VIETNAMESE UNIVERSITY STUDENTS’ ACADEMIC MOTIVATION

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Submitted in fulfilment of the requirements for the degree of Doctor of Education

School of Education and Professional Studies

December, 2017
Key words

Academic motivation, Vietnamese university students, higher education, self-determination theory, Academic Motivation Scale, psychometric properties
Abstract

Since 2005, a comprehensive reform agenda has been implemented in Vietnam aimed at improving the quality of higher education and of university graduates. While there has been a rapid expansion in participation in higher education, there are strong concerns regarding the preparedness of students and their overall employability. Strategies have been identified to address these concerns; however, the issue of student motivation has not been considered. This study, guided by self-determination theory, addressed this gap by exploring Vietnamese university students’ motivation including both motivation for daily study and, more broadly, motivation to pursue university education.

Guided by self-determination theory, a macrotheory of motivation, and conducted at a high-ranking, multidisciplinary university in Hanoi, this study employed a convergent parallel mixed methods research design. A total of 678 first-year students were surveyed. The survey instrument, based on the Academic Motivation Scale (AMS) (Vallerand et al., 1992, 1993), collected data to (a) assess both quantity and quality of students’ ongoing motivation, (b) examine the effects of demographic characteristics on students’ ongoing motivation, and (c) test the psychometric properties of the AMS in the current sample. Additionally, 14 students from Years 2 to 4 participated in 1:1 interviews focusing on their motivation around undertaking university education, degree choice, and ongoing motivation for study.

The results of descriptive analysis of 648 surveys revealed that Vietnamese students in this study had relatively low levels of self-determination in their daily study. These students exhibited higher levels of extrinsic motivation than intrinsic motivation, and were most highly motivated to study for reasons relating to future employment, although many demonstrated levels of amotivation. A confirmatory factor analysis was carried out to assess the appropriateness of the AMS in assessing Vietnamese students’ motivation. The results revealed that the 7-factor AMS with 23 items out of the original 28 items fitted the data well. The revised AMS exhibited satisfactory levels of reliability and validity. The results of the MANOVA to investigate the effects of demographic characteristics on students’ ongoing motivation showed a complex combination to family (including educational background and financial capacity) as well as those related to the individual (including gender and major).

A thematic analysis of the interviews was used to investigate the relationship between students’ ongoing motivation and their original motivation for pursuing university education. This analysis supported results from previous studies and of the MANOVA. The students who were interviewed attended university for both economic and non-economic reasons. These students chose degree programs based on their own interests, family opinions, and social trends. The
initial motivation for these students to attend university transformed into academic goals and influenced students’ motivation to a large extent. Many students reported a change in motivation between Year 1 and Year 2, and the first-year experience had an important role in understanding this change.

This study will make a significant contribution to theory as well as practice. The AMS has never been tested in Vietnam, and the reliability of its application in a collectivist culture is a substantial contribution to our understanding of self-determination theory. In practice, the findings of this thesis will enable administrators and educators to design appropriate measures to enhance students’ motivation and will contribute to the quality of the higher education experience. Given the context in which higher education in Vietnam exists, revealing the complex connections between the collectivist culture and individual motivation has potential to guide the reform agenda and, ultimately, contribute to student learning.
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<td>Achievement goal theory</td>
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<td>AM</td>
<td>Amotivation</td>
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<td>AMS</td>
<td>Academic Motivation Scale</td>
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<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
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<td>DV</td>
<td>Dependent variable</td>
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<td>EFA</td>
<td>Exploratory Factor Analysis</td>
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<td>EM</td>
<td>Extrinsic motivation</td>
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<td>EMID</td>
<td>Extrinsic motivation – Identified regulation</td>
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<tr>
<td>EMIN</td>
<td>Extrinsic motivation – Introjected regulation</td>
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<td>EMER</td>
<td>Extrinsic motivation – External regulation</td>
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<td>EVT</td>
<td>Expectancy-value theory</td>
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<td>FTP</td>
<td>Future time perspective</td>
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<td>GPA</td>
<td>Grade point average</td>
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<td>HE</td>
<td>Higher education</td>
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<td>HEI</td>
<td>Higher education institution</td>
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<td>IM</td>
<td>Intrinsic motivation</td>
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<td>IMES</td>
<td>Intrinsic motivation to experience stimulation</td>
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<td>IMTA</td>
<td>Intrinsic motivation to accomplish</td>
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<td>IMTK</td>
<td>Intrinsic motivation to know</td>
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<td>IV</td>
<td>Independent variable</td>
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<td>MSLQ</td>
<td>Motivated Strategies for Learning Questionnaire</td>
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<td>RQ</td>
<td>Research question</td>
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<td>SDI</td>
<td>Self-determination index</td>
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Statement of Original Authorship

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

To Lan Luong

Date: 22/12/2017
Acknowledgements

This thesis is dedicated to my parents and my children.

Growing up in large families and in a time of hardship, my parents could only complete basic education at the time, then had to serve in the army. Therefore, they had a strong wish that their children would have better education than they did. Thus, my parents have always supported me and my brother in our studies, without any complaint. My parents would do everything for us so that we could concentrate on our study, as they saw that we were capable. They were supportive, but not imposing, leaving us to make our own study-related decisions, even with my decision of going to Australia for my doctorate study alone with my two small children, which worried them a lot. The completion of this thesis is my expression of gratitude to my parents for all the love and care they have for me, which I only fully realised when I had my own children.

My children, at the age of three and four, left Vietnam to join me in my academic journey in a new country with the language which they did not speak or understand, and with people they never met before. But they have been such good kids ever since. They could easily adapt to the new life and make new friends, which brought me a big relief. Although they have seen their friends being able to do a lot of the things that we have not been able to, due to financial and time-related reasons, they have been very understanding. They are such beautiful and easy children, and are a real blessing for me. I owe them much parent-child quality time that they deserve as children. Therefore I want to dedicate this thesis to them, hoping to inspire them academically and set a good example for them in the future.

This thesis would never have been completed without the invaluable support, both academic and personal, from my supervisors. Dr. Helen Klieve, who remained my principal supervisor until I finished this thesis, and Dr. elke emerald agreed to take me on after an unexpected change that took place when I was already in Australia. They were very patient with me during the early stages of my research. Then Dr. Kate Thompson joined the supervisor team and offered great support with my writing up. My associate supervisor, Dr. Arthur Poropat, joined later but provided invaluable feedback that significantly improved the quality of my work. All four of them have always been very understanding and supportive. It has been a great experience having the four of them as my supervisors, and I want to express my gratitude and sincere thanks to them all.

There would never have been this thesis in the first place without the scholarship and financial support I received from the Australian government. The scholarship covered my tuition and
living expenses while the financial support allowed me to send my children first to child care then to school, without which I would never have been able to embark on my academic pursuit. It is my great honour to receive such support. I also would like to extend my thanks to all the staff at the scholarship office and the staff at Griffith University for their excellent support in all aspects related to my study.

Last but not least, I would like to thank all the Australian friends and families who we have got to know since we first arrived. They have really welcomed us and become real friends, which makes us feel like being home. This has been an important contribution to the growth of my children, which in turn has assisted me a lot in my study. Thank want to thank them all for being part of our memorable years in Australia.
CHAPTER 1: INTRODUCTION

Student learning and achievement are significant topics of research among educational researchers. The literature suggests that students’ academic motivation plays an important role in their learning and education-related outcomes. However, little attention has been paid to student motivation in the Vietnamese context, especially in the higher education (HE) sector. This chapter introduces the current study which investigated Vietnamese university students’ academic motivation.

1.1 Statement of the problem

There has been rapid expansion of the HE system in Vietnam: over the period from 2000 to 2015, the number of students almost tripled and the number of higher education institutions (HEIs) increased by 250%. Yet, there are many challenges and tensions regarding institutional autonomy and self-governance in Vietnam’s HE system (Hayden & Lam, 2007) and radical changes are yet to occur. A recent report by the World Bank (2015a) pointed out a lack of quality and relevance in HE with out-of-date curriculum and insufficient equipment, in the absence of a quality assurance system to provide universities with feedback. Vietnamese graduates are ill prepared, lacking necessary skills to transit into their professional life (T. T. Tran, 2012, 2013b; Vallely & Wilkinson, 2008).

HEIs are often blamed for their low graduate quality. Yet, in her qualitative study presenting voices from various stakeholders in Vietnam’s HE, T. T. Tran (2015) found that students share in the responsibility for their poor graduate employability. Tran found that many students are passive and dependent on their teachers to help them develop work-related skills. She concluded that the students themselves do not work hard enough and do not make use of all the available, though limited, resources and assistance that institutions have to offer.

Understanding student motivation may be a way forward both to explaining the lack of participation of Vietnamese students and to addressing it. Motivation has been shown to be one of the key determinants of students’ academic performance and achievement (Green, Nelson, Martin, & Marsh, 2006; Linnenbrink & Pintrich, 2002; Ryan & Connell, 1989). As a determinant of students’ performance, motivation is crucial to engagement in learning activities as it underpins students’ purpose and direction, as well as determining the quality of students’ behaviour (Reeve, 2012). The more students are engaged in their study, the more they are likely to learn (Kuh, 2009; Pascarella & Terenzini, 2005). Student motivation also relates to various
positive education-related outcomes such as better performance, adjustment, and persistence, among others (see Guay, Ratelle, & Chanal, 2008, for a review).

Educational researchers and practitioners have increasingly been interested in understanding the processes and dynamics of student motivation with an aim to foster motivation towards learning among students (Murphy & Alexander, 2000; Schunk, 2000). Yet, very little is known about the motivation of Vietnamese students towards their academic studies, particularly at the post-secondary level. Therefore this study serves as one among the first attempts to examine Vietnamese university students’ academic motivation.

1.2 Background

Since Vietnam embarked on the policy of doi moi, or economic renovation, in 1986, it has achieved remarkable social and economic developments, making it one of the fastest growing economies in the world in the 1990s (World Bank, 2001). But until 1993, the HE system of Vietnam was strictly modelled on that of the Soviet Union, with small, single-discipline institutions focusing on transfer of knowledge and operating mainly for elite students. Research was separated from teaching and was the responsibility of independent research institutes. Both lecturers and students used passive teaching and learning modes. Students would expect teachers to tell them everything they needed to know. This style of teaching and learning is still a common practice in HE in Vietnam (K. Harman & Nguyen, 2010; T. N. Pham, 2010). With this and other challenges, the Vietnamese HE system now fails to meet the growing and fast-changing demands of the regulated market economy for graduates with a broad range of high-level and adaptable skills (World Bank, 2008, 2015a). Indeed, the current performance and quality of the Vietnamese HE are poorer than those of its neighbouring countries in the South East Asia region (G. Harman, Hayden, & Pham, 2010; Vallely & Wilkinson, 2008).

Recognising the need for radical reforms of the country’s HE system, the Vietnamese government set out a long-term agenda for “fundamental and comprehensive reform of higher education in Vietnam 2006-2020” (Resolution No.14/2005/NQ-CP, often known as the HERA – Higher Education Reform Agenda). Weaknesses of the Vietnamese HE system are reflected in the measures set out in the HERA. All these measures are to be taken by Vietnamese HEIs and administrators to improve the quality of the whole system.

The goals set out in HERA are said to be ambitious and for these goals to be realised, radical changes at different levels have to be made within the restrictive financial constraints of the Vietnamese HE system (G. Harman et al., 2010). The HERA also outlines tasks and measures that are to be taken to achieve the goals set out therein. Among those measures that relate specifically to teaching and learning are the following:
• Foster learners’ creative and research abilities;
• Develop learners’ professional skills; and
• Upgrade training methodologies by teaching how to learn; bringing into full play learners’ autonomy; and applying ICTs in learning and teaching.

Among the many challenges to this reform agenda is institutional autonomy and self-governance (Hayden & Lam, 2007; Vallely & Wilkinson, 2008). HEIs are still centrally and almost fully controlled by the Ministry of Education and Training through curriculum regulation, enrolment quotas, national budget allocation, and the appointment of senior personnel. A consequence of this management is a long-term mismatch between employer needs and university responsiveness, resulting in the lack of work-related competencies or skills in graduates (Q. T. Tran & Swierczek, 2009). Until recently, worker skills remained a challenge in the labour market, with new workers entering the market lacking adequate skills (World Bank, 2014).

A very recent attempt by the Vietnamese government to improve HE quality was the restructuring of the whole education system, providing clearer pathways to university. In order to understand HE in Vietnam, a clarification of commonly used terms must be made. Traditionally, HE in Vietnam included education provided at academically oriented colleges (cao đẳng) and at university-level institutions (đại học). At the same time, there were separate vocational colleges (cao đẳng nghề) in the vocational education sector. With the Law on Vocational Education 2014, effective as of July 1, 2015, colleges have been merged with vocational colleges and moved to the vocational education sector.

Thus, HE in Vietnam now includes only education provided at university-level institutions, which include three types as follow. First, đại học (university) is the term used for national and regional multidisciplinary universities. Second, trường đại học, which also appears as university in English translations, refers to either (a) an academic element (i.e., a constituting academic body like a school or a faculty) within a multidisciplinary university that is called ‘university’, or (b) an independent provider of university-level education with a narrower teaching focus. Lastly, học viện (institute) refers to university-level institutions with a narrow disciplinary focus and a specialised research capacity. In this thesis, when referring to Vietnam’ HE, the term university incorporates all three types of university-level institutions; and “going to university” means attending HE to obtain a bachelor degree.

1.3 Rationale and significance

Various measures have been taken to improve the quality of teaching and learning in HE in Vietnam, but very little attention has been paid to the issue of student motivation, as evidenced
by governmental policies that have been and are being implemented, and the number of related publications that can be identified on academic databases. And of the limited published projects about Vietnamese university students’ motivation, the majority focus on motivation in the context of foreign language learning (e.g., Ngo, Spooner-Lane, & Mergler, 2017; T. T. H. Phan, 2010; L. T. Tran, 2007). Only one study (Andrews, 2016) has been identified that explored high school students’ expectations towards and preparations for university. No study has been identified that examines both students’ motivation to attend university and their ongoing academic motivation.

