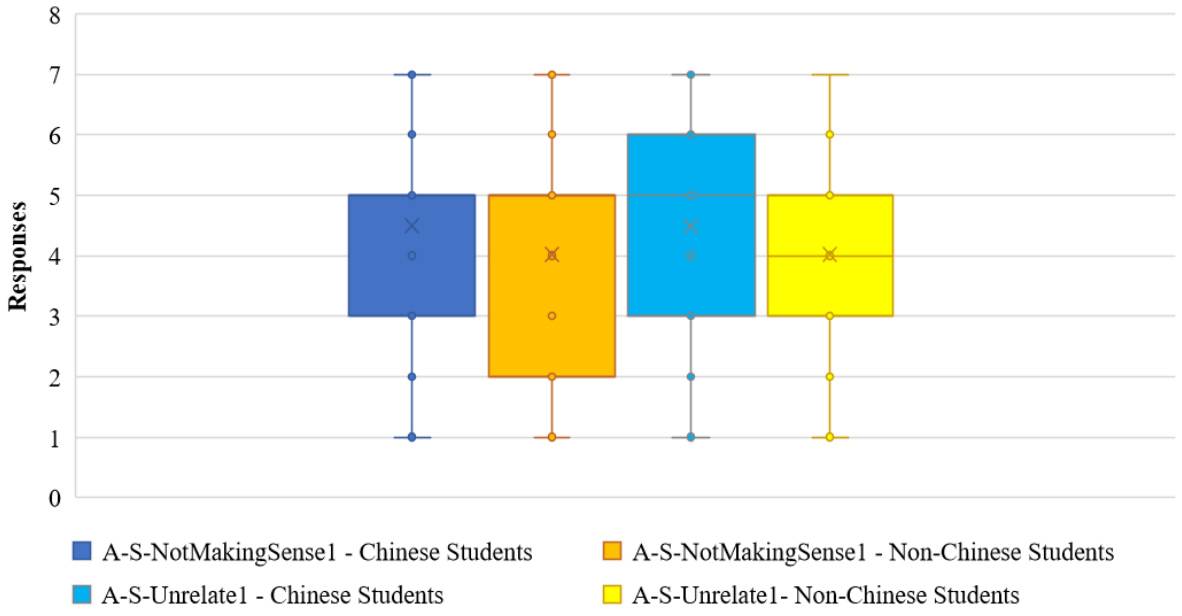


Figure 5.29 Surface Approaches Distribution Differences of Chinese and Non-Chinese Students



5.4.2 Deep Learning Approaches

Chinese students' responses to the eight statements that measure deep learning approaches are shown in Figures 5.30 to 5.33. Consistent with the findings from the surface learning section, Chinese students' responses to the statements that measure the practice of understanding the course material through reading and relating ideas across topics and subjects are significantly different from non-Chinese students at the 0.05 level. However, as shown in Figure 5.29, apart from the means, Chinese students' overall distributions are similar to non-Chinese students. The median and mode for A-D-Meaning1 and A-D-Relate1 are still high (5 – somewhat agree). Another measure in which Chinese students show a significantly different distribution from non-Chinese students is active interest. The result of comparing the means is consistent with the findings in Section 5.2.2, where Chinese students were found to score lower in the learning orientation statements linked to interest in accounting. The only statement in which Chinese students score significantly higher than non-Chinese students is A-D-Critical. 77.8% of Chinese students at least somewhat agree that they would not simply accept things they were taught – they need to think them through by themselves. In general, Chinese students corresponded positively in all eight deep learning statements.

Figure 5.30 The Distribution of Chinese Students' Deep Approaches Distribution – Active interest / Critical stance

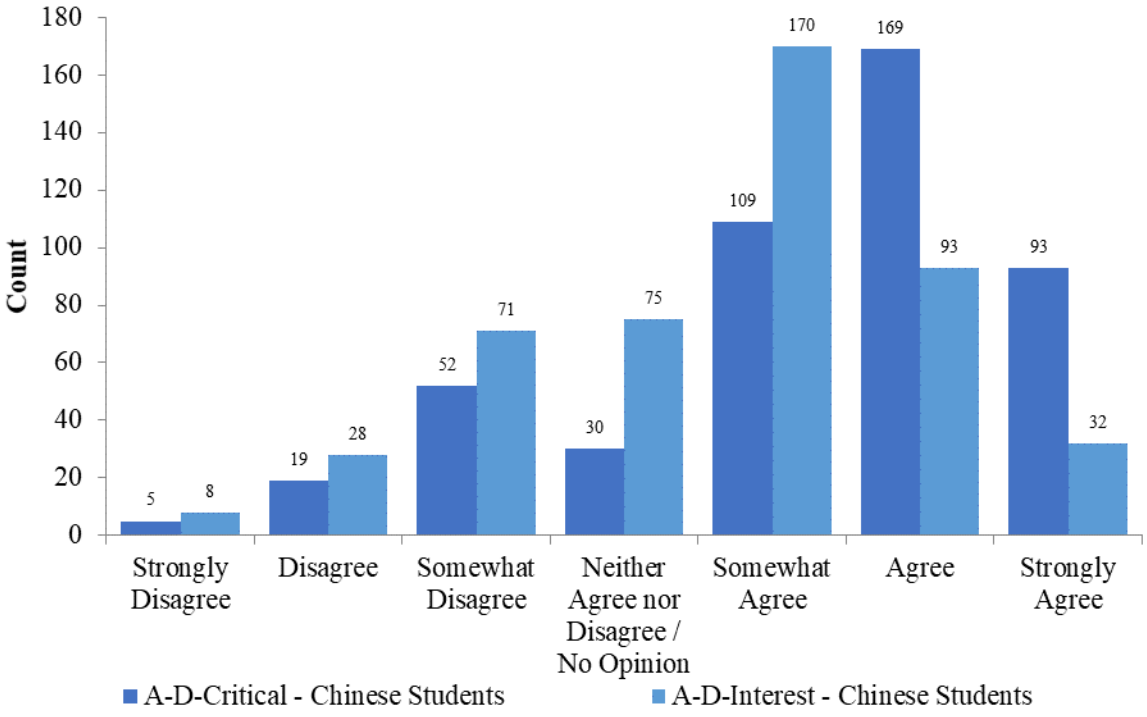


Figure 5.31 The Distribution of Chinese Students' Deep Approaches Distribution – Using Evidence and Logic

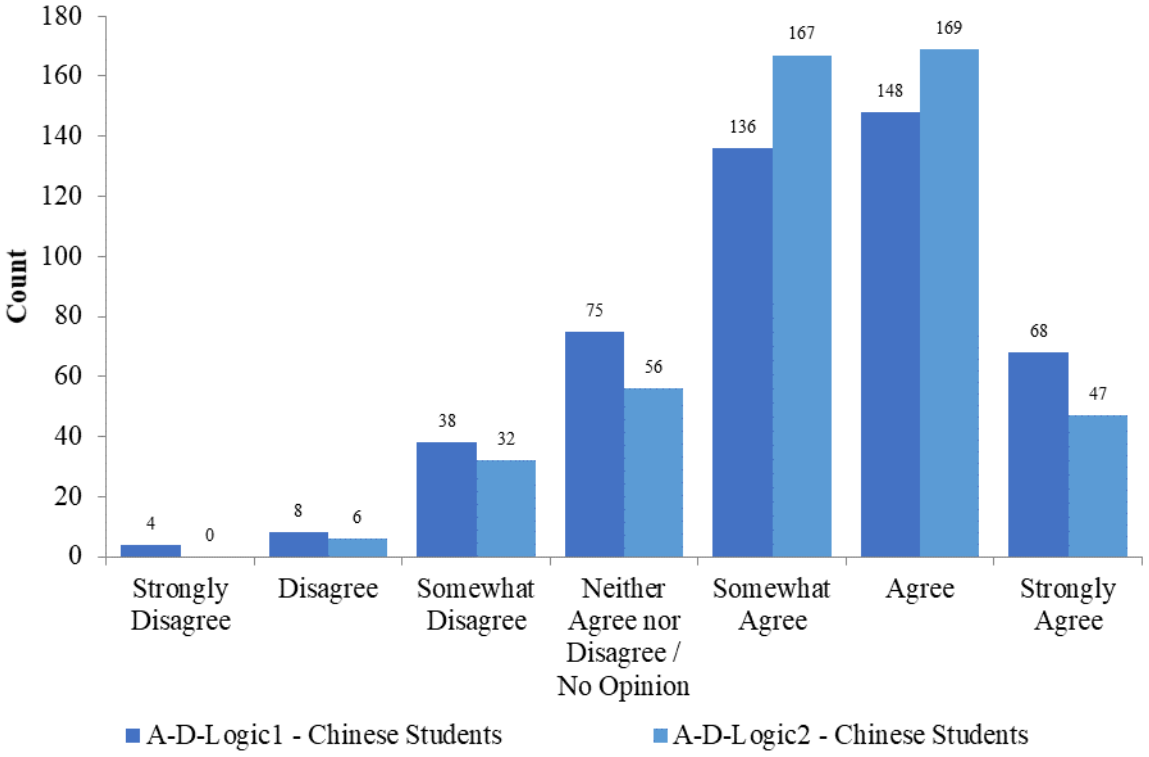


Figure 5.32 The Distribution of Chinese Students' Deep Approaches Distribution – Looking for Meaning

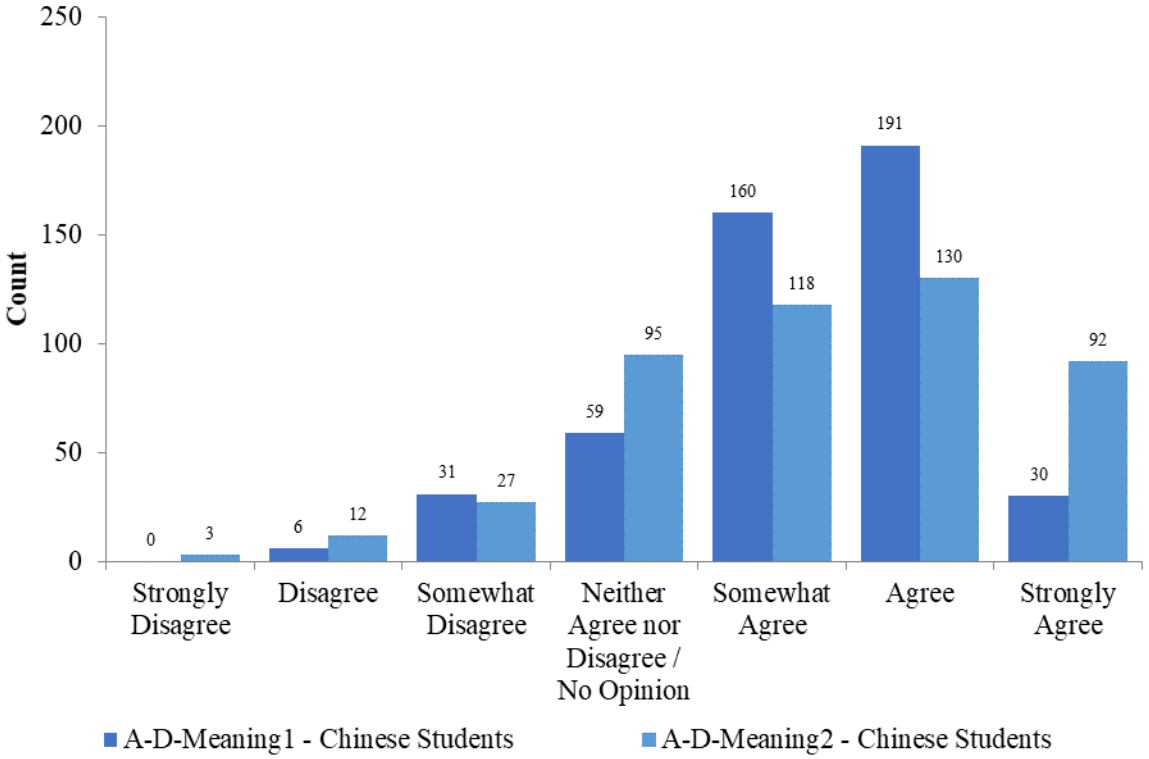


Figure 5.33 The Distribution of Chinese Students' Deep Approaches Distribution – Relating and Organising Ideas

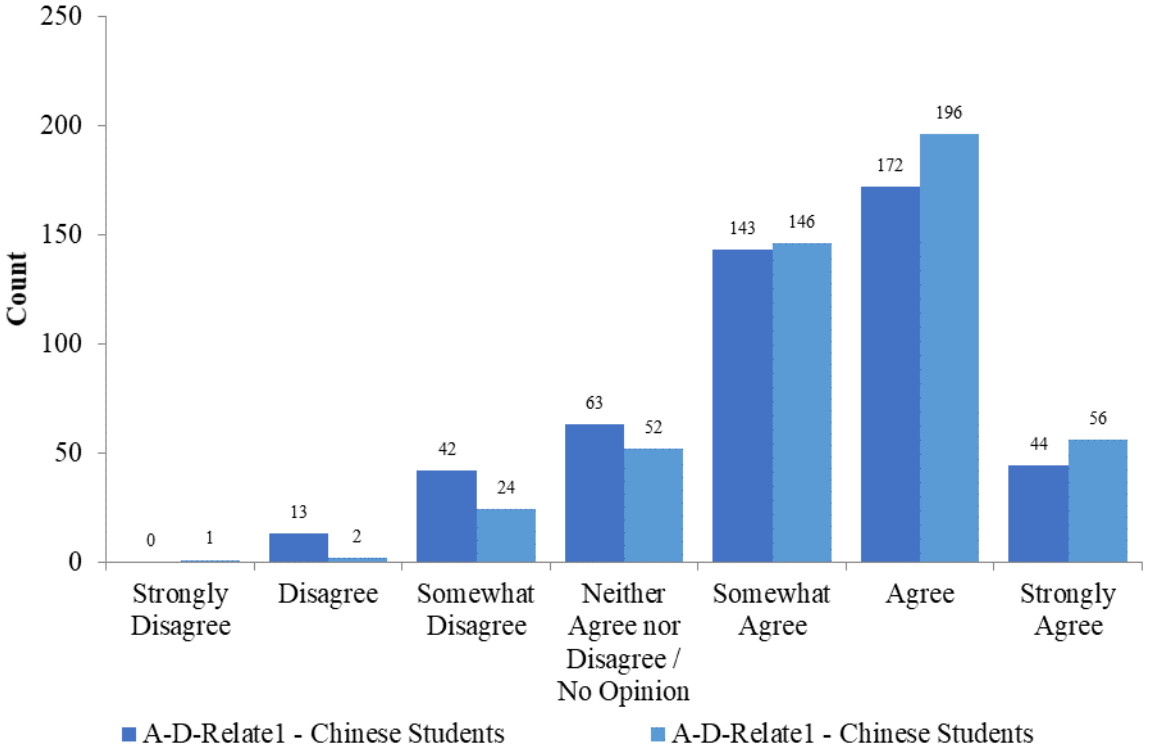
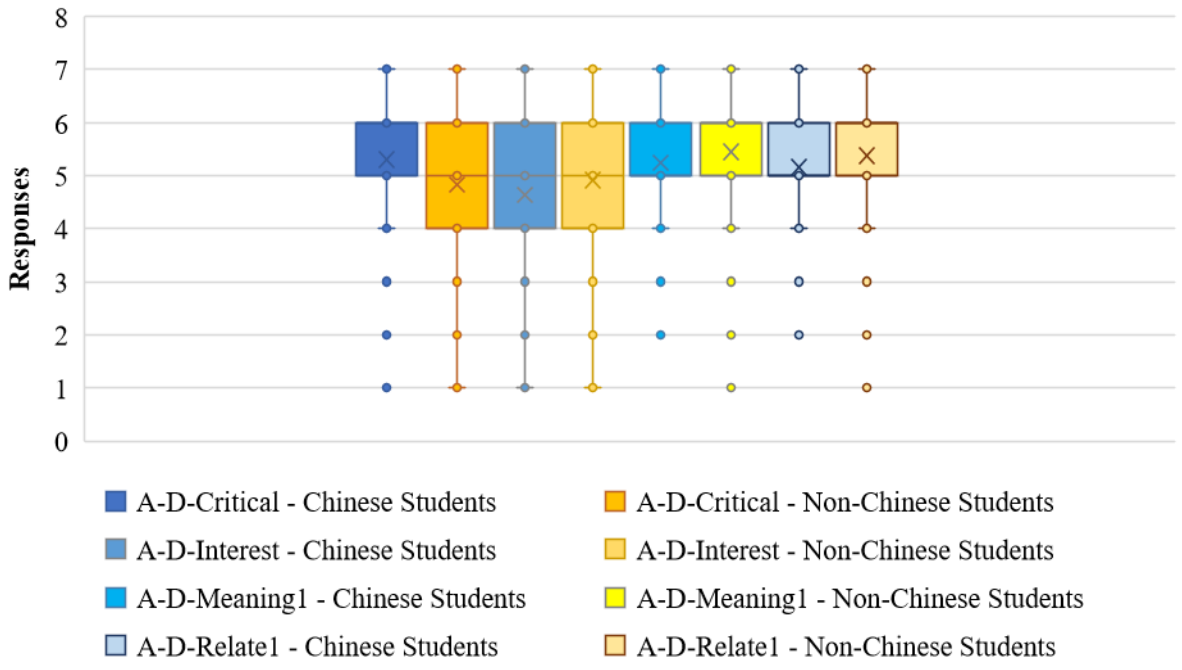


Figure 5.34 Deep Approaches Distribution Differences Between Chinese and Non-Chinese Students



5.4.3 Achieving Learning Approaches

Figures 5.35 to 5.38 present Chinese students' responses to the eight statements that measure achieving learning approaches. Chinese students' overall scores in this section are high, with a median of at least 5 (somewhat agree) in all statements. However, compared with non-Chinese students, Chinese students' scores are still significantly lower in the statements that measure determination to excel and organised study at the 0.05 level. The statements that received the most positive correspondence from Chinese students were the first statement that measures students' effort invested in studying and the first statement that measures students' practice of organising for good study conditions, with both statements having a median and a mode of 6 (agree). For time management, Chinese students organise their study time significantly better than Chinese overseas students. Figure 5.39 presents the distributions for the statements in which Chinese students show a significant difference from other student groups.

Figure 5.35 The Distribution of Chinese Students' Achieving Approaches Distribution – Effort in Studying

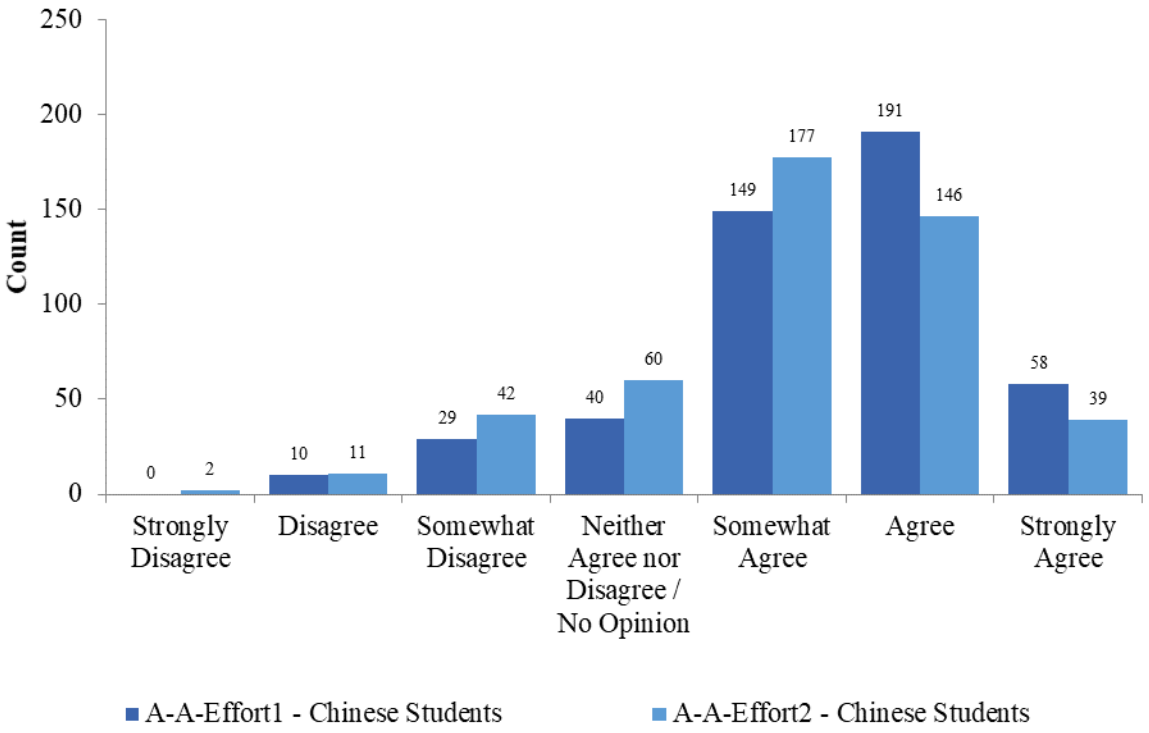


Figure 5.36 The Distribution of Chinese Students' Achieving Approaches Distribution – Determination to Excel

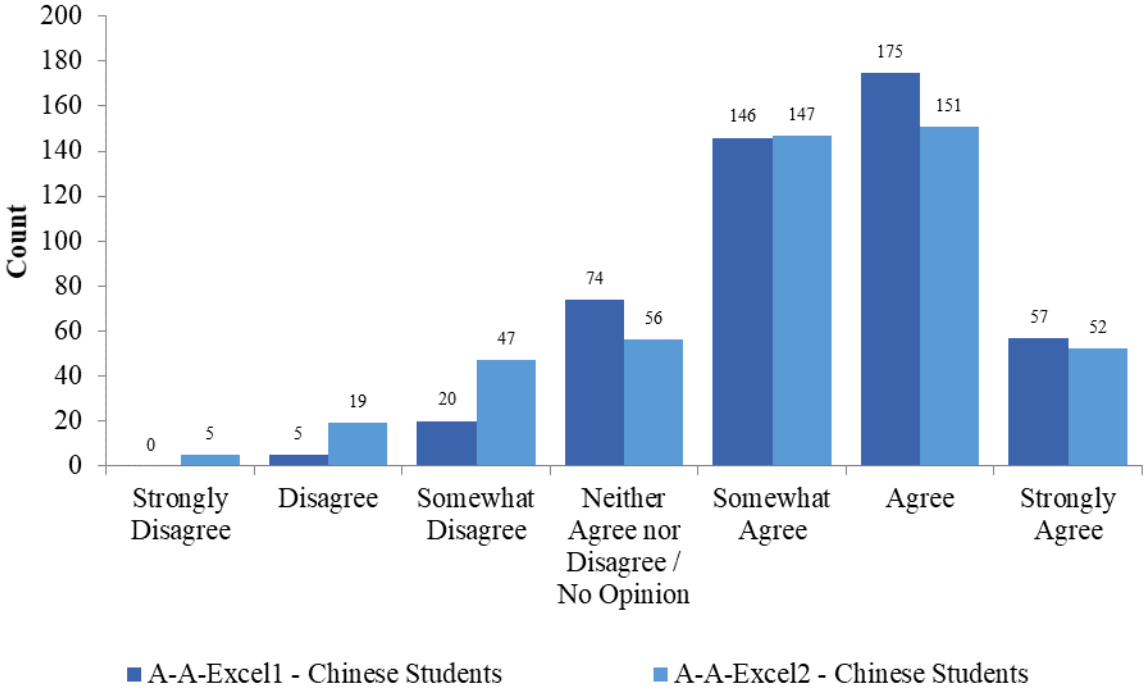


Figure 5.37 The Distribution of Chinese Students' Achieving Approaches Distribution – Organised Studying

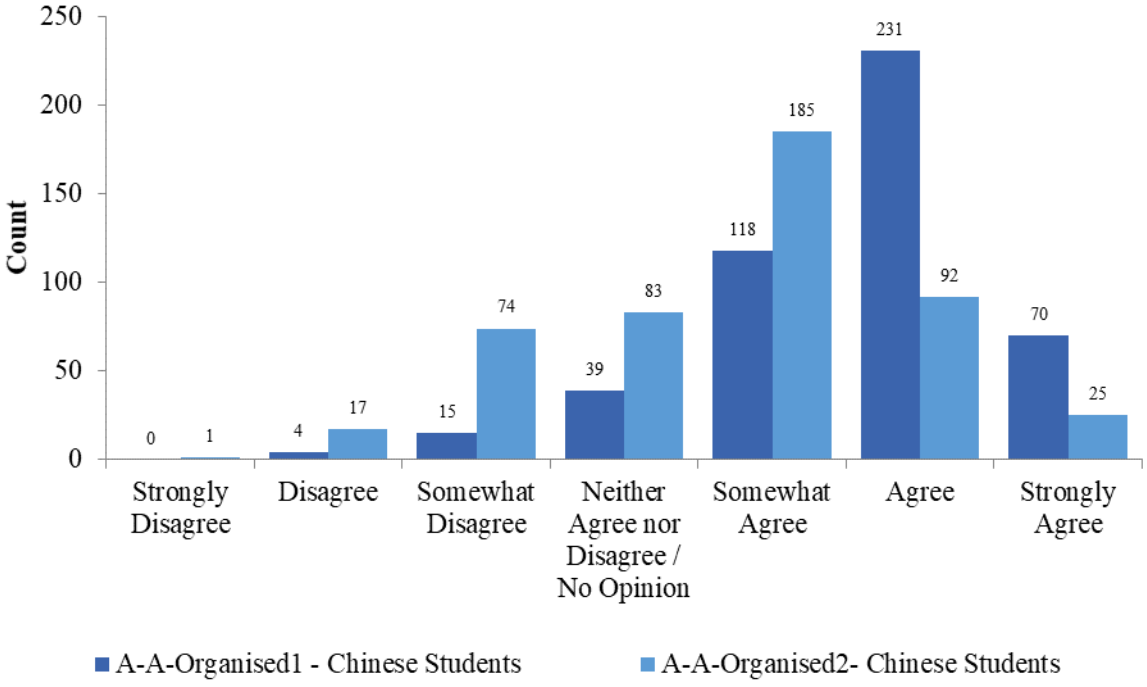


Figure 5.38 The Distribution of Chinese Students' Achieving Approaches Distribution – Time Management

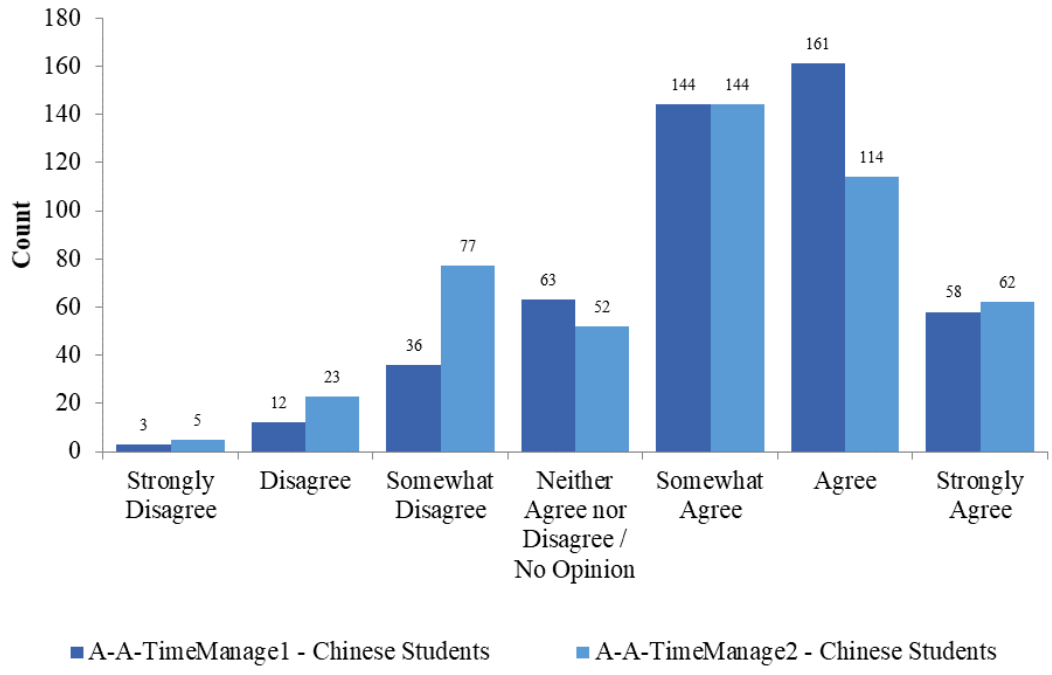
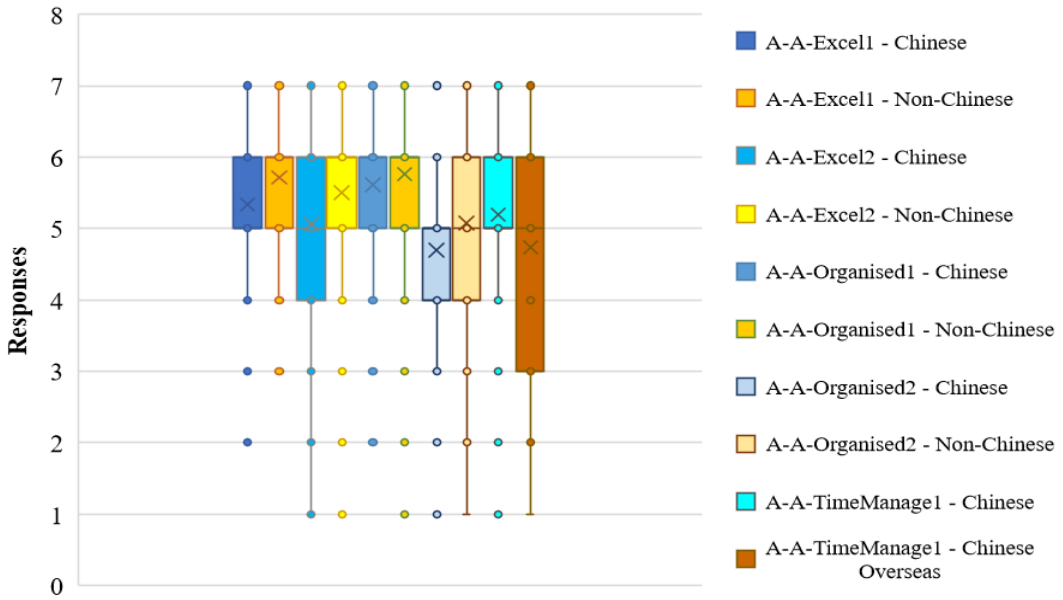


Figure 5.39 Achieving Approaches Distribution Differences of the Student Groups



Tables 5.16 and 5.17 present the descriptive statistics and Mann-Whitney U test statistics for the three student groups. The bold numbers in Table 5.17 indicate where the distributions of the other student groups and Chinese students are significantly different at the 0.05 level. The implication of the findings will be further discussed in Chapter Seven.

Table 5.16 Descriptive Statistics of Learning Approaches of Chinese Students

Classification	Statement	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis
Surface Approaches	A-S-Memorise1	477	5.07	5	5	1.330	-0.723	0.047
	A-S-Memorise2	477	4.77	5	5	1.332	-0.391	-0.641
	A-S-NotCope1	477	4.59	5	5	1.480	-0.417	-0.408
	A-S-NotCope2	477	4.97	5	6	1.514	-0.760	-0.172
	A-S-NotMakingSense1	477	4.50	5	5	1.472	-0.510	-0.410
	A-S-NotMakingSense2	477	3.87	4	3	1.582	0.055	-0.958
	A-S-Unrelate1	477	4.49	5	5	1.403	-0.391	-0.618
	A-S-Unrelate2	477	4.69	5	5	1.398	-0.403	-0.699
Deep Approaches	A-D-Critical	477	5.30	6	6	1.440	-0.900	0.117
	A-D-Interest	477	4.63	5	5	1.371	-0.448	-0.261
	A-D-Logic1	477	5.19	5	6	1.268	-0.632	0.187
	A-D-Logic2	477	5.26	5	6	1.087	-0.624	0.243
	A-D-Meaning1	477	5.23	5	6	1.047	-0.757	0.390
	A-D-Meaning2	477	5.25	5	6	1.319	-0.531	-0.114
	A-D-Relate1	477	5.16	5	6	1.199	-0.668	-0.032
	A-D-Relate2	477	5.42	6	6	1.045	-0.738	0.652
Achieving Approaches	A-A-Effort1	477	5.38	6	6	1.124	-0.875	0.708
	A-A-Effort2	477	5.08	5	5	1.176	-0.681	0.379
	A-A-Excel1	477	5.34	5	6	1.073	-0.525	0.064
	A-A-Excel2	477	5.06	5	6	1.338	-0.747	0.160
	A-A-Organised1	477	5.61	6	6	0.993	-0.947	1.169
	A-A-Organised2	477	4.70	5	5	1.210	-0.312	-0.346
	A-A-TimeManage1	477	5.20	5	6	1.245	-0.746	0.378
	A-A-TimeManage2	477	4.88	5	5	1.451	-0.441	-0.551

Table 5.17 Descriptive Statistics of Learning Approaches – Other Student Groups

Classification	Statement	Student Group	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis	Test Statistic	Sig.
Surface Approaches	A-S-Memorise 1	Chinese Overseas	56	4.68	5	5	1.685	-0.392	-0.827	-1.480	0.139
		Non-Chinese	106	4.81	5	6	1.598	-0.598	-0.453	-1.175	0.240
	A-S-Memorise 2	Chinese Overseas	56	5.00	5	5	1.321	-0.442	-0.695	1.251	0.211
		Non-Chinese	106	4.84	5	6	1.622	-0.704	-0.359	1.117	0.264
	A-S-NotCope1	Chinese Overseas	56	4.38	4.5	6	1.496	-0.340	-0.659	-0.976	0.329
		Non-Chinese	106	4.71	5	6	1.679	-0.621	-0.495	1.172	0.241
	A-S-NotCope2	Chinese Overseas	56	4.70	5	5	1.747	-0.490	-0.698	-1.003	0.316
		Non-Chinese	106	4.93	5	6	1.551	-0.950	0.312	-0.124	0.901
	A-S-NotMakingSense1	Chinese Overseas	56	4.02	5	5	1.657	-0.179	-1.401	-1.897	0.058
		Non-Chinese	106	4.02	5	5	1.882	-0.150	-1.202	-2.336	**0.020**

Classification	Statement	Student Group	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis	Test Statistic	Sig.
	A-S-NotMakingSense2	Chinese Overseas	56	3.52	3	3	1.607	0.321	-0.888	-1.590	0.112
		Non-Chinese	106	3.90	4	5	1.707	-0.316	-1.186	0.309	0.758
	A-S-Unrelate1	Chinese Overseas	56	4.20	4.5	5	1.432	-0.166	-0.622	-1.484	0.138
		Non-Chinese	106	4.02	4	3	1.531	-0.260	-0.859	-2.737	**0.006**
	A-S-Unrelate2	Chinese Overseas	56	4.46	5	6	1.629	-0.431	-0.664	-0.785	0.432
		Non-Chinese	106	4.61	5	6	1.682	-0.591	-0.515	0.097	0.923
Deep Approaches	A-D-Critical	Chinese Overseas	56	5.13	5.5	7	1.727	-0.705	-0.507	-0.344	0.731
		Non-Chinese	106	4.83	5	6	1.647	-0.635	-0.535	-2.600	**0.009**
	A-D-Interest	Chinese Overseas	56	4.80	5	5	1.470	-1.143	1.373	1.231	0.218
		Non-Chinese	106	4.92	5	5	1.332	-0.927	0.856	2.199	**0.028**
	A-D-Logic1	Chinese Overseas	56	4.84	5	5	1.359	-0.104	-0.778	-1.251	0.211
		Non-Chinese	106	5.46	5	6	1.339	-1.166	1.671	1.590	0.112
	A-D-Logic2	Chinese Overseas	56	5.23	5	5	1.236	-0.402	-0.553	-0.098	0.922
		Non-Chinese	106	5.25	5	6	1.145	-0.963	1.279	0.123	0.902
	A-D-Meaning1	Chinese Overseas	56	5.07	5	5	1.158	-0.435	-0.078	-1.153	0.249
		Non-Chinese	106	5.44	6	6	1.155	-1.427	2.603	2.483	**0.013**
	A-D-Meaning2	Chinese Overseas	56	5.27	5	5	1.272	-0.363	-0.469	0.018	0.986
		Non-Chinese	106	5.20	5	6	1.305	-0.455	-0.435	-0.354	0.724
	A-D-Relate1	Chinese Overseas	56	5.29	5	5	0.986	-0.376	0.037	0.371	0.710
		Non-Chinese	106	5.38	6	6	1.253	-1.343	2.178	2.172	**0.030**
	A-D-Relate2	Chinese Overseas	56	5.43	6	6	1.158	-0.987	0.713	0.472	0.637
		Non-Chinese	106	5.34	6	6	1.154	-1.040	1.701	-0.403	0.687
Achieving Approaches	A-A-Effort1	Chinese Overseas	56	5.25	5	5	1.148	-1.037	2.429	-1.004	0.316
		Non-Chinese	106	5.40	6	6	1.262	-1.339	2.325	0.612	0.540
	A-A-Effort2	Chinese Overseas	56	4.89	5	5	1.317	-0.192	-0.530	-1.320	0.219
		Non-Chinese	106	5.22	5	6	1.203	-1.332	2.211	1.557	0.119
	A-A-Excel1	Chinese Overseas	56	5.07	5	5	1.248	-0.488	0.050	-1.527	0.127
		Non-Chinese	106	5.72	6	6	0.892	-0.721	0.603	3.426	**0.001**

Classification	Statement	Student Group	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis	Test Statistic	Sig.
	A-A-Excel2	Chinese Overseas	56	4.71	5	5	1.581	-0.424	-0.687	-1.514	0.130
		Non-Chinese	106	5.50	6	6	1.347	-1.454	2.159	3.713	**0.000**
	A-A-Organised 1	Chinese Overseas	56	5.52	6	5	1.079	-0.453	-0.136	-0.781	0.435
		Non-Chinese	106	5.76	6	6	1.126	-1.479	3.144	2.115	**0.034**
	A-A-Organised 2	Chinese Overseas	56	4.80	5	6	1.367	-0.339	-0.404	0.706	0.480
		Non-Chinese	106	5.08	5	6	1.278	-0.618	0.009	3.112	**0.002**
	A-A-TimeManage1	Chinese Overseas	56	4.73	5	5	1.531	-0.348	-0.670	-2.178	**0.029**
		Non-Chinese	106	5.19	5	6	1.212	-0.829	0.164	0.035	0.972
	A-A-TimeManage2	Chinese Overseas	56	4.50	5	5	1.799	-0.291	-0.930	-1.414	0.157
		Non-Chinese	106	5.10	5	6	1.486	-0.803	0.053	1.674	0.094

5.4.4 Correlations between Learning Approach Variables of Chinese Students

Table 5.18 presents the Kendall's tau correlation coefficients for all learning approach variables. The bold numbers are coefficients that are significant at the 0.05 level. The results show a close relationship between learning approach variables, since all variables are significantly correlated with most other variables. All variables in the same classification (surface, deep and achieving) are positively correlated with each other, indicating that Chinese students' learning motives and learning strategies are closely related. In addition, the deep learning approaches are also closely correlated with the achieving learning approaches at the 0.01 level, suggesting that Chinese students can adopt both deep and achieving approaches simultaneously. These correlations are consistent with the SAL model (Biggs 1987) and thus suggest good validity of the survey's learning approach measures. Although these significant coefficients cannot prove causal relationships, the implications of some correlations provide some additional understanding with regard to Chinese students' learning approaches. For example, the two surface approach statements that measure Chinese students' reliance on memorisation in learning, A-S-Memorise1 and A-S-Memorise2, are positively correlated with all other learning approaches. This suggests that Chinese students adopt memorisation as a common strategy regardless of their learning approach. This finding is consistent with many prior studies (for example, Biggs 1996a; Donald & Jackling 2007).

Table 5.18 Correlations Between the Learning Approach Variables for Chinese Students

		Surface Learning Approaches								Deep Learning Approaches								Achieving Learning Approaches							
		Mem. 1	Mem. 2	NC 1	NC 2	NMS 1	NMS 2	Unrel. 1	Unrel. 2	Crit.	Int.	Logic 1	Logic 2	Mea. 1	Mea. 2	Relate 1	Relate 2	Effort 1	Effort 2	Excel 1	Excel 2	Org. 1	Org. 2	TM 1	TM 2
Memorise 1	Corre.	1.000																							
	Sig.	-																							
Memorise 2	Corre.	**0.262**	1.000																						
	Sig.	**0.000**	-																						
Not Cope 1	Corre.	**0.261**	**0.278**	1.000																					
	Sig.	**0.000**	**0.000**	-																					
Not Cope 2	Corre.	**0.355**	**0.190**	**0.376**	1.000																				
	Sig.	**0.000**	**0.000**	**0.000**	-																				
Not Mak. Sense 1	Corre.	**0.218**	**0.187**	**0.484**	**0.405**	1.000																			
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	-																			
Not Mak. Sense 2	Corre.	**0.169**	**0.165**	**0.256**	**0.229**	**0.283**	1.000																		
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-																		
Unrelated 1	Corre.	**0.163**	**0.203**	**0.351**	**0.264**	**0.369**	**0.307**	1.000																	
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-																	
Unrelated 2	Corre.	**0.303**	**0.257**	**0.264**	**0.333**	**0.263**	**0.283**	**0.231**	1.000																
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-																
Critical	Corre.	**0.103**	**0.125**	0.063	0.041	0.047	-0.052	0.065	**0.099**	1.000															
	Sig.	**0.006**	**0.001**	0.085	0.264	0.210	0.156	0.078	**0.007**	-															
Interest	Corre.	**0.192**	**0.234**	**0.100**	**0.175**	0.049	**0.147**	**0.122**	**0.256**	**0.184**	1.000														
	Sig.	**0.000**	**0.000**	**0.006**	**0.000**	0.189	**0.000**	**0.001**	**0.000**	**0.000**	-														
Logic 1	Corre.	**0.133**	**0.080**	-0.072	0.046	-0.016	0.028	0.021	**0.163**	**0.164**	**0.115**	1.000													
	Sig.	**0.000**	**0.032**	0.051	0.217	0.670	0.439	0.580	**0.000**	**0.000**	**0.002**	-													
Logic 2	Corre.	**0.178**	**0.173**	0.026	0.019	-0.026	-0.060	0.013	**0.189**	**0.296**	**0.254**	**0.270**	1.000												
	Sig.	**0.000**	**0.000**	0.478	0.615	0.487	0.105	0.729	**0.000**	**0.000**	**0.000**	**0.000**	-												
Meaning 1	Corre.	**0.205**	**0.118**	-0.001	**0.086**	0.036	-0.019	0.030	**0.212**	**0.231**	**0.160**	**0.634**	**0.426**	1.000											
	Sig.	**0.000**	**0.002**	0.977	**0.023**	0.343	0.619	0.436	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-											
Meaning 2	Corre.	**0.121**	**0.138**	0.029	-0.004	-0.027	-0.073	0.012	**0.119**	**0.250**	**0.183**	**0.204**	**0.694**	**0.307**	1.000										
	Sig.	**0.001**	**0.000**	0.432	0.912	0.469	0.051	0.751	**0.001**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-										
Relate 1	Corre.	**0.125**	**0.188**	-0.005	-0.027	-0.065	-0.057	-0.038	**0.113**	**0.260**	**0.294**	**0.194**	**0.344**	**0.274**	**0.274**	1.000									
	Sig.	**0.001**	**0.000**	0.889	0.464	0.081	0.123	0.314	**0.003**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-									
Relate 2	Corre.	**0.252**	**0.155**	-0.002	0.032	-0.052	-0.071	-0.053	**0.131**	**0.223**	**0.245**	**0.302**	**0.444**	**0.445**	**0.343**	**0.431**	1.000								
	Sig.	**0.000**	**0.000**	0.965	0.394	0.169	0.058	0.161	**0.001**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-								
Effort 1	Corre.	**0.312**	**0.209**	**0.160**	**0.147**	**0.117**	0.052	**0.123**	**0.165**	**0.232**	**0.186**	**0.188**	**0.326**	**0.259**	**0.229**	**0.232**	**0.267**	1.000							
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.002**	0.160	**0.001**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-							
Effort 2	Corre.	**0.259**	**0.217**	-0.020	0.021	-0.070	-0.045	0.020	**0.188**	**0.210**	**0.241**	**0.288**	**0.545**	**0.382**	**0.390**	**0.305**	**0.404**	**0.399**	1.000						
	Sig.	**0.000**	**0.000**	0.597	0.579	0.062	0.225	0.602	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-						
Excel 1	Corre.	**0.223**	**0.175**	-0.016	0.054	-0.016	-0.017	0.004	**0.185**	**0.220**	**0.320**	**0.229**	**0.431**	**0.323**	**0.345**	**0.350**	**0.460**	**0.332**	**0.439**	1.000					
	Sig.	**0.000**	**0.000**	0.661	0.151	0.662	0.655	0.906	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-					
Excel 2	Corre.	**0.325**	**0.202**	**0.250**	**0.217**	**0.227**	0.062	**0.222**	**0.169**	**0.251**	**0.187**	**0.112**	**0.244**	**0.176**	**0.207**	**0.138**	**0.216**	**0.384**	**0.301**	**0.236**	1.000				
	Sig.	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.089	**0.000**	**0.000**	**0.000**	**0.000**	**0.003**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-				
Organised 1	Corre.	**0.315**	**0.170**	0.010	0.108	0.029	-0.017	0.021	**0.186**	**0.145**	**0.159**	**0.261**	**0.389**	**0.411**	**0.268**	**0.284**	**0.502**	**0.318**	**0.415**	**0.365**	**0.212**	1.000			
	Sig.	**0.000**	**0.000**	0.786	**0.005**	0.455	0.650	0.579	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-			
Organised 2	Corre.	**0.104**	**0.186**	**-0.079**	**-0.103**	**-0.113**	-0.046	**-0.106**	0.029	**0.178**	**0.184**	**0.198**	**0.341**	**0.260**	**0.281**	**0.355**	**0.364**	**0.368**	**0.442**	**0.335**	**0.198**	**0.323**	1.000		
	Sig.	**0.005**	**0.000**	**0.032**	**0.005**	**0.002**	0.207	**0.004**	0.432	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-		
Time Manage.1	Corre.	**0.280**	**0.199**	0.023	0.065	-0.020	-0.004	-0.011	**0.204**	**0.172**	**0.234**	**0.255**	**0.427**	**0.328**	**0.322**	**0.284**	**0.455**	**0.423**	**0.552**	**0.465**	**0.298**	**0.434**	**0.465**	1.000	
	Sig.	**0.000**	**0.000**	0.531	0.082	0.590	0.908	0.773	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-	
Time Manage.2	Corre.	**0.165**	**0.077**	-0.047	0.007	**-0.112**	-0.019	-0.034	**0.109**	**0.171**	**0.197**	**0.195**	**0.319**	**0.252**	**0.228**	**0.234**	**0.261**	**0.394**	**0.486**	**0.326**	**0.216**	**0.276**	**0.398**	**0.470**	1.000
	Sig.	**0.000**	**0.037**	0.193	0.842	**0.002**	0.602	0.351	**0.003**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	-

This section discussed the findings in regard to Chinese students' learning approaches. Chinese students' learning approaches have some unique characteristics which make them different from other students. Memorisation is used as a common learning strategy regardless of which learning approach a Chinese student adopts. However, their reliance on memorisation is not significantly heavier than for other students at the 0.05 level. Chinese students have stronger surface motives and adopt less deep learning strategies than non-Chinese students. Although Chinese students find it harder to understand course materials and to relate different topics, they take a more critical stance when reading new materials than non-Chinese students. Chinese students are also less interested in accounting and less determined to excel than non-Chinese students. They are less organised in study than non-Chinese students but are better at time management than Chinese-overseas students.

5.5 Summary

This chapter used 18 tables and 39 figures to present the findings relevant to the first research question. It summarised the characteristics of Chinese students' backgrounds, learning orientations, and learning approaches by comparing their survey responses with other student groups. It should be noted that the discussion with regard to correlations mainly concerns the validity of the survey measurements rather than causal relationships between variables.

Chinese students have some unique background, learning orientation and learning approach characteristics that differentiate them from other students. There was a higher proportion of female students and lower English competency. Chinese students are also younger and thus have less working experience and less savings. Compared with other students, Chinese students rely more on their family's financial support to pay for their tuition fees and living costs while studying in Australia. For learning orientations, Chinese students are both intrinsically and extrinsically motivated, but they involve less self-determination and autonomy on the motivational continuum than non-Chinese students. It should be noted that they are not more migration-oriented than other students. Chinese students' adoption of surface, deep and achieving learning approaches is also different from non-Chinese students. Chinese students have stronger surface learning motives, adopt fewer deep learning strategies, and adopt fewer achieving learning approaches than non-Chinese students. They are also less interested in accounting but take a more critical stance with course materials.

Chapter Five also reported the diversity within the Chinese student group. The Chinese students' backgrounds, especially the locations of prior education institutions, prior academic performance and prior accounting knowledge, are widely dispersed. The diversity in backgrounds contributes to the diversity in their learning orientations and learning approaches. The most diversified learning orientation type is amotivation while the most diversified learning approach type is surface learning approaches.

The impact of Chinese students' backgrounds and learning orientations on their learning approaches will be discussed in Chapter Six. Chapter Six continues to present the research findings and answers the second and third research questions.

Chapter Six

Second and Third Research Questions – Findings

6.1 Introduction

This chapter continues to answer the research questions with findings from hypotheses tests. The test results for hypotheses H1 to H21 answer the second research question: What are the relationships between Chinese postgraduate accounting students' backgrounds, learning orientations and learning approaches? The test results for hypotheses H22 and H23 answer the third research question: How do Chinese postgraduate accounting students' learning orientations and approaches change during the time they study in Australian universities?

6.2 Findings to Answer the Second Research Question

6.2.1 Differences between female and male students

H1 and H2 compare Chinese students' differences in learning orientations and learning approaches between female and male students. Mann-Whitney U tests were performed to help draw conclusions for these two hypotheses. The findings and decisions are now discussed.

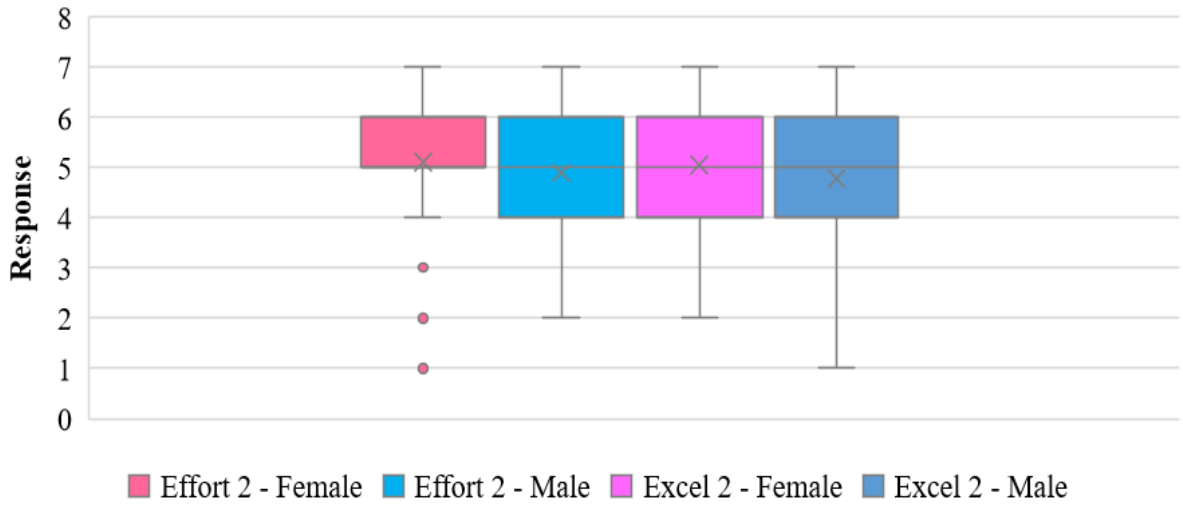
Table 6.1 summarises the results of the Mann-Whitney U tests performed for H1. The null hypothesis of H1 is that students' gender does not affect their learning approaches. Apart from two participants who chose "rather not say" in the gender question, all other students chose either "male" or "female". The test of H1 thus focuses on whether female students' learning approaches are different from male students. H1 was broken down into 24 null hypotheses, with each testing one statement used in the learning approaches section of the survey. The results show that female and male students' response distributions are significantly different at the 0.05 level for two achieving approach statements: (18) A-A-Effort2 and (20) A-A-Excel 2. Figure 6.1 uses box and whisker plots to present the distributions of the two genders for these two statements. In general, female students scored higher in both statements than male students. A-A-Effort2 describes the status of hard-working and staying focused while studying, while A-A-Excel 2 is related to achieving the best result within one's capability in the course. The null hypotheses regarding these two learning approach statements are rejected, while the null hypotheses regarding the other learning approach statements are retained. That

is, apart from the effort in studying and the determination to excel in achieving learning approaches, the differences between female and male students in learning approaches are not statistically significant at the 0.05 level. The conclusion is to retain H1b and reject H1a, that female Chinese students score significantly higher than male Chinese students in some achieving learning approaches.

Table 6.1 H1 Hypothesis Test Summary

	Null Hypothesis	Test Statistic	Significance	Decision
(1)	The distribution of A-S-Memorise1 is the same between female and male Chinese students.	-1.101	0.271	Retain the null hypothesis.
(2)	The distribution of A-S-Memorise2 is the same between female and male Chinese students.	-0.599	0.549	Retain the null hypothesis.
(3)	The distribution of A-S-NotCope1 is the same between female and male Chinese students.	0.463	0.643	Retain the null hypothesis.
(4)	The distribution of A-S-NotCope2 is the same between female and male Chinese students.	-0.951	0.341	Retain the null hypothesis.
(5)	The distribution of A-S-NotMakingSense1 is the same between female and male Chinese students.	1.161	0.246	Retain the null hypothesis.
(6)	The distribution of A-S-NotMakingSense2 is the same between female and male Chinese students.	0.272	0.786	Retain the null hypothesis.
(7)	The distribution of A-S-Unrelate1 is the same between female and male Chinese students.	0.625	0.532	Retain the null hypothesis.
(8)	The distribution of A-S-Unrelate2 is the same between female and male Chinese students.	1.580	0.114	Retain the null hypothesis.
(9)	The distribution of A-D-Critical is the same between female and male Chinese students.	0.474	0.635	Retain the null hypothesis.
(10)	The distribution of A-D-Interest is the same between female and male Chinese students.	-1.883	0.060	Retain the null hypothesis.
(11)	The distribution of A-D-Logic1 is the same between female and male Chinese students.	-1.000	0.317	Retain the null hypothesis.
(12)	The distribution of A-D-Logic2 is the same between female and male Chinese students.	0.134	0.893	Retain the null hypothesis.
(13)	The distribution of A-D-Meaning1 is the same between female and male Chinese students.	-0.909	0.363	Retain the null hypothesis.
(14)	The distribution of A-D-Meaning2 is the same between female and male Chinese students.	0.742	0.458	Retain the null hypothesis.
(15)	The distribution of A-D-Relate1 is the same between female and male Chinese students.	-0.599	0.549	Retain the null hypothesis.
(16)	The distribution of A-D-Relate2 is the same between female and male Chinese students.	-1.250	0.211	Retain the null hypothesis.
(17)	The distribution of A-A-Effort1 is the same between female and male Chinese students.	0.590	0.555	Retain the null hypothesis.
(18)	The distribution of A-A-Effort2 is the same between female and male Chinese students.	1.979	**0.048**	Reject the null hypothesis.
(19)	The distribution of A-A-Excel1 is the same between female and male Chinese students.	1.381	0.167	Retain the null hypothesis.
(20)	The distribution of A-A-Excel2 is the same between female and male Chinese students.	2.168	**0.030**	Reject the null hypothesis.
(21)	The distribution of A-A-Organised1 is the same between female and male Chinese students.	1.289	0.197	Retain the null hypothesis.
(22)	The distribution of A-A-Organised2 is the same between female and male Chinese students.	1.957	0.050	Retain the null hypothesis.
(23)	The distribution of A-A-TimeManage1 is the same between female and male Chinese students.	1.790	0.073	Retain the null hypothesis.
(24)	The distribution of A-A-TimeManage2 is the same between female and male Chinese students.	-0.089	0.929	Retain the null hypothesis.

Figure 6.1 Learning Approaches Distribution Differences between Genders of Chinese Students



The test for H2 test whether learning orientations are the same between female and male students. Similar to the test for H1, the null hypothesis of H2 was broken down into 14 null hypotheses, with each hypothesis concerning one learning orientation statement in the survey. As shown in Table 6.2, the Mann-Whitney test results are to retain all null hypotheses. That is, differences between female and male students in learning orientations are not statistically significant at the 0.05 level. H2a is retained and H2b is rejected.

Table 6.2 H2 Hypothesis Test Summary

	Null Hypothesis	Test Statistic	Significance	Decision
(1)	The distribution of O-E-Identified1 is the same between female and male Chinese students.	0.161	0.872	Retain the null hypothesis.
(2)	The distribution of O-E-Identified2 is the same between female and male Chinese students.	0.706	0.480	Retain the null hypothesis.
(3)	The distribution of O-E-Introjected1 is the same between female and male Chinese students.	-0.356	0.722	Retain the null hypothesis.
(4)	The distribution of O-E-Introjected2 is the same between female and male Chinese students.	-0.186	0.853	Retain the null hypothesis.
(5)	The distribution of O-E-Regulation1 is the same between female and male Chinese students.	-0.809	0.419	Retain the null hypothesis.
(6)	The distribution of O-E-Regulation2 is the same between female and male Chinese students.	0.283	0.777	Retain the null hypothesis.
(7)	The distribution of O-I-Accomplishment1 is the same between female and male Chinese students.	0.843	0.399	Retain the null hypothesis.
(8)	The distribution of O-I-Accomplishment2 is the same between female and male Chinese students.	0.843	0.399	Retain the null hypothesis.
(9)	The distribution of O-I-Stimulation1 is the same between female and male Chinese students.	-0.544	0.587	Retain the null hypothesis.
(10)	The distribution of O-I-Stimulation2 is the same between female and male Chinese students.	-0.687	0.492	Retain the null hypothesis.
(11)	The distribution of O-I-ToKnow1 is the same between female and male Chinese students.	-0.157	0.875	Retain the null hypothesis.
(12)	The distribution of O-I-ToKnow2 is the same between female and male Chinese students.	-0.408	0.683	Retain the null hypothesis.
(13)	The distribution of O-A-LackofDirection is the same between female and male Chinese students.	-0.341	0.733	Retain the null hypothesis.
(14)	The distribution of O-A-LostDirection is the same between female and male Chinese students.	0.589	0.556	Retain the null hypothesis.

6.2.2 Background's Impact on Learning Orientations and Approaches

H13 to H16 concern the impact of Chinese students' backgrounds on their learning orientations and learning approaches. H3, H4, H6, H7, H9, H11, H14 and H15 concern the relationships between background variables and learning orientations, while H5, H8, H10, H12, H13 and H16 concern the relationships between background variables and learning approaches. As introduced in Section 4.6.3, multinominal logistic regressions were performed with all background measures involved in H3 to H16 as the independent variables and the relevant learning orientation and learning approach statements as the dependent variables. The regression results for models (1) to (38) are discussed below.

Test results of H3: age and extrinsic learning orientations

The null hypothesis of H3 is that Chinese students' age does not affect their extrinsic learning orientations. The results from six multinominal logistic regressions that were performed to test the relationship between background variables and extrinsic learning orientations are used to make the decision. Table 6.3 presents the test statistics and decisions for models (1) to (6). The results show that none of the extrinsic learning orientation statements has a significant relationship with age at the 0.05 level. The conclusion is to retain H3a and reject H3b. In addition, the model fitting significance of models (4) and (6) are both higher than 0.05, indicating that all coefficients in models (4) and (6) are not significantly different from 0 at the 0.05 level. That is, no background variable has a significant effect on O-E-Introjected2 and O-E-Regulation2.

Table 6.3 H3 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_1 in model (1) equals to 0.	0.007	9.364	5	0.095	Retain the null hypothesis.
β_1 in model (2) equals to 0.	0.001	4.410	4	0.353	Retain the null hypothesis.
β_1 in model (3) equals to 0.	0.000	4.963	5	0.420	Retain the null hypothesis.
β_1 in model (4) equals to 0.	0.589	6.323	6	0.388	Retain the null hypothesis.
β_1 in model (5) equals to 0.	0.001	5.391	4	0.249	Retain the null hypothesis.
β_1 in model (6) equals to 0.	0.124	6.468	6	0.373	Retain the null hypothesis.

Test results of H4: age and intrinsic learning orientations

H4's null hypothesis is that there is no relationship between age and intrinsic learning orientations for Chinese students. The test process is similar to the one for H3. Six null hypotheses were used to test the relationship between age and each intrinsic learning orientation statement. As shown in Table 6.4, β_1 is not significantly different from 0 in all models except model (12). That is, Chinese students' age has a significant effect on one aspect of their intrinsic learning orientation – O-I-ToKnow2. Table 6.5 presents the parameter estimates for Age's effect on O-I-ToKnow2. The bold numbers indicate that the β_1 for that category of O-I-ToKnow2 is significant at the 0.05 level. The negative coefficients indicate that as Chinese students' age increases, they are less likely to select "agree" and "neither agree nor disagree" than "strongly agree" for O-I-ToKnow2. That is, older Chinese students are more likely to be intrinsically motivated and enrol in Australian postgraduate accounting programs to learn knowledge that interests them. The decision is to reject H4a and retain H4b. Chinese students' age has a positive effect on their intrinsic learning orientation.

Table 6.4 H4 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_1 in model (7) equals to 0.	0.008	6.028	5	0.303	Retain the null hypothesis.
β_1 in model (8) equals to 0.	0.030	7.107	6	0.311	Retain the null hypothesis.
β_1 in model (9) equals to 0.	0.001	10.583	6	0.102	Retain the null hypothesis.
β_1 in model (10) equals to 0.	0.012	10.056	6	0.122	Retain the null hypothesis.
β_1 in model (11) equals to 0.	0.000	5.947	5	0.311	Retain the null hypothesis.
β_1 in model (12) equals to 0.	0.000	14.581	5	0.012	Reject the null hypothesis.

Table 6.5 Parameter Estimates of Age in O-I-ToKnow2 of Chinese Students

Category*	β_1	Sig.
Disagree	0.270	0.203
Somewhat disagree	-0.035	0.824
Neither agree nor disagree / no opinion	**-0.409**	**0.017**
Somewhat agree	-0.113	0.318
Agree	**-0.267**	**0.023**
*The reference category is strongly agree.		

Test results of H5: age and deep learning approaches

The null hypothesis of H5 is that Chinese students' age has no relationship with deep learning approaches. Eight null hypotheses were established to test the relationship between age and each deep learning approach variable. The multinominal logistic regression results are summarised in Table 6.6. The model fitting figures show that all coefficients in models (25), (26) and (29) are not significantly different from 0 at the 0.05 level. That is, none of the background variables has a significant impact on A-D-Logic1, A-D-Logic 2 and A-D-Retale1. For the other models, the null hypotheses of models (27), (28) and (30) are rejected and the other null hypotheses are retained. This indicates that age plays a significant role in Chinese students' deep learning approaches. Table 6.7 presents the parameter estimates for the three deep learning variables that are significantly affected by age. The bold numbers highlight the coefficients (β) that are significant at the 0.05 level. All coefficients are negative, indicating an increasing use of understanding the meaning and relating ideas as age increases. To conclude, H5a is rejected and H5b is retained. Chinese students' age has a positive effect on the adoption of deep learning approaches.

Table 6.6 H5 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_1 in model (23) equals to 0.	0.008	10.900	6	0.092	Retain the null hypothesis.
β_1 in model (24) equals to 0.	0.012	2.424	6	0.877	Retain the null hypothesis.
β_1 in model (25) equals to 0.	0.192	9.022	5	0.108	Retain the null hypothesis.
β_1 in model (26) equals to 0.	0.291	15.736	5	0.008	Retain the null hypothesis.
β_1 in model (27) equals to 0.	0.003	17.566	5	0.004	Reject the null hypothesis.
β_1 in model (28) equals to 0.	0.030	15.578	6	0.016	Reject the null hypothesis.
β_1 in model (29) equals to 0.	0.165	3.251	5	0.661	Retain the null hypothesis.
β_1 in model (30) equals to 0.	0.000	34.974	4	0.000	Reject the null hypothesis.

Table 6.7 Parameter Estimates of Age in Deep Learning Approaches of Chinese Students

Deep learning approach variable	A-D-Meaning1		A-D-Meaning2		A-D-Relate2	
Category*	β_1	Sig.	β_1	Sig.	β_1	Sig.
Strongly disagree	-	-	-0.559	0.165	-	-
Disagree	-0.624	0.081	-0.202	0.486	-	-
Somewhat disagree	-0.250	0.162	-0.054	0.779	**-0.709**	**0.002**
Neither agree nor disagree / no opinion	-0.037	0.805	**-0.366**	**0.001**	-0.117	0.411
Somewhat agree	**-0.429**	**0.002**	**-0.294**	**0.004**	**-0.578**	**0.000**
Agree	**-0.231**	**0.059**	-0.173	0.054	-0.176	0.076
*The reference category is strongly agree.						

Test results of H6: family financial support and extrinsic learning orientations

H6's null hypothesis is that there is no relationship between Chinese students' financial support from their family and their extrinsic learning orientations. The regression results for models (1) to (6) are used to test this assertation. The regression results (Table 6.8) show that the null hypotheses for models (1) and (3) are rejected at the 0.05 level, while other null hypotheses are retained. It should be noted that although the significance of β_6 in model (6) is below 0.05, the null hypothesis is still retained. This is because the overall fitness significance of model (6) is over 0.05, indicating that the coefficients of all independent variables are not significantly different from 0 at the 0.05 level in this model. The extrinsic learning orientations that are significantly affected by FS-Family are O-E-Identified1 and O-E-Introjected1.

Table 6.8 H6 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_6 in model (1) equals to 0.	0.007	19.251	5	0.002	Reject the null hypothesis.
β_6 in model (2) equals to 0.	0.001	4.294	4	0.368	Retain the null hypothesis.
β_6 in model (3) equals to 0.	0.000	13.423	5	0.020	Reject the null hypothesis.
β_6 in model (4) equals to 0.	0.589	7.714	6	0.260	Retain the null hypothesis.
β_6 in model (5) equals to 0.	0.001	3.334	4	0.504	Retain the null hypothesis.
β_6 in model (6) equals to 0.	0.124	12.780	6	0.047	Retain the null hypothesis.

Table 6.9 presents the parameter estimates of FS-Family for O-E-Identified1 and O-E-Introjected1 with the significant (at the 0.05 level) coefficients highlighted in bold. The significant and positive coefficient for O-E-Identified1 shows that Chinese students who receive more financial support from their family are less interested in using the degree to enter their preferred career. In addition, although none of the coefficients of O-E-Introjected1 is significant at the 0.05 level, two positive coefficients in the disagree and somewhat disagree categories are significant at the 0.1 level. This implies a significant negative effect of FS-Family on O-E-Introjected1 at the 0.1 level. That is, students who receive more financial support from their family are less likely to use an Australian postgraduate accounting degree to prove themselves. In conclusion, FS-Family has a negative relationship with extrinsic learning orientations. H6a is rejected and H6b is retained.

Table 6.9 Parameter Estimates of FS-Family in Extrinsic Learning Orientations of Chinese Students

Extrinsic learning orientation variable	O-E-Identified1		O-E-Introjected1	
Category*	β_6	Sig.	β_6	Sig.
Disagree	0.095	0.078	0.093	0.085
Somewhat disagree	**0.102**	**0.031**	0.046	0.067
Neither agree nor disagree / no opinion	0.017	0.364	0.023	0.187
Somewhat agree	0.000	0.990	0.001	0.949
Agree	-0.005	0.723	0.003	0.769
*The reference category is strongly agree.				

Test results of H7: family financial support and amotivation

The null hypothesis of H7 assumes no relationship between Chinese students' financial support received from family and amotivation. Two null hypotheses were tested for O-A-LackofDirection and O-A-Lost Direction in models (13) and (14). As presented in Table 6.10, the multinominal logistic regression results show that FS-Family does not play a significant role in either of amotivation variable at the 0.05 level. H7a is retained and H7b is rejected.

Table 6.10 H7 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_6 in model (13) equals to 0.	0.002	1.935	6	0.926	Retain the null hypothesis.
β_6 in model (14) equals to 0.	0.000	10.657	6	0.100	Retain the null hypothesis.

Test results of H8: family financial support and surface learning approaches

The null hypothesis of H8 is that there is no relationship between Chinese students' financial support from family and surface learning approaches. The regression results of models (15) to model (22) are used to make the decisions. Table 6.11 presents the test statistics and decisions. None of the surface learning approach variables is significantly impacted by FS-Family at the 0.05 level. In addition, the model fitting significances of models (15), (16), (18) and (22) show that all coefficients in these models are not significantly different from 0 at the 0.05 level. That is, A-S-Memorise1, A-S-Memorise2, A-S-NotCope2 and A-S-Unrelate2 are not significantly affected by any background variable. This finding is consistent with the conclusion discussed in Section 5.2.8 – Chinese students use memorisation as a common learning strategy. Following the outcomes listed in Table 6.11, H8a is retained and H8b is rejected.

Table 6.11 H8 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_6 in model (15) equals to 0.	0.595	5.029	5	0.412	Retain the null hypothesis.
β_6 in model (16) equals to 0.	0.607	13.061	5	0.023	Retain the null hypothesis.
β_6 in model (17) equals to 0.	0.002	7.047	6	0.317	Retain the null hypothesis.
β_6 in model (18) equals to 0.	0.163	4.503	6	0.609	Retain the null hypothesis.
β_6 in model (19) equals to 0.	0.033	3.856	6	0.696	Retain the null hypothesis.
β_6 in model (20) equals to 0.	0.011	8.667	6	0.193	Retain the null hypothesis.
β_6 in model (21) equals to 0.	0.009	6.510	6	0.369	Retain the null hypothesis.
β_6 in model (22) equals to 0.	0.146	5.938	6	0.430	Retain the null hypothesis.