Students’ motivation “determines how much time they put into their student activities; attending classes, studying, reading, working on assignments, talking to and socialising with other students, sitting around and thinking about their subject and the changes in their lives” (Round, 2005, p. 28). Therefore, to enhance students’ learning and improve HE quality in general, it is crucial that educators and administrators foster students’ motivation. And with the massification of Vietnam’s HE and its low quality graduates, the issue of student motivation, both for the pursuit of HE and during their candidature, deserves more and immediate attention. This research project was among the first attempts to investigate this largely ignored aspect in the scholarship on Vietnamese university students, with the results offering further understanding of this aspect of HE in Vietnam.

Findings from this study provide initial understandings of Vietnamese university students’ academic motivation and help to expand the currently limited body of published scholarship about Vietnamese HE. On a practical level, results from the study benefit the participating university in that they offer insights to help administrators and instructors to reflect on and improve their strategies to promote student motivation, thus enhancing student learning. The study also makes theoretical contributions regarding the applicability of a Western theory and instrument in the context of a collectivist culture of Vietnam.

1.4 Purpose and scope

Given the limited scholarship about university student motivation in the Vietnamese context, this study aimed at exploring, from both quantitative and qualitative perspectives, the initial and ongoing motivation of students at a large multidisciplinary university in the North of Vietnam. Specifically, it sought to measure students’ motivation through a well-established measure, i.e., the Academic Motivation Scale (AMS) (Vallerand et al., 1992, 1993) and to directly ask students questions pertaining to their motivation. Provided that the main applications of the AMS has been in western countries, and there is a recognition that there are cultural differences
around peoples’ values, as documented by Hofstede, Hofstede and Minkov (2010), this research looks at the application of this instrument in a broader context.

This study was part of the requirements for a professional doctorate; thus its focus was more about its practicality and applicability rather than about theoretical contributions. Therefore, the research project was conducted with an ultimate purpose of providing insights for further research and actions to enhance students’ learning at the participating university. Hence, the target population of the study was students from the participating university only. Furthermore, it was not expected that results from the current study would be generalised to other student populations.

1.5 Research questions

The following research questions (RQ) guided the investigation:

RQ1: What are the psychometric properties of the AMS in the current sample?
   a. Does the proposed 7-factor structure or an alternate structure of the AMS best fit the observed data?
   b. Do scores on the AMS subscales reflect strong reliability?
   c. What are the relationships among the AMS subscales?
   d. What are the relationships between the AMS subscales and the three Motivated Strategies for Learning Questionnaire (MSLQ) subscales of organisation, elaboration, and critical thinking?

RQ2: What are Vietnamese students’ motivational orientations as measured by the AMS?

RQ3: What are the effects of demographic characteristics on Vietnamese students’ motivation?

RQ4: What are Vietnamese students’ views on issues related to their motivation?
   a. Why do students go to university?
   b. How do students make their choice of degree program?
   c. What affects students’ motivation in their daily study?
   d. How does students’ motivation change over the course of their study?

1.6 Research design

This study adopted a convergent parallel mixed methods design to obtain a more complete picture of the phenomenon of Vietnamese students’ motivation. This design, drawing information from both an extensive survey phase and a parallel interview process with university students, provides the capacity to integrate the information collected from these data to inform discussion responding to the above research questions. A combination of quantitative
and qualitative approaches would provide a more comprehensive understanding of the problem under investigation than when only one approach was used (Creswell & Clark, 2011).

1.7 Theoretical framework

This study was primarily guided by self-determination theory (SDT) (Deci & Ryan, 2012a; Ryan & Deci, 2017), which is a macrotheory of human motivation, emotion, and personality in social contexts that “takes interest in factors that either facilitate or forestall the assimilative and growth-oriented processes in people” (Niemic & Ryan, 2009, p. 134). The study also drew upon the construct of instrumental motivation (Husman & Lens, 1999; Simons, Dewitte, & Lens, 2000, 2004; Simons, Vansteenkiste, Lens, & Lacante, 2004), which has recently gained popularity in motivation research.

According to SDT, students possess and bring into the classroom and the school motivational resources which energise their learning behaviour; the educational environment, in turn, has sociocultural conditions that affect students’ motivation (Reeve, Deci, & Ryan, 2004; Reeve, Ryan, Deci, & Jang, 2008). Under the SDT framework, student motivation results from both internal and external sources (Reeve, 2012; Vansteenkiste, Niemiec, & Soenens, 2010) which can be explained by a combination of the six interrelated minitheories comprising SDT (Ryan & Deci, 2017). The six minitheories are:

- Cognitive evaluation theory: if students perceive that the reason for their engagement in learning is more internal, their intrinsic motivation (IM) will be enhanced; but if they feel the locus of control is external, their IM will be diminished;
- Organismic integration theory: through their natural tendency to internalise external values and regulations, students develop acquired motivation; more autonomous forms of extrinsic motivation (EM) lead to better engagement, learning, behaviour, and adjustment;
- Causality orientations theory: there are individual differences among students in terms of orientation toward self-determined behaviour. When students are more autonomy oriented, they exhibit better quality motivation;
- Basic needs theory: students have innate IM and three basic psychological needs, the satisfaction of which entails motivation, and the frustration of which results in a hindrance of motivation;
- Goal contents theory: if students’ learning is part of their pursuit of intrinsic goals, they will have optimal functioning;
- Relationships motivation theory: students’ autonomous motivation is facilitated where teachers are autonomy supportive.

As maintained by SDT, motivation quality is more important in predicting behaviour and outcomes than the quantity of motivation (Vansteenkiste, Sierens, Soenens, Luycks, & Lens, 2009). Therefore, the quality of student motivation determines how they interact with the learning environment to acquire new knowledge and skills. But aspects of the learning environment, in turn, affect the quality of student motivation, motivated by teachers’ motivating style.

As a macrotheory, SDT has generated a considerable amount of research in the field of education, and has been used extensively to better understand educational outcomes (see Niemiec & Ryan, 2009; Ryan & Deci, 2009; Ryan & Weinstein, 2009). In fact, Boiché, Sarrazin, Grouzet, Pelletier, and Chanal (2008) point out four reasons that the comprehensive SDT framework can serve to significantly expand our knowledge of student motivation. These reasons relate to the distinction among different types of motivation, hypotheses about conditions that can influence motivation, subsequent results of motivation, and the issue of internalisation. Central to SDT’s explanatory models is an understanding of basic psychological needs, that is, the needs for autonomy, competence, and relatedness. It is argued that these needs are universal, regardless of culture (Jang, Reeve, Ryan, & Kim, 2009).

SDT was originally developed in a Western individualistic culture, that is, in the United States. This is significant to this study as this research is contextualised in an Eastern collectivist culture, that is, in Vietnam, a country in South-East Asia, and the cross-cultural generalisation of the theory has been questioned (Jang et al., 2009). Criticisms of the applicability of SDT in Eastern collectivist cultures centre on the characterisation of autonomy as a basic psychological need (Jang et al., 2009).

Although much SDT-based research has been undertaken in individualistic cultures, a growing body of research has been concerned with applying the theory in collectivist cultures, especially to understand student motivation. Research using SDT has been undertaken in collectivist populations, for example, Singapore (Liu, Wang, Tan, Koh, & Ee, 2009), China (Vansteenkiste, Zhou, Lens, & Soenens, 2005), Indonesia (Maulana, Opdenakker, & Bosker, 2013), and Korea (Jang et al., 2009). Results from these studies suggest that student motivation in collectivist cultures can be studied from an SDT perspective just as in individualistic cultures. With existing evidence of its overall benefits and its applicability in the East, SDT and its dialectical framework are appropriate for the purpose of this study with Vietnamese students.
1.8 Thesis outline

The remainder of the thesis is organised into six chapters as follows:

Chapter 2 introduces the Vietnamese context. The chapter starts with a brief introduction about the geographical characteristics and the history of Vietnam. It then goes on to introduce the culture of Vietnam based on Hofstede’s model of national culture (Hofstede et al., 2010) and some of its core cultural values. Finally, the chapter outlines the HE system of Vietnam with an aim to provide a background for the study.

Chapter 3 reviews the literature related to research on student motivation. Following a section on definition of motivation, three contemporary theories of motivation are reviewed, including expectancy-value theory, achievement goal theory, and SDT. Although not formalised as a theory, the concept of instrumental motivation is then elaborated. Chapter 3 then goes on to review research on motivation and learning in the HE context which served to inform the current study. The chapter finishes with an introduction of the AMS, the instrument that was used for data collection and tested for its psychometric properties.

Chapter 4 details the implementation of the study. First, the chapter presents information including research design, research site, sampling, instrumentation, and procedures. Next, details of data preparation and analyses are elaborated. Then, the role of the researcher as an insider is discussed, along with ethical issues related to the study.

Chapter 5 reports results from statistical analyses of the survey data, including descriptive analyses of the participants’ responses to the survey items, confirmatory factor analysis and correlation analysis that assessed the psychometric properties of the AMS, as well as multivariate analysis of the effects of demographic characteristics on students’ motivation. The results in this chapter directly address RQ1, RQ2, and RQ3, providing an overall picture of Vietnamese university students’ academic motivation.

Chapter 6 reports results of the thematic qualitative text analysis of the interview data. This chapter directly addresses the qualitative RQ4 regarding students’ perspectives on issues related to their motivation.

Finally, Chapter 7 summarises the whole study and discusses the results. Further, the chapter discusses practical and theoretical implications drawn from the findings, as well as limitations of the study and recommendations for future research.
CHAPTER 2: THE VIETNAMESE CONTEXT

2.1 Introduction

Most of the academic achievement motivation literature has been based on studies that were conducted in what Henrich, Heine, and Norenzayan (2010) termed WEIRD (Western, education, industrialised, rich, democratic) cultures (Pajares, 2007) and that were of a Western philosophical orientation (Murphy & Alexander, 2000). Even given the fundamental cultural differences in cognition, emotion, and motivation (Markus & Kitayama, 1991; Morling & Kitamaya, 2007), motivation has often been treated as a trait and extensively studied in terms of sociocognitive measures, with little focus on the role of context and culture. Therefore, a proper understanding of university students’ motivation in less studied education systems requires knowledge of the culture and the higher education (HE) system of the country. The purpose of this chapter is to offer the reader a picture of the Vietnamese context in terms of basic geographical information, as well as its history, culture, and HE system.

2.2 The country

Vietnam is one of the three countries on the Indochina Peninsula in South East Asia. With its S shape, the country is bordered by China to the north, Laos and Cambodia to the west, the South China Sea on the east, and the Gulf of Thailand on the southwest (see Figure 2.1). Vietnam covers an area of 332,800 sq. km (128,000 square miles) and can broadly be split into three regions: the North, the Central, and the South, with Hanoi, Da Nang, and Ho Chi Minh city respectively as major cities. Vietnam is famous for rice production in the North and the South due to climatic conditions.
Chapter 2: The Vietnamese Context

Figure 2-1. Map of Vietnam, showing its characteristic S shape and neighbouring countries.

According to the General Statistics Office of Vietnam (GSO, retrieved from http://gso.gov.vn/default.aspx?tabid=382&idmid=&ItemID=16171), the population of the country in 2016 was estimated to be 92.70 million people, an increase of 987.8 thousand compared to 2015. The workforce that is within the working age was estimated at 47.7 million, with 20.6% having had some form of post-secondary training, and 2.30% being unemployed. Vietnam is a multiethnic country with 54 ethnic groups but the Viet (Kinh) people alone comprise about 90% of the whole population. The official language of the country is Vietnamese, the language of the dominant group.

2.3 History

Vietnam’s history is like “a saga of recurrent strife, turmoil, invasion, occupation and hardship” (Branigin, 1994, para. 7) and has shaped the country as it is today. Throughout the millennia starting from 111 BC, Chinese dynasties continuously invaded and conquered Vietnam, leading to constant rebellions as the Vietnamese tried to reclaim their land. Since 939 AD, when the Vietnamese defeated the Chinese invader, Vietnam went through feudalism with new rulers each subsequently overthrown by the next. From 1858 to 1954 Vietnam was under the colonisation of the French. And from 1954 to 1975, Vietnam was divided into two parts, with the Americans backing the South in the Vietnam War. The country was not united until April 30, 1975.
After its unification, Vietnam’s involvement in the Cambodian war caused the country’s forced isolation due to the 1979 U.S.-imposed trade embargo against Vietnam. This prevented other capitalist countries in Eastern Europe from providing financial and technical support to Vietnam; the embargo was not removed until 1994. Therefore, in the late 1980s, when the world’s economy started to be globalised, Vietnam remained one of the five poorest countries, with its doors tightly closed (Glewwe, 2004).

Challenged by the current socioeconomic situation, the Vietnamese government has progressed an economic reform policy (commonly known as doi moi) since the late 1980s. With this policy, the centrally planned economy was replaced with a market-oriented one, and a series of important reforms were implemented. The doi moi policy was timely and had great impacts on all aspects of social life in Vietnam (World Bank, 2002). Poverty was critically reduced, resulting in more children going to school and eventually to HE (Glewwe, 2004).

2.4 Culture

Culture is a widely recognised concept in social research; yet, its conceptualisation is not simple (Triandis & Suh, 2002) and its nature continues to be a topic of debate (Trumbull & Rothstein-Fisch, 2011). Culture can broadly be understood as a notion encompassing “shared norms, values, and assumptions” (Schein, 1996, p. 229) and “shared cognitions, standard operating procedures, and unexamined assumptions” (Triandis, 1996, p. 407) among people of an organised social group. This section gives an overview of the development of Vietnamese culture in relation to education, Vietnam’s position on the six dimensions of Hofstede’s model of national culture (Hofstede et al., 2010), and its core values that have been transmitted through many generations and which serve to guide beliefs and behaviours of Vietnamese people.