Test results of H9: prior education institutions' location and extrinsic learning orientations

The null hypothesis of H9 is that there is no relationship between Chinese students' locations of prior education institutions and their extrinsic learning orientations. Two measures – CityofHighSchool and CityofUniversity – were used to capture Chinese students' locations of prior education institutions. The regression results for models (1) to (6) helped make the decisions about H9. As shown in Table 6.12, the only rejected null hypothesis is about the

relationship between CityofUniversity and O-E-Introjected1. Table 6.13 presents the parameter estimates of CityofUniversity for each category of O-E-Introjected1 with the significant coefficient (at the 0.05 level) highlighted in bold. The negative coefficient indicates a negative relationship between CityofUniversity and O-E-Introjected1. That is, the Chinese students who graduated from less developed areas have stronger incentives to use an Australian postgraduate accounting degree to prove their capabilities. It should be noted, however, that the effect of prior education institutions' location on extrinsic learning orientation is relatively weak as the coefficient is close to 0. Nevertheless, H9a is rejected and H9b is retained.

Table 6.12 H9 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_2 in model (1) equals to 0.	0.007	6.270	5	0.281	Retain the null hypothesis.
β_3 in model (1) equals to 0.	0.007	7.794	2	0.168	Retain the null hypothesis.
β_2 in model (2) equals to 0.	0.001	3.701	4	0.448	Retain the null hypothesis.
β_3 in model (2) equals to 0.	0.001	3.243	4	0.518	Retain the null hypothesis.
β_2 in model (3) equals to 0.	0.000	7.003	5	0.220	Retain the null hypothesis.
β_3 in model (3) equals to 0.	0.000	11.691	5	0.039	Reject the null hypothesis.
β_2 in model (4) equals to 0.	0.589	1.850	6	0.933	Retain the null hypothesis.
β_3 in model (4) equals to 0.	0.589	6.882	6	0.332	Retain the null hypothesis.
β_2 in model (5) equals to 0.	0.001	3.495	4	0.479	Retain the null hypothesis.
β_3 in model (5) equals to 0.	0.001	2.852	4	0.583	Retain the null hypothesis.
β_2 in model (6) equals to 0.	0.124	8.207	6	0.223	Retain the null hypothesis.
β_3 in model (6) equals to 0.	0.124	1.779	6	0.939	Retain the null hypothesis.

Table 6.13 Parameter Estimates of CityofUniversity in O-E-Introjected1 of Chinese Students

Category*	β_3	Sig.
Disagree	-0.094	0.103
Somewhat disagree	-0.010	0.272
Neither agree nor disagree / no opinion	-0.002	0.698
Somewhat agree	-0.010	0.089
Agree	**-0.007**	**0.048**
*The reference category is strongly agree.		

Test results of H10: prior education institutions' locations and surface learning approaches

H10's null hypothesis assumes no relationship between Chinese students' locations of prior education institutions and their adoption of surface learning approaches. The regression result of models (15) to (22) are used to test H10. The regression information and hypothesis test details are listed in Table 6.14. The regression results show that neither β_2 nor β_3 is significantly

different from 0 in models (15) to (22) at the 0.05 level. H10a is retained and H10b is rejected. Chinese students' locations of prior education institutions does not have a significant effect on their adoption of surface learning approaches.

Table 6.14 H10 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_2 in model (15) equals to 0.	0.595	2.265	5	0.811	Retain the null hypothesis.
β_3 in model (15) equals to 0.	0.595	3.705	5	0.593	Retain the null hypothesis.
β_2 in model (16) equals to 0.	0.607	6.096	5	0.297	Retain the null hypothesis.
β_3 in model (16) equals to 0.	0.607	2.963	5	0.706	Retain the null hypothesis.
β_2 in model (17) equals to 0.	0.002	10.339	6	0.111	Retain the null hypothesis.
β_3 in model (17) equals to 0.	0.002	0.750	6	0.993	Retain the null hypothesis.
β_2 in model (18) equals to 0.	0.163	4.205	6	0.649	Retain the null hypothesis.
β_3 in model (18) equals to 0.	0.163	0.361	6	0.999	Retain the null hypothesis.
β_2 in model (19) equals to 0.	0.033	9.568	6	0.144	Retain the null hypothesis.
β_3 in model (19) equals to 0.	0.033	4.613	6	0.594	Retain the null hypothesis.
β_2 in model (20) equals to 0.	0.011	1.542	6	0.957	Retain the null hypothesis.
β_3 in model (20) equals to 0.	0.011	5.541	6	0.476	Retain the null hypothesis.
β_2 in model (21) equals to 0.	0.009	3.360	6	0.763	Retain the null hypothesis.
β_3 in model (21) equals to 0.	0.009	4.622	6	0.593	Retain the null hypothesis.
β_2 in model (22) equals to 0.	0.146	7.437	6	0.282	Retain the null hypothesis.
β_3 in model (22) equals to 0.	0.146	13.132	6	0.041	Retain the null hypothesis.

Test results of H11: prior academic performance and learning orientations

The null hypothesis of H11 is that Chinese students' prior academic performance does not affect their learning orientations. Two independent variables that measure Chinese students' prior academic performance, LevelofUni and GPA, are involved in the models. The regression results for models (1) to (14) are used to make decisions for H11. The hypotheses and test details are presented in Table 6.15.

Table 6.15 H11 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_4 in model (1) equals to 0.	0.007	10.251	5	0.068	Retain the null hypothesis.
β_5 in model (1) equals to 0.	0.007	10.176	5	0.070	Retain the null hypothesis.
β_4 in model (2) equals to 0.	0.001	6.526	4	0.163	Retain the null hypothesis.
β_5 in model (2) equals to 0.	0.001	20.932	4	0.000	Reject the null hypothesis.
β_4 in model (3) equals to 0.	0.000	14.226	5	0.014	Reject the null hypothesis.
β_5 in model (3) equals to 0.	0.000	14.148	5	0.015	Reject the null hypothesis.
β_4 in model (4) equals to 0.	0.589	9.508	6	0.147	Retain the null hypothesis.
β_5 in model (4) equals to 0.	0.589	1.334	6	0.970	Retain the null hypothesis.
β_4 in model (5) equals to 0.	0.001	10.918	4	0.028	Reject the null hypothesis.
β_5 in model (5) equals to 0.	0.001	18.162	4	0.001	Reject the null hypothesis.
β_4 in model (6) equals to 0.	0.124	6.475	6	0.372	Retain the null hypothesis.
β_5 in model (6) equals to 0.	0.124	5.169	6	0.522	Retain the null hypothesis.
β_4 in model (7) equals to 0.	0.008	5.432	5	0.365	Retain the null hypothesis.
β_5 in model (7) equals to 0.	0.008	19.820	5	0.001	Reject the null hypothesis.
β_4 in model (8) equals to 0.	0.030	5.116	6	0.529	Retain the null hypothesis.
β_5 in model (8) equals to 0.	0.030	11.456	6	0.075	Retain the null hypothesis.
β_4 in model (9) equals to 0.	0.001	7.988	6	0.239	Retain the null hypothesis.
β_5 in model (9) equals to 0.	0.001	19.085	6	0.004	Reject the null hypothesis.
β_4 in model (10) equals to 0.	0.012	8.651	6	0.194	Retain the null hypothesis.
β_5 in model (10) equals to 0.	0.012	11.705	6	0.069	Retain the null hypothesis.
β_4 in model (11) equals to 0.	0.000	4.064	5	0.540	Retain the null hypothesis.
β_5 in model (11) equals to 0.	0.000	9.728	5	0.083	Retain the null hypothesis.
β_4 in model (12) equals to 0.	0.000	6.436	5	0.266	Retain the null hypothesis.
β_5 in model (12) equals to 0.	0.000	23.862	5	0.000	Reject the null hypothesis.
β_4 in model (13) equals to 0.	0.002	5.898	6	0.435	Retain the null hypothesis.
β_5 in model (13) equals to 0.	0.002	16.059	6	0.013	Reject the null hypothesis.
β_4 in model (14) equals to 0.	0.000	14.261	6	0.027	Reject the null hypothesis.
β_5 in model (14) equals to 0.	0.000	18.473	6	0.005	Reject the null hypothesis.

For null hypotheses that involve LevelofUni, the null hypotheses of models (3), (5) and (14) are rejected. That is, Chinese students' undergraduate university levels have a significant effect on O-E-Introjected1, O-E-Regulation1 and O-A-LostDirection at the 0.05 level. The parameter estimates for LevelofUni in these three learning orientation variables are presented in Table 6.16 with the significant (at the 0.05 level) coefficients in bold. For LevelofUni, one category (agree) of O-E-Introjected1 has a significant coefficient at the 0.05 level, yet the coefficient is close to 0 (-0.007). This indicates a weak effect of Chinese students' undergraduate university levels on O-E-Introjected1. The coefficients for O-A-LostDirection, however, are significant in multiple categories. The negative coefficients indicate that Chinese students from better universities are more likely to have a strong feeling of losing direction after spending some time in their programs. Table 6.15 shows more learning orientations are affected by Chinese students' comparative GPA. O-E-Identified2, O-E-Introjected1, O-E-

Regulation1, O-I-Accomplishment1, O-I-Stimulation1, O-I-ToKnow2, O-A-LackofDirection and O-A-LostDirection are all significantly affected by GPA at the 0.05 level.

Table 6.16 Parameter Estimates of LevelofUni in Learning Orientations of Chinese Students

Learning orientation variable	O-E-Introjected1		O-E-Regulation1		O-A-LostDirection	
Category*	β_4	Sig.	β_4	Sig.	β_4	Sig.
Strongly disagree	-	-	-	-	-0.605	0.107
Disagree	-0.493	0.337	-	-	**-0.918**	**0.012**
Somewhat disagree	0.454	0.130	0.443	0.206	-0.556	0.116
Neither agree nor disagree / no opinion	0.409	0.105	0.274	0.324	**-0.763**	**0.032**
Somewhat agree	-0.090	0.671	-0.109	0.608	**-1.174**	**0.002**
Agree	**-0.007**	**0.048**	-0.319	0.105	**-0.847**	**0.029**
*The reference category is strongly agree.						

The parameter estimates of GPA for these learning orientation variables are presented in Tables 6.17 to 6.19 with each type of learning orientations (extrinsic, intrinsic and amotivation) presented in one table. The bold numbers indicate the coefficients that are significant at the 0.05 level. All coefficients are negative, indicating that the Chinese students with higher GPA than their undergraduate classmates have stronger extrinsic and intrinsic orientations, but they are also more likely to feel lost after spending some time in their programs. The decision is to reject H11a and retain H11b.

Table 6.17 Parameter Estimates of the GPA effect in Extrinsic Learning Orientations of Chinese Students

Extrinsic learning orientation variable	O-E-Identified2		O-E-Introjected1		O-E-Regulation1	
Category*	β_5	Sig.	β_5	Sig.	β_5	Sig.
Disagree	-	-	**-1.215**	**0.007**	-	-
Somewhat disagree	-0.333	0.308	-0.110	0.663	**-0.605**	**0.031**
Neither agree nor disagree / no opinion	**-0.896**	**0.000**	0.058	0.779	**-0.568**	**0.020**
Somewhat agree	**-0.679**	**0.000**	-0.261	0.094	**-0.764**	**0.000**
Agree	**-0.482**	**0.005**	0.005	0.970	**-0.527**	**0.004**
*The reference category is strongly agree.						

Table 6.18 Parameter Estimates of the GPA Effect in Intrinsic Learning Orientations of Chinese Students

Intrinsic learning orientation variable	O-I-Accomplishment1		O-I-Stimulation1		O-I-ToKnow2	
Category*	β_5	Sig.	β_5	Sig.	β_5	Sig.
Strongly disagree	-	-	-0.402	0.599	-	-
Disagree	**-0.963**	**0.003**	**-1.085**	**0.017**	**-1.722**	**0.000**
Somewhat disagree	-0.456	0.129	-0.477	0.122	-0.508	0.050
Neither agree nor disagree / no opinion	**-0.777**	**0.001**	**-0.667**	**0.019**	**-0.557**	**0.019**
Somewhat agree	**-0.684**	**0.001**	-0.342	0.230	**-0.626**	**0.002**
Agree	**-0.426**	**0.041**	-0.162	0.572	**-0.461**	**0.026**
*The reference category is strongly agree.						

Table 6.19 Parameter Estimates of the GPA Effect in Amotivation of Chinese Students

Amotivation variable	O-A-LackofDirection		O-A-LostDirection	
Category*	β_5	Sig.	β_5	Sig.
Strongly disagree	-0.641	0.170	**-1.223**	**0.004**
Disagree	-0.836	0.072	**-1.352**	**0.001**
Somewhat disagree	-0.885	0.057	**-1.197**	**0.004**
Neither agree nor disagree / no opinion	-0.843	0.080	**-1.417**	**0.001**
Somewhat agree	**-1.079**	**0.024**	**-1.259**	**0.003**
Agree	-0.262	0.605	**-1.311**	**0.002**
*The reference category is strongly agree.				

Test results of H12: prior academic performance and learning approaches

The null hypothesis of H12 is that Chinese students' prior academic performance does not affect their adoption of learning approaches in Australian postgraduate accounting programs. All models that involve the relationship between background variables and learning approaches can provide information to make decisions for H12. Table 6.20 presents the multinominal logistic regression results for these models. It can be concluded that Chinese students' previous universities' level has a significant effect on all three types of learning approaches at the 0.05 level.

Table 6.20 H12 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_4 in model (15) equals to 0.	0.595	5.593	5	0.348	Retain the null hypothesis.
β_5 in model (15) equals to 0.	0.595	1.775	5	0.879	Retain the null hypothesis.
β_4 in model (16) equals to 0.	0.607	1..421	5	0.922	Retain the null hypothesis.
β_5 in model (16) equals to 0.	0.607	2.894	5	0.716	Retain the null hypothesis.
β_4 in model (17) equals to 0.	0.002	19.252	6	0.004	Reject the null hypothesis.
β_5 in model (17) equals to 0.	0.002	12.950	6	0.044	Reject the null hypothesis.
β_4 in model (18) equals to 0.	0.163	14.571	6	0.024	Retain the null hypothesis.
β_5 in model (18) equals to 0.	0.163	4.698	6	0.583	Retain the null hypothesis.
β_4 in model (19) equals to 0.	0.033	13.164	6	0.041	Reject the null hypothesis.
β_5 in model (19) equals to 0.	0.033	8.215	6	0.223	Retain the null hypothesis.
β_4 in model (20) equals to 0.	0.011	15.177	6	0.019	Reject the null hypothesis.
β_5 in model (20) equals to 0.	0.011	9.929	6	0.128	Retain the null hypothesis.
β_4 in model (21) equals to 0.	0.009	9.006	6	0.173	Retain the null hypothesis.
β_5 in model (21) equals to 0.	0.009	8.484	6	0.205	Retain the null hypothesis.
β_4 in model (22) equals to 0.	0.146	13.400	6	0.037	Retain the null hypothesis.
β_5 in model (22) equals to 0.	0.146	6.775	6	0.342	Retain the null hypothesis.
β_4 in model (23) equals to 0.	0.008	11.108	6	0.085	Retain the null hypothesis.
β_5 in model (23) equals to 0.	0.008	7.988	6	0.239	Retain the null hypothesis.
β_4 in model (24) equals to 0.	0.012	7.144	6	0.308	Retain the null hypothesis.
β_5 in model (24) equals to 0.	0.012	5.154	6	0.524	Retain the null hypothesis.
β_4 in model (25) equals to 0.	0.192	3.073	5	0.689	Retain the null hypothesis.
β_5 in model (25) equals to 0.	0.192	4.939	5	0.423	Retain the null hypothesis.
β_4 in model (26) equals to 0.	0.291	3.672	5	0.598	Retain the null hypothesis.
β_5 in model (26) equals to 0.	0.291	4.874	5	0.431	Retain the null hypothesis.
β_4 in model (27) equals to 0.	0.003	14.637	5	0.012	Reject the null hypothesis.
β_5 in model (27) equals to 0.	0.003	6.375	5	0.271	Retain the null hypothesis.
β_4 in model (28) equals to 0.	0.030	12.207	6	0.058	Retain the null hypothesis.
β_5 in model (28) equals to 0.	0.030	4.974	6	0.547	Retain the null hypothesis.
β_4 in model (29) equals to 0.	0.165	6.550	5	0.256	Retain the null hypothesis.
β_5 in model (29) equals to 0.	0.165	7.726	5	0.172	Retain the null hypothesis.
β_4 in model (30) equals to 0.	0.000	13.919	4	0.008	Reject the null hypothesis.
β_5 in model (30) equals to 0.	0.000	5.492	4	0.240	Retain the null hypothesis.
β_4 in model (31) equals to 0.	0.017	8.568	5	0.128	Retain the null hypothesis.
β_5 in model (31) equals to 0.	0.017	6.890	5	0.229	Retain the null hypothesis.
β_4 in model (32) equals to 0.	0.000	3.093	5	0.686	Retain the null hypothesis.
β_5 in model (32) equals to 0.	0.000	7.989	5	0.157	Retain the null hypothesis.
β_4 in model (33) equals to 0.	0.203	5.589	5	0.348	Retain the null hypothesis.
β_5 in model (33) equals to 0.	0.203	1.831	5	0.872	Retain the null hypothesis.
β_4 in model (34) equals to 0.	0.123	10.102	6	0.120	Retain the null hypothesis.
β_5 in model (34) equals to 0.	0.123	5.151	6	0.525	Retain the null hypothesis.
β_4 in model (35) equals to 0.	0.036	4.920	4	0.296	Retain the null hypothesis.
β_5 in model (35) equals to 0.	0.036	2.644	4	0.619	Retain the null hypothesis.
β_4 in model (36) equals to 0.	0.001	20.886	5	0.001	Reject the null hypothesis.
β_5 in model (36) equals to 0.	0.001	21.924	5	0.001	Reject the null hypothesis.
β_4 in model (37) equals to 0.	0.000	10.456	6	0.107	Retain the null hypothesis.
β_5 in model (37) equals to 0.	0.000	15.339	6	0.018	Reject the null hypothesis.
β_4 in model (38) equals to 0.	0.000	13.594	5	0.018	Reject the null hypothesis.
β_5 in model (38) equals to 0.	0.000	27.705	5	0.000	Reject the null hypothesis.

The bold numbers in Tables 6.21 to 6.24 indicate that the coefficients for the category are statistically significant at the 0.05 level. As presented in Table 6.21, the significant coefficients for A-S-NotCope1 and A-S-NotMakingSense2 are positive. This means that Chinese students who are from better universities are less likely to have difficulties coping with and understanding course material.

Table 6.21 Parameter Estimates of LevelofUni Effect on Surface Learning Approaches of Chinese Students

Surface learning approach variable	A-S-NotCope1		A-S-NotMakingSense1		A-S-NotMakingSense2	
Category*	β_4	Sig.	β_4	Sig.	β_4	Sig.
Strongly disagree	0.616	0.131	0.253	0.493	**1.033**	**0.034**
Disagree	**0.706**	**0.035**	0.341	0.281	0.597	0.192
Somewhat disagree	0.486	0.077	0.008	0.976	0.776	0.083
Neither agree nor disagree / no opinion	0.412	0.136	-0.421	0.219	0.312	0.504
Somewhat agree	0.456	0.069	-0.022	0.930	0.433	0.337
Agree	-0.134	0.617	-0.436	0.123	0.327	0.476
*The reference category is strongly agree.						

Table 6.22 presents the parameter estimates for the deep learning approach variables that are significantly affected at the 0.05 level by LevelofUni. The negative coefficients indicate a positive relationship between Chinese students' level of universities and their use of understanding and relating in study.

Table 6.22 Parameter Estimates of LevelofUni Effect on Deep Learning Approaches of Chinese Students

Deep learning approach variable	A-D-Meaning1		A-D-Relate2	
Category*	β_4	Sig.	β_4	Sig.
Disagree	0.437	0.510	-	-
Somewhat disagree	-0.155	0.625	**-1.265**	**0.001**
Neither agree nor disagree / no opinion	**-0.926**	**0.002**	**-0.524**	**0.042**
Somewhat agree	-0.344	0.167	**-0.438**	**0.030**
Agree	-0.271	0.253	**-0.372**	**0.036**
*The reference category is strongly agree.				

The achieving learning approach variables that are significantly affected by LevelofUni are A-A-Organised2 and A-A-TimeManage2. As shown in Table 6.23, all coefficients that are significant at the 0.05 level are negative, indicating that Chinese students from better universities are better organised and work more steadily in their study.

Table 6.23 Parameter Estimates of LevelofUni Effect in Achieving Learning Approaches of Chinese Students

Achieving learning approach variable	A-A-Organised2		A-A-TimeManage2	
Category*	β_4	Sig.	β_4	Sig.
Disagree	-0.734	0.119	0.590	0.066
Somewhat disagree	**-0.955**	**0.002**	**-0.481**	**0.043**
Neither agree nor disagree / no opinion	**-0.597**	**0.031**	-0.303	0.214
Somewhat agree	-0.180	0.462	-0.005	0.977
Agree	-0.150	0.558	-0.088	0.647
*The reference category is strongly agree.				

The regression results for GPA also indicate its significant effect on Chinese students' learning approaches. Table 6.24 summarises the learning approaches that are significantly affected by Chinese students' comparative GPA performance in their undergraduate classes. The significant coefficients for the learning approach variable, A-S-NotCope1, are negative. This means Chinese students who outperformed their classmates in their undergraduate studies are less likely to have difficulties in coping. The positive coefficients that are significant at the 0.05 level for the three achieving approach variables show that Chinese students who had higher GPAs in their undergraduate studies are more organised in their study. In conclusion, the decision for H12 is to reject H12a and retain H12b.

Table 6.24 Parameter Estimates of the GPA Effect in Learning Approaches of Chinese Students

Learning approach variable	A-S-NotCope1		A-A-Organised2		A-A-TimeManage1		A-A-TimeManage2	
Category*	β_5	Sig.	β_5	Sig.	β_5	Sig.	β_5	Sig.
Strongly disagree	**0.795**	**0.025**	**-**	**-**	-1.081	0.085	-	-
Disagree	**0.739**	**0.006**	**-0.798**	**0.019**	-0.191	0.558	**-0.847**	**0.000**
Somewhat disagree	0.194	0.288	**-0.890**	**0.001**	**-0.601**	**0.004**	**-0.820**	**0.000**
Neither agree nor disagree / no opinion	0.233	0.206	-0.324	0.197	-0.080	0.684	**-0.679**	**0.001**
Somewhat agree	0.311	0.066	-0.425	0.069	-0.177	0.273	**-0.558**	**0.001**
Agree	0.158	0.376	-0.328	0.176	-0.026	0.865	-0.341	0.057
*The reference category is strongly agree.								

Test results of H13: English competency and surface learning approaches

H13's null hypothesis is that Chinese students' English competency does not affect their adoption of surface learning approaches. Models (15) to (22) describe the relationship between background variables and surface learning approach variables. The regression results of these eight models are presented in Table 6.25. The only surface learning variable that has a significant coefficient at the 0.05 level is A-S-NotCope1 in model (17). All other models retain

the null hypothesis. Table 6.26 presents the parameter estimates of English in A-S-NotCope1 with the significant coefficients in bold. The negative coefficients indicate that Chinese students with higher English competency are less likely to answer "somewhat disagree" and "disagree" than "strongly agree" for A-S-NotCope1. H13a is rejected and H13b is retained. Chinese students' English competency has a positive effect on their concerns about coping. This conclusion seems odd – students who speak English better are more likely to feel overwhelmed by the amount of course material. This could be explained by the correlation between A-S-NotCope1 and other learning approach variables. Chapter Seven will discuss these relationships and potential causes in detail.

Table 6.25 H13 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_7 in model (15) equals to 0.	0.595	6.304	5	0.278	Retain the null hypothesis.
β_7 in model (16) equals to 0.	0.607	4.675	5	0.457	Retain the null hypothesis.
β_7 in model (17) equals to 0.	0.002	13.641	6	0.034	Reject the null hypothesis.
β_7 in model (18) equals to 0.	0.163	11.429	6	0.076	Retain the null hypothesis.
β_7 in model (19) equals to 0.	0.033	9.084	6	0.169	Retain the null hypothesis.
β_7 in model (20) equals to 0.	0.011	5.647	6	0.464	Retain the null hypothesis.
β_7 in model (21) equals to 0.	0.009	8.055	6	0.234	Retain the null hypothesis.
β_7 in model (22) equals to 0.	0.146	9.395	6	0.153	Retain the null hypothesis.

Table 6.26 Parameter Estimates of the English Effect in A-S-NotCope1 of Chinese Students

Category*	β_7	Sig.
Strongly Disagree	0.246	0.683
Disagree	**-1.307**	**0.025**
Somewhat disagree	-0.198	0.644
Neither agree nor disagree / no opinion	-0.232	0.592
Somewhat agree	**-0.881**	**0.028**
Agree	-0.498	0.231
*The reference category is strongly agree.		

Test results of H14: English competency and learning orientations

The null hypothesis of H14 assumes no relationship between Chinese students' English competency and their learning orientations. Models (1) to (14) describe the relationships between Chinese students' background variables and their learning orientations. The regression results of these 14 models are used to test H14. As presented in Table 6.27, one extrinsic learning orientation variable, O-E-Introjected1, and two intrinsic learning orientation variables,

O-I-Accomplishment2 and O-I-Stimulation1, are significantly affected at the 0.05 level by English.

Table 6.27 H14 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_7 in model (1) equals to 0.	0.007	6.581	5	0.254	Retain the null hypothesis.
β_7 in model (2) equals to 0.	0.001	1.292	4	0.863	Retain the null hypothesis.
β_7 in model (3) equals to 0.	0.000	11.577	5	0.041	Reject the null hypothesis.
β_7 in model (4) equals to 0.	0.589	9.899	6	0.129	Retain the null hypothesis.
β_7 in model (5) equals to 0.	0.001	6.276	4	0.179	Retain the null hypothesis.
β_7 in model (6) equals to 0.	0.124	5.984	6	0.425	Retain the null hypothesis.
β_7 in model (7) equals to 0.	0.008	7.532	5	0.184	Retain the null hypothesis.
β_7 in model (8) equals to 0.	0.030	12.876	6	0.045	Reject the null hypothesis.
β_7 in model (9) equals to 0.	0.001	13.588	6	0.035	Reject the null hypothesis.
β_7 in model (10) equals to 0.	0.012	12.120	6	0.059	Retain the null hypothesis.
β_7 in model (11) equals to 0.	0.000	7.735	5	0.171	Retain the null hypothesis.
β_7 in model (12) equals to 0.	0.000	8.703	5	0.122	Retain the null hypothesis.
β_7 in model (13) equals to 0.	0.002	6.719	6	0.348	Retain the null hypothesis.
β_7 in model (14) equals to 0.	0.000	8.423	6	0.209	Retain the null hypothesis.

The parameter estimates for the three significant variables are presented in Table 6.28 with the significant coefficients in bold. A positive coefficient is significant at the 0.05 level for the disagree category in O-E-Introjected1. This shows that Chinese students with higher English competency are more likely to disagree with the first introjected statement, that they chose to enrol in an Australian postgraduate accounting degree to prove their capabilities. The negative coefficients of the two intrinsic orientation variables indicate that Chinese students' English competency positively affects their intrinsic learning orientations, in particular, their pleasure in surpassing themselves and communicating with other students and lecturers. Overall, Chinese students' English competency can impact their extrinsic and intrinsic learning orientations. The decision for H14 is therefore to reject H14a and retain H14b.

Table 6.28 Parameter Estimates of English in Learning Orientations of Chinese Students

Learning orientation variable	O-E-Introjected1		O-I-Accomplishment2		O-I-Stimulation1	
Category*	β_7	Sig.	β_7	Sig.	β_7	Sig.
Strongly disagree	-	-	-1.108	0.413	-1.058	0.389
Disagree	**1.501**	**0.034**	-0.035	0.967	1.154	0.128
Somewhat disagree	0.106	0.826	-0.566	0.330	-0.853	0.127
Neither agree nor disagree / no opinion	-0.156	0.721	-0.211	0.604	-0.692	0.150
Somewhat agree	-0.556	0.122	**-1.137**	**0.004**	**-1.036**	**0.032**
Agree	-0.427	0.152	-0.601	0.102	-0.785	0.097
*The reference category is strongly agree.						

Test results of H15: prior accounting knowledge and learning orientations

The null hypothesis of H15 is that Chinese students' prior accounting knowledge does not affect their learning orientations. Two measures were used to measure Chinese students' prior accounting knowledge: AccKnow that measures academic accounting knowledge and Work that measures practical knowledge. The regression results relevant to AccKnow and Work in models (1) to (14) are presented in Table 6.29. Two intrinsic learning orientation variables, O-I-Accomplishment1 and O-I-ToKnow1, are significantly affected by AccKnow at the 0.05 level.

Table 6.29 H15 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_8 in model (1) equals to 0.	0.007	8.900	5	0.113	Retain the null hypothesis.
β_9 in model (1) equals to 0.	0.007	7.105	5	0.213	Retain the null hypothesis.
β_8 in model (2) equals to 0.	0.001	3.090	4	0.543	Retain the null hypothesis.
β_9 in model (2) equals to 0.	0.001	22.163	4	0.000	Reject the null hypothesis.
β_8 in model (3) equals to 0.	0.000	9.664	5	0.085	Retain the null hypothesis.
β_9 in model (3) equals to 0.	0.000	12.025	5	0.034	Reject the null hypothesis.
β_8 in model (4) equals to 0.	0.589	5.292	6	0.507	Retain the null hypothesis.
β_9 in model (4) equals to 0.	0.589	6.599	6	0.360	Retain the null hypothesis.
β_8 in model (5) equals to 0.	0.001	5.983	4	0.200	Retain the null hypothesis.
β_9 in model (5) equals to 0.	0.001	12.346	4	0.015	Reject the null hypothesis.
β_8 in model (6) equals to 0.	0.124	3.475	6	0.747	Retain the null hypothesis.
β_9 in model (6) equals to 0.	0.124	7.297	6	0.294	Retain the null hypothesis.
β_8 in model (7) equals to 0.	0.008	13.199	5	0.022	Reject the null hypothesis.
β_9 in model (7) equals to 0.	0.008	7.442	5	0.190	Retain the null hypothesis.
β_8 in model (8) equals to 0.	0.030	6.116	6	0.410	Retain the null hypothesis.
β_9 in model (8) equals to 0.	0.030	6.260	6	0.395	Retain the null hypothesis.
β_8 in model (9) equals to 0.	0.001	8.165	6	0.226	Retain the null hypothesis.
β_9 in model (9) equals to 0.	0.001	9.637	6	0.141	Retain the null hypothesis.
β_8 in model (10) equals to 0.	0.012	11.933	6	0.063	Retain the null hypothesis.
β_9 in model (10) equals to 0.	0.012	7.517	6	0.276	Retain the null hypothesis.
β_8 in model (11) equals to 0.	0.000	19.375	5	0.002	Reject the null hypothesis.
β_9 in model (11) equals to 0.	0.000	4.031	5	0.545	Retain the null hypothesis.
β_8 in model (12) equals to 0.	0.000	3.811	5	0.577	Retain the null hypothesis.
β_9 in model (12) equals to 0.	0.000	18.467	5	0.002	Reject the null hypothesis.
β_8 in model (13) equals to 0.	0.002	8.744	6	0.188	Retain the null hypothesis.
β_9 in model (13) equals to 0.	0.002	15.393	6	0.017	Reject the null hypothesis.
β_8 in model (14) equals to 0.	0.000	9.754	6	0.135	Retain the null hypothesis.
β_9 in model (14) equals to 0.	0.000	4.507	6	0.608	Retain the null hypothesis.

The parameter estimates (see Table 6.30) show that Chinese students' prior academic accounting knowledge is positively related to their intrinsic learning orientations. The other subject knowledge measure, Work, has a significant impact on five learning orientation variables at the 0.05 level. As presented in Table 6.31, the significant (at the 0.05 level)

coefficients of all extrinsic and intrinsic variables are negative. This means that Chinese students with more working experience are more likely to be both extrinsically and intrinsically motivated. It should be noted that the coefficients of O-A-LackofDirection are negative. This means Chinese students with more working experience are also more likely to be unsure about the reasons why they enrolled in an Australian postgraduate accounting program. The decision for H15 is to reject H15a and retain H15b. Chinese students' prior accounting knowledge has an impact on all three types of learning orientations.

Table 6.30 Parameter Estimates of AccKnow in the Learning Orientations of Chinese Students

Learning orientation variable	O-I-Accomplishment1		O-I-ToKnow1	
Category*	β_8	Sig.	β_8	Sig.
Disagree	-0.295	0.106	**-0.384**	**0.025**
Somewhat disagree	**-0.422**	**0.006**	**-0.404**	**0.006**
Neither agree nor disagree / no opinion	-0.160	0.183	-0.211	0.101
Somewhat agree	-0.095	0.403	-0.127	0.298
Agree	-0.015	0.894	0.021	0.870
*The reference category is strongly agree.				

Table 6.31 Parameter Estimates of Work Effect on the Learning Orientations of Chinese Students

Learning orientation variable	O-E-Identified2		O-E-Introjected1		O-E-Regulation1		O-I-ToKnow2		O-A-Lack of Direction	
Category*	β_9	Sig.	β_9	Sig.	β_9	Sig.	β_9	Sig.	β_9	Sig.
Strongly disagree	-	-	-	-	-	-	-	-	-0.421	0.105
Disagree	-	-	-0.098	0.764	-	-	0.174	0.570	-0.424	0.100
Somewhat disagree	**-0.812**	**0.013**	0.121	0.481	-0.043	0.825	**-0.577**	**0.005**	**-0.576**	**0.026**
Neither agree nor disagree / no opinion	0.037	0.829	-0.201	0.188	-0.231	0.166	**-0.508**	**0.004**	-0.263	0.331
Somewhat agree	**-0.387**	**0.001**	-0.139	0.220	**-0.401**	**0.001**	**-0.332**	**0.010**	**-0.694**	**0.016**
Agree	**-0.328**	**0.002**	**-0.284**	**0.004**	-0.200	0.063	-0.201	0.113	**-0.745**	**0.013**
*The reference category is strongly agree.										

Test results of H16: prior accounting knowledge and learning approaches

H16's null hypothesis assumes no relationship between Chinese students' prior accounting knowledge and their learning approaches. Models (15) to (38) relate to the relationship between the two measures of prior accounting knowledge, AccKnow and Work, and the learning approach variables. The regression results are presented in Table 6.32.