2.4.1 Overview

Researchers today classify Vietnam as belonging to the group of Confucian heritage cultures (Truong, Hallinger, & Sanga, 2017). Countries in this group are historically influenced by Confucianism, which is “the philosophy of Confucius (551-479 BCE), his disciples, and the numerous later thinkers who regarded themselves as followers of his tradition” (Goldin, 2014, p. 1). But according to N. T. Tran (2006), at the core is Vietnamese indigenous culture, which dates back to around 3000 BC. It is so deeply rooted that one can still find its artefacts in present-day household, farming, musical instruments, and especially in the rich collection of folklores, legends, and folksongs that have been passed on through many generations by means of oral transmission. This indigenous culture was shaped by the geographical features and living conditions and evolved around water-based rice cultivation. Requirements of an agricultural economy in a land with harsh natural conditions have led to a social structure based on village
communities and a corresponding lifestyle with high community spirit, flexibility in social interaction, and high adaptability.

Under the millennial Chinese imperial domination, Vietnamese indigenous culture was blended with Chinese philosophies of Confucianism, Taoism, and Buddhism. Among these, Confucianism had the greatest influence; indeed, it remains a potent force in modern-day Vietnamese society (London, 2006; L. H. Pham & Fry, 2004; Truong et al., 2017). Despite Chinese attempts to absorb Vietnam and assimilate its people, Vietnamese indigenous culture succeeded in maintaining its identity (N. T. Tran, 2006). Indeed, Vietnamese indigenous culture adapted external influences to form its new values with features different from the originals. For example, Vietnamese Confucianism places more importance on dignity and face than does Chinese Confucianism because of their community-based lifestyle which creates the need for social respect (N. T. Tran, 2006).

Vietnam has witnessed many Confucian influences on its education and social values. Education traditionally focuses on teaching Confucian thoughts and principles of “self-cultivation of virtues, unity of man and heaven, relevance of social order and political harmony” (Doan, 2005, p. 452). Vietnamese people have always respected learning and intellectuals who hold positions like teachers, scholars, and mentors (L. H. Pham & Fry, 2004). Students expect teachers to tell them everything they need to know, which is still a common practice, even in HE (K. Harman & Nguyen, 2010; T. N. Pham, 2010). Furthermore, the focus of Confucianism on learning classical materials and passing exams has led to an overly theory-based curriculum and disrespect for manual work (L. H. Pham & Fry, 2004). In a world of globalisation and technology, this has caused many problems in the whole education system. At the HE level, university graduates lack high-level and adaptable skills required by the market economy and the modern workforce (Q. T. Tran & Swierczek, 2009; World Bank, 2008).

Since the late 1800s, Vietnamese culture has come in contact with Western values and Communist ideologies which have influenced the country in different ways. Western influences first came from the French colonists, whose stated mission was to civilise the primitive Vietnamese society, then from the Americans during the Vietnam War, and more recently via the open-door policy and market reforms, which have brought Vietnam closer to global Western influences. The widespread market economy and exposure to Western values have brought about both positive and negative changes in Vietnamese society and sociocultural values. A significant change is the move towards individualism and consumerism (Thomas & Drummond, 2005), which go against traditional values of the indigenous culture.

Communist ideologies, on the contrary, served as guiding ideals in Vietnam’s revolution against Western invaders and have been constitutionalised as guiding principles in the industrialisation
and modernisation of the country. Accordingly, the aim of Vietnamese education is to develop communist/socialist citizens (Doan, 2005). And as a governmental response to the challenges of Western influences, moral education is provided at all levels of schooling, from primary to high school. Moral education in Vietnam includes two types: socialist morality which comprises values and norms advocated by the ruling Communist Party, and traditional morality which is largely traditional Confucian values and beliefs (Doan, 2005; London, 2006). At the tertiary level, except at international institutions, there are compulsory ideology courses.

2.4.2 Dimensions of national culture

Through their extensive research, Hofstede et al. (2010) proposed six dimensions of national cultures that distinguish more industrialised societies from more traditional ones. The six dimensions are power distance index, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance index, long-term orientation versus short-term normative orientation, and indulgence versus restraint. Table 2.1 presents the dimension scores for Vietnam in comparison with other Confucian heritage cultures, as well as with the USA, a typical Western individualist country. This information gives an overview of the prominent features of Vietnamese culture.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Country scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vietnam</td>
<td>70 80 68 58 74 100 40</td>
</tr>
<tr>
<td>China</td>
<td>80 68 58 74 100 40</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>68 58 74 100 40</td>
</tr>
<tr>
<td>Taiwan</td>
<td>58 74 100 40</td>
</tr>
<tr>
<td>Singapore</td>
<td>74 100 40</td>
</tr>
<tr>
<td>Malaysia</td>
<td>100 40</td>
</tr>
<tr>
<td>USA</td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Vietnam</th>
<th>China</th>
<th>Hong Kong</th>
<th>Taiwan</th>
<th>Singapore</th>
<th>Malaysia</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Distance</td>
<td>70</td>
<td>80</td>
<td>68</td>
<td>58</td>
<td>74</td>
<td>100</td>
<td>40</td>
</tr>
<tr>
<td>Individualism</td>
<td>20</td>
<td>20</td>
<td>25</td>
<td>17</td>
<td>20</td>
<td>26</td>
<td>91</td>
</tr>
<tr>
<td>Masculinity</td>
<td>40</td>
<td>66</td>
<td>57</td>
<td>45</td>
<td>48</td>
<td>50</td>
<td>62</td>
</tr>
<tr>
<td>Uncertainty Avoidance</td>
<td>30</td>
<td>30</td>
<td>29</td>
<td>69</td>
<td>8</td>
<td>36</td>
<td>46</td>
</tr>
<tr>
<td>Long-Term Orientation</td>
<td>57</td>
<td>87</td>
<td>61</td>
<td>93</td>
<td>72</td>
<td>41</td>
<td>26</td>
</tr>
</tbody>
</table>


Table 2.1 shows that on the different cultural aspects, Vietnam has similarities to and differences from its close neighbours, but is notably different from a recognized individualist country such as the USA. A brief discussion of each dimension follows.

Power Distance refers to the extent to which the unequal distribution of power is expected and accepted as natural and legitimate. A relatively high score of 70 (compared with Taiwan’s score of 58 and the US’s of 40) indicates that Vietnamese people accept a hierarchical order in which
each member has a place and which needs no further justification. High power distance means subordinates expect to be told what to do and leadership is not to be challenged.

The Individualism-Collectivism dimension addresses the degree of interdependence a society maintains among its members. Vietnam scores 20 on this dimension, a score comparable to its neighbours’ scores but opposed to the US.’s high score of 91. With this score, Vietnam is shown to be a collectivist society where people have close long-term commitment to the “member” group, be that a family, extended family, or extended relationships, that takes care of them in exchange for loyalty, which in turn overrides most other societal rules and regulations. Collectivism fosters strong relationships where everyone takes responsibility for fellow members of their group. In collectivist cultures, people tend to evaluate their sense of worth based on the evaluation of external sources such as social norms, family expectations, relationships, and interactions with others.

Vietnam scores lower than other countries in the table on the Masculinity dimension. With a score of 40, Vietnam is more of a feminine society where the dominant values are caring for others and quality of life, the focus is on working in order to live, and conflicts are resolved by compromise and negotiation. As opposed to people in masculine societies, Vietnamese people do not see success as standing out from the crowd but as the quality of life.

The score on Uncertainty Avoidance reflects the extent to which members of a culture feel threatened by ambiguous or unknown situations and therefore have created beliefs and institutions that try to avoid these. Similarly to other Asian countries except for Taiwan, Vietnam’s low score of 30 indicates a low preference for avoiding uncertainty. Vietnamese people are more relaxed with principles, more tolerant with deviance from the norm, in less favour of rules, more flexible with schedules, and only undertake hard work when necessary.

The Long-Term Orientation dimension describes how a society prioritises the two existential goals of maintaining some links with its own past and dealing with the challenges of the present and the future. With a score of 57, Vietnam is somewhat more of a pragmatic culture where people show an ability to adapt traditions easily to changed conditions, and a strong propensity to save and invest. They also see truths as dependent on situation, context, and time; thus they encourage thriftiness, efforts, and perseverance in education as a way to prepare for the future. Yet, Vietnamese are much less long-term oriented than Chinese (score of 87) and Taiwanese (score of 93) people.

The Indulgence-Restraint dimension deals with the extent to which people try to control their desires and impulses based on the way they were raised and socialised as small children. A low score of 35 (compared with the US’s score of 68) indicates that Vietnam has a restrained culture.
where there is relatively strong control. People in such cultures perceive their actions to be restrained by social norms; thus, indulging themselves feels somewhat wrong. They also tend to be cynical and pessimistic. In restrained cultures, the gratification of desires is also controlled and leisure time does not receive much emphasis.

In summary, Vietnam’s scores on the six dimensions of national culture are largely comparable with scores of its neighbouring countries.

2.4.3 Core values

This section discusses some of Vietnam’s core cultural values that are supposed to influence teaching and learning in Vietnam and that have been further reinforced by Vietnamese communism, namely, community spirit/sense of belonging; filial piety; and respect for learning, knowledge, and the teacher.

Community spirit/Sense of belonging

Living on water-based rice crops and in harsh natural conditions, Vietnamese people from the early days had learned to cooperate with each other and developed a sense of belonging to communities (N. T. Tran, 2006). This community spirit was enhanced throughout the history of continual resistance against invaders. The importance of community spirit is highlighted in contemporary government policies and school curricula. Article 4 of the Vietnamese Constitution stipulates that “the State applies a policy of equality, solidarity, and mutual support among the various communities”. Moral education describes a socialist citizen as “a patriot who loves manual labour, and knows how to live and work for the harmony and benefits of the community” (Doan, 2005, p. 455).

This sense of belonging categorises Vietnam as collectivist on the Individualism-Collectivism dimension, the most important dimension in understanding cultural differences (Triandis, 2004). As such, teaching and learning in Vietnam are different from those in individualist countries. Table 2.2 presents individualist-collectivist differences in teacher/student and student/student interaction as summarised by Hofstede (1986).
### Table 2-2. Difference in Teacher/Student and Student/Student Interaction Related to the Individual Versus Collectivism Dimension

<table>
<thead>
<tr>
<th>COLLECTIVIST SOCIETIES</th>
<th>INDIVIDUALIST SOCIETIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• positive association in society with whatever is rooted in tradition</td>
<td>• positive association in society with whatever is “new”</td>
</tr>
<tr>
<td>• the young should learn; adults cannot accept student role</td>
<td>• one is never too old to learn; “permanent education”</td>
</tr>
<tr>
<td>• students expect to learn how to do</td>
<td>• students expect to learn how to learn</td>
</tr>
<tr>
<td>• individual students will only speak up in class when called upon personally by the teacher</td>
<td>• individual students will speak up in class in response to a general invitation by the teacher</td>
</tr>
<tr>
<td>• individuals will only speak up in small groups</td>
<td>• individuals will speak up in large groups</td>
</tr>
<tr>
<td>• large classes split socially into smaller, cohesive subgroups based on particularist criteria (e.g., ethnic affiliation)</td>
<td>• subgroupings in class vary from one situation to the next based on universalist criteria (e.g., the task “at hand”)</td>
</tr>
<tr>
<td>• formal harmony in learning situations should be maintained at all times</td>
<td>• confrontation in learning situations can be salutary; conflicts can be brought into the open</td>
</tr>
<tr>
<td>• neither the teacher nor any student should ever be made to lose face</td>
<td>• face-consciousness is weak</td>
</tr>
<tr>
<td>• education is a way of gaining prestige in one’s social environment and of joining a higher status group (“a ticket to a ride”)</td>
<td>• education is a way of improving one’s economic worth and self-respect based on ability and competence</td>
</tr>
<tr>
<td>• diploma certificates are important and displayed on walls</td>
<td>• diploma certificates have little symbolic value</td>
</tr>
<tr>
<td>• acquiring certificates, even through illegal means (cheating, corruption) is more important than acquiring competence</td>
<td>• acquiring competence is more important than acquiring certificates</td>
</tr>
<tr>
<td>• teachers are expected to give preferential treatment to some students (e.g., based on ethnic affiliation or on recommendation by an influential person)</td>
<td>• teachers are expected to be strictly impartial</td>
</tr>
</tbody>
</table>

(Adapted from Hofstede, 1986, *Cultural differences in teaching and learning*)

### Filial piety and gender hierarchy

Filial piety is a virtue of respect that individuals must show for their parents, elders, and ancestors (McLeod & Nguyen, 2001). This results from the strong belief that when individuals are born, they are indebted to their parents for giving them life and taking care of them. Therefore, in order to repay their moral debt, people have to obey their parents and take care of them, especially when they are incapable (Glewwe, 2004). People also have to pay respect to older members of their family. Among young people, the most common way to express filial piety towards their parents is to strive for academic success, which is widely believed to be reflective of the parents’ emotional, intellectual, as well as financial support. A student’s academic success brings pride to their family, especially the parents, because it makes them feel that their efforts have been worthwhile.
Regarding the gender hierarchy, Confucianism is often associated with patrilineal and patrilocal family arrangements (Grosse, 2015). With the historical influence of Confucianism and practical concerns, there has traditionally been a preference for sons over daughters in Vietnamese families (Larrinaga, 2010). Being born female, the daughters are soon taught the “three obediences” (tam tòng), which are the three core obligations of women, that is, obeying the father as a child, obeying the husband as a wife, and obeying the eldest son as a widow (T. L. Lam & Laura, 2017). Growing up, women are expected to behave in accordance with the “four virtues” (tứ đức), that is, they must be skillful in their work, modest in their behaviour, soft-spoken in their language, and faultless in their principles. In other words, men are implicitly given more power than women, both domestically and socially. Despite major changes that have taken place due to the economic reform, there still remain important gender differences (World Bank, 2011).

Respect for learning, knowledge, and the teacher

One enduring trait of Vietnamese people is the respect for knowledge and teachers (L. H. Pham & Fry, 2004). This is exemplified in many proverbs, including ‘Không thầy đố mày làm nên’ (Without a teacher, you can do nothing), and the official slogan currently used in schools across the country, that is, ‘Học, học nữa, học mãi’ (Learn, learn more, learn forever). Vietnamese people consider knowledge to be more valuable than material wealth and success because they believe that one can create everything given they have knowledge (N. T. Tran, 2006). This respect for knowledge leads to special respect for teachers, scholars, and mentors. Enhanced by filial piety, respect for educated people means that teachers are perceived as gurus in the classroom and students are, generally, submissive and passive learners who will not dare to challenge the teacher (T. T. Tran, 2013a).

2.5 The higher education system

Vietnam’s first institution of HE, Văn Miếu Quốc Tử Giám (the Royal College at the Temple of Literature), was established in 1076 and is the oldest recorded in South East Asia (L. H. Pham & Fry, 2004). The current poor performance and quality of the Vietnamese HE, even when compared only with other South East Asian countries, are believed to be a consequence of the historical legacies of the country (G. Harman et al., 2010; Vallely & Wilkinson, 2008). Since the embarkation of the doi moi economic renovation policy in 1986, the Vietnamese government has implemented a number of major reforms within the HE sector (T. H. T. Pham, 2011). This section provides a brief description of the major changes as well as the current situation of HE in Vietnam (cf. George, 2014).
2.5.1 Structure

With the 1975 national unification, Vietnam faced significant challenges in integrating the then existing different education systems into a new unified system (L. H. Pham & Fry, 2004). This process was intensified by the challenges of the socioeconomic crisis in the years that followed. The picture of the national education system of Vietnam is complex and has witnessed ongoing change; since 1975 it has been restructured multiple times – in 1979, 1993, 1998, 2005, 2014, and most recently 2016. Broadly speaking, the national education system of Vietnam includes three sectors: mainstream education, vocational education, and continuing education. However, as there have been overlaps between mainstream education and vocational education, as well as in state administrative management and legislation, the distinction between the systems is not always clear.

The 1993 restructuring (Decree No.90/CP, dated 24/11/1993) was fundamental to Vietnamese HE as it marked a shift from the Soviet model of specialised universities into multidisciplinary universities and the inclusion of research in universities, which was previously entrusted to independent research institutes. Apart from the two national universities which were established in the late 1990s, most universities still have teaching as their main function. It was also not until 2012 that a distinction was made between research-oriented and professional-oriented universities (Higher Education Law, dated 18/06/2012).

Traditionally, there were two types of colleges in Vietnam: cao đẳng, which are academically oriented, and cao đẳng nghề, which are vocationally oriented. [NB: unless otherwise specified, college as used in this thesis refers to academically oriented colleges]. With the Law on Vocational Education 2014, effective as of July 1, 2015, colleges have been merged with vocational colleges and moved to the vocational education sector. Thus, HE in Vietnam now includes only education provided at universities.

The most recent restructure of Vietnam’s national education system (Decision No.1981/QĐ-TTg, dated 18/10/2016) is an attempt of the government to systematise the whole education system, providing clearer pathways to university (see Figure 2.2). It is clear that it will take considerable time for the implications of all the restructuring to fully manifest. Statistics used in this thesis, obtained from the website of the GSO (http://gso.gov.vn/default.aspx?tabid=722, updated on 06/09/2016, accessed on 15/07/2017), include both universities and colleges.
Furthermore, until 1993, all universities in Vietnam were public. Today there are different forms of non-public universities: semi-public, private, and foreign. Although there has been growth in the private HE sector, it accounted for only 20% of schools in 2015 and has only had around 15% of total enrolments (GSO statistics). The quality of semi-public and private schools has often been perceived as lower than that of public institutions. Yet, more changes are bound to take place as Vietnam is fostering internationalisation of its HE.

### 2.5.2 Governance

There have been overlaps in administrative management of tertiary education in Vietnam, but overall, university-level education is overseen by the Ministry of Education and Training.
(MOET), while the vocational training sector is overseen by the Ministry of Labor, Invalids and Social Affairs, and some specialist colleges by corresponding ministries. Traditionally, MOET oversaw nearly all aspects of HE, including the regulation of new institutions, the creation of textbooks and curricula, the approval of new programs, decisions on admissions criteria, and the issuing of certificates and diplomas, as well as levels of payment for instructors in public higher education institutions (HEIs), which generally had very little autonomy (Vallely & Wilkinson, 2008).

Student enrolment was largely controlled by MOET through the imposition of student quotas for each school and the method of student admission to be used across the HE system. Overall, MOET coordinates the national university entrance examination which holders of a high school certificate are eligible to take, the results of which are used for admission. The university entrance examination is administered in groups of various combinations of high school subjects that reflect the key areas of knowledge or skills students will need for their university study. In the past, schools were able to design their own tests, but now the tests are designed by MOET to be used by all schools. Depending on the number of applications received, schools then set their required scores for different programs. Students’ chances of going to university depend solely on the scores they get for this examination. Therefore, students can be pragmatic in applying for a program, and do not necessarily pick their favourite or first-choice program. The high school graduation examination has also been used in place of the national university entrance examination as an experiment. The application process has also varied during the past years. The constant changes in student admission suggest that Vietnam is still struggling to find a system that works.

The situation has only recently started to change as a result of the HERA (Resolution No.14/2005/NQ-CP on the fundamental and comprehensive reform of higher education in Vietnam 2006-2020). With new legislation and policies being developed, HEIs are starting to have more autonomy. Specifically, since 2011, all HEIs can decide on the content of their training programs and open new training programs, and since 2012, HEIs can decide on the number of enrollees (McCourtie, 2015). However, HE curricula must still follow frameworks set by MOET, although there might be more flexibility in private schools. Therefore, the content enforced through this process may have little relevance to emerging labour market needs (World Bank, 2008).

2.5.3 Massification of higher education

Expansion of HE in Vietnam has been occurring since the embarkation of the doi moi policy in 1986, but has increased substantially since 2000. According to the GSO statistics, the number of
HEIs (see Figure 2.3) rose from 178 in 2000, to 322 in 2006, and to 445 in 2015, an increase of 250% over a 15-year period.

![Figure 2-3. Number of higher education institutions in Vietnam 2000-2015, showing public and non-public institutions.](image)

Similarly, the number of students in 2000 \( (n = 899,500) \) nearly doubled in 2006 \( (n = 1,666,200) \) and tripled in 2014 \( (n = 2,363,900) \) only to then decrease to 2,118,500 in 2015. The growth in numbers of instructors did not match this. The growth in terms of students and lecturers is presented in Figure 2.4.

![Figure 2-4. Number of students and lecturers in higher education institutions in Vietnam in the period 2000-2015.](image)

This expansion of HE has occurred largely as a result of the government’s long-term agenda for “fundamental and comprehensive reform of higher education in Vietnam 2006-2020” (Resolution No.14/2005/NQ-CP, often known as the HERA – Higher Education Reform
Chapter 2: The Vietnamese Context

2.5.4 Quality

A 2008 report by Harvard Kennedy School (Vallely & Wilkinson, 2008) described Vietnamese universities as “lag[ging] far behind even their undistinguished Southeast Asia neighbors” (p. 1), “largely isolated from international currents of knowledge” (p. 2), and “not producing the educated workforce that Vietnam’s economy and society demand” (p. 2). Similarly, another report by the World Bank (2015a) pointed out a lack of quality and relevance in HE with out-of-date curricula and insufficient equipment, in the absence of a quality assurance system to provide universities with feedback. The current national quality assurance agency is government dependent (Q. T. Lam & Vu, 2012). Prior to the HERA, HEIs lacked effective teachers and researchers as they did not receive sufficient academic credentials and training (World Bank, 2015b). Meanwhile, HEIs did not have the capacity and authority for strategic investment to improve the quality of their faculty members (World Bank, 2015a). This and the rapid growth of student numbers cause HEIs to fail to meet the demand of the workforce for a new economy. Vietnamese graduates are ill prepared, lacking necessary skills to transit into their professional life (T.T. Tran, 2013b).

2.5.5 Training areas and programs, and job prospects

As mentioned in section 2.5.2 above, the HE system in Vietnam is still very much centrally controlled by the government. MOET still regulate training areas and programs with a legal document listing all university-level training areas and programs. According to Circular No. 24/2017/TT-BGDĐT, dated October 10th 2017, there are currently 367 training programs in 24 areas. There is a seven year time gap between this recent document and its predecessor, Circular No. 14/2010/TT- BGDDT, dated April 24th 2010. Public universities have to obtain approval from MOET regarding the programs that they want to offer. Yet, universities are now granted autonomy over the specialisations of the approved programs.

It was not until July 10th 2017 that MOET issued the dispatch No. 2919/ BGDDT-GDDH giving official requirements and instructions for universities to survey the employment status of their graduates, starting from the cohort graduating in 2016, and to publicise survey results. Up until
June 2018, only a number of universities have been able to do as required. There have also been questions concerning the reliability of published data. Thus there is limited official statistics regarding job prospects for training programs.

According to a bulletin about the labour market of Vietnam in Quarter 4, 2017 that was jointly published by the Ministry of Labour, Invalids, and Social Affairs and the Government Statistics Office (from: http://www.molisa.gov.vn/Images/FileAnPham/fileanpham20183151635839.pdf), 21.5% of the labour force has some form of qualifications and certifications. Of these, 70.1% were working in service industries, 22.41% in construction and building, and 7.49% in agriculture, forestry, and aquaculture. All over the country 215.3 thousand people with a university or higher degree were unemployed, equating an unemployment rate of 4.12% among this group.

2.6 Summary

The long history of Vietnam has shaped its culture. While the country is widely known today as having Confucian heritage, many Confucian values have been adapted to suit the Vietnamese indigenous culture. In contemporary cultural research, Vietnam can be described as a collectivist society with high power distance, high femininity, low preference for uncertainty avoidance, high pragmatism with long-term orientation, and high social control. Influenced by cultural factors, education in Vietnam is highly respected and considered to be a good preparation for the future; a child’s academic success is the pride of the family.

With historical Chinese influences, the Vietnamese learner shares many characteristics with the Chinese learner as portrayed by Watkins and Biggs (1996). The Vietnamese learner lives in a society where some of the core cultural values are community spirit/sense of belonging, filial piety, and respect for learning, knowledge, and the teacher. These values should be taken into account in explaining Vietnamese students’ behaviour and motivation, especially in HE, which requires high levels of time and financial commitments.

Since the reform agenda was enacted in 2005, Vietnam’s HE has witnessed many positive changes, but there is still a lot to be done. One recent governmental attempt is the restructuring of the whole education system whereby HE now only includes university study and there is no more distinction between academically oriented colleges and vocational colleges. The new structure is believed to provide clearer pathways to university, thus offering learners equal chances to further their study.

Already since the doi moi policy in the late 1980s, particularly since 2000, more Vietnamese students have pursued HE. Nevertheless, many university graduates lack the necessary skills
required by the workforce, a possible reason leading to a rather high unemployment rate among university graduates. Vietnam’s HE has been blamed for low graduate quality. Yet, T. T. Tran (2015) found that university students themselves, with their learning attitudes and styles, are also responsible for their low employability. An important factor that can explain student learning is motivation, but this has largely been ignored in Vietnam. It is therefore timely and necessary that more research is conducted to study Vietnamese university students’ motivation, helping instructors to better understand their students and enhance students’ learning.
3.1 Introduction

Motivation in learning enhances educational accomplishments; motivated students exhibit more cognitive engagement, develop more effective strategies for learning, and are more committed to knowledge and skill accumulation (Blumenfeld, Kempler, & Krajcik, 2006). Therefore, educational researchers and practitioners have increasingly been interested in understanding the processes and dynamics of student motivation (Murphy & Alexander, 2000; Schunk, 2000), and its influences on choice, persistence, and performance (Vansteenkiste, Lens, & Deci, 2006). Hence, motivational research in education is also often referred to as achievement motivation research.

The body of motivation research in education is broadly located across many areas (Murphy & Alexander, 2000). Human motivation in general and student motivation in particular have been examined under various theoretical perspectives, each of which focuses on specific aspects of motivation (Schunk, Meece, & Pintrich, 2014). Therefore, the goal of this chapter is to present a broad review of motivation research in education, particularly in higher education (HE), that serves to inform the current study.

This study was conducted with university students in Vietnam, a country that has been deeply influenced by Confucian thoughts and principles but that has also been able to maintain its indigenous cultural values. Since Vietnam embarked on its economic reform policy, the doi moi, in 1986, many great changes have taken place in its society. One such change is the greater demand for education due to better household resources (Glewwe & Jacoby, 2004). This is reflected in the expansion of the country’s HE system, particularly since 2005, when the HE reform agenda was enacted (see section 2.5). Yet, graduate quality is still very low, and has often been attributed to a lack of quality and relevance in HE with out-of-date curricula, insufficient equipment, and shortage of effective teachers (World Bank, 2015a). Some research (T. T. Tran, 2015) has pointed out the shared responsibility of students in their low employability. Nevertheless, very little attention has been paid to students’ motivation, despite the strong link between motivation and learning. Therefore it is timely to look into the issue of motivation among Vietnamese university students.

This chapter reviews the literature pertaining to student motivation, first with an introduction to definitions of motivation. Then three selected theories are considered, with particular focus on self-determination theory (SDT) as this is the guiding theory of the study. Motivation research
in the HE arena is then considered, followed by a review of the Academic Motivation Scale (AMS), the instrument used and tested in this study.