Table 6.32 H16 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_8 in model (15) equals to 0.	0.595	2.164	5	0.826	Retain the null hypothesis.
β_9 in model (15) equals to 0.	0.595	6.772	5	0.238	Retain the null hypothesis.
β_8 in model (16) equals to 0.	0.607	3.167	5	0.674	Retain the null hypothesis.
β_9 in model (16) equals to 0.	0.607	2.318	5	0.804	Retain the null hypothesis.
β_8 in model (17) equals to 0.	0.002	3.197	6	0.784	Retain the null hypothesis.
β_9 in model (17) equals to 0.	0.002	17.811	6	0.007	Reject the null hypothesis.
β_8 in model (18) equals to 0.	0.163	2.359	6	0.884	Retain the null hypothesis.
β_9 in model (18) equals to 0.	0.163	6.886	6	0.331	Retain the null hypothesis.
β_8 in model (19) equals to 0.	0.033	7.484	6	0.278	Retain the null hypothesis.
β_9 in model (19) equals to 0.	0.033	5.669	6	0.461	Retain the null hypothesis.
β_8 in model (20) equals to 0.	0.011	8.775	6	0.187	Retain the null hypothesis.
β_9 in model (20) equals to 0.	0.011	20.994	6	0.002	Reject the null hypothesis.
β_8 in model (21) equals to 0.	0.009	8.168	6	0.226	Retain the null hypothesis.
β_9 in model (21) equals to 0.	0.009	18.727	6	0.005	Reject the null hypothesis.
β_8 in model (22) equals to 0.	0.146	1.996	6	0.920	Retain the null hypothesis.
β_9 in model (22) equals to 0.	0.146	4.588	6	0.598	Retain the null hypothesis.
β_8 in model (23) equals to 0.	0.008	12.158	6	0.059	Retain the null hypothesis.
β_9 in model (23) equals to 0.	0.008	8.674	6	0.193	Retain the null hypothesis.
β_8 in model (24) equals to 0.	0.012	12.651	6	0.049	Reject the null hypothesis.
β_9 in model (24) equals to 0.	0.012	11.888	6	0.065	Retain the null hypothesis.
β_8 in model (25) equals to 0.	0.192	5.041	5	0.411	Retain the null hypothesis.
β_9 in model (25) equals to 0.	0.192	2.933	5	0.710	Retain the null hypothesis.
β_8 in model (26) equals to 0.	0.291	4.391	5	0.495	Retain the null hypothesis.
β_9 in model (26) equals to 0.	0.291	4.881	5	0.431	Retain the null hypothesis.
β_8 in model (27) equals to 0.	0.003	5.704	5	0.336	Retain the null hypothesis.
β_9 in model (27) equals to 0.	0.003	6.717	5	0.243	Retain the null hypothesis.
β_8 in model (28) equals to 0.	0.030	5.948	6	0.429	Retain the null hypothesis.
β_8 in model (28) equals to 0.	0.030	6.551	6	0.364	Retain the null hypothesis.
β_9 in model (29) equals to 0.	0.165	3.174	5	0.673	Retain the null hypothesis.
β_8 in model (29) equals to 0.	0.165	1.214	5	0.944	Retain the null hypothesis.
β_9 in model (30) equals to 0.	0.000	7.321	4	0.120	Retain the null hypothesis.
β_8 in model (30) equals to 0.	0.000	8.916	4	0.063	Retain the null hypothesis.
β_9 in model (31) equals to 0.	0.017	4.239	5	0.515	Retain the null hypothesis.
β_8 in model (31) equals to 0.	0.017	3.167	5	0.674	Retain the null hypothesis.
β_9 in model (32) equals to 0.	0.000	13.819	5	0.017	Reject the null hypothesis.
β_8 in model (32) equals to 0.	0.000	4.409	5	0.492	Retain the null hypothesis.
β_9 in model (33) equals to 0.	0.203	5.817	5	0.324	Retain the null hypothesis.
β_8 in model (33) equals to 0.	0.203	5.327	5	0.377	Retain the null hypothesis.
β_9 in model (34) equals to 0.	0.123	3.136	6	0.792	Retain the null hypothesis.
β_8 in model (34) equals to 0.	0.123	19.599	6	0.003	Retain the null hypothesis.
β_9 in model (35) equals to 0.	0.036	5.726	4	0.221	Retain the null hypothesis.
β_8 in model (35) equals to 0.	0.036	8.270	4	0.082	Retain the null hypothesis.
β_9 in model (36) equals to 0.	0.001	11.738	5	0.039	Reject the null hypothesis.
β_8 in model (36) equals to 0.	0.001	5.585	5	0.349	Retain the null hypothesis.
β_9 in model (37) equals to 0.	0.000	16.799	6	0.010	Reject the null hypothesis.
β_8 in model (37) equals to 0.	0.000	1.776	6	0.939	Retain the null hypothesis.
β_9 in model (38) equals to 0.	0.000	5.050	5	0.410	Retain the null hypothesis.
β_9 in model (38) equals to 0.	0.000	5.273	5	0.383	Retain the null hypothesis.

The only model that has a significant coefficient for AccKnow at the 0.05 level is A-D-Interest. However, as shown in Table 6.33, none of the A-D-Interest categories has a coefficient that is significant at the 0.05 level. This indicates that although Chinese students' academic accounting knowledge has an effect on their active interest in accounting, the relationship between the two variables cannot be expressed well with a linear model. The same conclusion can be drawn for working experience's effect on A-A-Effort2, A-A-Organised2 and A-A-TimeManage1. Multinominal logistic regressions rejected the null hypothesis for the three models concerning the achieving approach variables at the 0.05 level. However, as shown in Table 6.34, these variables do not have any category with a significant coefficient for Work. That is, although relationships between Chinese students' working experience and their adoption of achieving learning approaches may exist, these relationships cannot be simply explained with a linear model.

Table 6.33 Parameter Estimates of AccKnow Effect on A-D-Interest of Chinese Students

Category*	β_8	Sig.
Strongly Disagree	0.209	0.410
Disagree	-0.245	0.143
Somewhat disagree	0.174	0.197
Neither agree nor disagree / no opinion	-0.087	0.497
Somewhat agree	0.064	0.594
Agree	0.047	0.704
*The reference category is strongly agree.		

Table 6.34 Parameter Estimates of the Work Effect on Achieving Learning Approaches of Chinese Students

Achieving learning approach variable	A-A-Effort2		A-A-Organised2		A-A-TimeManage1	
Category*	β_9	Sig.	β_9	Sig.	β_9	Sig.
Strongly disagree	-	-	-	-	0.254	0.628
Disagree	0.325	0.150	0.290	0.196	-0.052	0.850
Somewhat disagree	0.100	0.559	0.105	0.527	0.141	0.380
Neither agree nor disagree / no opinion	-0.111	0.520	-0.023	0.886	-0.021	0.880
Somewhat agree	0.042	0.759	-0.047	0.754	0.076	0.516
Agree	0.066	0.625	-0.074	0.637	0.024	0.825
*The reference category is strongly agree.						

Significant coefficients were found for several categories of the surface learning approach variables. Table 6.35 lists the parameter estimates and highlights the coefficients that are significant at the 0.05 level in bold. There is a negative coefficient that is significant for the disagree category of A-S-NotCope1. That is, Chinese students with more working experience are more likely to disagree rather than strongly agree with the statement that they are having

difficulty in coping. The other two surface approach variables have negative coefficients, indicating that Chinese students with more working experience are more likely to find themselves reading without understanding and are unable to see the overall picture. In general, Chinese students' prior accounting knowledge affects all three types of learning approaches. H16a is rejected and H16b is retained.

Table 6.35 Parameter Estimates of Work's Effect for Surface Learning Approaches of Chinese Students

Surface learning approach variable	A-S-NotCope1		A-S-NotMakingSense2		A-S-Unrelate1	
Category*	β_9	Sig.	β_9	Sig.	β_9	Sig.
Strongly disagree	0.186	0.419	-0.343	0.157	-0.113	0.701
Disagree	**0.515**	**0.005**	-0.218	0.323	-0.163	0.475
Somewhat disagree	-0.006	0.965	**-0.559**	**0.010**	**-0.411**	**0.042**
Neither agree nor disagree / no opinion	-0.059	0.696	**-0.686**	**0.004**	**-0.500**	**0.020**
Somewhat agree	0.021	0.874	**-0.476**	**0.027**	**-0.504**	**0.011**
Agree	-0.085	0.548	-0.368	0.096	**-0.609**	**0.003**
*The reference category is strongly agree.						

6.2.3 Learning Orientations' Impact on the Learning Approaches of Chinese Students

H17 to H21 concern the relationship between Chinese students' learning orientations and their learning approaches. Similar to the tests for H3 to H16, multinominal logistic regressions were performed to test the null hypotheses of H17 to H21. The regression results of models (39) to (62) are discussed in this subsection.

Test results of H17: extrinsic learning orientations and surface learning approaches

H17 concerns Chinese students' extrinsic learning orientations' impact on their adoption of surface learning approaches. The regression results for models (39) to (46) are used for testing purposes. Table 6.36 presents the regression results of the eight models concerning the extrinsic learning orientations' coefficients (β_{11} to β_{16}).

Table 6.36 H17 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_{11} in model (39) equals to 0.	0.000	4.089	5	0.537	Retain the null hypothesis.
β_{12} in model (39) equals to 0.	0.000	7.196	5	0.206	Retain the null hypothesis.
β_{13} in model (39) equals to 0.	0.000	30.836	5	0.000	Reject the null hypothesis.
β_{14} in model (39) equals to 0.	0.000	5.178	5	0.395	Retain the null hypothesis.
β_{15} in model (39) equals to 0.	0.000	2.626	5	0.757	Retain the null hypothesis.
β_{16} in model (39) equals to 0.	0.000	19.149	5	0.002	Reject the null hypothesis.
β_{11} in model (40) equals to 0.	0.057	16.238	5	0.006	Retain the null hypothesis.
β_{12} in model (40) equals to 0.	0.057	1.471	5	0.916	Retain the null hypothesis.
β_{13} in model (40) equals to 0.	0.057	5.394	5	0.370	Retain the null hypothesis.
β_{14} in model (40) equals to 0.	0.057	13.316	5	0.021	Retain the null hypothesis.
β_{15} in model (40) equals to 0.	0.057	5.242	5	0.387	Retain the null hypothesis.
β_{16} in model (40) equals to 0.	0.057	6.531	5	0.258	Retain the null hypothesis.
β_{11} in model (41) equals to 0.	0.000	12.884	6	0.045	Reject the null hypothesis.
β_{12} in model (41) equals to 0.	0.000	6.744	6	0.345	Retain the null hypothesis.
β_{13} in model (41) equals to 0.	0.000	13.493	6	0.036	Reject the null hypothesis.
β_{14} in model (41) equals to 0.	0.000	5.615	6	0.468	Retain the null hypothesis.
β_{15} in model (41) equals to 0.	0.000	3.308	6	0.769	Retain the null hypothesis.
β_{16} in model (41) equals to 0.	0.000	7.817	6	0.252	Retain the null hypothesis.
β_{11} in model (42) equals to 0.	0.000	1.589	6	0.953	Retain the null hypothesis.
β_{12} in model (42) equals to 0.	0.000	6.504	6	0.369	Retain the null hypothesis.
β_{13} in model (42) equals to 0.	0.000	33.518	6	0.000	Reject the null hypothesis.
β_{14} in model (42) equals to 0.	0.000	3.304	6	0.770	Retain the null hypothesis.
β_{15} in model (42) equals to 0.	0.000	7.193	6	0.303	Retain the null hypothesis.
β_{16} in model (42) equals to 0.	0.000	5.077	6	0.534	Retain the null hypothesis.
β_{11} in model (43) equals to 0.	0.000	8.179	6	0.225	Retain the null hypothesis.
β_{12} in model (43) equals to 0.	0.000	3.734	6	0.713	Retain the null hypothesis.
β_{13} in model (43) equals to 0.	0.000	17.898	6	0.006	Reject the null hypothesis.
β_{14} in model (43) equals to 0.	0.000	4.538	6	0.604	Retain the null hypothesis.
β_{15} in model (43) equals to 0.	0.000	4.665	6	0.587	Retain the null hypothesis.
β_{16} in model (43) equals to 0.	0.000	18.053	6	0.006	Reject the null hypothesis.
β_{11} in model (44) equals to 0.	0.000	10.687	6	0.099	Retain the null hypothesis.
β_{12} in model (44) equals to 0.	0.000	2.723	6	0.843	Retain the null hypothesis.
β_{13} in model (44) equals to 0.	0.000	14.033	6	0.029	Reject the null hypothesis.
β_{14} in model (44) equals to 0.	0.000	9.128	6	0.166	Retain the null hypothesis.
β_{15} in model (44) equals to 0.	0.000	7.906	6	0.245	Retain the null hypothesis.
β_{16} in model (44) equals to 0.	0.000	9.366	6	0.154	Retain the null hypothesis.
β_{11} in model (45) equals to 0.	0.008	2.874	6	0.824	Retain the null hypothesis.
β_{12} in model (45) equals to 0.	0.008	8.195	6	0.224	Retain the null hypothesis.
β_{13} in model (45) equals to 0.	0.008	8.430	6	0.208	Retain the null hypothesis.
β_{14} in model (45) equals to 0.	0.008	6.410	6	0.379	Retain the null hypothesis.
β_{15} in model (45) equals to 0.	0.008	10.339	6	0.111	Retain the null hypothesis.
β_{16} in model (45) equals to 0.	0.008	4.381	6	0.625	Retain the null hypothesis.
β_{11} in model (46) equals to 0.	0.000	2.930	5	0.711	Retain the null hypothesis.
β_{12} in model (46) equals to 0.	0.000	3.101	5	0.684	Retain the null hypothesis.
β_{13} in model (46) equals to 0.	0.000	18.381	5	0.003	Reject the null hypothesis.
β_{14} in model (46) equals to 0.	0.000	3.642	5	0.602	Retain the null hypothesis.
β_{15} in model (46) equals to 0.	0.000	6.789	5	0.237	Retain the null hypothesis.
β_{16} in model (46) equals to 0.	0.000	2.209	5	0.820	Retain the null hypothesis.

In all extrinsic learning orientation variables, O-E-Introjected1 has significant (at the 0.05 level) relationships with the highest number of surface approach variables. The parameter estimates for the significant relationships are listed in Table 6.37 with the significant coefficients in bold. All significant coefficients are negative, indicating a positive relationship between O-E-Introjected1 and the six surface learning approaches in Table 6.37. Chinese students who choose to study postgraduate accounting in Australian universities to prove themselves adopt more surface learning approaches. They often find it difficult to cope with and understand the course material, need to rely on repeating or copying in learning and are not sure what content is important.

Table 6.37 Parameter Estimates of O-E-Introjected1 Effect on Surface Learning Approaches of Chinese Students

Surface learning approach variable	A-S-Memorise1		A-S-NotCope1		A-S-NotCope2	
Category*	β_{13}	Sig.	β_{13}	Sig.	β_{13}	Sig.
Strongly disagree	-	-	0.042	0.902	**-0.966**	**0.005**
Disagree	**-0.675**	**0.017**	**-0.573**	**0.028**	**-0.832**	**0.001**
Somewhat disagree	**-0.873**	**0.000**	-0.259	0.203	**-1.048**	**0.000**
Neither agree nor disagree / no opinion	**-0.596**	**0.005**	-0.105	0.618	**-0.682**	**0.002**
Somewhat agree	**-0.362**	**0.045**	-0.208	0.268	**-0.564**	**0.003**
Agree	-0.134	0.469	0.123	0.546	-0.349	0.060
Surface learning approach variable	A-S-NotMakingSense1		A-S-NotMakingSense2		A-S-Unrelate2	
Category*	β_{13}	Sig.	β_{13}	Sig.	β_{13}	Sig.
Strongly disagree	**-0.894**	**0.011**	-0.444	0.260	-	-
Disagree	-0.466	0.115	**-0.775**	**0.032**	**-0.580**	**0.024**
Somewhat disagree	**-0.769**	**0.003**	**-0.845**	**0.017**	**-0.616**	**0.007**
Neither agree nor disagree / no opinion	-0.502	0.088	-0.639	0.078	**-0.569**	**0.022**
Somewhat agree	-0.479	0.056	-0.521	0.140	-0.310	0.156
Agree	-0.257	0.331	-0.494	0.176	-0.112	0.620
*The reference category is strongly agree.						

Table 6.38 shows that another extrinsic learning orientation, O-E-Identified1, has a negative coefficient in the strongly disagree category of A-S-NotCope1. This means Chinese students who are motivated by identified learning orientations are more likely to have difficulties in coping with the amount of course material.

Table 6.38 Parameter Estimates of the O-E-Identified1 effect on A-S-NotCope1 of Chinese Students

Category*	β_{11}	Sig.
Strongly disagree	**-0.662**	**0.041**
Disagree	0.287	0.353
Somewhat disagree	-0.131	0.541
Neither agree nor disagree / no opinion	-0.308	0.157
Somewhat agree	0.041	0.838
Agree	-0.172	0.408
*The reference category is strongly agree.		

The only extrinsic orientation that negatively affects surface learning approaches is O-E-Regulation2, the variable that measures Chinese students' migration-related orientations. As shown in Table 6.39, coefficients that are significant at the 0.05 level are both positive in the disagree categories for A-S-Memorise1 and A-S-NotMakingSense1. This means Chinese students who have a strong migration orientation rely less on memorisation and have fewer difficulties understanding the things they have to learn.

Table 6.39 Parameter Estimates of O-E-Regulation2 Effect on Surface Learning Approaches of Chinese Students

Surface learning approach variable	A-S-Memorise1		A-S-NotMakingSense1	
Category*	β_{13}	Sig.	β_{13}	Sig.
Strongly disagree	-	-	0.220	0.365
Disagree	**0.661**	**0.006**	**0.557**	**0.010**
Somewhat disagree	0.136	0.388	0.043	0.791
Neither agree nor disagree / no opinion	-0.034	0.825	0.396	0.057
Somewhat agree	-0.132	0.269	0.008	0.954
Agree	0.031	0.799	0.008	0.958
*The reference category is strongly agree.				

Overall, Chinese students' extrinsic learning orientations have significant effects on their adoption of surface learning approaches at the 0.05 level. The decision for H17 is to reject H17a and retain H17b.

Test results of H18: intrinsic learning orientations and deep learning approaches

The null hypothesis of H18 is that there is no relationship between Chinese students' intrinsic learning orientations and their adoption of deep learning approaches. Models (47) to (54) concern the relationships between learning orientation variables and eight deep learning approach variables. The regression results of these eight models are presented in Table 6.40. All intrinsic orientation variables except for O-I-Stimulation2 have significant effects on at

least one deep learning approach variable at the 0.05 level. For H18, the decision is to reject H18a and retain H18b. Tables 6.41 to 6.45 present the parameter estimates for all deep approach variables that are significantly affected by the five intrinsic orientation variables. The coefficients that are significant at the 0.05 level are in bold.

Table 6.40 H18 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_{17} in model (47) equals to 0.	0.000	11.016	6	0.088	Retain the null hypothesis.
β_{18} in model (47) equals to 0.	0.000	10.798	6	0.095	Retain the null hypothesis.
β_{19} in model (47) equals to 0.	0.000	20.927	6	0.002	Reject the null hypothesis.
β_{20} in model (47) equals to 0.	0.000	1.176	6	0.978	Retain the null hypothesis.
β_{21} in model (47) equals to 0.	0.000	9.290	6	0.158	Retain the null hypothesis.
β_{22} in model (47) equals to 0.	0.000	8.181	6	0.225	Retain the null hypothesis.
β_{17} in model (48) equals to 0.	0.006	4.683	6	0.585	Retain the null hypothesis.
β_{18} in model (48) equals to 0.	0.006	13.076	6	0.042	Reject the null hypothesis.
β_{19} in model (48) equals to 0.	0.006	4.535	6	0.605	Retain the null hypothesis.
β_{20} in model (48) equals to 0.	0.006	9.659	6	0.140	Retain the null hypothesis.
β_{21} in model (48) equals to 0.	0.006	12.320	6	0.055	Retain the null hypothesis.
β_{22} in model (48) equals to 0.	0.006	3.147	6	0.790	Retain the null hypothesis.
β_{17} in model (49) equals to 0.	0.000	8.278	6	0.218	Retain the null hypothesis.
β_{18} in model (49) equals to 0.	0.000	11.621	6	0.071	Retain the null hypothesis.
β_{19} in model (49) equals to 0.	0.000	9.523	6	0.146	Retain the null hypothesis.
β_{20} in model (49) equals to 0.	0.000	9.485	6	0.148	Retain the null hypothesis.
β_{21} in model (49) equals to 0.	0.000	3.989	6	0.678	Retain the null hypothesis.
β_{22} in model (49) equals to 0.	0.000	19.066	6	0.004	Reject the null hypothesis.
β_{17} in model (50) equals to 0.	0.000	26.877	5	0.000	Reject the null hypothesis.
β_{18} in model (50) equals to 0.	0.000	21.015	5	0.001	Reject the null hypothesis.
β_{19} in model (50) equals to 0.	0.000	23.508	5	0.000	Reject the null hypothesis.
β_{20} in model (50) equals to 0.	0.000	10.179	5	0.070	Retain the null hypothesis.
β_{21} in model (50) equals to 0.	0.000	23.370	5	0.000	Reject the null hypothesis.
β_{22} in model (50) equals to 0.	0.000	27.870	5	0.000	Reject the null hypothesis.
β_{17} in model (51) equals to 0.	0.000	7.594	5	0.180	Retain the null hypothesis.
β_{18} in model (51) equals to 0.	0.000	6.064	5	0.300	Retain the null hypothesis.
β_{19} in model (51) equals to 0.	0.000	13.021	5	0.023	Reject the null hypothesis.
β_{20} in model (51) equals to 0.	0.000	8.103	5	0.151	Retain the null hypothesis.
β_{21} in model (51) equals to 0.	0.000	7.201	5	0.206	Retain the null hypothesis.
β_{22} in model (51) equals to 0.	0.000	9.900	5	0.078	Retain the null hypothesis.
β_{17} in model (52) equals to 0.	0.006	2.576	5	0.765	Retain the null hypothesis.
β_{18} in model (52) equals to 0.	0.006	2.808	5	0.730	Retain the null hypothesis.
β_{19} in model (52) equals to 0.	0.006	13.245	5	0.021	Reject the null hypothesis.
β_{20} in model (52) equals to 0.	0.006	9.546	5	0.089	Retain the null hypothesis.
β_{21} in model (52) equals to 0.	0.006	9.873	5	0.053	Retain the null hypothesis.
β_{22} in model (52) equals to 0.	0.006	3.962	5	0.555	Retain the null hypothesis.
β_{17} in model (53) equals to 0.	0.001	2.846	5	0.724	Retain the null hypothesis.
β_{18} in model (53) equals to 0.	0.001	14.933	5	0.011	Reject the null hypothesis.
β_{19} in model (53) equals to 0.	0.001	10.955	5	0.052	Retain the null hypothesis.
β_{20} in model (53) equals to 0.	0.001	3.900	5	0.564	Retain the null hypothesis.
β_{21} in model (53) equals to 0.	0.001	1.480	5	0.915	Retain the null hypothesis.
β_{22} in model (53) equals to 0.	0.001	2.434	5	0.786	Retain the null hypothesis.
β_{17} in model (54) equals to 0.	0.006	2.071	5	0.839	Retain the null hypothesis.
β_{18} in model (54) equals to 0.	0.006	4.949	5	0.422	Retain the null hypothesis.
β_{19} in model (54) equals to 0.	0.006	6.880	5	0.230	Retain the null hypothesis.
β_{20} in model (54) equals to 0.	0.006	7.724	5	0.172	Retain the null hypothesis.
β_{21} in model (54) equals to 0.	0.006	5.869	5	0.319	Retain the null hypothesis.
β_{22} in model (54) equals to 0.	0.006	4.304	5	0.507	Retain the null hypothesis.

Both variables that measure Chinese students' accomplishment-related orientations (O-I-Accomplishment1 and O-I-Accomplishment2) positively affect the adoption of deep learning approaches (see Tables 6.41 and 6.42). Similar conclusions can also be drawn for O-I-Stimulation1's impact on deep learning approaches. Chinese students who enjoy communicating their ideas with others are more likely to think critically and use logic to draw their own conclusions in learning. However, as shown in Table 6.43, none of the coefficients is significant at the 0.05 level for the A-D-Meaning1 or A-D-Meaning2. This indicates that although Chinese students' adoption of learn-by-understanding strategies is affected by their willingness to communicate, the effects cannot be captured well by a simple linear model. This kind of effect also exists between O-I-ToKnow 2 and both variables that measure Chinese students' use of logic in learning (see Table 6.44).

Table 6.41 Parameter Estimates of the O-I-Accomplishment1 Effect on A-D-Logic2 of Chinese Students

Category*	β_{17}	Sig.
Disagree	-32.666	0.254
Somewhat disagree	0.097	0.753
Neither agree nor disagree / no opinion	**-0.887**	**0.003**
Somewhat agree	-0.286	0.204
Agree	-0.164	0.460
*The reference category is strongly agree.		

Table 6.42 Parameter Estimates of the O-I-Accomplishment1 Effect on Deep Approaches of Chinese Students

Deep learning approach variable	A-D-Interest		A-D-Logic2		A-D-Relate1	
Category*	β_{18}	Sig.	β_{18}	Sig.	β_{18}	Sig.
Strongly disagree	**-1.228**	**0.043**	-	-	-	-
Disagree	-0.314	0.378	-16.172	0.191	**-1.114**	**0.009**
Somewhat disagree	**-0.920**	**0.002**	**-0.622**	**0.048**	**-1.052**	**0.001**
Neither agree nor disagree / no opinion	-0.554	0.057	-0.384	0.169	**-0.582**	**0.044**
Somewhat agree	**0.550**	**0.041**	**-0.495**	**0.044**	-0.480	0.067
Agree	-0.427	0.147	-0.461	0.064	**-0.687**	**0.010**
*The reference category is strongly agree.						

Table 6.43 Parameter Estimates of O-I-Stimulation1 Effect on Deep Learning Approaches of Chinese Students

Deep learning approach variable	A-D-Critical		A-D-Logic2		A-D-Meaning1		A-D-Meaning2	
Category*	β_{19}	Sig.	β_{19}	Sig.	β_{19}	Sig.	β_{19}	Sig.
Strongly disagree	**-1.831**	**0.021**	-	-	-	-	-	-
Disagree	-0.055	0.889	18.021	0.233	0.149	0.823	-0.740	0.281
Somewhat disagree	**-0.692**	**0.006**	**-0.724**	**0.020**	-0.359	0.290	-0.464	0.134
Neither agree nor disagree / no opinion	0.067	0.834	-0.058	0.834	-0.347	0.253	-0.16	0.419
Somewhat agree	**-0.629**	**0.002**	0.121	0.592	0.164	0.549	0.251	0.202
Agree	-0.355	0.057	0.250	0.257	0.262	0.331	0.006	0.973
*The reference category is strongly agree.								

Table 6.44 Parameter Estimates of O-I-ToKnow2 Effect on Deep Learning Approaches of Chinese Students

Deep learning approach variable	A-D-Logic1		A-D-Logic2	
Category*	β_{22}	Sig.	β_{22}	Sig.
Strongly disagree	0.957	0.288	-	-
Disagree	-0.522	0.236	24.806	0.232
Somewhat disagree	0.117	0.654	0.312	0.271
Neither agree nor disagree / no opinion	-0.132	0.562	-0.048	0.852
Somewhat agree	0.087	0.679	-0.101	0.655
Agree	0.517	0.116	0.163	0.475
*The reference category is strongly agree.				

Last but not the least, O-I-ToKnow1 has been found to have a significant effect on A-D-Logic2, but the direction of the effect is unclear. As shown in Table 6.45, the coefficients that are significant at the 0.05 level are for the "neither agree nor disagree/no opinion" category. One can only conclude that students who scored higher O-I-ToKnow1 in are more likely to choose the neutral response than choose "strongly agree" for A-D-Logic2.

Table 6.45 Parameter Estimates of the O-I-ToKnow1 Effect on A-D-Logic2 of Chinese Students

Category*	β_{21}	Sig.
Disagree	16.401	0.253
Somewhat disagree	0.332	0.280
Neither agree nor disagree / no opinion	**1.138**	**0.000**
Somewhat agree	0.278	0.164
Agree	0.396	0.050
*The reference category is strongly agree.		

Test results of H19: extrinsic learning orientations and achieving learning approaches

The null hypothesis of H19 assumes no relationship between Chinese students' extrinsic learning orientations and their adoption of achieving learning approaches. Eight regression models, models (55) to (62), concern the relationships between the learning orientation variables and achieving learning approach variables. The regression results relevant to the extrinsic learning orientation variables are presented in Table 6.46. All six extrinsic orientation variables significantly affect at least one achieving approach variable at the 0.05 level. The parameter estimates for the achieving approach variables that are significantly affected by orientation variables are presented in Tables 6.47 to 6.52. Bold numbers indicate that the coefficients for the category of the dependent variable are significant at the 0.05 level.

Table 6.46 H19 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_{11} in model (55) equals to 0.	0.000	22.886	5	0.000	Reject the null hypothesis.
β_{12} in model (55) equals to 0.	0.000	5.141	5	0.399	Retain the null hypothesis.
β_{13} in model (55) equals to 0.	0.000	3.234	5	0.664	Retain the null hypothesis.
β_{14} in model (55) equals to 0.	0.000	6.582	5	0.254	Retain the null hypothesis.
β_{15} in model (55) equals to 0.	0.000	5.777	5	0.329	Retain the null hypothesis.
β_{16} in model (55) equals to 0.	0.000	21.377	5	0.001	Reject the null hypothesis.
β_{11} in model (56) equals to 0.	0.000	8.275	5	0.142	Retain the null hypothesis.
β_{12} in model (56) equals to 0.	0.000	6.656	5	0.247	Retain the null hypothesis.
β_{13} in model (56) equals to 0.	0.000	4.310	5	0.506	Retain the null hypothesis.
β_{14} in model (56) equals to 0.	0.000	11.449	5	0.043	Reject the null hypothesis.
β_{15} in model (56) equals to 0.	0.000	4.567	5	0.471	Retain the null hypothesis.
β_{16} in model (56) equals to 0.	0.000	1.997	5	0.850	Retain the null hypothesis.
β_{11} in model (57) equals to 0.	0.000	1.823	5	0.873	Retain the null hypothesis.
β_{12} in model (57) equals to 0.	0.000	16.002	5	0.007	Reject the null hypothesis.
β_{13} in model (57) equals to 0.	0.000	14.074	5	0.015	Reject the null hypothesis.
β_{14} in model (57) equals to 0.	0.000	2.103	5	0.835	Retain the null hypothesis.
β_{15} in model (57) equals to 0.	0.000	4.966	5	0.420	Retain the null hypothesis.
β_{16} in model (57) equals to 0.	0.000	1.163	5	0.948	Retain the null hypothesis.
β_{11} in model (58) equals to 0.	0.000	14.715	6	0.023	Reject the null hypothesis.
β_{12} in model (58) equals to 0.	0.000	11.560	6	0.073	Retain the null hypothesis.
β_{13} in model (58) equals to 0.	0.000	5.145	6	0.525	Retain the null hypothesis.
β_{14} in model (58) equals to 0.	0.000	7.260	6	0.297	Retain the null hypothesis.
β_{15} in model (58) equals to 0.	0.000	4.944	6	0.551	Retain the null hypothesis.
β_{16} in model (58) equals to 0.	0.000	19.647	6	0.003	Reject the null hypothesis.
β_{11} in model (59) equals to 0.	0.007	2.919	5	0.712	Retain the null hypothesis.
β_{12} in model (59) equals to 0.	0.007	3.998	5	0.550	Retain the null hypothesis.
β_{13} in model (59) equals to 0.	0.007	8.025	5	0.155	Retain the null hypothesis.
β_{14} in model (59) equals to 0.	0.007	4.484	5	0.482	Retain the null hypothesis.
β_{15} in model (59) equals to 0.	0.007	5.382	5	0.371	Retain the null hypothesis.
β_{16} in model (59) equals to 0.	0.007	14.893	5	0.011	Reject the null hypothesis.
β_{11} in model (60) equals to 0.	0.000	9.388	5	0.095	Retain the null hypothesis.
β_{12} in model (60) equals to 0.	0.000	15.507	5	0.008	Reject the null hypothesis.
β_{13} in model (60) equals to 0.	0.000	9.714	5	0.084	Retain the null hypothesis.
β_{14} in model (60) equals to 0.	0.000	2.955	5	0.707	Retain the null hypothesis.
β_{15} in model (60) equals to 0.	0.000	8.697	5	0.122	Retain the null hypothesis.
β_{16} in model (60) equals to 0.	0.000	12.638	5	0.027	Reject the null hypothesis.
β_{11} in model (61) equals to 0.	0.000	5.806	5	0.326	Retain the null hypothesis.
β_{12} in model (61) equals to 0.	0.000	6.587	5	0.253	Retain the null hypothesis.
β_{13} in model (61) equals to 0.	0.000	10.276	5	0.068	Retain the null hypothesis.
β_{14} in model (61) equals to 0.	0.000	7.834	5	0.166	Retain the null hypothesis.
β_{15} in model (61) equals to 0.	0.000	14.886	5	0.011	Reject the null hypothesis.
β_{16} in model (61) equals to 0.	0.000	2.384	5	0.794	Retain the null hypothesis.
β_{11} in model (62) equals to 0.	0.000	7.113	6	0.310	Retain the null hypothesis.
β_{12} in model (62) equals to 0.	0.000	7.830	6	0.251	Retain the null hypothesis.
β_{13} in model (62) equals to 0.	0.000	4.337	6	0.631	Retain the null hypothesis.
β_{14} in model (62) equals to 0.	0.000	22.034	6	0.001	Reject the null hypothesis.
β_{15} in model (62) equals to 0.	0.000	12.462	6	0.052	Retain the null hypothesis.
β_{16} in model (62) equals to 0.	0.000	12.198	6	0.058	Retain the null hypothesis.

Two identified and related orientations (O-E-Identified1 and O-E-Identified2) have negative impacts on the adoption of achieving learning approaches (see Tables 6.47 and 6.48). Chinese students whose learning orientations are strongly related to future career are less likely to invest effort to achieve the best results and be systematic and organised with their study. However, Table 6.48 shows a positive relationship between O-E-Identified2 and A-A-Excel1, that Chinese students who target at becoming a better accountant are more likely to set a goal in the course and are determined to achieve it. This achieving learning motive (A-A-Excel1) is also positively affected by O-E-Introjected1 (see Table 6.49), a variable that measures Chinese students orientations to using an Australian accounting Master degree to prove their capabilities.

Table 6.47 Parameter Estimates of O-E-Identified1 Effect on Achieving Approaches of Chinese Students

Achieving learning approach variable	A-A-Effort1		A-A-Excel2	
Category*	β_{11}	Sig.	β_{11}	Sig.
Strongly disagree	-	-	**2.216**	**0.035**
Disagree	**1.801**	**0.003**	**0.822**	**0.016**
Somewhat disagree	0.241	0.390	0.015	0.943
Neither agree nor disagree / no opinion	-0.335	0.144	0.259	0.233
Somewhat agree	-0.149	0.396	0.077	0.661
Agree	-0.257	0.128	0.183	0.292
*The reference category is strongly agree.				