### 3.2 Definition of motivation

Derived from the Latin word “movere”, which means “to move”, the word “motivation”, as a psychological construct, generally refers to forces which cause an individual to perform and sustain certain behaviour towards a desired goal. Motivation has been conceptualised in different ways, but the general aim has been to understand three interrelated aspects of human behaviour: “the choice of a particular action, persistence with it, and effort expended on it” (Dörnyei, 2000, p. 520). Motivation in the educational domain is often referred to as academic motivation and has been defined in different ways within a variety of theoretical perspectives that reflect the nature of the constructs and outcomes being targeted (Murphy & Alexander, 2000; Pintrich, 2003; Vallerand & Bissonnette, 1992).

Different theoretical perspectives have different views towards motivation. For example, goal theorists typically define motivation as that which influences the initiation, direction, magnitude, perseverance, continuation, and quality of goal-directed behaviours (Maehr & Meyer, 1997). From a social cognitive perspective, academic motivation refers to internal processes that trigger and prolong activities that aim at attaining specific goals (Pintrich & Zusho, 2007). Ryan and Deci (2000a) provide another definition based on self-determination: “motivation concerns energy, direction, persistence and equifinality – all aspects of activation and intention” (p. 69).

These broad perspectives on motivation have served as the basis for different operationalised definitions of academic motivation in empirical research. For example, basing on self-determination, Reeve (2012) views motivation as in essence the force behind students’ studying. Framing motivation as an internal causal process, Beck (2004) refers to academic motivation as the reasons for students’ attendance to, engagement in, and effort regarding learning and achieving in school. Alternatively, Brophy (1983) states, “motivation to learn in school means seeking to acquire the knowledge and skill that an academic activity is designed to develop, not merely getting the activity finished or doing the minimum necessary to meet requirements” (p. 200).

At the HE level, Round (2005) suggests a distinction between three separate but interlinked aspects of student motivation, namely, entry motivation (attending HE, choice of institution and course), daily motivation (attendance and engagement in daily tasks and activities once enrolled), and future motivation (expected attainments upon completion). In this study, the term ‘ongoing motivation’ is used instead of ‘daily motivation’. Students may have a different
quantity or quality of motivation on each of these components. Round also points out that high levels of entry motivation and future motivation do not necessarily lead to the corresponding level of ongoing motivation. Furthermore, entry motivation and future motivation are not easily distinguishable. Therefore, the most important distinction is between ongoing motivation and the other two types. Students’ entry motivation helps to understand why students pursue HE in the first place, which in turn can partially explain their ongoing motivation. Ongoing motivation offers direct insights into students’ learning and performance.

In some studies on HE students, although the researchers do not make clear statements about this distinction, it can be seen that they actually focus on only one of the three aspects that Round (2005) elaborates. For example, Clark and Schroth’s (2010) definition of motivation as “the factors that influence a person to attend school and obtain a degree” (p. 19) clearly reflects entry/future motivation. Meanwhile, J. S. Smith, Dai, and Szelest (2006) clearly refer to ongoing motivation when they suggest that that motivation involves both cognitive and behavioural processes resulting from students’ interaction with the teaching and learning environment. The current study sought to obtain an overall understanding of Vietnamese university students’ motivation. Therefore, it addressed both entry/future motivation and ongoing motivation.

3.3. Theories of motivation

Numerous theories have been proposed to explain human motivation (Schunk et al., 2014). Most motivation theories have areas of conceptual overlap and disagreement, with potential confusion where, for example, different words may be used for the same concept, and the same word can be used for different concepts (Murphy & Alexander, 2000). In academic motivation research, there are five broadly recognised contemporary theories (Cook & Artino Jr, 2016; cf. Schunk et al., 2014), namely attribution theory, expectancy-value theory (EVT), achievement goal theory (AGT), SDT, and social-cognitive theory. Cook and Artino Jr identify four recurrent themes across the five theories, with both between- and within-theory differences. The four common themes are: a concept around beliefs about competence; a concept around the value or anticipated value of the learning task; the importance of attributions; and the inclusion of both social and cognitive elements.

To provide a thorough review of all the different theoretical orientations and topical themes in the area of student motivation would be an impossible task, and well beyond the scope of this thesis. A brief introduction of the most prevailing theories is offered to provide insights into the selection of this particular theory. Thus, the following section focuses on EVT, AGT, and SDT, identifying key elements of the theory and associated research, as these are suggested by the
literature to be the most widely used theories in achievement motivation research. The emerging trend of combining theories is then introduced (section 3.3.4), serving as the foundation for a discussion about research on instrumental motivation (section 3.3.5). The section concludes with a discussion of reasons for the choice of SDT as the guiding theory of the current study.

3.3.1 Expectancy-value theory

3.3.1.1 Overview

There are several models of modern EVT (e.g., Eccles, 2005; Eccles et al., 1983; Feather, 1982; Wigfield & Eccles, 1992, 2000) that examine motivation and explain behaviours around the two components of expectancy and value (Barron & Hulleman, 2015). Among these models, the most influential is the model by Eccles et al. (1983) and its refinements (Wigfield & Eccles, 2002). Under this model, expectancy and value are the most immediate or direct predictors of achievement performance, persistence, and choice, and are themselves influenced by a variety of psychological, social, and cultural factors. Research based on this model has largely focused on how children’s expectancies and values develop and change over time; how expectancies and values are related; and the relations between expectancies and values and performance, choice, and emotions (Wigfield & Cambria, 2010a).

Expectancies for success are understood as an individual’s beliefs about the extent to which they will succeed in a future academic task that comes either in the near or more distant future. As such, expectancy for success is theoretically related to other conceptions of self-belief like academic self-concept and self-efficacy (Trautwein et al., 2012). Conceptually, expectancies, which are task or subject specific and future oriented, are differentiated from ability or competence beliefs, which are an individual’s perception of their current competence in a given domain (Eccles et al., 1983). Empirically, the distinction between these two constructs is not clear because ability self-concepts have been found to be directly linked to expectations for success (Eccles, 2009). In fact, expectancies for success are largely determined by perceived ability (Steinmayr & Spinath, 2009) and have routinely been measured via academic self-concept (Guo et al., 2016).

Task values refer to the importance, usefulness, and enjoyability that the individual perceives the task to have. Task values are subjective and include four major facets: attainment value, intrinsic value, utility value, and cost (cf. Wigfield & Eccles, 1992). A task is perceived to have attainment value if it is personally important for the individual to succeed in the task. Intrinsic value is the enjoyment a person gains from performing the task. Utility value is the individual’s perceived usefulness of the task for their future goals. The components of attainment value and
utility value are conceptually similar in certain respects to two of the four external regulation components in SDT (Wigfield & Cambria, 2010a). Similarly, intrinsic value shares some commonalities with the notions of intrinsic motivation and interest. Finally, cost refers to the negative aspects of engaging in the task, which include alternatives that have to be given up for the performance of the task, the anticipated level of effort required for the task, as well as emotional cost associated with completion of the task.

Research on subjective task value has predominantly focused on a single facet of value measured by a small number of items or on only one or two of the four components (Guo et al., 2016). Utility value has also been found to have strong correlation with attainment value and therefore in several studies these two components have been combined into one, often called importance value (e.g., Durik, Vida, & Eccles, 2006; Musu-Gillette, Wigfield, Harring, & Eccles, 2015; Watt, 2006; Watt et al., 2012). Among the four components of task values, cost remains the least studied (Flake, Barron, Hulleman, McCoach, & Welsh, 2015; Guo et al., 2016; Wigfield & Cambria, 2010a; Wigfield, Tonks, & Klauda, 2009). Some researchers (e.g., Barron & Hulleman, 2015; Flake et al., 2015) have suggested new conceptualisations and measurements of cost and the inclusion of cost in the overall name of the Eccles et al. (1983) model.

3.3.1.2 Effects of expectancy and value

The effects of expectancy and value have mainly been examined in an additive manner (Barron & Hulleman, 2015; Trautwein et al., 2012), that is, expectancy and value are postulated to uniquely and independently predict outcomes; the combined effect of the two factors adds to the combination of their unique effects. There is both longitudinal and cross-sectional evidence that students’ expectancies for success and achievement task values predict important achievement outcomes, with other factors having indirect influence through these expectancies and values (Wigfield et al., 2009). Yet where both expectancy and value beliefs are entered into a regression model, expectancies have been found to be the stronger predictor of academic achievement while task values are stronger predictors of achievement-related behaviours (Wigfield & Cambria, 2010b).

Expectancies for success have been found to have positive associations with educational expectation (e.g., Fan, 2011), academic engagement (e.g., Fan, 2011; Nagengast et al., 2011), occupational aspirations (e.g., Guo, Marsh, Morin, Parker, & Kaur, 2015), choice of college major (e.g., Musu-Gillette et al., 2015), and mastery goals (e.g., Bong, 2001), amongst others. Meanwhile, value beliefs have been found to be more potent predictors of effort and persistence (e.g., Chouinard, Karsenti, & Roy, 2007; Nagengast, Trautwein, Kelava, & Lüdtke, 2013; Trautwein & Lüdtke, 2007, 2009), the use of metacognitive strategies (e.g., Velayutham &
Aldridge, 2013), as well as educational and career aspirations (e.g., Simpkins, Davis-Kean, & Eccles, 2006; Watt et al., 2012).

At the post-secondary level, expectancy and value have been found to relate positively with academic performance (Credé & Phillips, 2011); study success (De Clercq, Galand, Dupont, & Frenay, 2013); cognitive process outcomes of reflective-thinking practice and a deep-learning approach, and achievement (H. P. Phan, 2014); and intentions to enter graduate school (e.g., Battle & Wigfield, 2003). Similarly, F. Wu and Fan (2016) found that expectancy and value had significant associations with academic procrastination, effort and persistence; the effects of expectancy and value on effort and persistence were mediated through academic procrastination. In another study, Perez, Cromley, and Kaplan (2014) identified dynamic relations between expectancy and value and chemistry achievement and students’ retention intentions in STEM majors. The study also revealed that different perceptions of cost related differently to students’ intentions.

With methodological and statistical advances, structural equation modelling with latent interactions corrected for measurement error is increasingly being used to examine these elements (e.g., Guo et al., 2016; Guo, Parker, Marsh, & Morin, 2015; Nagengast et al., 2011; Nagengast et al., 2013; Trautwein et al., 2012) with support found for the interactive effects of expectancy and value in the Eccles et al. (1983) model. Specifically, there is a statistical interaction between expectancy and value, and the multiplicative effect of expectancy beliefs and value beliefs is different from the sum of their unique effects (Guo et al., 2016; Trautwein et al., 2012). From these findings, it is concluded that if expectancy is high while value is low, or vice versa, task engagement is very unlikely to happen. Thus to perform desired achievement behaviours, individuals must have both high expectancies and high values. For example, the interactions between expectancy and value beliefs have been found to synergistically predict engagement in science activities and intentions of pursuing scientific careers (Nagengast et al., 2011), homework engagement in six subjects (Nagengast et al., 2013), and academic achievement and effort (Guo et al., 2016; Trautwein et al., 2012).

3.3.2 Achievement goal theory

3.3.2.1 Overview

AGT, also referred to as goal orientation theory, specifies the kinds of goals that direct achievement-related behaviours in particular situations or in classes of related situations (Harackiewicz, Barron, & Elliot, 1998). AGT focuses on understanding why instead of what individuals are trying to achieve (Maehr & Zusho, 2009). Achievement goals are concerned with the development, attainment, or demonstration of competence at an activity (Dweck,
The classification of achievement goals centres on competence, which is “a condition or quality of effectiveness, ability, sufficiency, or success” (Elliot & Dweck, 2005, p. 5).

Central to AGT is the distinction between mastery goals and performance goals. The focus of mastery goals is the development of competence relative to the task while the focus of performance goals is the demonstration of competence relative to others (Elliot, Murayama, Kobeisy, & Lichtenfeld, 2015). Mastery goals have also been referred to as task-involved learning goals, and performance goals as ego-involved ability goals. Mastery and performance goals arouse different thoughts and emotions, which in turn initiate different behaviours (Elliott & Dweck, 1988).

3.3.2.2 Perspectives of achievement goals

A number of perspectives of achievement goals have been proposed, differing in three main dimensions: the origins of goals, the issue of motivational equity and the role of goals, and the nature of goals and the possibility of multiple goal endorsement (Maehr & Zusho, 2009). Each perspective may also have different conceptualisations of mastery and performance goals (Senko & Tropiano, 2016). Four achievement goals models that have been proposed to date are: the dichotomous model, the trichotomous model, the 2x2 model, and the 3x2 model. There is also the multiple-goal perspective.

The dichotomous model

In this original model (see Figure 3.1) of AGT (Ames, 1992; Ames & Archer, 1988; Dweck & Leggett, 1988; Nicholls, 1984), two types of goals are distinguished based on the focus of competence (Korn & Elliot, 2016) that explains why an individual chooses to achieve a certain outcome: mastery goals (i.e., to develop competence and acquire task mastery) and performance goals (i.e., to demonstrate competence and outperform others).

![Figure 3-1. The dichotomous model.](image)

The pursuit of mastery goals is adaptive, promoting effective functioning and performance, whereas performance goals orientation can be maladaptive, leading to undesirable behaviours and outcomes, especially for individuals who have low perceptions of competence and doubts about their ability (Dweck, 1986; Dweck & Leggett, 1988). This assumption has led to an
extensive body of correlational and experimental studies that test the correlates and consequences of mastery and performance goals. Yet, early research revealed more consistent findings regarding mastery goals than performance goals (Harackiewicz et al., 1998; Maehr & Zusho, 2009). For example, Linnenbrink-Garcia, Tyson, and Patall (2008) reviewed more than 90 studies and found the positive relationship between mastery goals and academic achievement was evidenced in 40% of the effects reported in correlational studies and in about 20% of the effects in experimental studies.

**The trichotomous and the 2x2 models**

Elliot and colleagues suggested that the focus of competence could be on the positive possibility of success or on the negative possibility of failure, thus resulting in approach and avoidance forms of regulation, respectively (Elliot et al., 2015). The crossing of the definition and the valence of competence resulted in the trichotomous model (Elliot & Church, 1997; Elliot & Harackiewicz, 1996) comprising mastery, performance-approach, and performance-avoidance goals (see the left half of Figure 3.2).