Table 6.48 Parameter Estimates of O-E-Identified2 Effect on Achieving Approaches of Chinese Students

Achieving learning approach variable	A-A-Excel1		A-A-Organised2	
Category*	β_{12}	Sig.	β_{12}	Sig.
Disagree	1.040	0.220	**1.538**	**0.004**
Somewhat disagree	-0.233	0.550	0.225	0.436
Neither agree nor disagree / no opinion	**-0.660**	**0.015**	0.373	0.204
Somewhat agree	**-0.591**	**0.017**	**0.643**	**0.021**
Agree	-0.201	0.410	0.488	0.104
*The reference category is strongly agree.				

Table 6.49 Parameter Estimates of O-E-Introjected1 Effect on A-A-Excel1 of Chinese Students

Category*	β_{13}	Sig.
Disagree	-0.532	0.273
Somewhat disagree	**-0.860**	**0.002**
Neither agree nor disagree / no opinion	-0.297	0.128
Somewhat agree	**-0.475**	**0.007**
Agree	-0.303	0.079
*The reference category is strongly agree.		

O-E-Introjected2 has quite the opposite effects on Chinese students' achieving learning approaches. As shown in Table 6.50, this learning orientation is negatively related to A-A-Effort2 and A-A-TimeManage2. The students whose learning orientation are to prove their intelligence are less likely to work hard and more likely to leave everything to the last minute.

Table 6.50 Parameter Estimates of O-E-Introjected2 Effect on Achieving Approaches of Chinese Students

Achieving learning approach variable	A-A-Effort2		A-A-TimeManage2	
Category*	β_{14}	Sig.	β_{14}	Sig.
Strongly disagree	-	-	3.412	0.365
Disagree	**1.110**	**0.004**	**0.951**	**0.001**
Somewhat disagree	-0.349	0.128	0.251	0.122
Neither agree nor disagree / no opinion	0.349	0.072	**0.383**	**0.043**
Somewhat agree	0.307	0.051	**0.459**	**0.002**
Agree	0.276	0.079	0.122	0.376
*The reference category is strongly agree.				

Table 6.51 presents a negative coefficient of O-E-Regulation1 in the disagree category of TimeManage1. This means Chinese students who have a learning orientation of obtaining a more prestigious job are more likely to carefully organise their study to make the best use of it.

Table 6.51 Parameter Estimates of O-E-Regulation1 Effect on A-A-TimeManage1 of Chinese Students

Category*	β_{15}	Sig.
Disagree	**-1.315**	**0.001**
Somewhat disagree	0.091	0.749
Neither agree nor disagree / no opinion	-0.193	0.440
Somewhat agree	-0.115	0.603
Agree	-0.292	0.170
*The reference category is strongly agree.		

The extrinsic learning orientation variable that affects the highest number of achieving learning approaches is the migration-related orientation, O-E-Regulation2. Table 6.52 shows that O-E-Regulation2 is positively related to A-A-Organised1 but negatively related to A-A-Effort1, A-A-Excel2 and A-A-Organised2. Though Chinese students who have a strong migration orientation are more likely to find good conditions for studying, they are also less likely to invest effort to achieve the best results and be systematic and organised with study.

Table 6.52 Parameter Estimates of O-E-Regulation2 Effect on Achieving Approaches of Chinese Students

Achieving learning approach variable	A-A-Effort1		A-A-Excel2		A-A-Organised1		A-A-Organised2	
Category*	β_{16}	Sig.	β_{16}	Sig.	β_{16}	Sig.	β_{16}	Sig.
Strongly disagree	-	-	0.474	0.338	-	-	-	-
Disagree	**1.418**	**0.003**	**0.771**	**0.002**	-0.506	0.264	**0.639**	**0.034**
Somewhat disagree	0.388	0.057	0.293	0.053	-0.192	0.454	-0.157	0.421
Neither agree nor disagree / no opinion	**0.354**	**0.035**	**0.465**	**0.002**	**-0.500**	**0.001**	-0.056	0.771
Somewhat agree	0.084	0.455	**0.344**	**0.003**	**-0.397**	**0.002**	-0.035	0.848
Agree	0.035	0.743	0.204	0.066	**-0.259**	**0.025**	-0.117	0.540
*The reference category is strongly agree.								

The overall decision for H19 is to reject H19a and retain H19b. Chinese students' extrinsic learning orientations can affect their adoption of achieving learning approaches. Chapter Seven has more discussion about these effects.

Test results of H20: intrinsic learning orientations and achieving learning approaches

H20 concerns the relationship between Chinese students' intrinsic learning orientations and their adoption of achieving learning approaches. Similar to H19, the regression results of models (55) to (62) can provide information to make decisions about H20. Table 6.53 presents the regression results relevant to the six intrinsic learning orientation variables. All intrinsic orientation variables except for O-I-Stimulation1 significantly affect at least one achieving approach variable at the 0.05 level. Tables 6.54 to 6.58 present the parameter estimates of these effects with the significant coefficients in bold.

Table 6.53 H20 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_{17} in model (55) equals to 0.	0.000	4.534	5	0.475	Retain the null hypothesis.
β_{18} in model (55) equals to 0.	0.000	8.599	5	0.126	Retain the null hypothesis.
β_{19} in model (55) equals to 0.	0.000	7.635	5	0.178	Retain the null hypothesis.
β_{20} in model (55) equals to 0.	0.000	8.700	5	0.122	Retain the null hypothesis.
β_{21} in model (55) equals to 0.	0.000	5.833	5	0.323	Retain the null hypothesis.
β_{22} in model (55) equals to 0.	0.000	5.846	5	0.322	Retain the null hypothesis.
β_{17} in model (56) equals to 0.	0.000	14.871	5	0.011	Reject the null hypothesis.
β_{18} in model (56) equals to 0.	0.000	7.327	5	0.197	Retain the null hypothesis.
β_{19} in model (56) equals to 0.	0.000	0.840	5	0.974	Retain the null hypothesis.
β_{20} in model (56) equals to 0.	0.000	5.972	5	0.309	Retain the null hypothesis.
β_{21} in model (56) equals to 0.	0.000	12.551	5	0.028	Reject the null hypothesis.
β_{22} in model (56) equals to 0.	0.000	12.937	5	0.024	Reject the null hypothesis.
β_{17} in model (57) equals to 0.	0.000	6.680	5	0.246	Retain the null hypothesis.
β_{18} in model (57) equals to 0.	0.000	8.530	5	0.129	Retain the null hypothesis.
β_{19} in model (57) equals to 0.	0.000	9.297	5	0.098	Retain the null hypothesis.
β_{20} in model (57) equals to 0.	0.000	3.420	5	0.635	Retain the null hypothesis.
β_{21} in model (57) equals to 0.	0.000	10.118	5	0.072	Retain the null hypothesis.
β_{22} in model (57) equals to 0.	0.000	3.156	5	0.676	Retain the null hypothesis.
β_{17} in model (58) equals to 0.	0.000	5.238	6	0.514	Retain the null hypothesis.
β_{18} in model (58) equals to 0.	0.000	10.680	6	0.099	Retain the null hypothesis.
β_{19} in model (58) equals to 0.	0.000	5.162	6	0.523	Retain the null hypothesis.
β_{20} in model (58) equals to 0.	0.000	12.920	6	0.044	Reject the null hypothesis.
β_{21} in model (58) equals to 0.	0.000	2.832	6	0.830	Retain the null hypothesis.
β_{22} in model (58) equals to 0.	0.000	12.541	6	0.051	Retain the null hypothesis.
β_{17} in model (59) equals to 0.	0.007	1.846	5	0.870	Retain the null hypothesis.
β_{18} in model (59) equals to 0.	0.007	6.962	5	0.223	Retain the null hypothesis.
β_{19} in model (59) equals to 0.	0.007	9.554	5	0.089	Retain the null hypothesis.
β_{20} in model (59) equals to 0.	0.007	3.808	5	0.577	Retain the null hypothesis.
β_{21} in model (59) equals to 0.	0.007	1.948	5	0.856	Retain the null hypothesis.
β_{22} in model (59) equals to 0.	0.007	7.234	5	0.204	Retain the null hypothesis.
β_{17} in model (60) equals to 0.	0.000	10.606	5	0.060	Retain the null hypothesis.
β_{18} in model (60) equals to 0.	0.000	13.872	5	0.016	Reject the null hypothesis.
β_{19} in model (60) equals to 0.	0.000	4.577	5	0.470	Retain the null hypothesis.
β_{20} in model (60) equals to 0.	0.000	6.064	5	0.300	Retain the null hypothesis.
β_{21} in model (60) equals to 0.	0.000	8.718	5	0.121	Retain the null hypothesis.
β_{22} in model (60) equals to 0.	0.000	19.963	5	0.001	Reject the null hypothesis.
β_{17} in model (61) equals to 0.	0.000	12.802	5	0.025	Reject the null hypothesis.
β_{18} in model (61) equals to 0.	0.000	9.816	5	0.081	Retain the null hypothesis.
β_{19} in model (61) equals to 0.	0.000	6.167	5	0.290	Retain the null hypothesis.
β_{20} in model (61) equals to 0.	0.000	1.561	5	0.906	Retain the null hypothesis.
β_{21} in model (61) equals to 0.	0.000	6.476	5	0.263	Retain the null hypothesis.
β_{22} in model (61) equals to 0.	0.000	9.027	5	0.108	Retain the null hypothesis.
β_{17} in model (62) equals to 0.	0.000	13.294	6	0.039	Reject the null hypothesis.
β_{18} in model (62) equals to 0.	0.000	11.516	6	0.074	Retain the null hypothesis.
β_{19} in model (62) equals to 0.	0.000	11.386	6	0.077	Retain the null hypothesis.
β_{20} in model (62) equals to 0.	0.000	6.111	6	0.411	Retain the null hypothesis.
β_{21} in model (62) equals to 0.	0.000	20.496	6	0.002	Reject the null hypothesis.
β_{22} in model (62) equals to 0.	0.000	1.816	6	0.936	Retain the null hypothesis.

As shown in Tables 6.54 and 6.55, both intrinsic orientation variables that measure students' orientations toward accomplishment have negative coefficients for achieving learning approaches. O-I-Accomplishment1 positively affects A-A-Effort2, A-A-TimeManage1 and A-A-TimeManage2. This means Chinese students whose orientations are to surpass themselves are more likely to work hard and are better at time management. O-I-Accomplishment2 is positively related to A-A-Excel2, indicating that Chinese students who are motivated by accomplishing difficult academic activities are more systematic with their study.

Table 6.54 Parameter Estimates of O-I-Accomplishment1 Effect on Achieving Approaches of Chinese Students

Achieving learning approach variable	A-A-Effort2		A-A-TimeManage1		A-A-TimeManage2	
Category*	β_{17}	Sig.	β_{17}	Sig.	β_{17}	Sig.
Strongly disagree	-	-	-	-	-1.771	0.227
Disagree	**-2.033**	**0.001**	**-1.608**	**0.005**	-0.172	0.624
Somewhat disagree	-0.626	0.062	-0.195	0.508	-0.463	0.059
Neither agree nor disagree / no opinion	**-0.623**	**0.041**	**-0.536**	**0.044**	**-0.776**	**0.005**
Somewhat agree	-0.484	0.066	-0.334	0.131	**-0.643**	**0.004**
Agree	-0.388	0.148	-0.130	0.548	-0.391	0.093
*The reference category is strongly agree.						

Table 6.55 Parameter Estimates of O-I-Accomplishment2 Effect on A-A-Organised2 of Chinese Students

Category*	β_{18}	Sig.
Disagree	**-1.396**	**0.005**
Somewhat disagree	-0.480	0.171
Neither agree nor disagree / no opinion	-0.302	0.385
Somewhat agree	-0.171	0.610
Agree	-0.196	0.580
*The reference category is strongly agree.		

The relationship between O-I-Stimulation2 and A-A-Excel2 is more complex. Although Table 6.56 shows a significant β_{20} in A-A-Excel2 at the 0.05 level, on further examination, no category of A-A-Excel2 has a β_{20} that is significant at the 0.05 level. This means although the O-I-Stimulation2's overall effect on A-A-Excel2 is significant at the 0.05 level, the effect could not be captured by a simple linear model.

Table 6.56 Parameter Estimates of O-I-Stimulation2 Effect on A-A-Excel2 of Chinese Students

Category*	β_{20}	Sig.
Strongly disagree	-0.962	0.266
Disagree	-0.470	0.221
Somewhat disagree	0.032	0.913
Neither agree nor disagree / no opinion	0.148	0.599
Somewhat agree	0.238	0.318
Agree	-0.262	0.250
*The reference category is strongly agree.		

According to the regression results, the two intrinsic orientation variables that measure Chinese students' interest in learning accounting knowledge have very different effects on achieving learning approaches. As presented in Table 6.57, the coefficients of O-I-ToKnow1 (β_{21}) that are significant at the 0.05 level are positive for A-A-Effort2 and A-A-TimeManage2. This means Chinese students who experience pleasure and satisfaction in learning new accounting knowledge are less likely to work hard or work steadily throughout the course. Conversely, the significant coefficients of O-I-ToKnow2 (β_{22}) are negative for A-A-Effort2 and A-A-Organised2 (see Table 6.58). That is, Chinese students who are interested in learning accounting knowledge work harder and are better organised. The potential causes of this conflicting effect are discussed in Chapter Seven.

Table 6.57 Parameter Estimates of O-I-ToKnow1 Effect on Achieving Approaches of Chinese Students

Achieving learning approach variable	A-A-Effort2		A-A-TimeManage2	
Category*	β_{21}	Sig.	β_{21}	Sig.
Strongly disagree	-	-	2.415	0.276
Disagree	0.520	0.340	0.070	0.964
Somewhat disagree	**0.732**	**0.017**	**0.528**	**0.020**
Neither agree nor disagree / no opinion	**0.688**	**0.009**	**0.904**	**0.001**
Somewhat agree	**0.723**	**0.001**	**0.625**	**0.002**
Agree	**0.710**	**0.002**	**0.667**	**0.002**
*The reference category is strongly agree.				

Table 6.58 Parameter Estimates of O-I-ToKnow2 Effect on Achieving Approaches of Chinese Students

Achieving learning approach variable	A-A-Effort2		A-A-Organised2	
Category*	β_{22}	Sig.	β_{22}	Sig.
Disagree	0.172	0.739	0.381	0.400
Somewhat disagree	**-0.684**	**0.036**	-0.543	0.092
Neither agree nor disagree / no opinion	**-0.839**	**0.007**	**-0.814**	**0.012**
Somewhat agree	**-0.765**	**0.008**	**-0.634**	**0.040**
Agree	**-0.750**	**0.010**	-0.296	0.366
*The reference category is strongly agree.				

Overall, Chinese students' intrinsic learning orientations have significant effects on their adoption of achieving learning approaches at the 0.05 level. The decision therefore is to reject H20a and retain H20b.

Test results of H21: amotivation and surface learning approaches

The last hypothesis that helps answer the second research question is H21. It concerns the relationship between Chinese students' amotivation and their adoption of surface learning approaches. The regression results of models (39) to (46) provide information to help make decisions about H21. As presented in Table 6.59, both amotivation variables have significant effects on Chinese students' adoption of surface learning approaches at the 0.05 level. The parameter estimates for the significantly affected surface learning approaches are listed in Tables 6.60 and 6.61. The bold numbers indicate the significant (at the 0.05 level) coefficients for the relevant categories.

Table 6.59 H21 Hypothesis Test Summary

Null Hypothesis	Model Fitting Sig.	Chi-Square	Degree of Freedom	Sig.	Decision
β_{23} in model (39) equals to 0.	0.000	6.942	5	0.225	Retain the null hypothesis.
β_{24} in model (39) equals to 0.	0.000	9.220	5	0.101	Retain the null hypothesis.
β_{23} in model (40) equals to 0.	0.057	5.280	5	0.383	Retain the null hypothesis.
β_{24} in model (40) equals to 0.	0.057	7.416	5	0.191	Retain the null hypothesis.
β_{23} in model (41) equals to 0.	0.000	7.385	6	0.287	Retain the null hypothesis.
β_{24} in model (41) equals to 0.	0.000	15.635	6	0.016	Reject the null hypothesis.
β_{23} in model (42) equals to 0.	0.000	24.832	6	0.000	Reject the null hypothesis.
β_{24} in model (42) equals to 0.	0.000	21.304	6	0.002	Reject the null hypothesis.
β_{23} in model (43) equals to 0.	0.000	9.954	6	0.127	Retain the null hypothesis.
β_{24} in model (43) equals to 0.	0.000	16.459	6	0.011	Reject the null hypothesis.
β_{23} in model (44) equals to 0.	0.000	21.754	6	0.001	Reject the null hypothesis.
β_{24} in model (44) equals to 0.	0.000	28.153	6	0.000	Reject the null hypothesis.
β_{23} in model (45) equals to 0.	0.008	5.345	6	0.500	Retain the null hypothesis.
β_{24} in model (45) equals to 0.	0.008	27.185	6	0.000	Reject the null hypothesis.
β_{23} in model (46) equals to 0.	0.000	4.240	5	0.515	Retain the null hypothesis.
β_{24} in model (46) equals to 0.	0.000	16.167	5	0.006	Reject the null hypothesis.

As shown in Table 6.60, all β_{23} that are significant at the 0.05 level are negative, indicating positive effects on the two surface learning motive variables, A-S-NotCope2 and A-S-NotMakingSense2. Chinese students who did not have much orientation and rather "floated" into their programs are more likely to have difficulty in coping and understanding course material.

Table 6.60 Parameter Estimates of O-A-LackofDirection Effect on Surface Approaches of Chinese Students

Surface learning approach variable	A-S-NotCope2		A-S-NotMakingSense2	
Category*	β_{23}	Sig.	β_{23}	Sig.
Strongly disagree	**-1.101**	**0.016**	**-0.776**	**0.002**
Disagree	**-0.483**	**0.032**	**-0.691**	**0.001**
Somewhat disagree	-0.174	0.301	**-0.633**	**0.002**
Neither agree nor disagree / no opinion	0.275	0.056	-0.286	0.170
Somewhat agree	-0.065	0.574	**-0.465**	**0.019**
Agree	0.025	0.825	**-0.517**	**0.011**
*The reference category is strongly agree.				

The amotivation variable that affects the highest number of surface learning approach variables is O-A-LostDirection. As shown in Table 6.61, all surface learning approach variables, except the two memorisation-related variables, are positively affected by O-A-LostDirection. Chinese students who have lost their reasons for their study have more difficulty in coping with the amount of course material, understanding the things they need to learn, seeing the overall picture and identifying important course content.

Table 6.61 Parameter Estimates of O-A-LostDirection Effect on Surface Approaches of Chinese Students

Surface learning approach variable	A-S-NotCope1		A-S-NotCope2		A-S-NotMakingSense1	
Category*	β_{24}	Sig.	β_{24}	Sig.	β_{24}	Sig.
Strongly disagree	-0.416	0.134	-0.056	0.824	-0.523	0.070
Disagree	**-0.494**	**0.023**	**-0.531**	**0.004**	**-0.418**	**0.033**
Somewhat disagree	-0.089	0.530	**-0.320**	**0.038**	-0.209	0.198
Neither agree nor disagree / no opinion	-0.056	0.698	**-0.443**	**0.003**	-0.168	0.368
Somewhat agree	-0.004	0.975	-0.070	0.539	-0.068	0.643
Agree	0.140	0.297	-0.055	0.624	0.086	0.588
Surface learning approach variable	A-S-NotMakingSense2		A-S-Unrelate1		A-S-Unrelate2	
Category*	β_{24}	Sig.	β_{24}	Sig.	β_{24}	Sig.
Strongly disagree	**-0.663**	**0.009**	**-1.215**	**0.004**	-	-
Disagree	**-0.432**	**0.048**	-0.329	0.129	**-0.434**	**0.027**
Somewhat disagree	-0.329	0.112	**-0.492**	**0.009**	-0.126	0.422
Neither agree nor disagree / no opinion	-0.159	0.460	**-0.545**	**0.006**	-0.103	0.543
Somewhat agree	-0.035	0.864	-0.256	0.154	0.043	0.764
Agree	-0.011	0.958	-0.151	0.410	0.128	0.377
*The reference category is strongly agree.						

In conclusion, Chinese students' amotivation has a significant effect on their adoption of surface learning approaches at the 0.05 level. H21a is rejected and H21b is retained.

6.3 Findings to Answer the Third Research Question

The third research question addresses the changes in Chinese students' learning orientations and learning approaches during their study in Australian postgraduate accounting programs. Two hypotheses, H22 and H23, were formed for testing, with H22 concerning changes in learning orientations and H23 focusing on changes in learning approaches. Friedman's two-way ANOVA by ranks was used to compare the distribution of learning orientation and learning approach responses from the same student's three surveys over three semesters. The test results and decisions made for H22 and H23 are discussed below.

6.3.1 Test Results for H22: Changes in Learning Orientations

The H22 null hypothesis assumes no change in Chinese students' learning orientations over their study period in Australian postgraduate accounting programs. Table 6.62 lists the test statistics to compare learning orientation variables over the three survey responses from three different semesters. An extrinsic learning orientation variable, O-E-Regulation1, is the only learning orientation variable that shows a significant difference in distribution over the three surveys at the 0.05 level. The descriptive statistics of O-E-Regulation1 over three surveys are presented in Table 6.63.

Table 6.62 Test Summary of Learning Orientation Distribution Comparison of Chinese Students over Three Semesters

Null Hypothesis	Test Stat.	Sig.	Decision
The distributions of different categories of O-E-Identified1 are the same in all three surveys.	4.836	0.089	Retain the null hypothesis.
The distributions of different categories of O-E-Identified2 are the same in all three surveys.	4.933	0.085	Retain the null hypothesis.
The distributions of different categories of O-E-Introjected1 are the same in all three surveys.	0.333	0.846	Retain the null hypothesis.
The distributions of different categories of O-E-Introjected2 are the same in all three surveys.	1.322	0.516	Retain the null hypothesis.
The distributions of different categories of O-E-Regulation1 are the same in all three surveys.	14.387	0.001	Reject the null hypothesis.
The distributions of different categories of O-E-Regulation2 are the same in all three surveys.	0.531	0.767	Retain the null hypothesis.
The distributions of different categories of O-I-Accomplishment1 are the same in all three surveys.	2.889	0.236	Retain the null hypothesis.
The distributions of different categories of O-I-Accomplishment2 are the same in all three surveys.	5.792	0.055	Retain the null hypothesis.
The distributions of different categories of O-I-Stimulation1 are the same in all three surveys.	1.782	0.410	Retain the null hypothesis.
The distributions of different categories of O-I-Stimulation2 are the same in all three surveys.	0.280	0.869	Retain the null hypothesis.
The distributions of different categories of O-I-ToKnow1 are the same in all three surveys.	0.275	0.872	Retain the null hypothesis.
The distributions of different categories of O-I-ToKnow2 are the same in all three surveys.	5.375	0.068	Retain the null hypothesis.
The distributions of different categories of O-A-LackofDirection are the same in all three surveys.	2.039	0.361	Retain the null hypothesis.
The distributions of different categories of O-A-LostDirection are the same in all three surveys.	0.406	0.816	Retain the null hypothesis.

Table 6.63 Changes in O-E-Regulation1 of Chinese Students over Three Surveys

Survey	1	2	3
Total N	40	40	40
Mean	5.75	5.53	5.45
Standard Error	0.16	0.15	0.15
Median	6	6	6
Mode	6	6	6
Standard Deviation	1.01	0.93	0.93
Kurtosis	1.28	1.21	0.91
Skewness	-1.05	-0.87	-0.85
Range	4	4	4
Minimum	3	3	3
Maximum	7	7	7
Friedman Test Mean Rank	2.21	1.93	1.86

The mean of O-E-Regulation1 decreased over the three semesters, indicating that Chinese students' learning orientations are less related to finding more prestigious jobs as they spend more time studying in their programs. The decision for H21 is to therefore to reject H21a

and retain H21b. Chinese students' extrinsic learning orientations are significantly lower at the 0.05 level after three semesters' study in Australian postgraduate accounting programs. Changes in intrinsic learning orientations and amotivation are not significant at the 0.05 level.

6.3.2 Test Results for H23: Changes in Learning Approaches

The null hypothesis of H23 is that Chinese students' learning approaches do not change over the different semesters of their study. Table 6.64 presents the results of Friedman's two-way ANOVA by ranks for the learning approach variables in three surveys. The three surface learning approach variables, A-S-Memorise2, A-S-NotCope1 and A-S-NotMakingSense1 have significant changes over three surveys at the 0.05 level. The descriptive statistics of these three variables are presented in Table 6.65.

Table 6.64 Test Summary of Learning Approaches Distribution Comparison over Three Semesters of Chinese Students

Null Hypothesis	Test Stat.	Sig.	Decision
The distributions of different categories of A-S-Memorise1 are the same in all three surveys.	1.173	0.556	Retain the null hypothesis.
The distributions of different categories of A-S-Memorise2 are the same in all three surveys.	6.836	0.033	Reject the null hypothesis.
The distributions of different categories of A-S-NotCope1 are the same in all three surveys.	7.070	0.029	Reject the null hypothesis.
The distributions of different categories of A-S-NotCope2 are the same in all three surveys.	0.590	0.744	Retain the null hypothesis.
The distributions of different categories of A-S-NotMakingSense1 are the same in all three surveys.	9.395	0.009	Reject the null hypothesis.
The distributions of different categories of A-S-NotMakingSense2 are the same in all three surveys.	5.282	0.071	Retain the null hypothesis.
The distributions of different categories of A-S-Unrelate1 are the same in all three surveys.	3.748	0.154	Retain the null hypothesis.
The distributions of different categories of A-S-Unrelate2 are the same in all three surveys.	1.528	0.466	Retain the null hypothesis.
The distributions of different categories of A-D-Critical are the same in all three surveys.	0.054	0.973	Retain the null hypothesis.
The distributions of different categories of A-D-Interest are the same in all three surveys.	3.153	0.207	Retain the null hypothesis.
The distributions of different categories of A-D-Logic1 are the same in all three surveys.	2.162	0.339	Retain the null hypothesis.
The distributions of different categories of A-D-Logic2 are the same in all three surveys.	3.755	0.153	Retain the null hypothesis.
The distributions of different categories of A-D-Meaning1 are the same in all three surveys.	2.966	0.227	Retain the null hypothesis.
The distributions of different categories of A-D-Meaning2 are the same in all three surveys.	2.672	0.263	Retain the null hypothesis.
The distributions of different categories of A-D-Relate1 are the same in all three surveys.	3.651	0.161	Retain the null hypothesis.
The distributions of different categories of A-D-Relate2 are the same in all three surveys.	2.045	0.360	Retain the null hypothesis.
The distributions of different categories of A-A-Effort1 are the same in all three surveys.	2.846	0.241	Retain the null hypothesis.
The distributions of different categories of A-A-Effort2 are the same in all three surveys.	4.321	0.115	Retain the null hypothesis.
The distributions of different categories of A-A-Excel1 are the same in all three surveys.	4.992	0.082	Retain the null hypothesis.
The distributions of different categories of A-A-Excel2 are the same in all three surveys.	4.971	0.083	Retain the null hypothesis.
The distributions of different categories of A-A-Organised1 are the same in all three surveys.	1.326	0.515	Retain the null hypothesis.
The distributions of different categories of A-A-Organised2 are the same in all three surveys.	1.580	0.454	Retain the null hypothesis.
The distributions of different categories of A-A-TimeManage1 are the same in all three surveys.	2.175	0.337	Retain the null hypothesis.
The distributions of different categories of A-A-TimeManage2 are the same in all three surveys.	2.462	0.292	Retain the null hypothesis.

Table 6.65 Changes in Learning Approach Variables of Chinese Students over Three Surveys

Variable	A-S-Memorise2			A-S-NotCope1			A-S-NotMakingSense1		
Survey	1	2	3	1	2	3	1	2	3
Total N	40	40	40	40	40	40	40	40	40
Mean	4.55	4.78	4.18	4.08	4.85	4.33	3.88	4.63	4.43
Standard Error	0.20	0.16	0.21	0.24	0.20	0.24	0.24	0.25	0.22
Median	5	5	4.5	4	5	4	5	5	5
Mode	6	5	5	5	6	5	5	5	5
Standard Deviation	1.28	1.03	1.34	1.51	1.29	1.54	1.52	1.58	1.39
Kurtosis	-1.40	-0.52	-1.02	-0.44	-0.38	-0.67	-1.49	0.31	-0.97
Skewness	-0.31	-0.72	0.00	-0.42	-0.38	0.04	-0.28	-0.98	0.07
Range	4	3	5	6	5	6	5	6	5
Minimum	2	3	2	1	2	1	1	1	2
Maximum	6	6	7	7	7	7	6	7	7
Friedman Test Mean Rank	2.09	2.20	1.71	1.76	2.26	1.98	1.66	2.21	2.13

Unlike the changes in learning orientation that decrease over three semesters, Chinese students' adoption of surface learning approaches shows a bell curve over three semesters. As shown in Table 6.65, the scores of all three surface learning approach variables reach peaks in the second survey and then drop in the third survey. This shows that Chinese students find it more difficult to cope with the amount of work, to make sense of the things they have to learn and rely more on memorising in learning, in their second semester. However, in the third semester, their difficulties in coping and understanding reduce and they rely less on memorising in learning. The mean of A-S-Memorise2 for the third survey is the lowest, representing the lowest reliance on memorisation is in the third semester.

The conclusion for H23 is to reject H23a and accept H23b. Chinese students' adoption of surface learning approaches can change during their period of study. Their adoption of surface learning approaches initially increases in the second semester but then decreases in the third semester.

6.4 Summary

This chapter used 65 tables and one figure to present the findings from 38 Mann-Whitney U tests and 62 multinominal logistic regression analyses that test the 23 hypotheses. The conclusions of hypothesis tests for H1 to H21 were used to answer the second research question, which focuses on the relationships between Chinese postgraduate accounting students' backgrounds, learning orientations and learning approaches in Australian universities. Tables 6.66 and 6.67 presents a summary of the hypothesis test results and answers

to the second research question. Table 6.66 focuses on the effect of students' backgrounds on their learning orientations and learning approaches, while Table 6.67 concerns the effect of learning orientations on learning approaches.

Table 6.66 Hypothesis Test Results for H1 to H16

Hypothesis Tested	Hypothesis Retained	Finding
H1	H1b (alternative hypothesis)	Female students score significantly higher than male students on achieving approaches at the 0.05 level.
H2	H2a (null hypothesis)	Gender does not significantly affect students' learning orientations at the 0.05 level.
H3	H3a (null hypothesis)	Age does not significantly affect students' extrinsic learning orientations at the 0.05 level.
H4	H4b (alternative hypothesis)	Age has a significant and positive effect on students' intrinsic learning orientations at the 0.05 level.
H5	H5b (alternative hypothesis)	Age has a significant and positive effect on students' adoption of deep learning approaches at the 0.05 level.
H6	H6b (alternative hypothesis)	Financial support received from family has a significant and negative effect on students' extrinsic learning orientations at the 0.05 level.
H7	H7a (null hypothesis)	Financial support received from family does not significantly affect students' amotivations at the 0.05 level.
H8	H8a (null hypothesis)	Financial support received from family does not significantly affect students' adoption of surface learning approaches at the 0.05 level.
H9	H9b (alternative hypothesis)	Students from less developed areas are more strongly motivated by extrinsic learning orientations, but this effect of location is very weak.
H10	H10a (null hypothesis)	The location of students' prior education institutions does not significantly affect their surface learning approaches at the 0.05 level.
H11	H11b (alternative hypothesis)	Students' prior academic performance has a significant and positive effect on all three types of learning orientations (extrinsic, intrinsic and amotivation) at the 0.05 level.
H12	H12b (alternative hypothesis)	Students' prior academic performance has a significant effect on their adoption of learning approaches at the 0.05 level. The effect is negative on the adoption of surface learning approaches and positive on the adoption of deep and achieving learning approaches.
H13	H13b (alternative hypothesis)	Students' English competency has a significant and positive effect on their surface learning motive, in particular, their concerns of coping, at the 0.05 level.
H14	H14b (alternative hypothesis)	Students' English competency has a significant effect on their learning orientations at the 0.05 level. The effect is negative on extrinsic learning orientations and positive on intrinsic learning orientations.
H15	H15b (alternative hypothesis)	Students with more academic accounting knowledge are significantly more motivated by intrinsic learning orientations at the 0.05 level. Students' prior working experience has a significant and positive effect on all three types of learning orientations.
H16	H16b (alternative hypothesis)	Students' prior accounting knowledge has a significant effect on their adoption of deep and achieving learning approaches at the 0.05 level. However, the effect cannot be explained well in a linear model.

Table 6.67 Hypothesis Test Results for H17 to H21

Hypothesis Tested	Hypothesis Retained	Finding
H17	H17b (alternative hypothesis)	Students' identified- and introjected-related learning orientations have a significant and positive effect on their adoption of surface learning approaches at the 0.05 level. Students' migration-related learning orientation has a significant and negative effect on their adoption of surface learning approaches at the 0.05 level.
H18	H18b (alternative hypothesis)	Students who are intrinsically motivated toward accomplishment are significantly more likely to adopt deep learning approaches at the 0.05 level. The other two types of intrinsic orientations (to know and to experience stimulation) have a significant effect on the adoption of deep learning approaches at the 0.05 level, but the effect cannot be explained well in a linear model.
H19	H19b (alternative hypothesis)	Extrinsic learning orientations has a significant effect on students' achieving approaches at the 0.05 level. The direction of the effects are different for different aspects of extrinsic orientations and achieving approaches. (The details are presented in Section 6.2.3)
H20	H20b (alternative hypothesis)	Students who are intrinsically motivated toward accomplishment are significantly more likely to adopt achieving learning approaches at the 0.05 level. The stimulation-related intrinsic orientation has a significant effect on the adoption of achieving learning approaches at the 0.05 level, but the effect cannot be explained well in a linear model. The to-know-related intrinsic orientations also significantly affect achieving approaches at the 0.05 level, but the direction of the two variables are the opposite.
H21	H21b (alternative hypothesis)	Amotivation has a significant and positive effect on the adoption of surface learning approaches at the 0.05 level.

The third research question asks whether Chinese students' learning orientations and approaches change during their period of study in Australian postgraduate accounting programs. The hypothesis tests for H22 and H23 suggest that they are less extrinsically motivated as time passes. Their learning approach change follows a bell curve: they adopt more surface learning approaches in the second semester but then their surface learning motivations reduce in the following semester. Eventually, Chinese students' reliance on memorisation is lower than when they started their programs. Table 6.68 presents the conclusion of the hypothesis tests for H22 and H23.

Table 6.68 Hypothesis Test Results for H22 and H23

Hypothesis Tested	Hypothesis Retained	Finding
H22	H22b (alternative hypothesis)	Students are significantly less extrinsically motivated by external regulations as they spend more time in their Australian postgraduate accounting programs at the 0.05 level.
H23	H23b (alternative hypothesis)	Students' learning approaches are significantly different across different semesters of their study at the 0.05 level. The adoption of surface learning approaches increases from the first semester to the second semester and then decreases from the second semester to the third semester. Overall, the adoption of surface learning approaches is the lowest in the third semester.

The next chapter will discuss the potential causes and implications of the findings from in this chapter. It will also address the contributions and limitations of this study.

Chapter Seven

Discussion and Conclusion

7.1 Introduction

This chapter discusses the research findings and concludes this thesis. It begins with a summary of the research findings that answer the research questions. This is followed by some recommendations for Australian accounting education practice and future research. The contributions of this study are then addressed. The limitations and delimitation of this study are discussed at the end of the chapter.

7.2 Discussions of the Key Findings

7.2.1 The Characteristics of Chinese Students' Backgrounds, Learning Orientations and Learning Approaches

The findings that describe Chinese students' backgrounds, learning orientations and learning approaches are presented in Chapter Five to answer the first research question. Chinese students' characteristics are described in comparative terms with other student groups. The other two student groups that were used in the comparison are Chinese overseas students and non-Chinese students. Chinese overseas students refer to the students who completed their high school in mainland China and then completed their undergraduate degrees in Australia (40.5%), other Western countries (40.5%) or other Asian countries or regions outside mainland China (19%). Non-Chinese students are those who did not complete their high school or undergraduate degree in mainland China, which includes Australian students (26.1%) and other international students (73.9%).

In general, Chinese postgraduate accounting students' demographic characteristics and education backgrounds are significantly different from other student groups. Chinese students have a higher proportion of female students than other student groups, and these female Chinese students have better academic performance and accounting knowledge than the male students before entering the Australian postgraduate accounting programs. Chinese students are also younger and have less working experience than other student groups, which makes them predominantly rely on their family's financial support. On average, Chinese students'

part-time work income only contributes less than 4% of their tuition fee and living costs in Australia, a figure that is significantly lower than for non-Chinese students. Correlation results show that Chinese students' lower English competency partly contributes to this situation.

There are differences in backgrounds within the Chinese student group. Chinese students have a very diversified working experience before entering Australian postgraduate accounting programs. While over 50% of Chinese students do not have any working experience at all, almost a quarter of Chinese students have some accounting-related working experience. Another background aspect that also shows a wide diversity is academic accounting knowledge. 23.7% of Chinese students already had an accounting or business Bachelor degree before entering their accounting Master programs in Australia, but another 36.7% of Chinese students do not have any accounting knowledge at all.

Apart from prior academic accounting knowledge and working experience, the other aspects of Chinese students' backgrounds do not have high variances. The Chinese students in this study are mostly from more developed areas of China where education resources are easier to access and, therefore, the competition to enter universities is not as intense as in other areas. In terms of prior academic performance, Chinese students outperformed their undergraduate classmates, in general, but they are not from the best tier of Chinese universities. The ones who graduated from better universities usually had lower GPAs in their undergraduate programs. It should be noted that students' prior academic performance is not expected to be widely dispersed, because the participants in this study were all studying at the same university. That is, variation may have been constrained because all student participants were subject to the same university's entrance requirements. Chinese students' English competency is typically equivalent to IELTS 6.0 level, which is the minimum language requirement to enter postgraduate accounting programs in Australian universities[5].

Chinese students' learning orientations also have some unique characteristics. Compared with non-Chinese students, they show less interest in accounting knowledge and are less intrinsically oriented. They have a strong extrinsic learning orientation from introjected regulation when entering their current study programs – that is, they want to use an Australian accounting Master degree to prove their capabilities. It should be noted that although 76.6% of the surveyed Chinese students considered the migration opportunities when deciding to study

[5] Some programs require a minimum overall IELTS score of 6.5 and a minimum score of 6.0 in each section (reading, writing, listening and speaking).

an accounting Master degree in Australia, their migration-related learning orientation is not statistically stronger than for other student groups. The migration-related learning orientation had the most diversified responses in Chinese students' extrinsic learning orientations. It is also the only orientation that is not significantly correlated with any other extrinsic learning orientations. All extrinsic learning orientations, however, are positively correlated to intrinsic learning orientations. This means Chinese students are extrinsically and intrinsically oriented at the same time. As would be expected, their amotivation negatively correlates with the other learning orientations. It is also the learning orientation section that shows the most difference within the Chinese student group, with the ratio of positive over negative correspondence of 1:2.1. Although 66.1% of Chinese students responded negatively to the amotivation statements, Chinese students are still more likely to lose direction after spending some time in their study programs than non-Chinese students.

Chinese students' learning approaches are diversified within the group. The most diversified area is surface learning approaches. The ratio of positive correspondence over negative correspondence in all surface learning approaches is 2.3:1. However, Chinese students still have high scores in surface learning approaches overall. Compared with non-Chinese students, Chinese students find it harder to understand the meaning, or to see the overall picture, of subject knowledge. Although Chinese students do not significantly rely more on memorisation than other students, they do use memorisation as a common learning strategy regardless of their learning approaches. This conclusion about Chinese students' use of memorisation in learning is consistent with prior literature (Biggs 1996b; Cooper 2004; Wang & Byram 2011).

Chinese students' deep learning approaches differ from non-Chinese students' in many aspects, but the differences are not in the same direction. As a result of their higher scores in the two surface learning aspects above, Chinese students have lower scores in two deep learning approach aspects, looking for meaning and relating ideas. Their correspondences to the statement that measures their active interest in subject knowledge is also consistent with the results in learning orientation section, that is, they have less interest in accounting knowledge than non-Chinese students. It should be noted that this interest-related statement has a diversified response in Chinese students – it has the second-highest standard deviation of all deep learning approach statements. The statement with the highest standard deviation is "I cannot simply accept things I am told, I have to think them out by myself." It is also the only

statement in which Chinese students reported a higher score than non-Chinese students. This shows that Chinese students take a more critical stance with the knowledge they have to learn than non-Chinese students.

In the SAL model, Biggs (1987) stated that it is common for students to adopt several learning approaches, especially deep and achieving approaches, at the same time. The findings of this study support this statement. All achieving learning approach variables are positively correlated with all deep learning approach variables. This indicates a close relationship between the adoption of achieving learning approaches and deep learning approaches in Chinese students. Although Chinese students' utilisation of achieving learning approaches is not as high as non-Chinese students in the determination to excel and organised studying, they are better in time management than Chinese overseas students. Overall, Chinese students score high on all three learning approach types, showing their capabilities to adopt surface, deep and achieving approaches.

7.2.2 The Relationships between Chinese Students' Backgrounds, Learning Orientations and Learning Approaches

Chapter Six presents the findings about how different aspects of Chinese students' learning approaches are affected by their backgrounds and different aspects of learning orientations. The relationships between Chinese postgraduate accounting students' backgrounds, learning orientations and learning approaches are complex and are not always well captured by simple linear models. In general, Chinese students' background characteristics have significant effects on all three types of learning orientations, in which the extrinsic learning orientations, especially the need to prove one's capabilities, are affected most. Students from less developed areas, with better prior academic performance, more working experience and lower English competency are more likely to use an Australian accounting Master degree to prove their capabilities. This extrinsic learning orientation, together with an extrinsic orientation to enter one's preferred job market and both amotivations, push Chinese students to adopt surface learning approaches. The migration-related learning orientation is negatively related to the use of memorisation and repetition as well as difficulties in understanding course materials, but it is also negatively related to students' ability to concentrate and organise in their study. Intrinsic

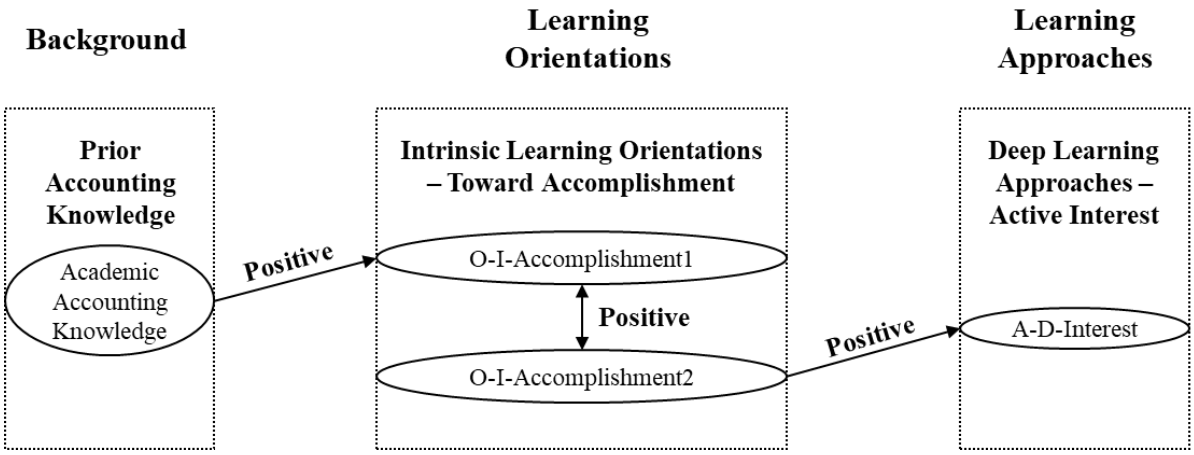
learning orientations generally have a positive effect on the adoption of deep learning approaches, but not all effects can be expressed in simple linear models.

Both prior academic performance and prior accounting knowledge have a strong impact on shaping Chinese students' learning orientations. The students who outperformed their undergraduate classmates are not only more extrinsically and intrinsically oriented, but also are more likely to lose their direction after spending some time in Australian postgraduate accounting programs. The Chinese university tier has a similar impact on the orientation to prove one's capability and loss of directions over time, but it does not have a significant effect on Chinese students' intrinsic learning orientations. Chinese students who have studied accounting in their undergraduate programs are more intrinsically oriented by the interest in learning new knowledge and the pleasure of accomplishments, whereas those with more working experience in accounting fields are more extrinsically oriented to become a more competent accountant, to prove one's capability and to obtain a more prestigious job. English competency is the third-strongest background factor that shapes Chinese students' learning orientations. Students with higher English competency are less extrinsically oriented to prove themselves and more intrinsically oriented to experience stimulation and accomplishments. Students receiving more financial support from their family are less motivated by the extrinsic learning orientations to find their preferred job. They are also younger and more intrinsically motivated by the interest to learn.

Chinese students' background also has an impact on their learning approaches, though institutional factors affect more aspects of learning approaches than personal factors do. Female students score higher on the determination to achieve the best results and the ability to stay concentrated on studying, whereas older students are stronger at learning through understanding and relating ideas. Students with higher prior academic performance have fewer difficulties in coping with course materials, are more likely to learn through understanding and relating, and are better organised with their study. Though these relationships seem simple and easy to understand, the effects of Chinses students' prior accounting knowledge on learning approaches are rather complex and cannot be well explained by simple linear models. Chinese students' prior academic accounting knowledge significantly affects their active interests in accounting, but the regression analysis does not return a parameter (β) that is significant in any category of the dependent variable (active interest in accounting) at the 0.05 level. The role of learning orientations, in this case, may help shed some light, since accomplishment-related

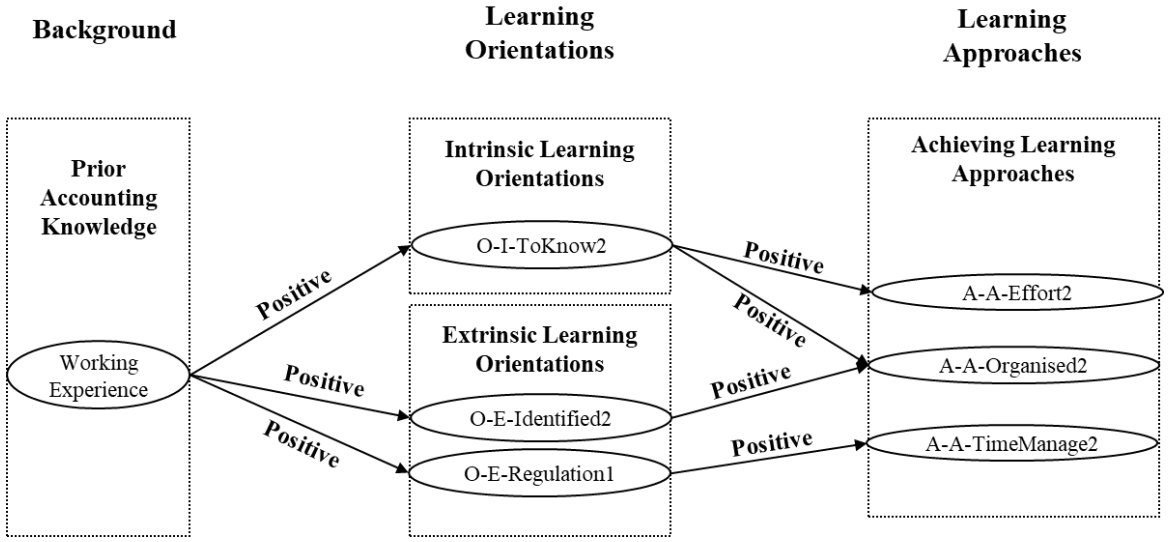
learning orientations are found to be positively related to both prior academic accounting knowledge and interest in accounting. The learning orientations' effect on learning approaches suggests that the relationship between academic accounting knowledge and active interest in accounting is not linear. Figure 7.1 illustrates the relationship between the relevant variables. It should be noted that, although the accomplishment-related learning orientations consist of two separate variables, the two variables are positively correlated.

Figure 7.1 The Relationships between Academic Accounting Knowledge and Active Interest in Chinese Students



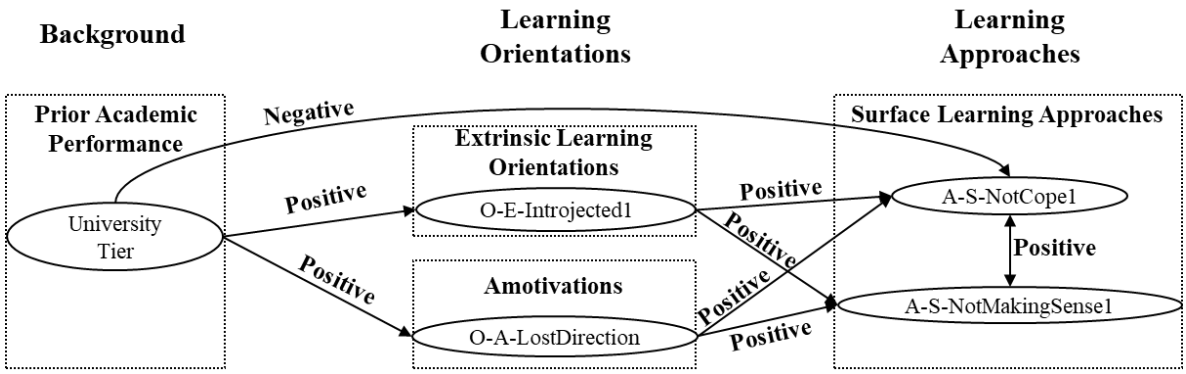
The relationship between working experience and achieving learning approaches has a similar circumstance. The direct effect of working experience on achieving learning approaches is not explained well with a linear model because of learning orientations' effects. The details are presented in Figure 7.2.

Figure 7.2 The Relationship between Working Experience and Achieving Approaches in Chinese Students



The relationship between Chinese students' university tiers and their difficulties in making sense (A-S-NotMakingSense1) can also be described by their relationships with learning orientations. As presented in Figure 7.3, both O-E-Introjected from extrinsic learning orientations and O-A-LostDirection from amotivation are positively related to the two variables. Given learning orientations' impact, it is possible to illustrate the link between Chinese students' university tiers and their difficulties in making sense. In addition, students' university tiers have a negative effect on A-S-NotCope1, a surface learning approach variable that is positively correlated with A-S-NotMakingSense1. This aspect of a surface learning approach is also included in the illustration to help explain the relationship between students' university tiers and their adoption of surface learning approaches.

Figure 7.3 The Relationship between University Tier and Surface Learning Approaches of Chinese Students

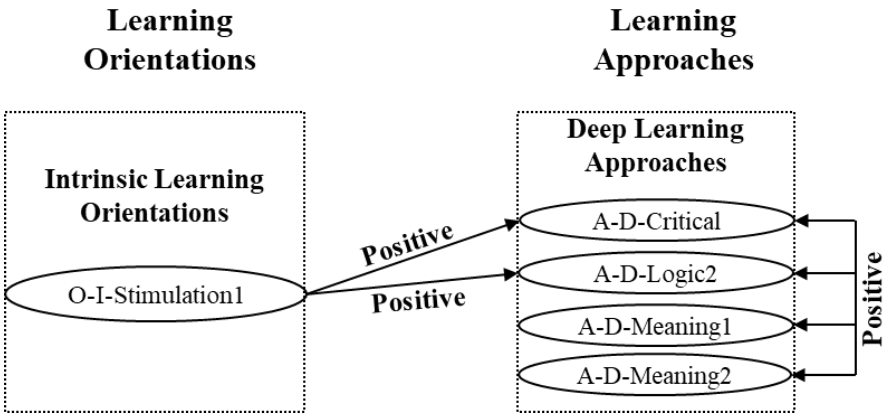


All three categories of Chinese students' learning orientations have strong effects on their adoption of learning approaches. In the extrinsic learning orientations, the orientations to prove one's capability and to work and live in Australia affect the highest number of learning approaches. However, these two extrinsic learning orientations have very different effects on shaping Chinese students' learning approaches. While the former has a positive effect on all aspects of surface learning approaches, the latter is negatively related to surface and achieving approaches. Although students who have strong migration orientations have fewer difficulties understanding course material, they are also less motivated to give their best effort and study in an organised manner. Chinese students whose learning orientations are more toward entering their preferred job market share the same achieving learning approaches as migration-oriented students, but they are more likely to have difficulty in coping with course materials. The last extrinsic learning orientation that negatively affects Chinese students' achieving learning approaches is O-E-Introjected2. Students who choose to study accounting Masters programs to prove their intelligence are less likely to work harder and often leave study tasks to the last

minute. Although most extrinsic learning orientations push students to surface learning and reduce their determinations in achieving learning, two variables, O-E-Identified2 and O-E-Regulation1, have positive effects on achieving learning. Both of these variables are linked to career goals, i.e., to become a more competent accountant or to get a more prestigious job. Chinese students with these learning orientations set clear goals and are better organised in their study.

The effects of intrinsic learning orientations on deep and achieving learning approaches are mostly positive, but because of the close correlations between deep and achieving approaches, intrinsic learning orientation's effect cannot be explained well using simple linear models. Accomplishment-related learning orientations have strong positive effects on the adoption of deep learning approaches, including learning through using logic and relating ideas. These learning orientations increase achieving learning approaches by encouraging Chinese students to work harder and in a more organised manner. Chinese students who are more intrinsically oriented by the pleasure received from communication are also more likely to take a critical stance and draw their own conclusions in studying, but the effect of this intrinsic learning orientation on the deep learning strategy of looking for meaning is not captured well in simple linear models. Figure 7.4 presents the relationship between the intrinsic learning orientation to experience stimulation through communication (O-I-Stimulation1) and deep learning approaches.

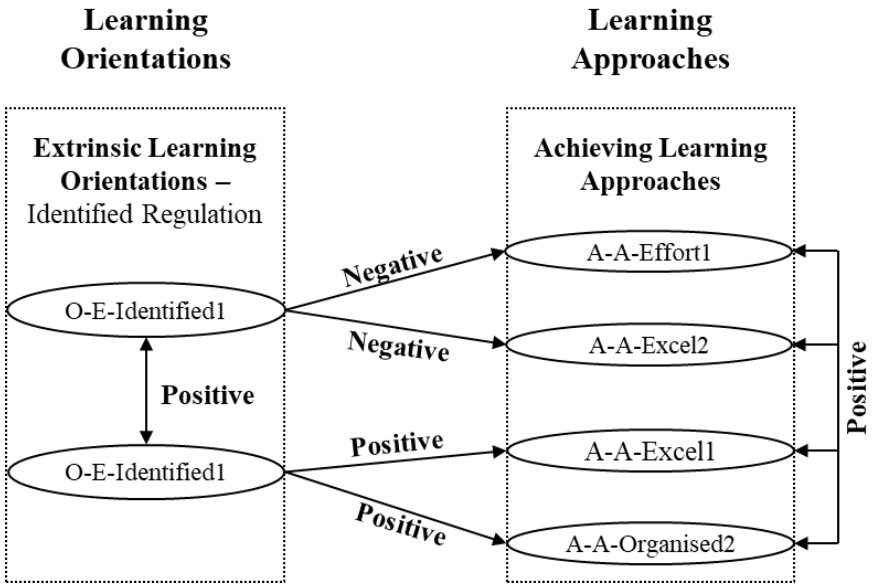
Figure 7.4 Relationship between O-I-Stimulation1 and Deep Learning Approaches of Chinese Students



The relationships between the identified regulation of extrinsic learning orientations and achieving learning approaches are also complicated. Though two identified regulation variables (O-E-Identified1 and O-E-Identified2) are positively correlated with each other, their

effects on achieving learning approaches are opposite. Figure 7.5 illustrates these effects. This complex relationship highlights the benefits of running regression analyses for each individual learning orientation and learning approach variable, so that the dynamics between different aspects of learning orientations and learning approaches can be illustrated in detail.

Figure 7.5 Relationships between Identified Regulation and Achieving Approaches of Chinese Students



Both amotivations have positive effects on Chinese students' adoption of surface learning approaches. The loss of direction's impact is particularly strong because it is positively related to all surface learning motives. For Chinese students who are no longer sure about why they are studying in Australian postgraduate accounting programs, they have more difficulties in coping, understanding and relating course materials.

7.2.3 Changes in Chinese Students' Learning Orientations and Approaches

Chapter Six also presents the findings from comparing Chinese students' learning orientations and approaches among different semesters and answers the third research question. The findings show that Chinese students' learning orientations and learning approaches change during their 1.5 to 2 years' study in Australian postgraduate accounting programs. The extrinsic learning orientations, in particular external regulation, fade as students spend more time in their programs. After every semester, Chinese students' learning orientations are less related to finding a more prestigious job.

Chinese students' adoption of surface learning approaches also changes during their study, but not in a single direction as do their learning orientations. The surface learning motives, including difficulty in coping and making sense, increase after the first semester. As a result, reliance on memorisation rises. This is probably related to an increase in the complexity of knowledge from the fundamental accounting subjects to the intermediate accounting subjects. While the first semester's accounting subject focuses on double-entry accounting, accrual accounting and accounting cycle, the second semester's accounting subject includes more challenging topics, such as accounting for income tax and leases. However, as subject complexity continues to rise in the third semester, Chinese students' surface learning motives decrease. They are less likely to have the same level of difficulty coping with the amount of work and understanding the course materials. Consequently, their reliance on memorisation decreases. Their use of surface learning strategies, in particular reliance on memorisation, drops to the lowest level in the third semester. This pattern of change can be explained by the theory of threshold concepts (Meyer & Land 2003, 2005). For the accounting discipline, the threshold concepts, such as double-entry accounting and accrual accounting, are introduced mostly in the first semester's course (Magdziarz, Myers & Bellamy 2012). It may take Chinese students another semester (the second semester) to fully comprehend these threshold concepts of the accounting discipline before applying their understanding in future learning.

Changes in other learning orientations and learning approaches are not statistically significant. However, reduction in extrinsic learning orientation and surface learning approaches shows that Chinese students can change the way they learn after spending a short period of time in Australian universities.

7.3 Recommendations

The answers to the three research questions can be used in many different aspects of accounting education practice. This section discusses the challenges and makes recommendations to Australian universities, accounting educators, and accounting education researchers.

7.3.1 Challenges and Opportunities in a Post-pandemic Environment for Australian Universities

Because of the COVID-19 outbreak, the Australian government stopped allowing first Chinese students then all international students to enter Australia from February 2020. At the time of writing, the Australian borders are still closed to all international students. Although Australian universities adapted to the situation very quickly and shifted to online teaching for offshore international students from the first semester of 2020, international enrolment numbers have suffered a decrease. Postgraduate accounting programs particularly lost a high proportion of international, especially Chinese students. The tensions between the Australian government and the Chinese government also intensified the situation. Just before the second semester of 2020, the Ministry of Education of China announced an alert to all Chinese students who study overseas, urging them to not choose Australian universities (Cao 2020). With the tense external environment and economic downfall during the COVID-19 pandemic, Australian universities are expected to face more difficulties in recruiting Chinese students in the near future.

Although facing challenges, Australian higher education still has its advantages that attract Chinese students. This study found that many Chinese students choose Australian universities because they want to use an Australian Master degree to prove their capabilities. Chinese students are significantly more extrinsically oriented by this reason than non-Chinese students. This means Australian Master degrees are perceived to be of good quality, especially to Chinese students who are from less developed areas and lower-ranked universities and have better prior academic performances and some working experience. Compared with non-Chinese students, Chinese students are also more concerned with future career opportunities but not with migration opportunities. This suggests that Chinese students also see an Australian accounting Master degree as a competitive advantage in Chinese job markets. With this understanding, when recruiting Chinese students for postgraduate accounting programs, Australian universities may focus more on students from smaller cities, other first-tier and second-tier universities and new university graduates who recently joined the workforce[6]. The marketing strategy can also address the potential of proving one's capability and future career advantages with an Australian Master degree. Australian universities can also consider working

[6] It is acknowledged that in practice, universities will recruit in all market segments.

with Chinese employers to promote the quality of Australian degrees and advance employment opportunities for Chinese graduates.

7.3.2 General Support That Can Benefit Chinese Students

The research findings suggest that Chinese students face more difficulties in understanding course materials because of their lower English competency than non-Chinese students. Having experienced difficulty in understanding and coping, Chinese students often lose their motives to study and consequently feel more overwhelmed and frustrated with their study in Australian postgraduate accounting programs. The comparison between semesters shows that Chinese students face most challenges in their second semester of study, where they not only feel overwhelmed by the course materials but also face challenges in organising their time and studying in a systematic manner. These difficulties affect all Chinese students regardless of their English competency. More support in time management skills, organising study plans and stress-relief counselling can be offered throughout the program, especially at the beginning of the second semester, to help Chinese students overcome the obstacles and complete the more complex learning tasks.

7.3.3 Recommendations for Australian Accounting Educators

The study's findings are most useful for Australian accounting educators. The analysis shows that although memorisation is used as a common strategy in learning, Chinese students do take a critical stance with the knowledge that they need to learn. They experience pleasure in communicating with lecturers and prefer to learn through understanding than through rote-learning. This finding conflicts with some studies that investigated Chinese accounting students' learning in Australian universities over 10 years ago (Bhattacharyya 2010; Watty, Jackson & Yu 2009). This study's findings suggest that Chinese accounting students' learning approaches change with environment change in Australian accounting education. Australian educators should not simply see Chinese students as stereotypical rote-learners because of their reliance on memorisation and repetition in learning. Chinese students do have intrinsic learning orientations and deep learning motives. Educators should reinforce Chinese students' deep learning motives and create more communication channels to encourage students to ask

questions. For example, the lecturers and tutors may consider spending more time in class explaining the concepts and rationale of journal entries and accounting procedures. The instructors may also encourage students to ask questions immediately after class and through email instead of restricting students' opportunities to ask questions within limited consultation hours. Explaining students' confusions in emails would be particularly beneficial to the Chinese students, as their language competency may prevent them from expressing and absorbing the full message in a face-to-face discussion. Previous studies found that Chinese students are also reluctant to raise their questions in public (Bodycott & Lai 2012; Chan & Rao 2009), so allowing them to ask questions privately in emails can encourage their active engagement.

Despite having more difficulties in understanding and coping, Chinese students still show strong motives in making effort and achieving better results. The Chinese students who face more challenges in coping also spend more time thinking about course materials and are more willing to try their best. It is therefore important for them to receive academic support alongside their study so that they do not feel frustrated and eventually lose direction and motivation. Tutorial activities and in-term assessment tasks should be designed to help students understand course materials better. For example, questions should focus more on reasoning and logic in the application of accounting concepts and procedures and cannot only include mechanical reproduction of calculation and journal entries. Including detailed explanations of journal entries and calculations in solutions and assessment feedback will also help students better understand complex accounting questions. Providing timely feedback is also beneficial for students to maintain a systematic and organised study plan. Considering that Chinese students' English competency may create difficulties for them to understand the verbal explanations in class, providing explanation and rationale in the written solutions to tutorial practices and assessment feedback can better help with their understanding.

Chinese students find the second semester rather than the first semester, the hardest with which to cope. In addition to the added complexity of subject knowledge, a lack of understanding of fundamental accounting knowledge may also contribute to this situation. To encourage students to learn by understanding from the first semester, assessments of the first semester's subjects should focus on evaluating the understanding of the fundamental concepts instead of simple replication of journal entries. Students who proceed to the next level of accounting subjects should already have a good understanding of fundamental knowledge so

that they will not feel overwhelmed by the demand of the study tasks and lose direction. It is also recommended to review the key threshold knowledge, such as accrual accounting and the accounting cycle, at the beginning of the second semester, so that the student can proceed to learn the more complex knowledge with their understanding of fundamental accounting concepts.

The recommendations made in this subsection can help Australian accounting educators obtain a more in-depth understanding of Chinese students' learning, especially under the changing environment of restricted immigration policies. By acknowledging and encouraging Chinese students' intrinsic learning orientations and deep learning motives, Australian accounting educators can help Chinese students adapt to the new learning context and engage more understanding in their learning processes. The recommendations can also jointly help Chinese students and all accounting students with their studies. With more understanding-focused learning activities, students can experience pleasure in learning instead of feeling drowned and bored in repetitive calculations and mechanical reproductions. By providing sufficient explanation in plain language, students can better understand course content and think things out by themselves. Timely feedback can ensure students remain stimulated by their progress and study in a systematic manner, while an open communication environment not only helps reinforce students' deep learning motives but also makes sure they receive academic support in time. It is particularly important for the fundamental subjects to address understanding in assessments so that students are not hit by a steep learning curve in the next level of accounting subjects.

7.3.4 Recommendations for Future Accounting Education Research

This study adopted the SAL model (Biggs 1987) to measure Chinese accounting students' learning approaches in Australian universities. Although this model has been widely used in education research, this study's findings suggest that caution must be exercised when applying the model to today's higher education environment and student groups with a different cultural background. While measuring students' learning approaches with survey instruments, students' use of memorisation is classified as a surface learning strategy. However, this study found that Chinese students' responses to the statements measuring their use of memorisation are positively correlated with all other statements in the survey at the 0.01 level. That is,

Chinese students rely heavily on memorisation in learning regardless of their learning motives. Chinese students with strong deep and achieving learning motives also score high on memorisation-related statements. As emphasised by Biggs (1987), it is the students' learning motives that determine their learning approaches. Therefore, simply labelling a Chinese student as a surface learner based on high scores in memorisation-related statements is inappropriate. The study's findings agree with Patel, Millanta and Tweedie (2016) that memorisation is a common strategy adopted by Chinese students to enhance understanding. The positive relationships between deep and achieving learning motives and the two memorisation-related statements suggest that these two statements may no longer represent only surface learning strategies. It is therefore questionable whether they should remain to be used as a measure of surface learning approaches in today's education research. When Chinese students use memorisation to obtain understanding, the utilisation of memorisation should be classified based on their learning motives. This argument is supported by previous researchers who investigated Chinese students' learning in Western universities (Donald & Jackling 2007).

This study's theoretical framework was developed based on the Student Learning in Context model (Ramsden 2003). Although this model identified learning orientation as a key factor in shaping learning approaches, it does not provide measurements or definitions of learning orientations. Future researchers should consider adopting a model that measures learning orientations in the same manner as the SAL model measures learning approaches. This would allow the researchers to test the relationships between different aspects of learning orientations and learning approaches. Some findings of this study (see Figures 7.1 to 7.5) suggest that the relationships between some aspects of backgrounds, learning orientations and learning approaches are not simple or linear. The multinominal logistic regression results suggest that, although the coefficients of some independent variables in the model are significantly different from 0, none of the categories of the dependent variable has a significant relationship with the coefficient. These independent variables include Chinese students' university tier, academic accounting knowledge, working experience and most intrinsic learning orientations. This could be caused by the co-effects of other learning orientations and the correlations between different learning approaches. The Student Learning in Context model (Ramsden 2003) used linear models to test the relationships between broad categories of learning orientations and learning approaches (for example, extrinsic learning orientations and surface learning approaches) and provided some conclusions about how learning orientations affect learning approaches. However, this study's findings suggest that such a conclusion could

be missing some details. Future research can consider adopting theories, such as the Self-Determination theory, to classify students' learning orientations in further detail and examine learning orientations' effect on learning approaches in more depth. The complex dynamics between different aspects of learning orientations and learning approaches can be illustrated by showing the relationships between each variable. Future research can also consider constructing non-linear models based on the relationships between the different aspects of learning orientations and learning approaches identified by this study.

In addition to quantitative research, future studies can also consider using interviews and focus groups with Chinese students studying in Western universities to obtain a deeper understanding of their learning orientations and learning approaches. It is recommended that the interview and focus groups are facilitated in Mandarin Chinese to encourage Chinese students' participation as well as to ensure efficient communication.

7.4 Contributions

This study makes contributions to both accounting education practice in Australia and future accounting education research. The findings provide a comprehensive understanding of Chinese students' learning in the current environment of Australian postgraduate accounting programs. With this understanding, recommendations have been made to Australian universities and accounting educators. The recommendations can help Australian universities continue to attract Chinese students, the major student group in postgraduate accounting programs, and receive much-needed income in the challenging environment. Understanding Chinese students' challenges and difficulties in learning also enables the universities to provide better student support that suits Chinese students' needs. More student-centred support can help not only the Chinese students but all students who share similar challenges to overcome their learning obstacles, reduce stress, and prevent from losing directions. Since Chinese students are the majority of the postgraduate accounting students, helping them with their study difficulties would also help improve the overall student satisfaction and retention rate for postgraduate accounting programs, which in turn contribute to sustainable enrolment growth.

The findings of this study make the most contributions to Australian accounting educators. The recommendations can help promote learning-by-understanding strategies in Chinese students and all postgraduate accounting students. Better understanding in Chinese

students' learning orientations and motives can help accounting educators reduce the communication barriers and provide academic support that better suits Chinese students' needs. Through reinforcing Chinese students' deep and achieving learning motives, accounting lecturers can better encourage Chinese students to give effort and think things out by themselves. With more suitable support from teaching staff and the course material, Chinese students can experience less frustration and more pleasure in learning accounting knowledge, and consequently achieve better academic performance.

This study contributes to the literature by incorporating two models from different disciplines, helps explain some conflicting findings and adds some new knowledge about Chinese students' learning in Australian universities. The theoretical framework uses the Self-Determination theory to measure students' learning orientations and better understand the relationship between learning orientations and learning approaches in the Student Learning in Context model. The survey instruments also combined AMS and RASI, two instruments developed based on the two theories incorporated into the theoretical framework. The findings are consistent with the prior research on Chinese students, heavy reliance on memorisations in learning (Patel, Millanta & Tweedie 2016), but also found that Chinese students take a critical stance with the knowledge they have to learn, which is different from the traditional Chinese education environment described in Bhattacharyya (2010). This study partially agrees with Patel, Millanta and Tweedie's (2016) finding that Chinese students score lower in some deep learning approaches, but this study aims at providing different explanations. Chinese students' higher score on critical stance indicates that they do prefer to learn through understanding, but their lower English competency and younger age create more challenges in understanding and relating for them than for other student groups. This explains why they score higher on the surface learning approaches that concern not-making-sense and unrelatedness and simultaneously score lower on the deep learning approaches that measure the same aspects but in the opposite direction. Other findings, especially the findings regarding their changes in surface learning approaches over time, provide some new understanding of Chinese students' learning.