![Figure 3-2. The trichotomous (left) and the 2x2 (right) models.](image)

This model later expanded into a 2x2 framework (Elliot, 1999; Elliot & McGregor, 2001) comprising mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance goals (see the right half of Figure 3.2). These two models have led to an extensive body of research, with mastery-avoidance goals being least tested (Linnenbrink-Garcia et al., 2008) and performance-approach goals having the least consistent effects (see Hulleman, Schrager, Bodmann, & Harackiewicz, 2010 for a review; see also Maehr & Zusho, 2009).

Mastery-approach goals have generally been shown to be the most adaptive form of regulation (Maehr & Zusho, 2009; see Moller & Elliot, 2006 for a review). Mastery-approach goals are associated with adaptive achievement emotions, intrinsic motivation, persistence, help-seeking, self-regulation, academic self-concept, and higher interest (e.g., Barron & Harackiewicz, 2001; Bieg, Reindl, & Dresel, 2017; Lau & Nie, 2008; Pekrun, Elliot, & Maier, 2006; Wolters, 2004). Yet, the effects of mastery-approach goals on academic achievement have been mixed (Diseth
& Kobbeltvedt, 2010; Hulleman et al., 2010). Among university students, Morris, Brooks, and May (2003) found mastery-approach goals to be positively related to grade point averages and task-oriented coping, and H. P. Phan (2012) found them to have an interactive effect with academic performance.

Some researchers have proposed explanations for inconsistencies in AGT-based research. Hulleman et al. (2010) conducted a meta-analysis and found different conceptual and operational definitions of all four types of achievement goals, resulting in differences in measurement and effects. Senko, Hulleman, and Harackiewicz (2011) specifically pointed out two viewpoints regarding performance goals with different focus. More recently, Korn and Elliot (2016) identified a gap between the original dichotomous model and subsequent models of AGT. That is, the goals in the dichotomous model, although not explicitly acknowledged, actually consisted of two distinct subcomponents while subsequent models focused on only one subcomponent. The two subcomponents in the dichotomous model are standpoints on competence (developing vs. demonstrating) and standards of competence (task/self-based and other-based standards). The Elliot (1999) 2x2 model, instead, focused on only the standards of competence. Nevertheless, some measures continued to assess the standpoints on competence.

**The 3x2 model**

The 3x2 achievement goal model (Elliot, Murayama, & Pekrun, 2011) conceptualises achievement goals purely on the basis of the definition of competence (see Figure 3.3). Specifically, competence can be defined on three basic standards: the task itself, oneself, or others. Accordingly, there are three types of goals: task-based, self-based, and other-based goals. These are crossed with the approach/avoidance aspects of valence to form the 3x2 framework. Thus task- and self-based goals correspond to mastery goals and other-based goals correspond to performance goals.

![Figure 3.3. The 3x2 model.](image_url)
Within each combination of definition/valence, there can be different variants as in each achievement situation the individual may use a different trajectory of reference (Elliot et al., 2015). Although this model has not been extensively tested (Vansteenkiste, Lens, Elliot, Soenens, & Mouratidis, 2014), initial evidence has been found in its favour (e.g., David, 2012, 2014; M. L. Johnson & Kestler, 2013; Lower & Turner, 2016; C.-C. Wu, 2012; Yang, Taylor, & Cao, 2016).

Other models

Apart from the issues of crossing mastery/performance with approach/avoidance and defining performance goals, there have been other refinements to AGT. First, unexpected findings about the benefits of performance goals led to the proposal of a multiple goal perspective (Harackiewicz et al., 1998; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002) which assumes that performance-approach goals may have more positive effects than mastery goals, that students can endorse mastery and performance goals simultaneously, and that the pursuit of both goals may enhance the unique benefits of the goals.

Another attempt to account for the different effects of performance goals resulted in the goal complex model (Elliot & Thrash, 2001; Urdan & Mestas, 2006) that defines achievement goals as the competence standards (i.e., the task itself, oneself, or others) and differentiates the objective or standard of goal pursuit from the reasons to pursue those goals. There can be different goal complexes, each blending the goal with the reason. This model has only recently been tested in a few studies using SDT as the framework for classifying the various underlying reasons (e.g., Senko & Tropiano, 2016).

3.3.3 Self-determination theory

3.3.3.1 Self-determination

As a psychological construct, self-determination has been defined in different ways according to the theoretical orientations under examination (Hui & Tsang, 2012). From a motivation perspective, Deci and Ryan (1985, p. 38, cited in Reeve, Nix, & Hamm, 2003) offered the following definition of self-determination:

“Self-determination is the capacity to choose and to have those choices, rather than reinforcement contingencies, drives, or any other forces or pressures, be the determinants of one’s actions. … When self-determined, one acts out of choice rather than obligation or coercion, and those choices are based on an awareness of one’s organismic needs and a flexible interpretation of external events.”
In SDT, self-determination and autonomy are treated as interchangeable concepts (Ryan & Deci, 2017). Being self-determined in one’s behaviours is optimal for adjustment and psychological functioning (Deci and Ryan, 2002; Soenens and Vansteenkiste, 2005). Yet, the degrees of self-determination or autonomy in one’s actions are dependent on an individual’s extent of internalisation of external regulations and values. And self-determination by students is reciprocally influenced by individual, family, and school characteristics (Shogren, 2013).

In the field of education, self-determination is a critical component (Denney & Daviso, 2012). Self-determination is associated with, for example, higher academic achievement, self-esteem, perceived competence, personal control and creativity (Reeve, 2002), and with a more adaptive learning attitude and academic success (Vansteenkiste et al., 2005). It is also a key predictor of valued life outcomes (Shogren, Wehmeyer, Palmer, Rifenbark, & Little, 2015).

3.3.3.2 Overview of the theory

SDT (Deci & Ryan, 2012a; Ryan & Deci, 2017) is an organismic-dialectical metatheory with a focus on the innate motivation that underlies choices and decisions in the growth and development of humans (Vansteenkiste et al., 2006). SDT has evolved to become an internationally collaborative work and been refined inductively in the form of mini- or sub-theories, each of which accounts for a set of motivational phenomena, and which are based on the same meta-theoretical assumptions (Vansteenkiste & Ryan, 2013). Thus, SDT proves to be “a theory with great heuristic power” (Vallerand, Pelletier, & Koestner, 2008, p. 257).

There are four meta-assumptions in SDT. First, people are proactive organisms that have a natural tendency to create optimal life conditions. Second, people are naturally inclined to integrate their ongoing experiences into a unified sense of self and to integrate themselves with other individuals and groups. Through integration, people internalise external regulation like values, attitudes, contingencies, and knowledge. Third, this integrative tendency only occurs when individuals experience the satisfaction of basic psychological needs for autonomy, competence, and relatedness. Individuals may experience high or low need satisfaction, as well as need frustration, which result in different degrees of well-being and functioning. SDT accordingly distinguishes three categories of social environments: need supportive, need depriving, or need thwarting. The fourth assumption in SDT also relates to psychological needs and postulates that human beings are subject to ill-being and psychopathology.

There are currently six mini-theories under the umbrella of SDT (Ryan & Deci, 2017), namely: cognitive evaluation theory, organismic integration theory, causality orientations theory, basic psychological needs theory, goal contents theory, and relationships motivation theory. This section discusses the tenets of organismic integration theory and goal contents theory, the two
highly related mini-theories that distinguish SDT from other motivation theories and which guided this study.

SDT views motivation as a multidimensional concept encompassing both quantity and quality aspects (Vansteenkiste et al., 2009). SDT posits that in psychological well-being and behavioural outcomes, the quality of motivation matters more than the overall quantity, amount, or intensity of motivation. In examining the quality of motivation, SDT distinguishes two different aspects of goal-directed behaviour: the what versus the why, or the content of the goal versus the reason/regulatory style underlying the pursuit of the goal.

3.3.3.3 The why of behaviour

The why question in SDT addresses the issue of behavioural regulation, or the reasons that give rise to behaviour. This section first elaborates different types of motivation and regulation postulated by SDT. It then presents SDT’s proposal of a continuum of relative autonomy/self-determination among regulatory types. Lastly, it reviews SDT-based research in terms of the autonomous versus controlled motivation distinction that is an important contribution of SDT.

3.3.3.3.1 Types of motivation/behavioural regulation

a. Intrinsic motivation

Similarly to other theories, SDT views intrinsic motivation (IM) as relating to an individual’s interest or enjoyment in a task or activity. It refers to engagement in an activity for the inherent satisfaction and pleasure associated with the activity itself. Intrinsically motivated activities are non-instrumental in nature, that is, they are not dependent on any outcome other than participation in the activity itself. Participation is fully autonomous or self-determined. People can be intrinsically motivated to engage in an activity because of their interest, their quest for expanding or improving themselves, their desire to gain knowledge, or their beliefs. It has been found that people often experience both IM and extrinsic motivation (EM) at the same time (Husman & Lens, 1999), and that the two types of motivation result in experience and performance of differing qualities (Ryan & Deci, 2000b).

In academic settings, Vallerand and colleagues (Vallerand et al., 1992, 1993) expanded the concept of IM to include three subtypes:

- IM to know;
- IM to accomplish things; and
- IM to experience stimulation.

IM to know refers to engaging in an activity for the pleasure and satisfaction experienced while learning, exploring, or trying to understand something new. IM to accomplish refers to
performing an activity for the pleasure and satisfaction experienced when one attempts to accomplish or create something. And IM to experience stimulation can be defined as engaging in an activity for the stimulating sensations derived from one’s engagement in the activity. Yet, this distinction is only adopted in a small number of studies, especially those that use the AMS (Vallerand et al., 1992, 1993) as a measure of motivation.

b. Extrinsic motivation

EM, on the other hand, comes from influences external to the individual. It refers to performance of behaviour in order to achieve an external reward or outcome that is not inherently related to the action itself. Extrinsically motivated activities are instrumental in nature because they are performed to attain an outcome that is separable from the activity.

From their extensive research on the impact of extrinsic rewards on IM, Deci and Ryan (2000) found that EM can also lead to self-determined behaviour, and that EM includes several types that differ in terms of behavioural regulation. Thus, Deci and Ryan hypothesised that in the process of internalisation, EM can regulate behaviour in different ways. They distinguished four types of behavioural regulation in the process of internalisation, namely, external, introjected, identified, and integrated regulation. These regulatory types differ in their degree of relative autonomy or the extent to which they regulate behaviour autonomously or in a controlling way. The resulting EM types are thus of different quality. A summary of these regulatory types is presented in Figure 3-4.

External regulation is the most controlled type of regulation and corresponds to the classic EM. Under external regulation, behaviours are energised by means external to the self, such as rewards, pressures, obligations, and constraints. People with externally regulated motivation engage in an activity purely to achieve something promised to them or to avoid an obvious consequence in the absence of participation.

<table>
<thead>
<tr>
<th>Type of Motivation</th>
<th>Lack of Motivation</th>
<th>Controlled Motivation</th>
<th>Autonomous Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Regulation</td>
<td>Non-regulation</td>
<td>External</td>
<td>Identified</td>
</tr>
<tr>
<td>Locus of Causality</td>
<td>Impersonal</td>
<td>External</td>
<td>Internal</td>
</tr>
<tr>
<td>Level of Autonomy</td>
<td>Lowest</td>
<td>External</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td>Relative</td>
<td>Somewhat External</td>
<td>Highest</td>
</tr>
</tbody>
</table>

*Figure 3-4. The SDT continuum of relative autonomy, showing types of motivation, types of regulations, locus of causality, and the degree of relative autonomy.*

(Developed from Deci & Ryan, 2000; Ryan & Deci, 2016)
Introjected regulation is more autonomous but still mostly controlled. With introjected regulation, individuals partially internalise the regulation but do not fully accept and endorse it; therefore they still feel pressured and controlled. Introjected behaviours are regulated by self-imposed contingencies that are associated with self-esteem preservation and ego enhancement; that is, people are driven to do things because they do not want to lose face when they fail to do them, or because they want to gain recognition for their behaviour. More recently, Assor, Vansteenkiste, and Kaplan (2009) differentiated and found different patterns of effect between approach (approaching self-worth) and avoidance (avoiding loss of self-worth) introjected regulation.

Identified regulation represents higher degrees of internalisation and is characteristic of autonomous extrinsically motivated behaviours. With identified regulation, although the behaviour has been externally initiated, people perceive it as personally important and therefore engage in the behaviour with a greater sense of choice. The behavioural regulation has almost been fully internalised and the individual does not feel pressured or coerced to act.

Finally, integrated regulation is the most autonomous form of EM and the fullest internalised form of regulation. When regulated through integration, behaviours are fully accepted, valued, and integrated with other aspects of the individual’s values and identity. Through the process of integration, an extrinsically motivated behaviour becomes truly self-determined; however, the behaviour is still not considered as intrinsically motivated because it is not accomplished for interest or enjoyment alone.

c. Amotivation

Opposed to IM and EM, amotivation (AM) refers to the lack of motivation to act. Amotivated individuals will either not act at all or only act passively, without a purpose or understanding of what they are doing. In a school setting, when amotivated, students may not perceive contingencies between outcomes and their actions (Vallerand et al., 1992). Research on AM has mainly treated it as a one-dimensional construct that explains why individuals do not partake in target activities (Vansteenkiste, Lens, De Witte, De Witte, & Deci, 2004) while in fact there can be various factors leading to this nonparticipation (Vansteenkiste & Mouratidis, 2016).

Some researchers (e.g., Pelletier, Dion, Tuson, & Green-Demers, 1999; Vansteenkiste et al., 2004) have examined not acting in terms of autonomous versus controlled reasons. In the academic domain, Legault, Green-Demers, and Pelletier (2006) developed and validated a taxonomy of AM that includes four dimensions: ability beliefs, effort beliefs, characteristics of the task, and value placed on the task. They proposed that “amotivation is itself an entity, a complex and multifaceted process, which is not so much an absence as a broad effect of unmet
needs” (p. 580). Yet, AM has received only very little attention compared to the extant body of SDT-based research on motivation quality and therefore deserves more investigation (Vansteenkiste & Mouratidis, 2016).