This study also provides some experience for future accounting education research. Compared with previous studies, this study provides a new perspective to understand Chinese students, that is, treat them as a diversified group. Previous studies have often compared the differences between student groups, particularly between domestic students and international

students, Western students and Asian students, etc. When the student numbers of one previously minor or foreign group increase to the point that the student group becomes the vast majority in the learning context, the diversity within the group should be considered in future comparisons. This study also proposed some unique measures that can capture Chinese students' prior academic performance. These measures are selected based on an understanding of the unique educational and political background of Chinese society. The findings suggest that both measures (tier of university and comparative GPA) can help explain differences in learning orientations and learning approaches in a Chinese student group. The recommendation also provides inspirations and suggestions for future research that adopts the Student Learning in Context model (Ramsden 2003) and the SAL model (Biggs 1987) to investigate student learning.

7.5 Limitations

This study is limited by both the external environment of the data collection and the research methods used in data analysis. Both of these factors impact generalisation of the findings.

As mentioned in Chapter Four, the major limitation of this study is the sample which was limited to just one university. Because of the sensitive nature of student information, it took 12 months and various approvals and procedures to obtain ethics approval from the University of Adelaide to collect student data. The limited time and budget of a PhD program could not afford involving more universities in this study. As a result, the survey was distributed only to students at the University of Adelaide. The extent to which this study's findings can be applied to a larger population is unknown but the circumstances at the University of Adelaide are not dissimilar from those found at other Group of Eight universities. To manage this limitation, surveys were also distributed to other students who were in the same programs with Chinese students. Through describing Chinese students' learning orientations and learning approaches in comparative terms with other students, the effects of university-specific learning contexts are minimised.

In addition to the sampling method, the sample size of this study also limits generalisation of the conclusions. The response rate of the survey was restricted by the participant recruitment method required by the Human Research Ethics Committee (HREC). Many recipients disregarded the survey recruitment email because it was from a school admin

email account. To increase the response rate, in 2019, the research project was advertised through other communication channels while following the requirements of HREC. However, the COVID-19 pandemic significantly interrupted data collection and forced the survey to cease in early 2020. As a result, the sample size of this survey is much smaller than the 200 originally planned. Only 43 students completed all three surveys and only 40 of them are Chinese students. To include more observations in the data analysis and support a more scientific conclusion, this study included all survey responses even if the participant did not complete all three surveys. There were 316 unique responses for Chinese students' backgrounds, 364 unique responses for Chinese students' learning orientations, and 477 unique responses for Chinese students' learning approaches.

The data analysis methods also limit the findings. When analysing the relationships between Chinese students' learning backgrounds, learning orientations and learning approaches, all regression analyses were performed with simple linear models. These models were constructed following the theoretical framework and the prior empirical studies that adopted the Student Learning in Context model (Ramsden 2003). As discussed earlier, because of the learning orientations' effect on learning approaches and high correlations between different learning approaches, the relationships between some variables were identified as significant but cannot be explained well with a simple linear model. This study performed regression between each learning orientation and learning approaches to present more details of the relationships. As presented in Figures 7.1 to 7.5, although some relationships cannot be explained with one simple linear model, they can be illustrated by presenting the relationships between other related variables. In addition, many relationships were captured and explained by multinominal logistic regression analysis and provided rich information to answer the research questions.

7.6 Summary

This chapter concludes this thesis. It started with a summary of the findings that answer the three research questions, followed by further discussion to address the key findings and relevant recommendations. The findings contribute to both the literature and the accounting education practice. Nevertheless, this study is limited by its scope, its external environment

and adopted methods. Future research can use the findings and limitations as inspirations to further explore accounting education and Chinese student learning.

Appendices

Appendix 1

The Survey Distributed to All Participants

Postgraduate Accounting Student Survey
会计研究生调查问卷

Please scroll down to read the information[7] below and click on "yes" at the bottom of the page to continue.
请向下滚动阅读简介，并在页面底部点选"是"以继续。

Dear Participant,
尊敬的同学：

You are invited to participate in the research project described below.
您被邀请参与以下研究。

Project title: Chinese postgraduate accounting students' learning in Australian universities: their background, learning orientations and learning approaches
研究课题：中国会计硕士学生在澳洲大学的学习：背景，学习动力和学习方法

Human Research Ethics Committee approval number 人类研究道德委员会批准编号: H-2017-005

Principal Investigator 导师（课题负责人）: Associate Professor Robyn Davidson

Student researcher 研究生: Yuxi Wei 魏宇希

Student's degree 学位: PhD in business 商学博士

What is the project about?
这研究是做什么的？

This study focuses on how Chinese students learning in Australian universities' postgraduate accounting programs. It aims to describe the characteristics of as well as investigate the relationships between students' diversified learning background, learning orientations, learning approaches (motivations and strategies) and learning outcomes. In addition, it also investigates whether and how Chinese postgraduate accounting students change their learning approaches during their two years' study in Australian universities.
这个研究主要关注在澳洲的大学里学习会计的中国硕士留学生的学习情况。研究课题旨在调查同学们的学习背景，学习动力，学习方法和学习成果以及它们之间的关系。本研究也关注中国留学生是否以及如何在澳洲学习会计硕士的两年时间内改变学习方法。

Who is undertaking the project?
谁在做这个研究？

This project is being conducted by Yuxi Wei. This research will form the basis for the degree of PhD in Business at the University of Adelaide under the supervision of Associate Professor Robyn Davidson

[7] This information page is the participant information sheet required by the HREC.

Davidson and Professor Bryan Howieson.
这个研究由魏宇希同学负责。本研究将作为她在阿德莱德大学商学博士论文的基础。她的导师是 Robyn Davidson 副教授 和 Bryan Howieson 教授。

Why am I being invited to participate?
我为什么会被邀请参与？

You are invited because you are enrolled in a postgraduate accounting program at the University of Adelaide.
您被邀请是因为您在阿德莱德大学学习会计硕士课程。

Your knowledge and experience as a postgraduate accounting student at the University of Adelaide will be useful to this study. Please note that participation or non-participation in this project will not impact your academic result.
您在阿德莱德大学学习会计硕士的经历和经验能够为本研究提供有用的数据资料。请注意，参与与否将不会对您的学习成绩产生任何影响。

What am I being invited to do?
我被邀请来做什么？

You will be invited to complete three questionnaires (one per semester) which includes questions about your previous learning experience and background, as well as your current learning orientations and learning approaches. The questionnaire will be completed online. At the end of the questionnaire you will be asked to provide your student ID to group your responses of the three questionnaries for data analysis purposes. The course coordinators will not know who participated or did not participate and there will be no impact on your grades if you decide not to take part.
您被邀请完成三个调查问卷，每学期一份。调查问卷中包含关于您的背景，学习动力以及在某一会计课程中的学习方法的问题。调查问卷将在网上填写。问卷末尾会询问您的学生编号用于整理您的三组问卷回答，以进行数据分析。您的课程老师将不会知道谁参与了这次调查，参与与否也不会对您的成绩有任何影响。

How much time will my involvement in the project take?
参与这个调查会占用我多长时间？

Each questionnaire will take 10-15 minutes to complete.
每份调查问卷将占用您 10 到 15 分钟。

Are there any risks associated with participating in this project?
参与这个研究有什么风险吗？

All participants' information will remain strictly confidential. This research project is completely independent from your study and therefore will have no impact on your academic result.
所有参与者的信息将被严格保密。这个研究项目和您在学校的硕士学习完全无关，也不会对您的成绩产生任何影响。

What are the potential benefits of the research project?
参与这个研究有什么好处？

If you complete all three questionnaires, a $15 electronic gift card will be sent to your email address to reimburse you for your time.

如果您完成全部三个调查问卷，一张价值$15 的礼物卡会被发送至您的邮箱。

The findings of this study may be beneficial to educators and students. The findings may help Australian accounting educators better understand Chinese students' learning needs. The knowledge gained may help improve the curriculum design to help Chinese accounting students overcome learning difficulties in Australian universities.
本次研究的成果能够造福于教育者和同学们。研究成果能够帮助澳洲的会计教育者们更好地理解中国学生的学习模式。从本次研究中取得的信息能够帮助澳洲大学更好地完善和改进会计教学设计，以帮助中国的会计学生克服学习中遇到的困难。

Can I withdraw from the project?
我可以退出吗？

Participation in this project is completely voluntary. If you agree to participate, you can withdraw from the study at any time before the completion of the survey. If you choose to withdraw, all provided information will be erased. Withdrawing from the research will not affect your academic results.
本研究参与与否完全自愿。即使您同意参与，也可以在问卷提交之前随时退出。如果您选择退出，您之前提供的所有信息都将被清除。退出研究将不会影响您的学习成绩。

What will happen to my information?
我提供的信息将被如何处理？

Your information will only be used as described in this participant information sheet and it will only be disclosed according to the consent provided, except as required by law.
您提供的信息只会被用于本文件描述的研究目的。这些信息只有在法律要求或您知情同意的前提下被披露。

Your student ID will be used to match your responses over three semesters. All other information collected will be analysed to identify key elements for the research topic.
您的学生证号会被用于追踪您三份问卷的回答。其它数据将会被进行分析以解答研究课题。

All written and electronic records and materials will be locked in the researcher's workstation throughout the period of the research project (now – May 2023). The student researcher is the only person who will have access. All research data will be held at the University of Adelaide.
在整个研究进行期间（即日起至 2023 年 5 月），所有纸质和电子的数据记录都将被封存在调查者（魏宇希）的工作台。魏宇希将是唯一能够接触数据的人。所有研究数据都会被封存在阿德莱德大学。

After completion of the project all records will be transferred to the researcher's supervisors for safe keeping for a period of five years.
在研究结束后，所有的数据记录将被转移到魏宇希的导师手中继续封存 5 年。

Only aggregated data collected from this project will be published. No participants will be identified in any future publication.
只有总结性的信息会被发表。未来的出版物不会发表任何能够确认调查参与者的身份的信息。

Whom do I contact if I have questions about the project?
如果我有问题，该联系谁？

In case of any questions about the project, please feel free to contact the student researcher's supervisor or the student researcher.
如果您对本研究有任何疑问，请联系研究生的导师们或研究生本人。

Contact Details 联系方式:

Supervisors 导师
Name 姓名: Associate Professor Robyn Davidson Phone 电话: +61 8 8313 8373
Email 邮箱: robyn.davidson@adelaide.edu.au

Name 姓名: Professor Bryan Howieson Phone 电话: +61 8 8313 4760
Email 邮箱: bryan.howieson@adelaide.edu.au

Student Researcher 研究生
Name 姓名: Yuxi Wei 魏宇希 Phone 电话: +61 8 8313 9145
Email 邮箱: yuxi.wei@adelaide.edu.au

What if I have a complaint or any concerns?
如果我有担忧或者想投诉怎么办？

The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number H-2017-005). This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research 2007 (Updated 2018). If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult Associate Professor Robyn Davidson. If you wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant, please contact the Human Research Ethics Committee's Secretariat on:
本研究已经通过阿德莱德大学人类研究道德委员会的审查（档案号 H-2017-005）。研究将严格遵循 2007 年（2018 年更新版）国家人类研究道德准则的各项规定。如果您对项目的执行和参与有任何问题或愿意提出任何意见，请直接联系导师（课题负责人）Robyn Davidson 副教授。如果您想对独立第三方提出关于相关政策的意见或投诉，或对您作为研究参与者的权利有疑问，请联系人类研究道德委员会的秘书处：

Phone 电话: +61 8 8313 6028 Email 邮箱: hrec@adelaide.edu.au
Post 通讯地址: Level 4, Rundle Mall Plaza, 50 Rundle Mall, ADELAIDE SA 5000

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.
任何投诉或意见将被严格保密并详细调查。您将会得知调查结果。

If I want to participate, what do I do?
如果我想参与这个研究，我该做什么？

If you would like to participate in the survey, please click on the "yes" botton at the end of this page to start the survey.
如果您愿意填写调查问卷，请在页面底部选择"是"以进入问卷。

Yours sincerely,
衷心感谢
Yuxi Wei (PhD candidate) 魏宇希（博士研究生）
Associate Professor Robyn Davidson
Professor Bryan Howieson

I hereby acknowledge that I have read and understand the information above and agree to participate in this research project[8].
我已阅读并理解以上信息，并同意参与本研究调查。

○ Yes 是

○ No 否

Survey section A: background information[9]

Q1 What is your gender? 您的性别是？

○ Female 女

○ Male 男

○ Other 其他

○ Rather not say 保密

Q2 What is your year of birth? (E.g, 1995) 您的出生年份是？（例：1995）

☐☐☐☐

Q3 Did you complete your high school in mainland China (PRC)?

○ Yes 是*

○ No 否**

*If the participant selected this option, they will be directed to the following question:

Q4(a) In which city/town of China did you complete your high school? (E.g., Dalian, Liaoning)
您在中国的哪座城市完成了高中学业？（例：辽宁大连）

_____

**If the participant selected this option, they will be directed to the following question:

Q4(b) In which country/district did you complete your high school? (E.g. Australia)

_____

Q5 Did you complete your previous undergraduate degree in mainland China (PRC)?
请问您是在中国大陆完成的本科学习吗？

○ Yes 是+

○ No 否++

○ Other (E.g, "2+2" programs) 其它（例如"2+2"项目）+++

+If the participant selected this option, they will be directed to the following questions:

Q6(a) In which city/town of China did you complete your previous undergraduate degree before coming to Australia? (E.g, Dalian, Liaoning)
来到澳洲之前，您在中国的哪座城市/城镇完成了本科学业？（例：辽宁大连）

_____

[8] This question serves the purpose as a consent form. If "No" is selected, the survey will jump to the end and will not collect any information.
[9] This survey section was only displayed to new survey participants.

Q7(a) Your undergraduate educational institution in China was:
您中国的本科院校属于以下哪个类别：

- ○ “985” university “九八五”高校
- ○ “211” university “211”院校（非“九八五”）
- ○ Other tier 1 university 其它一批次本科院校
- ○ Tier 2 university 二批次本科院校
- ○ Tier 3 university 三批次本科院校
- ○ College 专科院校
- ○ Other (please specify)其它（请注明学校名称）

_____

[++]If the participant selected this option, they will be directed to the following question:

Q6(b) In which country/district did you complete your previous undergraduate degree? (E.g. Australia)

_____

Q7(b) What is the name of your undergraduate institution?

_____

[+++]If the participant selected this option, they will be directed to the following questions:

Q6(c) Please describe the locations of your undergraduate study as well as the time you studied at these locations. (E.g, 2 years in Beijing, China then 2 years in the US)
请描述您本科学习的地点和在各地点学习的时间。（例：前两年在北京，后两年在美国）

_____

Q7(c) Your undergraduate educational institution in China was:
您中国的本科院校属于以下哪个类别：

- ○ “985” university “九八五”高校
- ○ “211” university “211”院校（非“九八五”）
- ○ Other tier 1 university 其它一批次本科院校
- ○ Tier 2 university 二批次本科院校
- ○ Tier 3 university 三批次本科院校
- ○ College 专科院校
- ○ Other (please specify)其它（请注明学校名称）

_____

Q7(d) What is the name of your international undergraduate institution?
您本科的国际院校的名字是：

_____

The following questions are displayed for all participants:

Q8 **Your academic performance compared to your classmates at your previous educational institution before coming to Australia was:**
在您之前的本科院校中，相比于其他同学，您的成绩是：

- ○ In the top 10% of the class 本专业前 10%
- ○ In the top 10% to 20% of the class 本专业前 10% 到前 20%
- ○ In the top 20% to 40% of the class 本专业前 20% 到前 40%
- ○ In the top 40% to 60% of the class 本专业前 40% 到前 60%
- ○ In the bottom 20% to 40% of the class 本专业末 20% 到末 40%
- ○ In the bottom 10% to 20% of the class 本专业末 10% 到末 20%
- ○ The bottom 10% of the class 本专业末 10%
- ○ I don't know 我不知道

Q9 **What are the sources of your tuition fee and living costs for your postgraduate study? What percentage of total tuition and living costs are from these financial sources?**[10]
您读研究生的学费和生活费来源是什么？请输入这些经济来源占您学费和生活费的百分比：

☐ My parents and relatives 我的父母和亲属	**%**
☐ My own savings 我自己的存款	**%**
☐ My part-time work during my study in Australia 我在澳洲期间自己打工挣的钱	**%**
☐ University scholarships 学校的奖学金	**%**
☐ Government or sponsor's scholarships/allowance/grant funds 政府或雇主奖学金/助学金	**%**
☐ Hecs-Help/Borrowings 借款	**%**
☐ Other (Please specify) 其它（请注明）	**%**

Q10 **When starting your current postgraduate accounting program in Australia, your English competency was: 在开始现在的会计硕士学习的时候，您的英语水平为：**

- ○ English is my first language 英语是我的母语
- ○ IELTS 8.0 equivalent 雅思总分 8 分或同等能力
- ○ IELTS 7.0 equivalent 雅思总分 7 分或同等能力
- ○ IELTS 6.0 equivalent 雅思总分 6 分或同等能力
- ○ IELTS 5.0 equivalent 雅思总分 5 分或同等能力
- ○ Below IELTS 5.0 雅思总分 5 分以下
- ○ I cannot speak English at all 我完全不会说英语

Q11 **Your accounting-related academic knowledge before enrolling in the current postgraduate accounting program was:**
在开始会计硕士的学习之前，您的会计相关的知识背景是：

- ○ I have a Bachelor degree in accounting 我有一个会计本科学位
- ○ I have a Diploma in accounting 我有一个会计专科学位

[10] The total percentage entered by the participant must equal to 100%.

- ○ I have a Bachelor degree in business but not in accounting 我有一个商科相关的本科学位（非会计）
- ○ I have a Diploma in business but not in accounting 我有一个商科相关的专科学位（非会计）
- ○ I have completed some accounting training courses but do not have a degree 我有上过一些会计课程，但是没有相关学位
- ○ I have not received any formal accounting training but I have some self-taught knowledge in accounting 我没有正式接受过会计相关的教育，但是我自学了一些会计知识
- ○ I do not have any accounting knowledge 我没有学过任何和会计有关的知识

Q12 Your working experience before enrolling in the current postgraduate accounting program was:
在开始会计硕士的学习之前，您的工作经验：

- ○ More than 3 years in any industry 我有三年以上的工作经验（任意行业）
- ○ 1 to 3 years in any industry 我有一到三年的工作经验（任意行业）
- ○ Less than 1 year in any industry 我有不到一年的工作经验（任意行业）
- ○ I do not have any working experience 我没有任何工作经验*

*If the participant selected this option, Q12 would not be displayed to them.

Q13 Your previous working experience involved working in an accounting-related job for:
在您之前的工作经验中，和会计有关的工作持续了：

- ○ More than 3 years 三年以上
- ○ 1 to 3 years 一到三年
- ○ Less than 1 year 不到一年
- ○ Not at all 完全没有

Survey Section B: Learning Orientations[11]

The following question is displayed to returning participants only:

In the previous semester's survey, you have answered the following question:

"Why did you choose to enrol in a postgraduate accounting program at the University of Adelaide?"

Based on your recent learning experience, would you like to change your responses to this question now?

在上个学期的调查中，您曾经回答过这个问题：
“您为什么选择在阿德莱德大学进行会计硕士的学习？”
经过这一学期的学习体验，请问现在您想改动对这个问题的回答吗？

- ○ Not at all 完全不想改动[12]
- ○ Yes/Maybe 想改动/有一点想改动
- ○ Not sure/I do not remember my original responses 不确定/我不记得我原来的回答了

For new participants and the returning participants who selected the second or the third options in the question above, the following question will be presented:

Why did you choose to enrol in a postgraduate accounting program at the University of Adelaide?
您为什么选择在阿德莱德大学进行会计硕士的学习？

Using the scale below, please indicate to what extent each of the following items corresponds to one of the reasons why you chose to enrol in a postgraduate accounting program at the University of Adelaide. There is no good or bad answer, please simply choose the item that truly reflects your thoughts.

本页列出了一些同学们选择在阿德莱德大学学习会计的原因。在以下的量表里，请在每个原因的后面点选一个选项来表示您对这个原因的同意程度。请注意，这些原因没有好坏或对错之分，请选择最能代表您个人对该原因的同意程度的选项。

[11] For returning participants, their surveys start from this section.
[12] If a participant selected this option, they will be directed to Survey Section C: Learning Approaches.

	Strongly agree 完全同意	Agree 同意	Somewhat agree 部分同意	Neither agree nor disagree / no opinion 无意见/没有想法	Somewhat disagree 不太同意	Disagree 不同意	Strongly disagree 完全不同意
Because eventually it will enable me to enter the job market in a field that I like. 因为将来它能让我进入我喜爱的职场。	○	○	○	○	○	○	○
To prove to myself that I am capable of completing an Australian postgraduate degree in accounting. 为了向我自己证明我有能力获得一个澳洲大学的会计硕士学位。	○	○	○	○	○	○	○
Because I experience pleasure and satisfaction while learning new things in accounting. 因为我在学习新的会计知识的过程中感到快乐和满足。	○	○	○	○	○	○	○
For the pleasure I experience while surpassing myself in my studies. 为了感受在学习中超越自我的愉悦。	○	○	○	○	○	○	○
In order to work and live in Australia after graduation. 为了毕业后留在澳洲工作和生活。	○	○	○	○	○	○	○
For the pleasure that I experience when I read interesting accounting knowledge. 为了感受学到有趣的会计知识时的愉悦。	○	○	○	○	○	○	○
I cannot see why I go to an Australian university for postgraduate study, and frankly, I could not care less. 我也不知道我为什么要来澳洲学会计硕士，事实上我也不关心。	○	○	○	○	○	○	○
In order to obtain a more prestigious job later on. 为了将来能找到一份受人尊敬，待遇良好的工作。	○	○	○	○	○	○	○
Because I believe that a few additional years of education will improve my competence as an accountant. 因为我认为这几年的学习能够增强我作为一名会计的竞争力。	○	○	○	○	○	○	○
To show myself that I am an intelligent person. 为了向自己证明我是一个聪明的人。	○	○	○	○	○	○	○
For the intense feelings I experience when I am communicating my own ideas to other students and lecturers. 为了感受和其他同学和老师交流自己想法时的兴奋感。	○	○	○	○	○	○	○
For the satisfaction I feel when I am in the process of accomplishing difficult academic activities. 因为我在完成困难的学习任务时感到满足。	○	○	○	○	○	○	○
Because this program allows me to continue to learn about many things that interest me. 因为我能继续学习我感兴趣的新知识。	○	○	○	○	○	○	○
I once had good reasons for studying this program, but now I wonder whether I should continue. 我曾经有过充分的理由，可是现在我不确定是不是该继续了。	○	○	○	○	○	○	○

Survey Section C: Learning Approaches

Please recall your learning experience in the current semester. Which accounting subject below did you spend most effort in learning?
请回忆您本学期的学习体验，您为学习以下哪门会计课程付出了最多的努力呢？

- ○ ACCTING 7019 Accounting Concepts and Methods (M)
- ○ ACCTING 7020 Intermediate Financial Reporting (M)
- ○ ACCTING 7023 Advanced Financial Accounting (M)
- ○ ACCTING 7014 Management Accounting (M)
- ○ ACCTING 7026 Accounting Systems and Processes (M)
- ○ ACCTING 7009 Auditing and Assurance Services (M)

In the course I selected above, my experience is:
在我刚刚选择的课程中，我的学习体验是:
Using the scale below, please indicate to what extent each of the following items corresponds to your learning in an accounting course. There is no good or bad answer, please simply choose the item that truly reflects your experience.
本页列出了一些同学们学习会计课程的方法和感受。请在以下的量表中为每行选一个选项来表示您对该方法/感受的使用/同意程度。请注意，这些描述没有好坏或对错之分，请选择最能代表您个人对该方法/感受的实际使用/同意程度的选项。

	Strongly agree 完全同意	Agree 同意	Somewhat agree 部分同意	Neither agree nor disagree / no opinion 无意见/没有想法	Somewhat disagree 不太同意	Disagree 不同意	Strongly disagree 完全不同意
I often have trouble making sense of the things I have to learn. 我经常很难理解需要学习的内容。	○	○	○	○	○	○	○
I am not prepared just to accept things I am told, I have to think them out by myself. 我不愿意简单地接受别人告诉我的知识，我必须自己想明白。	○	○	○	○	○	○	○
It is important to me to feel I am doing as well as I really can in the course. 我需要感觉到自己在这门课里已经竭尽全力了。	○	○	○	○	○	○	○
Although I can remember facts and details, I often cannot see the overall picture. 我能记住事实和细节，但是经常无法看到宏观知识结构。	○	○	○	○	○	○	○
When I am reading, I examine the details carefully to see how they fit in with what is being said. 我在阅读的时候会仔细分析文中的细节是否和整体结论一致。	○	○	○	○	○	○	○
I put a lot of effort into making sure I have the most important details at my fingertips. 我付出了很多努力来确保我扎实地掌握了最重要的知识细节。	○	○	○	○	○	○	○
Often I feel I am drowning in the sheer amount of material I have to cope with on this course. 我经常觉得这门课的材料和内容太多了，我难以适应。	○	○	○	○	○	○	○
I usually set out to understand for myself the meaning of what I have to learn. 我通常会主动去理解需要学习的内容。	○	○	○	○	○	○	○
I think I am quite systematic and organised in the way I go about studying. 我觉得我的学习方法非常系统化而且条理清楚。	○	○	○	○	○	○	○
I find I have to concentrate on memorising a good deal of what I have to learn. 我在学习的时候专注于记忆大量要学的内容。	○	○	○	○	○	○	○
I try to relate ideas I come across to other topics or other courses whenever possible. 我尽可能多地把其它课程或学科的知识和这门课联系起来。	○	○	○	○	○	○	○
I work steadily throughout the course, rather than leaving everything until the last minute. 我的学习计划是按部就班的，不会把所有的事情都留到最后。	○	○	○	○	○	○	○
Often I find myself reading things without really trying to understand them. 我经常发现自己在阅读的时候并不试着去理解。	○	○	○	○	○	○	○
Sometimes I find myself thinking about ideas from the course when I am doing other things. 有时候我发现自己即使是在做别的事情时也会思考这门课的内容。	○	○	○	○	○	○	○

	Strongly agree 完全同意	Agree 同意	Somewhat agree 部分同意	Neither agree nor disagree / no opinion 无意见/没有想法	Somewhat disagree 不太同意	Disagree 不同意	Strongly disagree 完全不同意
I know what result I want to get out of this course and I am determined to achieve it. 我知道自己想从这门课中得到什么样的结果，而且我下定了决心要达成目标。	○	○	○	○	○	○	○
I am not really sure what is important, so I try to get down just as much as I can in lectures. 我不太确定哪些知识重要，所以上课的时候我尽可能地记下所有的东西。	○	○	○	○	○	○	○
I look at the evidence carefully and then try to reach my own conclusions about things I am studying. 我学习的时候会仔细检查现有的内容，然后试着独立作出自己的结论。	○	○	○	○	○	○	○
I work hard when I am studying and generally manage to keep my mind on what I am doing. 我学习非常努力且专注于手头上的事。	○	○	○	○	○	○	○
Sometimes I worry about whether I will ever be able to cope with the work properly. 我有时候担心自己到底能不能适应这门课的学习任务/要求。	○	○	○	○	○	○	○
When I am reading course material, I try to work out for myself exactly what is being said. 当我在阅读课程材料的时候，我试着自己独立推断出材料里讲的内容。	○	○	○	○	○	○	○
I make sure I find good conditions for studying which enables me to get on with my work easily. 我为自己创造最合适的环境来使我高效地学习。	○	○	○	○	○	○	○
I spend quite a lot of time repeating or copying out things to help me learn them. 我花费大量的时间重复或复述来学习知识。	○	○	○	○	○	○	○
When I am working on a new topic, I try to see in my own mind how all the ideas relate to each other. 学习新的内容时，我试着在自己的脑海里构想这些新知识之间的联系。	○	○	○	○	○	○	○
I organise my study time carefully to make the best use of it. 我认真计划我的学习时间以充分利用它们。	○	○	○	○	○	○	○

Survey Section D: Student ID

Please provide your student ID so that I can send you the following semesters' surveys and gift card. (Please enter number only. E.g. 1700123).
请提供您的学号以便于我给您发送以后的问卷以及最后的礼品卡。（请仅输入数字。例：1700123)：

☐☐☐☐☐☐☐

Your provided student ID will be used to match your survey responses over different semesters. All information you have provided in this survey will remain strictly confidential. Your responses will not be provided to any person or party other than the student researcher, Yuxi Wei. Your participation or non-participation will not have any impact on your study. Should you have further question, please feel free to contact yuxi.wei@adelaide.edu.au.
您提供的学号将会被用来比对您不同学期问卷的回答。在本调查中，您提供的一切信息都会被严格保密。您的回答不会被披露给除了项目负责学生魏宇希之外的任何人，您的参与也不会对您的学习成绩或体验产生任何影响。如果您有任何问题，请随时联系 yuxi.wei@adelaide.edu.au 。

Thanks for completing this survey! You may close this window now.
感谢您完成这份调查问卷！您现在可以关闭窗口了。

End of Survey

Appendix 2

Survey Participant Recruitment Emails

Recruitment Email for the Frist Survey

Email title: Survey participant needed: postgraduate accounting students learning
关于会计硕士同学学习体验的调查问卷

Dear student,

同学，您好！

I am a current PhD student in Accounting at the University of Adelaide. My PhD study investigates postgraduate accounting students' learning in Australian universities. To collect data, you are invited to participate in this project by completing 3 surveys during your postgraduate accounting program. The survey questions are about your previous learning experience and background, as well as your current learning orientations and learning approaches. If you complete this survey, you will receive invitations to two shorter surveys in the following year (one per semester). Even if you can only fill in one or two surveys out of the series, your data will still be helpful to my study. If you complete all three surveys, a **$15 electronic gift card** will be sent to your email address.

我是阿德莱德大学的一名会计博士生。我的博士研究专注于调查澳洲大学会计硕士学生的学习体验。为了收集数据，我在此诚挚邀请您帮我在硕士学习期间填写三个调查问卷。调查问卷的问题主要关注您的背景，学习动力以及在某一会计课程中的学习方法。如果您完成了问卷，在接下来的一年内您会再收到两份短一些的问卷，每学期一份。即使您只能填写其中的一份或两份问卷，您的信息依然会为我的研究提供很大帮助。如果您完成了全部三份问卷，一张**价值$15 的礼品卡**将会被发送到您的邮箱。

This email was only sent to a small selected group of students who are eligible to fill in this survey. Receiving this email means you are eligible to participate in this survey. It will be appreciated if you could complete it.

这封邮件仅仅被发送给了符合填写要求的少部分同学。收到这封邮件意味着您就是这份问卷的目标对象。如果您能填写这份问卷，我将不胜感激。

If you would like to participate, please access the first survey via the link below:

如果您愿意填写调查问卷，请点击下面的链接：

[Link to the online survey]

You do not have to be a Chinese student to complete this survey. The data from non-Chinese students will also provide help to the analysis.

This survey will take **10-15 minutes** to complete. All participants' information will remain **strictly confidential**. This research project is completely **independent** of your study and therefore will have **no** impact on your academic result.

问卷将占用您 **10 到 15 分钟**的时间。所有参与者的信息将被**严格保密**。这个研究项目和您在学校的硕士学习完全**无关**，也**不会**对您的成绩产生任何影响。

This research project has been approved by the University of Adelaide's Human Research Ethics Committee (HREC Approval number: H-2017-005). In case of any question or concern about the project, please feel free to contact me via yuxi.wei@adelaide.edu.au.

本研究调查已经得到阿德莱德大学人类研究道德审查委员会的批准（批准档案号：H-2017-005）。如果您对本研究有任何疑问，请随时联系 yuxi.wei@adelaide.edu.au。

Sincerely yours,
Yuxi Wei

感激不尽，
魏宇希

Recruitment Email for the Second Survey

Email title: The second survey: postgraduate accounting students learning

关于会计硕士同学学习体验的第二份调查问卷

Hi,

同学，您好！

You may recall completing a survey regarding your learning experience in postgraduate accounting program at the University of Adelaide in the previous semester. Now I would like to invite you to complete the second survey of the series. This survey includes questions regarding your learning experience of an accounting course this semester. After completing this survey, another similar survey will be sent to your email address by the end of next semester. If you completed all three surveys, a $15 electronic gift card will be sent to your email address. Even if you cannot complete next semester's survey, I will also appreciate if you could complete this survey now.

您也许还记得在上学期曾经填写过一份关于您在阿德莱德大学会计硕士学习体验的问卷。我现在想请您填写这个问卷系列中的第二份问卷。本次问卷将调查您本学期某一门会计课程的学习体验。完成这份问卷后，在下学期您会收到一份类似的问卷。如果您能完成全部三份问卷，一张价值$15 的礼品卡将会被发送到您的邮箱。即使您下学期不能填写问卷，我依然希望您能填写现在的这份问卷。

This email was only sent to a small selected group of students who are eligible to fill in this survey. Receiving this email means you are eligible to participate in this survey. It will be appreciated if you could complete it.

这封邮件仅仅被发送给了符合填写要求的少部分同学。收到这封邮件意味着您就是这份问卷的目标对象。如果您能填写这份问卷，我将不胜感激。

If you would like to participate, please access the first survey via the link below:

如果您愿意填写调查问卷，请点击下面的链接：

[Link to the online survey]

You do not have to be a Chinese student to complete this survey. The data from non-Chinese students will also provide help to the analysis.

This survey will take **5-10 minutes** to complete. All participants' information will remain **strictly confidential**. This research project is completely **independent** of your study and therefore will have **no** impact on your academic result.

问卷将占用您 **5 到 10 分钟**的时间。所有参与者的信息将被**严格保密**。这个研究项目和您在学校的硕士学习完全**无关**，也**不会**对您的成绩产生任何影响。

This research project has been approved by the University of Adelaide's Human Research Ethics Committee (HREC Approval number: H-2017-005). In case of any question or concern about the project, please feel free to contact me via yuxi.wei@adelaide.edu.au.

本研究调查已经得到阿德莱德大学人类研究道德审查委员会的批准（批准档案号：H-2017-005）。如果您对本研究有任何疑问，请随时联系 yuxi.wei@adelaide.edu.au。

Sincerely yours,

Yuxi Wei

感激不尽，

魏宇希

Recruitment Email for the Third Survey

Email title: The third survey: postgraduate accounting students learning

关于会计硕士同学学习体验的第三份调查问卷

Hi,

同学，您好！

You may recall completing two surveys regarding your learning experience in postgraduate accounting program at the University of Adelaide in previous semesters. Now I would like to invite you to complete the third and the last survey of the series. This survey includes questions regarding your learning experience of an accounting course this semester. After completing this survey, a **$15 electronic gift card** will be sent to your email address.