3.3.3.3.2 The continuum of self-determination/autonomy

SDT-based research on people’s motivation for engaging in particular behaviours has suggested that these types of behavioural regulations can be ordered along a continuum of relative autonomy or self-determination with IM as the anchor on the autonomous end and external regulation as the anchor on the controlled end (Deci & Ryan, 2012a, 2012b). It should be noted that in the paper (Ryan & Connell, 1989) where the SDT continuum of autonomy was first proposed and tested, the continuum was supposed to represent “classes of reasons for acting” which “reflect various levels of internalisation” (p. 750). Thus, AM was not placed on this continuum. However, some subsequent published papers (e.g., Gagné & Deci, 2005; Vallerand et al., 1992) included AM on this continuum.

Because the proposed continuum included only four classes of reasons (integrated regulation was excluded as it was not distinct enough), Ryan and Connell (1989) claimed that the correlations among them are only “simplexlike” (p. 751). A true simplex needs at least five entries (Guttman, 1954, cited in Ryan & Connell, 1989). As such, these behavioural regulations or motivation types are expected to correlate in a simplexlike pattern with adjacent types being more positively correlated than those further apart on the continuum. Yet, these regulations lie on a continuum but are not hierarchical in order; instead, they can coexist in different degrees (Covington & Müeller, 2001). Furthermore, the continuum does not mean that the internalisation of behavioural regulations must be progressive from one to the next (Gagné & Deci, 2005; Ryan & Deci, 2000a). Past findings regarding this pattern of correlations have been inconsistent (Taylor et al., 2014), which may be due to the different regulation types being included or the analytic approach being used (Sheldon, Osin, Gordeeva, Suchkov, & Sychev, 2017; Ünlü, Dettweiler, 2015).

3.3.3.3.3 New focus: Autonomous versus controlled motivation

With the new conceptualisation of EM, the focus within SDT has shifted from IM versus EM to autonomous (self-determined) versus controlled (non-self-determined) motivation (Deci & Ryan, 2012a). An action is considered autonomous when it emanates from the individual; it is considered controlled when it is energised by external sources. Yet, the decision to embark on certain behaviour is often the combination of different regulations, thus the aspect of autonomy is only relative (Deci & Ryan, 2012a).
Autonomous motivation comprises IM and the two well-internalised types of EM (i.e., integrated and identified regulation) whereas controlled motivation includes the two poorly internalised types of EM (i.e., introjected and external regulation). According to SDT, the quality of motivation matters more than the quantity; therefore, students with autonomous motivation are more likely to achieve more positive education-related outcomes than those with controlled motivation (Guay et al., 2008; Lens, Paixão, & Herreta, 2009; Reeve et al., 2008; Vansteenkiste et al., 2009). But research has also shown that each type of motivation is distinct and can predict different outcomes (Ryan & Deci, 2016). Yet, the effect of each motivation type on academic performance and achievement is not fully understood as the majority of studies examining the link between motivation and achievement have been studied cross-sectionally (see Taylor et al., 2014). The inconsistencies in past findings may also be due to differences in the measurement of performance (Bailey & Phillips, 2016).

An extant body of research findings has supported the postulated effects of motivation categories across different age spans and across cultures (Deci & Ryan, 2012b; see Vansteenkiste et al., 2010 for a review). Past findings have demonstrated that autonomous motivation types were related to various positive, desirable outcomes, including enhanced cognitive flexibility and engagement, higher intellectual performance, greater use of self-regulation strategies, active information processing, greater persistence, enhanced subjective or psychological well-being, better engagement, less academic anxiety, less drop out of a compulsory college course, greater creativity, and higher academic self-concept (e.g., Alivernini & Lucidi, 2011; Bailey & Phillips, 2016; Burton, Lydon, D’Alessandro, & Koestner, 2006; Eisenberger & Shanock, 2003; Gottfried & Gottfried, 2004; Gottfried, Marcoulides, Gottfried, Oliver, & Guerin, 2007; Otis, Grouzet, & Pelletier, 2005; Soenens & Vansteenkiste, 2005; Vallerand & Bissonnette, 1992; Walker, Greene, & Mansell, 2006).

On the contrary, controlled motivation types fail to predict positive outcomes, or are even linked to negative, undesirable outcomes that are not limited to learning, such as greater levels of cheating (Davy, Kincaid, Smith, & Trawick, 2007), burnout (Pisarik, 2009), higher drop-out rates (Hardre & Reeve, 2003), and increased anxiety (Bailey & Phillips, 2016). Similarly, AM has been found to be associated with greater stress and poor adjustment (Baker, 2004), anxiety and depression, lower levels of meaning in life (Bailey & Phillips, 2016), reduced self-esteem, and poorer academic performance (Petersen, Louw, & Dumont, 2009).

More recently, a body of SDT-based research has used the person-oriented perspective to identify naturally occurring profiles of motivation and examine their effects. In identifying motivational profiles, researchers have used separate motivation types (e.g., Cannard, Lannegrand-Willems, Safont-Mottay, & Zimmerman, 2016; Ntoumanis, 2002), combined them...
into autonomous versus controlled motivations (e.g., Gillet, Vallerand, & Rosnet, 2009; Vansteenkiste et al., 2009), or used different analytical procedures. Different indicators of outcomes are used in testing the predictive effect of motivational profiles. The profile of high autonomous motivation has been found to be the most adaptive (Hayenga & Corpus, 2010) and the best at positively predicting students’ academic adjustment (e.g., Boiché & Stephan, 2014; Ratelle, Guay, Vallerand, Larose, & Senécal, 2007), performance (Boiché et al., 2008), physically active lifestyle (Haerens, Kirk, Cardon, Bourdeauhuij, & Vansteenkiste, 2010), adaptive physical education experiences (Ullrich-French & Cox, 2009), and persistence (Ratelle et al., 2007).

3.3.3.4 The what of behaviour: Intrinsic versus extrinsic goals

The second question addressing motivation quality in SDT, the what question, concerns aspirations or life goals that people pursue and that energise present activities aimed at sub-goals at various levels. SDT differentiates goals in terms of the degree to which they validate self-worth and promote natural growth (Deci & Ryan, 2000; Vansteenkiste et al., 2006). There are two general categories of goals: intrinsic and extrinsic goals (Kasser & Ryan, 1996).

Intrinsic goals are those that directly satisfy basic psychological needs and have an inward orientation such as self-development, competence, health, affiliation, and community contribution. Extrinsic goals, on the other hand, are more outward oriented and reflect people’s quest for external manifestations of worth such as physical attractiveness, wealth, fame, power, and recognition. SDT postulates that humans have a natural tendency to shift from extrinsic goals to intrinsic goals, but this will only occur when socioenvironmental contexts support basic psychological needs (Vansteenkiste et al., 2010). Researchers have found that stronger aspirations for extrinsic goals tend to result in poorer well-being and less optimal functioning; the effect of goals is independent of the effect of behavioural regulations (Niemiec, Ryan, & Deci, 2009; Sheldon, Ryan, Deci, & Kasser, 2004).

The effects of goal contents on achievement outcomes have been examined in a number of experimental studies where learning activities are framed in terms of intrinsic and extrinsic goals and in association with autonomy supportive versus controlling conditions (e.g., Vansteenkiste, Matos, Lens, & Soenens, 2007; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004; Vansteenkiste, Simons, Lens, Soenens, & Matos, 2005; Vansteenkiste, Simons, Lens, Soenens, et al., 2004). Results from these studies reveal that when students engage in learning with an intrinsic goal they exhibit better performance and learning than when they engage with an extrinsic goal or with both goals; the effect of intrinsic goal is enhanced when the learning climate is autonomy supportive (Deci & Ryan, 2016) or when learners exhibit autonomous motivation (Vansteenkiste, Simons, Lens, Soenens, et al., 2004). Intrinsic goal framing in these
studies is positively associated with deep processing, test performance, free-choice persistence (Vansteenkiste, Simons, Lens, Sheldon, et al., 2004), and conceptual learning (Vansteenkiste, Simons, et al., 2005). Extrinsic goal framing, on the contrary, undermines autonomous motivation, conceptual learning, and persistence, irrespective of students’ goal orientation (Vansteenkiste, Timmermans, Lens, Soenens, & Van den Broeck, 2008).

3.3.4 Trend to combine motivation theories

Contemporary motivation psychology is witnessing an increase in the combination of different theories into a more encompassing framework or model at the empirical level (Vansteenkiste & Mouratidis, 2016). These multiperspective models are not integrative, but rather built in a complementary manner with top-down theories shedding light on more fundamental motivational processes. A number of studies have combined two among the three theories reviewed above.

A review of the literature revealed that many combine aspects of SDT (e.g., autonomous/controlled motives, intrinsic/extrinsic goals) with aspects of AGT. For example, Bieg et al. (2017) explored the reciprocal effects of mastery goals and IM in a longitudinal study; Benita, Roth, and Deci (2014) examined the importance of people’s autonomous and controlled motives when pursuing mastery goals; Michou, Matos, Gargurevich, Gumus, and Herreta (2016) and Michou, Vansteenkiste, Mouratidis, and Lens (2014) tested the joint effects of achievement goals and their underlying reasons; and Vansteenkiste, Smeets et al. (2010) tested the predictive ability of performance-approach goals with autonomous versus controlled motives. Most notably, Vansteenkiste et al. (2014) theoretically advanced achievement goals to cover the various autonomous versus controlled reasons underlying these six goals.

An important, more recent line of research on motivation, instrumental motivation, has emerged from the examination of multiple theories. Instrumental motivation is “the motivation for present actions that results from already anticipated future goals” (Lens et al., 2009, pp. 23-24). Research on instrumental motivation has been informed by future time perspective (FTP) theories, goal theories, and the aspects of goal contents and behavioural regulations from SDT. Given the fact that HE education is the door to future career options, instrumental motivation may help to better understand university students’ motivation. Therefore, the following section outlines the line of research on instrumental motivation.

3.3.5 Instrumental motivation: Beyond what and why

Research on instrumental motivation has largely been inspired by Lens and colleagues (Husman & Lens, 1999; Simons, Dewitte, et al., 2000, 2004; Simons, Vansteenkiste, et al., 2004).
Instrumental motivation results from anticipated future goals, which can be final goals or sub-goals to achieve bigger goals. For these goals to be attained, activities have to be performed in the present (Simons, Vansteenkiste, et al., 2004). In other words, present activities are instrumental in achieving future goals. Thus, the individual’s motivation in performing present activities is instrumental motivation. Lens and colleagues (Fryer, Van den Broeck, Ginns, & Nakao, 2016; Vansteenkiste & Mouratidis 2016) argue that despite instrumental motivation being extrinsic by nature, certain types of instrumental motivation can be autonomous or self-determined and of a quality almost as high as that of IM (Lens et al., 2009).

The understanding of an individual about the instrumental value is often referred to as perceived instrumentality, which is similar to the concept of utility value in educational research and which has been found to impact students’ motivation (Husman & Lens, 1999). Instrumental motivation has been found to be determined by the extension of the future goals, their intrinsic or extrinsic content, and the extent to which they regulate motivation in the present activities in an autonomous or controlled way, as well as the relationship between the present task or goal and the future task or goal (Lens et al., 2009; Lens, Paixão, Herreta, & Grobler, 2012).

The extension of future goals is often discussed in terms of FTP, which is “the present anticipation of future goals” (Simons, Vansteenkiste, et al., 2004, p. 122). FTP can be of long or short extension, which is “the time span in which one habitually makes plans” (Husman & Lens, 1999, p. 115). People with an extended FTP have a broader range of future goals, including distal goals and nearer sub-goals, and therefore perceive present activities as more instrumental in achieving their goals; they also have higher anticipation towards the value of future goals, and thus value their present task more strongly (Simons, Vansteenkiste, et al., 2004). On the contrary, people with a short FTP tend to have more proximal goals like course credit and graduation, and assign less utility value to the present task.

In other words, FTP extension has motivational effects on present activities and outcomes. Students who are future oriented have been found to be more engaged in their study and to use both deep-level and reproductive learning strategies (Horstmanshof & Zimitat, 2007), to have more autonomous motivation (de Bilde, Vansteenkiste, & Lens, 2011), to sign up for studies more quickly and to manage their time more effectively (Harber, Zimbardo, & Boyd, 2003), and to display less procrastination (Jackson, Fritch, Nagasaka, & Pope, 2003). When future oriented, students place more instrumental value on present tasks and are more motivated and achieve better academic results (e.g., Simons, Dewitte, et al., 2004).

The utility value of the present task or goal also results from its relationship with the future task or goal. When the present task and the future task are highly related, that is, when they require the same capacities or competencies, the present task has high utility value. On the contrary, if
the capacities or competencies required for the present task and the future task are different, the present task has low utility value. High perceptions of utility have been found to relate to positive motivation (for a review, see Husman & Lens, 1999). In an experimental study, Simons, Dewitte, and Lens (2003) found that increasing the perception of instrumentality/utility causes (rather than merely accompanies) a change in optimal learning in physical education among university students.

Apart from its unique effects, the dimension of utility value of present activities has often been combined with the dimension of behavioural regulation (internal vs. external) to explain the instrumentality of present tasks and the motivational effects of future goals (e.g., Fryer, Ginns, & Walker, 2014; Fryer et al., 2016; Simons et al., 2000, 2003; Simons, Dewitte, et al., 2004). The crossing of the two dimensions results in four types of instrumentality, but some studies focus only on three types (e.g., Simons et al., 2000). The different types of instrumentality have been found to have different associations with motivation, cognition, and achievement.