您也许还记得在之前的学期曾经填写过两份关于您在阿德莱德大学会计硕士学习体验的问卷。我现在想请您填写这个问卷系列中的第三份也是最后一份问卷。本次问卷将调查您本学期某一门会计课程的学习体验。完成这份问卷后，一张**价值$15 的礼品卡**将会被发送到您的邮箱。

This email was only sent to a selected group of students who are eligible to fill in this survey. Receiving this email means you are eligible to participate in this survey. It will be appreciated if you could complete it.

这封邮件仅仅被发送给了符合填写要求的一部分同学。收到这封邮件意味着您就是这份问卷的目标对象。如果您能填写这份问卷，我将不胜感激。

If you would like to participate, please access the first survey via the link below:

如果您愿意填写调查问卷，请点击下面的链接：

[Link to the online survey]

You do not have to be a Chinese student to complete this survey. The data from non-Chinese students will also provide help to the analysis.

This survey will take **10-15 minutes** to complete. All participants' information will remain **strictly confidential**. This research project is completely **independent** of your study and therefore will have **no** impact on your academic result.

问卷将占用您 **10 到 15 分钟**的时间。所有参与者的信息将被**严格保密**。这个研究项目和您在学校的硕士学习完全**无关**，也**不会**对您的成绩产生任何影响。

This research project has been approved by the University of Adelaide's Human Research Ethics Committee (HREC Approval number: H-2017-005). In case of any question or concern about the project, please feel free to contact me via yuxi.wei@adelaide.edu.au.

本研究调查已经得到阿德莱德大学人类研究道德审查委员会的批准（批准档案号：H-2017-005）。如果您对本研究有任何疑问，请随时联系 yuxi.wei@adelaide.edu.au。

Sincerely yours,

Yuxi Wei

感激不尽，

魏宇希

Appendix 3

Ethics Approval Letters from HREC[13]

THE UNIVERSITY of ADELAIDE

RESEARCH SERVICES
OFFICE OF RESEARCH ETHICS, COMPLIANCE AND INTEGRITY
THE UNIVERSITY OF ADELAIDE

LEVEL 4, RUNDLE MALL PLAZA
50 RUNDLE MALL
ADELAIDE SA 5000 AUSTRALIA

TELEPHONE +61 8 8313 5137
FACSIMILE +61 8 8313 3700
EMAIL hrec@adelaide.edu.au

CRICOS Provider Number 00123M

13 February 2017

Dr Davidson
Accounting and Finance

Dear Dr Davidson

ETHICS APPROVAL No: **H-2017-005**

PROJECT TITLE: **Chinese accounting students' learning in Australian universities: how their different background influences their learning approaches**

The ethics application for the above project has been reviewed by the Low Risk Human Research Ethics Review Group (Faculty of Arts and Faculty of the Professions) and is deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research (2007)* involving no more than low risk for research participants. You are authorised to commence your research on **13 Feb 2017**.

Ethics approval is granted for three years and is subject to satisfactory annual reporting. The form titled *Annual Report on Project Status* is to be used when reporting annual progress and project completion and can be downloaded at http://www.adelaide.edu.au/rb/oreci/human/reporting/. Prior to expiry, ethics approval may be extended for a further period.

Participants in the study are to be given a copy of the Information Sheet and the signed Consent Form to retain. It is also a condition of approval that you **immediately report** anything which might warrant review of ethical approval including:

- serious or unexpected adverse effects on participants,
- previously unforeseen events which might affect continued ethical acceptability of the project,
- proposed changes to the protocol; and
- the project is discontinued before the expected date of completion.

Please refer to the following ethics approval document for any additional conditions that may apply to this project.

Yours sincerely

DR JOHN TIBBY
Co-Convenor
Low Risk Human Research Ethics Review Group
(Faculty of Arts and Faculty of the Professions)

DR ANNA OLIJNK
Co-Convenor
Low Risk Human Research Ethics Review Group
(Faculty of Arts and Faculty of the Professions)

[13] The project title and scope has been changed during the term of the investigation.

RESEARCH SERVICES
OFFICE OF RESEARCH ETHICS, COMPLIANCE
AND INTEGRITY
THE UNIVERSITY OF ADELAIDE

LEVEL 4, RUNDLE MALL PLAZA
50 RUNDLE MALL
ADELAIDE SA 5000 AUSTRALIA

TELEPHONE +61 8 8313 5137
FACSIMILE +61 8 8313 3700
EMAIL hrec@adelaide.edu.au

CRICOS Provider Number 00123M

Applicant: Dr R Davidson

School: Accounting and Finance

Project Title: Chinese accounting students' learning in Australian universities: how their different background influences their learning approaches

---

The University of Adelaide Human Research Ethics Committee
Low Risk Human Research Ethics Review Group (Faculty of Arts and Faculty of the Professions)

ETHICS APPROVAL No: H-2017-005 **App. No.: 0000022160**

APPROVED for the period: 13 Feb 2017 to 29 Feb 2020

Thank you for your response, dated 09.02.17, to the matters raised. It is also noted that this project involves PhD student Yuxi Wei.

DR JOHN TIBBY
Co-Convenor
Low Risk Human Research Ethics Review Group
(Faculty of Arts and Faculty of the Professions)

DR ANNA OLIJNK
Co-Convenor
Low Risk Human Research Ethics Review Group
(Faculty of Arts and Faculty of the Professions)

RESEARCH SERVICES
OFFICE OF RESEARCH ETHICS, COMPLIANCE AND INTEGRITY
THE UNIVERSITY OF ADELAIDE

LEVEL 4, RUNDLE MALL PLAZA
50 RUNDLE MALL
ADELAIDE SA 5000 AUSTRALIA

TELEPHONE +61 8 8313 5137
FACSIMILE +61 8 8313 3700
EMAIL hrec@adelaide.edu.au

CRICOS Provider Number 00123M

Our reference 0000022160

24 February 2020

Associate Professor Robyn Davidson
Adelaide Business School

Dear Associate Professor Davidson

ETHICS APPROVAL No: H-2017-005
PROJECT TITLE: Chinese accounting students' learning in Australian universities: how their different background influences their learning approaches

Thank you for the Annual Report on the project's status provided by Yuxi Wei on the 13th of February 2020 requesting an extension. The extension request to continue with the data collection phase of the project has been approved.

The ethics amendment for the above project has been reviewed by the Low Risk Human Research Ethics Review Group (Faculty of Arts and Faculty of the Professions) and is deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research 2007 (Updated 2018)* involving no more than low risk for research participants.

You are authorised to commence your research on: 13/02/2017
The ethics expiry date for this project is: 28/02/2023

NAMED INVESTIGATORS:

Chief Investigator:	Associate Professor Robyn Davidson
Student - Postgraduate Doctorate by Research (PhD):	Ms Yuxi Wei
Associate Investigator:	Associate Professor Bryan Howieson

Ethics approval is granted for three years and is subject to satisfactory annual reporting. The form titled Annual Report on Project Status is to be used when reporting annual progress and project completion and can be downloaded at http://www.adelaide.edu.au/research-services/oreci/human/reporting/. Prior to expiry, ethics approval may be extended for a further period.

Participants in the study are to be given a copy of the information sheet and the signed consent form to retain. It is also a condition of approval that you immediately report anything which might warrant review of ethical approval including:

- serious or unexpected adverse effects on participants,
- previously unforeseen events which might affect continued ethical acceptability of the project,
- proposed changes to the protocol or project investigators; and
- the project is discontinued before the expected date of completion.

Yours sincerely,

Dr Anna Olijnyk
Convenor

Dr Jungho Suh
Convenor

The University of Adelaide

References

Al-Twaijry, AA 2010, 'Student academic performance in undergraduate managerial-accounting courses', *Journal of education for business*, vol. 85, no. 6, pp. 311-322.

Arkoudis, S, Hawthorne, L, Baik, C, Hawthorne, G, O'Loughlin, K, Leach, D & Bexley, E 2009, *The impact of English language proficiency and workplace readiness on the employment outcomes of tertiary international students*, Centre for the Study of Higher Education, Melbourne.

Arkoudis, S & Tran, L 2010, 'Writing blah, blah, blah: Lecturers' approaches and challenges in supporting international students', *International Journal of Teaching & Learning in Higher Education*, vol. 22, no. 2, pp. 169-178.

Arkoudis, S & Tran, LT 2007, 'International Students in Australia: Read ten thousand volumes of books and walk ten thousand miles', *Asia Pacific Journal of Education*, vol. 27, no. 2, 2007/07/01, pp. 157-169.

Ballantine, JA, Duff, A & McCourt Larres, P 2008, 'Accounting and business students' approaches to learning: A longitudinal study', *Journal of Accounting Education*, vol. 26, no. 4, 2008/12/01/, pp. 188-201.

Barkoukis, V, Tsorbatzoudis, H, Grouios, G & Sideridis, G 2008, 'The assessment of intrinsic and extrinsic motivation and amotivation: Validity and reliability of the Greek version of the Academic Motivation Scale', *Assessment in Education: Principles, Policy Practice*, vol. 15, no. 1, pp. 39-55.

Bhattacharyya, A 2010, 'Learning accounting in globalised Australian universities: Challenges and way out', *International Journal of Learning*, vol. 17, no. 3, pp. 487-500.

Biggs, JB 1978, 'Individual and group differences in study processes', *British Journal of Educational Psychology*, vol. 48, no. 3, pp. 266-279.

Biggs, JB 1987, *Student approaches to learning and studying*, Australian Council for Educational Research, Melbourne.

Biggs, JB 1993, 'What do inventories of students' learning processes really measure? A theoretical review and clarification', *British Journal of Educational Psychology*, vol. 63, no. 1, pp. 3-19.

Biggs, JB 1996a, 'Approaches to learning of Asian students: a multiple', in J Pandey, D Sinha & DP Bhawuk (eds), *Asian contributions to cross-cultural psychology*, vol. 4, SAGE, New Delhi, pp. 180-199.

Biggs, JB 1996b, 'Western misconceptions of the Confucian-heritage learning culture', in DA Watkins & JB Biggs (eds), *The Chinese learner: Cultural, psychological and contextual*

influences, University of Hong Kong, Comparative Education Research Centre (CERC), Hong Kong, pp. 45-68.

Biggs, JB, Kember, D & Leung, DY 2001, 'The revised two-factor study process questionnaire: R-SPQ-2F', *British Journal of Educational Psychology*, vol. 71, no. 1, pp. 133-149.

Bilgin, AA, Primi, C, Chiesi, F, Lopez, MV, del Carmen Fabrizio, M, Quinn, VF, Gantner, T & Graham, PL 2014, 'A comparison of first year statistics units' content and contexts in a multinational study, with a case study for the validation of ASSIST in Australia', in H MacGillivray, B Phillips & MA Martin (eds), *Topics from Australian Conferences on Teaching Statistics*, Springer New York, New York, pp. 189-210.

Birrell, B & Healy, E 2008, 'Migrant accountants: High numbers, poor outcomes', *People and Place*, vol. 16, no. 4, p. 9.

Blackmore, J, Gribble, C, Farrell, L, Rahimi, M, Arber, R & Devlin, M 2014, *Australian international graduates and the transition to employment*, Deakin University, Melbourne.

Blackmore, J, Gribble, C & Rahimi, M 2017, 'International education, the formation of capital and graduate employment: Chinese accounting graduates' experiences of the Australian labour market', *Critical Studies in Education*, vol. 58, no. 1, pp. 69-88.

Bobe, BJ & Cooper, BJ 2019, 'The effect of language proficiency on approaches to learning and satisfaction of undergraduate accounting students', *Accounting Education*, vol. 28, no. 2, pp. 149-171.

Bobe, BJ & Cooper, BJ 2020, 'Accounting students' perceptions of effective teaching and approaches to learning: Impact on overall student satisfaction', *Accounting & Finance*, vol. 60, no. 3, pp. 2099-2143.

Bodycott, P & Lai, A 2012, 'The influence and implications of Chinese culture in the decision to undertake cross-border higher education', *Journal of studies in International education*, vol. 16, no. 3, pp. 252-270.

Bolen, LM, Wurm, TR & Hall, CW 1994, 'Factorial structure of the study process questionnaire', *Psychological Reports*, vol. 75, no. 3, pp. 1235-1241.

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: an international journal*, vol. 8, no. 4, 1999/12/01, pp. 277-300.

Boyle, EA, Duffy, T & Dunleavy, K 2003, 'Learning styles and academic outcome: The validity and utility of Vermunt's Inventory of Learning Styles in a British higher education setting', *British Journal of Educational Psychology*, vol. 73, no. 2, pp. 267-290.

Bryman, A 2011, *Business research methods*, 3rd edn, ed. E Bell, Oxford University Press, Oxford.

Burnett, PC & Dart, BC 2000, 'The Study Process Questionnaire: A construct validation study', *Assessment & Evaluation in Higher Education*, vol. 25, no. 1, 2000/03/01, pp. 93-99.

Byrne, M & Flood, B 2008, 'Examining the relationships among background variables and academic performance of first year accounting students at an Irish University', *Journal of Accounting Education*, vol. 26, no. 4, pp. 202-212.

Byrne, M, Flood, B & Willis, P 2004, 'Validation of the approaches and study skills inventory for students (assist) using accounting students in the USA and Ireland: a research note', *Accounting Education*, vol. 13, no. 4, 2004/12/01, pp. 449-459.

Byrne, M & Willis, P 2009, 'An exploration of tertiary accounting students' prior approaches to learning accounting', *international journal of management education*, vol. 7, no. 3, pp. 35-46.

Cao, J 2020, *教育部发布 2020 年第 1 号留学预警 The Ministry of Education annouced the first overseas studying alert in 2020*, Ministry of Education of the People's Republic of China, Beijing, viewed 12 December 2020, <http://www.moe.gov.cn/jyb_xwfb/gzdt_gzdt/s5987/202006/t20200609_464131.html>.

Carbonneau, N, Vallerand, RJ & Lafrenière, MAKJJop 2012, 'Toward a tripartite model of intrinsic motivation', vol. 80, no. 5, pp. 1147-1178.

Carroll, D 2016, *Graduate course experience 2015*, Graduate Careers Australia Ltd, Melbourne.

Chan, CKK & Rao, N 2009, *Revisiting the Chinese Learner: Changing Contexts, Changing Education*, ed. M Mason, Comparative Education Research Centre, Hong Kong.

Chan, H-T & Ryan, S 2013, 'Challenging stereotypes: International accounting students in Australia', *Journal of Modern Accounting and Auditing*, vol. 9, no. 2, p. 169.

Charlesworth, ZM 2008, 'Learning styles across cultures: Suggestions for educators', *Education + Training*, vol. 50, no. 2, 2008/03/21, pp. 115-127.

Chen, C-S, Lee, S-Y & Stevenson, HW 1996, 'Academic achievement and motivation of Chinese students: a cross-national perspective', in S Lau (ed.), *Growing up the Chinese way: Chinese child adolescent development*, The Chinese University Press, Hong Kong, pp. 69-92.

Coates, H & Edwards, D 2010, *Graduate course experience 2009*, Graduate Careers Australia Ltd, Melbourne.

Cokley, KO, Bernard, N, Cunningham, D & Motoike, J 2001, 'A psychometric investigation of the academic motivation scale using a United States sample', *Measurement evaluation in Counseling development*, vol. 34, no. 2, pp. 109-119.

Cooper, BJ 2004, 'The enigma of the Chinese learner', *Accounting Education*, vol. 13, no. 3, pp. 289-310.

CPA Australia 2020, *Migration assessment Australia*, viewed 13 March 2020, <https://www.cpaaustralia.com.au/become-a-cpa/migration-assessment/australia>.

Dai, K 2020, 'Learning between two systems: A Chinese student's reflexive narrative in a China-Australia articulation programme', *Compare: A Journal of Comparative and International Education Journal*, vol. 50, no. 3, pp. 371-390.

Dai, K, Matthews, KE & Reyes, V 2019, 'Chinese students' assessment and learning experiences in a transnational higher education programme', *Assessment and Evaluation in Higher Education*.

Deci, EL & Ryan, RM 1985, *Intrıinsic motivation and self-determination in human behaviour*, Plenum Press, New York.

Deci, EL & Ryan, RM 1991, 'A motivational approach to self: integration in personality', in R D (ed.), *Nebraska symposium on motivation: perspectives on motivation*, vol. 38, University of Nebraska Press, Lincoln, pp. 237-288.

Deci, EL, Vallerand, RJ, Pelletier, LG & Ryan, RM 1991, 'Motivation and education: The self-determination perspective', *Educational Psychology*, vol. 26, no. 3/4, Summer/Fall91, p. 325.

Department of Home Affairs 2019, *Occupation ceilings*, viewed 06 March 2019, <https://immi.homeaffairs.gov.au/visas/working-in-australia/skillselect/occupation-ceilings>.

Department of Home Affairs 2020, *Points table for skilled independent visa (subclass 189)*, viewed 02 October 2020, <https://immi.homeaffairs.gov.au/visas/getting-a-visa/visa-listing/skilled-independent-189/points-table>.

Dochy, F, de Rijdt, C & Dyck, W 2002, 'Cognitive Prerequisites and Learning: How Far Have We Progressed since Bloom? Implications for Educational Practice and Teaching', *Active Learning in Higher Education*, vol. 3, no. 3, November 1, 2002, pp. 265-284.

Donald, J & Jackling, B 2007, 'Approaches to learning accounting: A cross-cultural study', *Asian Review of Accounting*, vol. 15, no. 2, 2007/04/03, pp. 100-121.

Duff, A 1997, 'A note on the reliability and validity of a 30-item version of Entwistle & Tait's Revised Approaches to Studying Inventory', *British Journal of Educational Psychology*, vol. 67, no. 4, pp. 529-539.

Duff, A 2004a, 'The Revised Approaches to Studying Inventory (RASI) and its use in management education', vol. 5, no. 1, pp. 56-72.

Duff, A 2004b, 'Understanding academic performance and progression of first-year accounting and business economics undergraduates: the role of approaches to learning and prior academic achievement', *Accounting Education*, vol. 13, no. 4, 2004/12/01, pp. 409-430.

Eisenberger, R 1972, 'Explanation of rewards that do not reduce tissue needs', *Psychological bulletin*, vol. 77, no. 5, p. 319.

Ekanayake, D & Jackling, B 2014, 'The growth in international enrolments in accounting: Implications for an established nexus between education and migration', *Accounting Education: an international journal*, vol. 23, no. 3, 2014/05/04, pp. 203-224.

Eley, M 1992, 'Differential adoption of study approaches within individual students', *Higher Education*, vol. 23, no. 3, 1992/04/01, pp. 231-254.

English, L, Luckett, P & Mladenovic, R 2004, 'Encouraging a deep approach to learning through curriculum design', *Accounting Education: an international journal*, vol. 13, no. 4, 2004/12/01, pp. 461-488.

Entwistle, N, Hanley, M & Hounsell, D 1979, 'Identifying distinctive approaches to studying', *Higher Education*, vol. 8, no. 4, 1979/07/01, pp. 365-380.

Entwistle, N & McCune, V 2004, 'The conceptual bases of study strategy inventories', *Educational psychology review*, vol. 16, no. 4, pp. 325-345.

Entwistle, N & Ramsden, P 1982, *Understanding student learning*, Croom Helm, London.

Entwistle, N & Tait, H 1994, *The revised approaches to studying inventory*, University of Edinburgh, Centre for Research into Learning and Instruction, Edinburgh.

Evans, E, Burritt, R & Guthrie, J 2010, *Accounting education at a crossroad in 2010*, Institute of Chartered Accountants in Australia, Sydney.

Everaert, P, Opdecam, E & Maussen, S 2017, 'The relationship between motivation, learning approaches, academic performance and time spent', *Accounting Education*, vol. 26, no. 1, pp. 78-107.

Field, A 2017, *Discovering Statistics Using IBM SPSS Statistics*, 5th edn, SAGE, London.

Flood, B & Wilson, RMS 2008, 'An exploration of the learning approaches of prospective professional accountants in Ireland', *Accounting Forum*, vol. 32, no. 3, 2008/09/01, pp. 225-239.

Fox, RA, McManus, I & Winder, B 2001, 'The shortened Study Process Questionnaire: An investigation of its structure and longitudinal stability using confirmatory factor analysis', *British Journal of Educational Psychology*, vol. 71, no. 4, pp. 511-530.

Guay, F, Morin, AJ, Litalien, D, Valois, P & Vallerand, RJ 2015, 'Application of exploratory structural equation modeling to evaluate the academic motivation scale', *The Journal of Experimental Education*, vol. 83, no. 1, pp. 51-82.

Hall, M, Ramsay, A & Raven, J 2004, 'Changing the learning environment to promote deep learning approaches in first-year accounting students', *Accounting Education: an international journal*, vol. 13, no. 4, 2004/12/01, pp. 489-505.

Hao, J & Welch, A 2012, 'A Tale of Sea Turtles: Job-Seeking Experiences of Hai Gui (High-Skilled Returnees) in China', *Higher Education Policy*, vol. 25, no. 2, Jun 2012
2018-10-15, pp. 243-260.

Ho, DY 1994, 'Cognitive socialization in Confucian heritage cultures', in PM Greenfield & RR Cocking (eds), *Cross-cultural roots of minority child development*, Psychology Press, New York, pp. 285-313.

Honkimaki, S, Tynjala, P & Valkonen, S 2004, 'University students' study orientations, learning experiences and study success in innovative courses', *Studies in Higher Education*, vol. 29, no. 4, pp. 431-449.

Jackling, B, De Lange, P, Phillips, J & Sewell, J 2012, 'Attitudes towards accounting: Differences between Australian and international students', *Accounting Research Journal*, vol. 25, no. 2, 2012/09/07, pp. 113-130.

James, WB & Blank, W 1993, 'Review and critique of available learning-style instruments for adults', *New Directions for Adult Continuing Education*, vol. 1993, no. 59, pp. 47-57.

Keefe, JW 1985, 'Assessment of learning style variables: The NASSP Task Force model', *Theory Into Practice*, vol. 24, no. 2, pp. 138-144.

Keefe, JW & Monk, JS 1986, *Learning style profile: examiner's manual*, National Association of Secondary School Principals, Reston.

Kolb, AY & Kolb, DA 2005, 'The Kolb learning style inventory - version 3.1 2005 technical specifications', viewed 2 Feburary 2021, <http://www.whitewater-rescue.com/support/pagepics/lsitechmanual.pdf>.

Kolb, DA 1984, *Experience as the source of learning and development*, Prentice-Hall, New Jersey.

Krosnick, JA & Presser, S 2010, 'Question and questionnaire design', in PV Marsden & JD Wright (eds), *Handbook of survey research*, 2nd edn, Emerald Group Publishing Limited, Bingley, pp. 263-314.

Li, J 2002, 'A cultural model of learning: Chinese "heart and mind for wanting to learn"', *Journal of Cross-Cultural Psychology*, vol. 33, no. 3, pp. 248-269.

Liu, Y 2015, 'The longitudinal relationship between Chinese high school students' academic stress and academic motivation', *Learning and Individual Differences*, vol. 38, 2015/02/01/, pp. 123-126.

Lucas, U & Meyer, JHF 2005, '"Towards a mapping of the student world": the identification of variation in students' conceptions of, and motivations to learn, introductory accounting', *The British Accounting Review*, vol. 37, no. 2, 2005/06/01/, pp. 177-204.

Lynn, SA 2013, 'The impact of diversity on approaches to learning and assessment preferences of intermediate accounting students', *Advances in accounting education: Teaching and curriculum innovations*, vol. 14, pp. 239-267.

Magdziarz, S, Myers, P & Bellamy, S 2012, 'The integrative nature of threshold concepts in financial accounting–an exploration of the interdisciplinarity of one threshold concept', in *National Academy's Sixth Annual Conference and the Fourth Biennial Threshold Concepts Conference, Dublin, June 28*, vol. 29.

Marginson, S 2011, 'It's a Long Way Down: The Underlying Tensions in the Education Export Industry', *Australian Universities' Review*, vol. 53, no. 2, pp. 21-33.

Marton, F & Säljö, R 1976a, 'On qualitative differences in learning: i outcome and process', *British Journal of Educational Psychology*, vol. 46, no. 1, pp. 4-11.

Marton, F & Säljö, R 1976b, 'On qualitative differences in learning: ii Outcome as a function of the learner's conception of the task', *British Journal of Educational Psychology*, vol. 46, no. 2, pp. 115-127.

McGowan, S & Potter, L 2008, 'The implications of the Chinese learner for the internationalization of the curriculum: An Australian perspective', *Critical Perspectives on Accounting*, vol. 19, no. 2, pp. 181-198.

McMahon, P 2011, 'Chinese voices: Chinese learners and their experiences of living and studying in the United Kingdom', *Journal of Higher Education Policy Management*, vol. 33, no. 4, pp. 401-414.

Meyer, J & Land, R 2003, 'Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practising within the disciplines', in C Rust (ed.), *Improving Student Learning: Improving Student Learning Theory and Practice – Ten Years On*, Oxford Centre for Staff and Learning Development, Oxford.

Meyer, J & Land, R 2005, 'Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning', *Higher Education*, vol. 49, no. 3, pp. 373-388.

Meyer, JHF 2000, 'Variation in contrasting forms of 'memorising' and associated observables', *British Journal of Educational Psychology*, vol. 70, no. 2, pp. 163-176.

Miller, CM & Parlett, M 1974, *Up to the mark: a study of the examination game*, Society for Research into Higher Education, London.

Munro-Smith, H 2018, *University and other higher education in Australia industry report*, Industry Report, no. P8102, IBIS World.

Murray-Harvey, R 1994, 'Conceptual and measurement properties of the productivity environmental preference survey as a measure of learning style', *Educational and Psychological Measurement*, vol. 54, no. 4, pp. 1002-1012.

Murray-Harvey, R 1994, 'Learning styles and approaches to learning: distinguishing between concepts and instruments', *British Journal of Educational Psychology*, vol. 64, no. 3, pp. 373-388.

Niles, FS 1995, 'Cultural differences in learning motivation and learning strategies: A comparison of overseas and Australian students at an Australian university', *International Journal of Intercultural Relations*, vol. 19, no. 3, pp. 369-385.

Pang, M, Ho, TM & Man, R 2009, 'Learning approaches and outcome-based teaching and learning: A case study in Hong Kong, China', *Journal of Teaching in International Business*, vol. 20, no. 2, 2009/04/01, pp. 106-122.

Parker, L 2002, 'It's been a pleasure doing business with you: A strategic analysis and critique of university change management', *Critical Perspectives on Accounting*, vol. 13, no. 5–6, 10//, pp. 603-619.

Parker, L 2011, 'University corporatisation: Driving redefinition', *Critical Perspectives on Accounting*, vol. 22, no. 4, 2011/04/01/, pp. 434-450.

Pask, G 1976, 'Styles and strategies of learning', *British Journal of Educational Psychology*, vol. 46, no. 2, pp. 128-148.

Patel, C, Millanta, B & Tweedie, D 2016, 'Is international accounting education delivering pedagogical value?', *Accounting Education*, vol. 25, no. 3, pp. 223-238.

Pettersen, RC 2010, 'Validation of Approaches to Studying Inventories in a Norwegian context: In search of "quick-and-easy" and short versions of the ASI', *Scandinavian Journal of Educational Research*, vol. 54, no. 3, 2010/06/01, pp. 239-261.

Quan, R, He, X & Sloan, D 2016, 'Examining Chinese postgraduate students' academic adjustment in the UK higher education sector: A process-based stage model', *Teaching in Higher Education*, vol. 21, no. 3, pp. 326-343.

Ramburuth, P & Mladenovic, R 2004, 'Exploring the relationship between students' orientations to learning, the structure of students' learning outcomes and subsequent academic performance', *Accounting Education*, vol. 13, no. 4, pp. 507-527.

Ramsden, P 1979, 'Student learning and perceptions of the academic environment', *Higher Education*, vol. 8, no. 4, pp. 411-427.

Ramsden, P 2003, *Learning to teach in higher education*, 2nd edn, RoutledgeFalmer, London and New York.

Rao, N, Chi, J & Cheng, K-M 2010, 'Teaching mathematics: observations from urban and rural schools in mainland China', in CKK Chan & N Rao (eds), *Revisiting the Chinese learner: changing contexts, changing education*, vol. 25, Springer Netherlands, Dordrecht, pp. 211-231.

Rao, N, Moely, BE & Sachs, J 2000, 'Motivational beliefs, study strategies, and mathematics attainment in high- and low-achieving chinese secondary school students', *Contemporary Educational Psychology*, vol. 25, no. 3, 2000/07/01/, pp. 287-316.

Richardson, JTE 2013, 'Approaches to studying across the adult life span: Evidence from distance education', *Learning and Individual Differences*, vol. 26, 2013/08/01/, pp. 74-80.

Ryan, J 2010, 'The Chinese learner: Misconceptions and realities', in J Ryan & G Slethaug (eds), *International Education and the Chinese Learner*, Hong Kong University Press, Hong Kong, pp. 37-56.

Sadler-Smith, E 1996, 'Approaches to Studying: age, gender and academic performance', *Educational Studies*, vol. 22, no. 3, 1996/10/01, pp. 367-379.

Säljö, R 1979, 'Learning about learning', *Higher Education*, vol. 8, no. 4, pp. 443-451.

Sawir, E 2005, 'Language difficulties of international students in Australia: The effects of prior learning experience', *International Education Journal*, vol. 6, no. 5, pp. 567-580.

Sikkema, SE & Sauerwein, JA 2015, 'Exploring culture-specific learning styles in accounting education', *Journal of International Education in Business*, vol. 8, no. 2, pp. 78-91.

Smith, PJ & Smith, SN 1999, 'Differences between Chinese and Australian students: some implications for distance educators', *Distance Education*, vol. 20, no. 1, 1999/01/01, pp. 64-80.

Smith, SN 2001, 'Approaches to study of three Chinese national groups', vol. 71, no. 3, pp. 429-441.

Sullivan, A 2020, 'Sex and the census: why surveys should not conflate sex and gender identity', *International Journal of Social Research Methodology*, vol. 23, no. 5, pp. 517-524.

Tait, H & Entwistle, N 1996, 'Identifying students at risk through ineffective study strategies', *Higher Education*, vol. 31, no. 1, 1996/01/01, pp. 97-116.

Tait, H, Entwistle, N & McCune, V 1998, 'ASSIST: a reconceptualisation of the approaches to studying inventory', in C Rust & G Gibbs (eds), *Improving student learning: improving students as learners*, The Oxford Centre for Staff and Learning Development, England, pp. 262-271.

the Australian Trade and Investment Commission (Austrade) 2018, 'International student data detailed pivot tables', The Australian Trade and Investment Commission (Austrade), Canberra, viewed 2 September 2019, <https://www.austrade.gov.au/Australian/Education/Education-Data/Current-data/pivot-tables>.

The University of Adelaide 2017, *Student enrolments*, The University of Adelaide Planning and Analytics, viewed 29 September 2020, <https://www.adelaide.edu.au/planning/student-lifecycle-reporting>.

Tolland, L & Evans, J 2019, *What is the difference between sex and gender? Exploring the difference between sex and gender, looking at concepts that are important to the sustainable development goals*, Office of National Statistics, UK, <https://www.ons.gov.uk/economy/environmentalaccounts/articles/whatisthedifferencebetweensexandgender/2019-02-21#definitions-and-differences>.

Vallerand, RJ, Blais, MR, Brière, NM & Pelletier, L 1989, 'Construction et validation de l'échelle de motivation en éducation (EME)', (Construction and validation of the Academic Motivation Scale), *Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement*, vol. 21, no. 3, p. 323.

Vallerand, RJ, Pelletier, LG, Blais, MR, Briere, NM, Senecal, C & Vallieres, EF 1992, 'The Academic Motivation Scale: A Measure of Intrinsic, Extrinsic, and Amotivation in Education', *Educational and Psychological Measurement*, vol. 52, no. 4, pp. 1003-1017.

Vermunt, JD 1998, 'The regulation of constructive learning processes', *British Journal of Educational Psychology*, vol. 68, no. 2, pp. 149-171.

Volet, SE, Renshaw, PD & Tietzel, K 1994, 'A short-term longitudinal investigation of cross-cultural differences in study approaches using Biggs' SPQ questionnaire', *British Journal of Educational Psychology*, vol. 64, no. 2, pp. 301-318.

Wang, C, Li, X, Ou, X, O'kane, J, Mao, Z & Zhang, W 2015, 'An exploration of the readiness, challenges and expected support for their overseas study of Chinese business and management programme students', *Higher Education Quarterly*, vol. 69, no. 4, pp. 314-341.

Wang, J 2005, *Curriculum reform of elementary education in China*, Embassy of the People's Republic of China, Beijing, viewed 08 Janurary2021, <http://www.chinese-embassy.org.uk/eng/zt/Features/t214562.htm>.

Wang, L & Byram, M 2011, ''But when you are doing your exams it is the same as in China' – Chinese students adjusting to western approaches to teaching and learning', *Cambridge Journal of Education*, vol. 41, no. 4, 2011/12/01, pp. 407-424.

Watkins, DA & Biggs, JB 1996, *The Chinese learner: cultural, psychological, and contextual influences*, University of Hong Kong, Comparative Education Research Centre (CERC), Hong Kong.

Watty, K, Jackson, M & Yu, X 2009, 'Students' approaches to assessment in accounting education: The unique student perspective', *Accounting Education: an international journal*, vol. 19, no. 3, 2010/06/01, pp. 219-234.

Wolfgang, ME & Dowling, WD 1981, 'Differences in Motivation of Adult and Younger Undergraduates', *Journal of Higher Education*, vol. 52, no. 6, pp. 640-648.

Wong, G, Cooper, BJ & Dellaportas, S 2015, 'Chinese students' perceptions of the teaching in an Australian accounting programme–an exploratory study', *Accounting Education*, vol. 24, no. 4, pp. 318-340.

Wong, JK-K 2004, 'Are the learning styles of Asian international students culturally or contextually based?', *International Education Journal*, vol. 4, no. 4, pp. 154-166.

Wu, Q 2015, 'Re-examining the "Chinese learner": A case study of mainland Chinese students' learning experiences at British Universities', *Higher Education*, vol. 70, no. 4, pp. 753-766.

Xiang, M & Gruber, R 2012, 'Student performance in their first postsecondary accounting course: Does high school accounting matter?', *Advances in Accounting Education*, vol. 13, pp. 297-311.

Yap, C, Ryan, S & Yong, J 2014, 'Challenges Facing Professional Accounting Education in a Commercialised Education Sector', *Accounting Education*, vol. 23, no. 6, 2014/11/02, pp. 562-581.

Zeegers, P 2002, 'A revision of the Biggs' study process questionnaire (R-SPQ)', *Higher Education Research & Development*, vol. 21, no. 1, 2002/05/01, pp. 73-92.

Zhang, B, Li, YM, Li, J, Li, Y & Zhang, H 2016, 'The revision and validation of the Academic Motivation Scale in China', vol. 34, no. 1, pp. 15-27.

Zhang, H & Zhou, Y 2003, 'The teaching of mathematics in Chinese elementary schools', *International Journal of Psychology*, vol. 38, no. 5, pp. 286-298.

Zhao, D, Cai, Y & Dang, Y 2019, *2019 中国大学评价研究报告—高考志愿填报指南（校友会版）*, (2019 Chinese universities evaluation report: a guidance to university application for Gaokao candidates (the alumni association network edition)), Science Press, Beijing.