Empirical results show desirable positive scores on different aspects of motivation and cognition among students who regard a course as of high utility to their future life and perceive themselves as being internally regulated (for details, see Lens, Simon, & Dewitte, 2002; see also Simon et al., 2000, 2003). Similarly, the combination of distal utility and internal regulation has been found to result in the most adaptive motivational outcomes and the highest level of task orientation (Simons, Dewitte, et al., 2004), and to positively predict mastery goals and deep learning approaches (Fryer et al., 2014). From a person-centred approach, Fryer et al. (2016) found that students who pursue high levels of multiple goals (i.e., distal externally and internally regulated goals, and proximal externally regulated goals and social goals) exhibit the most adaptive pattern of motivation and the highest levels of deep-level learning.

3.3.6 Theoretical framework of the current study

Vietnam is a Confucian heritage culture with three core values, amongst others, of community spirit or sense of belonging, filial piety and gender hierarchy, and respect for learning, knowledge, and the teacher (see section 2.4.3). Students’ behaviours in such a culture will undoubtedly be influenced to a great extent by external factors. To fit in with the culture, students are more likely to do things that would not be their preferred choice if all external factors were removed, and vice versa. In other words, Vietnamese students’ motivation is a more complex issue than it appears.

Furthermore, the purpose of this study was to obtain an overall understanding of Vietnamese students’ motivation, both for attending university and during the actual course of study. It did not seek to study students’ motivation in specific academic situations or tasks, for which EVT
and AGT would be more suitable. Instead, it required the employment of a broad theory that could guide the exploration and understanding of the different facets of student motivation. To this aim and because of the complexity of the issue of student motivation in Vietnamese culture, SDT deemed the most appropriate theory and was chosen as the guiding theory of this study.

In general people may seek HE for a myriad of reasons that are beyond a simple dichotomy of intrinsic and extrinsic. There is public information and real life evidence about unemployment among degree holders in Vietnam; yet, massification of HE is still taking place (see section 2.5.3). So students must be attending university for reasons other than job prospects. Growing up in the Vietnamese collectivist culture, students’ decisions are more likely to be influenced by their parents and families. And students can integrate these influences on different levels. They can perceive parental expectations as personally important or as coercing. The same scenario may apply to students’ study during their candidature. In other words, Vietnamese students’ motivation cannot be easily understood in terms of quality. SDT, with its focus on the quality of behavioural regulations, or the degrees of autonomy/self-determination in one’s actions, thus helped to better understand Vietnamese students’ motivation behind their quest for a university degree. Therefore, in the current study, the following framework, which is synthesised from the what and why of behaviour under SDT, was used to understand students’ motivation.

![Figure 3-5. Theoretical framework of the study.]

When applied in education, SDT is primarily concerned with promoting students’ IM towards learning and internalisation of socially endorsed values and socially valued regulations, which will translate into desired educational outcomes (Deci, Vallerand, Pelletier, & Ryan, 1991).
Students’ IM to learn directly manifests as their attitudes, communication behaviours, and success (Reeve, 2002). Yet, a large body of SDT-based research has suggested that autonomous types of EM, which are results of the internalisation process, are comparatively conductive to students’ engagement, learning, performance, and well-being (Guay et al., 2008; Niemiec & Ryan, 2009). This is particularly important in HE as students’ IM for school activities diminishes throughout their adolescence (Gnambs & Hanfsting, 2016; Lepper, Corpus, & Iyengar, 2005) and is therefore unlikely to be the primary reason for their engagement (Vallerand, Blais, Brière, & Pelletier, 1989). Instead, autonomous types of EM or behavioural regulations become more prominent (Koestner, Taylor, Losier, & Fichman, 2010). With its approach to motivation quality, “SDT has strong implications for both classroom practice and educational reform policies” (Niemiec & Ryan, 2009, p. 133).

As the majority of SDT-based research has been conducted in Western individualist cultures, some cross-cultural researchers have challenged the generalisability of SDT in Eastern collectivist cultures (cf. Murphy-Berman & Berman, 2003), particularly with regards to the conceptualisation of autonomy as one of the three basic psychological needs (Jang et al., 2009). Some researchers (e.g., Chirkov, 2009; Chirkov, Ryan, Kim, & Kaplan, 2003; Jang et al., 2009) have directly addressed this challenge, emphasising the distinction between autonomy as postulated by SDT and individualism in cultural study. In another study, Chen et al. (2015) examined the cross-cultural applicability of SDT in terms of need satisfaction, frustration, and strength. Findings from these studies support SDT’s validity across cultures, especially regarding the acclaimed three universal basic psychological needs and the role of need satisfaction. Indeed, in their most recent and comprehensive publication on SDT, Ryan and Deci (2017) analytically defend the universality of autonomy as a psychological needs, suggesting the applicability of SDT in Vietnam, a collectivist culture.

### 3.4 Motivation and learning in higher education

The previous section has presented and reviewed research guided by three of the five most widely applied theories of motivation in educational research. It has also introduced the line of research on instrumental motivation which combines aspects of SDT, goal theories, and FTP theory. This section goes on to review research on motivation and learning in HE, which is the focus of this study. The discussion of student motivation in HE in the remaining of this section, as well as in subsequent discussions of the results, is based to a large extent on the unpublished work of Round (2005), which had a similar investigation of students’ motivation as the current research project. The rationale of the two studies were quite similar, i.e., to ultimately enhance students’ learning.
As mentioned in the section on definitions of motivation, Round (2005) suggests that HE students’ motivation encompasses three separate but interlinked aspects, namely, entry motivation, ongoing motivation, and future motivation, with entry and future motivations being strongly related. Motivation energises study-related behaviours; thus, in HE, motivation “directly affect[s] academic success and proficiency, confidence and integration” (Round, 2005, p. 28), which determines whether and how much students get what they expect from their education.

This section first reviews the literature related to students’ motivation to pursue HE and for degree choice. Then it goes on to review research on students’ ongoing motivation guided by SDT. The association between motivation and self-regulated learning (SRL) is addressed next. Finally, research on Vietnamese university students’ motivation is reviewed, pointing out a gap in the literature.

### 3.4.1 Motivation for higher education pursuit and choice of degree

Students’ decision for HE progression and choice of course are influenced by many factors (Kutty, 2014). Yet, there are fewer studies directly exploring students’ reasons for pursuing HE compared with the number of studies investigating reasons for drop out and for degree choice or for motivational orientations (Kennett, Reed, & Lam, 2011; Phinney, Dennis, & Osorio, 2006).

To foster students’ learning, it is helpful to understand students’ motivation to pursue HE, as the reasons for HE attendance can have different effects on various aspects of student life (Keane, 2012) such as adjustment, resourcefulness, experience, learning, achievement, and development (e.g., Côté & Levine, 1997, 2000; Kennett, Reed, & Stuart, 2013; Phinney et al., 2006).

In studying motivation for HE attendance, researchers have either conducted interviews (e.g., Budd, 2017; Kennett et al., 2011; Lehmann, 2009) and open-ended surveys (e.g., Krutii & Fursov, 2007) to directly ask students, or developed scales based on theoretical considerations (e.g., Neill, 2004, cited in Bartram 2016a; Côté & Levine, 1997). Other researchers (e.g., Balloo, Pauli, & Worrell, 2017; Phinney et al., 2006) have combined existing scales with student interviews to develop new measures for their studies. One common finding is that students endorse multiple reasons to varying degrees when deciding to pursue HE (Côté & Levine, 1997, 2000).

Students’ motivation for going to university has been studied under various labels, such as motivations (e.g., Côté & Levine, 1997, 2000), goals (e.g., Stark, Shaw, & Lowther, 1989), purposes (e.g., Bloomer & Hodkinson, 2000), aspirations (e.g., Hossler, Schmit, & Vesper, 1999), dispositions (e.g., Terenzini & Reason, 2005), reasons (e.g., Pryor, Hurtado, Saenz, Santos, & Korn, 2007), and motives (e.g., Bartram, 2016a, 2016b; Bennett, 2004). Motivation
for HE attendance has been examined in different student populations, including non-traditional or mature-aged students (e.g., Brownie, 2014; Villar, Triadó, Pinazo, Celdrán, & Solé, 2010) and high-school-aged students (e.g., Bennett, 2004; Krutii & Fursov, 2007; Loeber & Higson, 2009; Low, 2015). Traditional student populations have included first-year (e.g., Kaye & Bates, 2017; Kennett et al., 2011), upper-year (e.g., Kennett et al., 2011), first-generation (e.g., Bui, 2002; Kutty, 2014), and working-class students (e.g., Lehmann, 2009).

Traditional students are likely to be most influenced by reasons related to employment, work, and qualifications (Kaye & Bates, 2017). The importance of career prospects has been reflected in many studies (e.g., Balloo et al., 2017; Jian, Sandnes, Huang, & Huang, 2010) including those on high-school-aged students (e.g., Krutii & Fursov, 2007; Loeber & Higson, 2009). Specifically, in an earlier study by Higgins, Hartley, and Skelton (2002), as many as 92% of respondents expressed gaining qualifications as their main reason for going to university. Similarly, in Round’s (2005) study of over 300 first-year undergraduate students in the UK, job prospects were a common reason for as many as 85.8% of respondents and were mentioned as the most important motive among many of the 80% of respondents who identified one particular reason as being paramount. More recently, Bartram (2016a) found that among English, German, and Portuguese students, qualifications and professional prospects are among the most important reasons for HE attendance. Specifically, 77%, 44%, and 45% of respondents from the UK, Germany, and Portugal, respectively, are strongly motivated to attend university to enhance their job prospects.

Among non-economic reasons for students’ participation in HE, personal development tends to be the most significant. Over 70% of students in all three settings in Bartram’s (2016b) study indicated that personal development was the most important non-economic factor. In Balloo et al.’s (2017) study, personal development is the next most important reason after career prospects and enhancing quality of life. Personal development or improvement tends to be more strongly related to aspirations for financial gains among low- and medium-SES students (Phinney et al., 2006). Another common source of motivation for HE attendance is subject interest. This reason was mentioned by 53.8% of respondents in Round’s (2005) study, by 71% in Higgins et al.’s (2002), and by 67% in Leathwood and O’Connell’s (2003). It is also indicated as being an important reason in other studies (e.g., Balloo et al., 2017).

Researchers have also found that a body of students attend HE due to “default motivation” (Bartram, 2016a, 2016b; Côté & Levine, 1997, 2000), that is, because they see university as either the unquestionable next step or the best available option they can choose. Up to 21.3% of German and 18.3% of Portuguese respondents reported this type of motivation (Bartram, 2016b). Among Asian Americans, this type of motivation tends to result from strong family
pressure (Phinney et al., 2006). Other researchers have used other labels to refer to different aspects of this type of motivation. Kaye and Bates (2017), for example, identified three reasons that fall within this category: “cultural norm”, “continuity of education”, and “safe option”.

Other non-economic reasons include altruism, social enjoyment, social pressures (Bartram, 2016b); changing direction in life, making friends, to be a role model, self-discovery, gaining independence (Baloo et al., 2017); general enjoyment of studying, self-esteem (Round, 2005); avoiding full-time employment, family recognition (Kaye & Bates, 2017); parental SES and involvement, siblings’ and relatives’ influence, high school characteristics, and the nature of the source of university-related information (Kutty, 2014). Perceived external expectations and influence are two factors commonly mentioned by students in different contexts (e.g., Bartram, 2016b; Round, 2005) but they tend to be more influential among second-generation students (Loeber & Higson, 2009; Round, 2005) and low- and medium-SES and non-White students (Phinney et al., 2006), as well as students from Asian backgrounds (e.g., Kutty, 2014). Yet, Low (2015) found and cautioned that familial pressure and expectation may have detrimental effects on educational aspirations among lower SES students if not communicated in a proper way.

Once students have made the decision to progress to university, various factors that influence their choice of degrees or courses come into play. Traditional students tend to be strategic in selecting courses that provide them with greater career options following graduation (Kaye & Bates, 2017). Jian et al. (2010) found that Taiwanese and Norwegian engineering students make their choice mostly for the usefulness and applicability of the course for their future careers. Malaysian physical and social sciences students place more value on prospects of employment and career chances than on other factors in choosing their courses (Kok & Ang, 2015). Similarly, career-related motivations for course selection have been reported by psychology students (Kaye & Bates, 2017), education students (Bartram, 2016a, 2016b), and business students (Bennett, 2004).

A recent comparative study by Davies, Tikoo, Ding, and Salama (2016) found the same five motives among students in China, UAE, UK, and USA in choosing business majors out of six motives underlying undergraduates’ choice of business majors across China, UAE, UK, and USA. The five common motives are: lifestyle aspirations (how students perceive the major to match their lifestyle aspirations), relative ease of completion of major (anticipated effort required to succeed), reputational effects (market image and resources of the institution, department, and faculty), career outputs (job opportunities, high earnings), and developmental skills (skills acquired from the degree that will meet the needs of employers). Two determinants -- lifestyle aspirations and developmental skills -- have similar relative levels of importance.
among students in all four countries, whereas the other three motives exert different levels of influence. These findings have not been shown to apply to other fields of study.

To sum up, students’ decisions to pursue HE and to choose a specific program result from the interactions among factors which can be broadly grouped into academic/learning, vocational/instrumental, and social/personal (cf. Bennett, 2004). The importance associated with each reason varies according to students’ demographic characteristics. Among first-generation students, career prospects can serve as a stronger motivation because they are perceived as the means to greater financial support for families (Bui, 2002). Students from this subgroup also have largely vocational orientations towards university (Lehmann, 2009). Overall, students today highly value the economic prospects of HE education.

3.4.2 Ongoing motivation in light of SDT

This study explored both entry and ongoing motivation of Vietnamese university students. The examination of students’ ongoing motivation was mainly guided by SDT. While SDT addresses both the what and why of behaviour in relation to motivation quality, the focus of the current study is the why of student motivation at the domain level. Ongoing motivation plays a significant role in students’ engagement and learning; yet, this area of research is still largely ignored in Vietnamese HE. What follows is a review of the SDT-based literature on the associations between motivation types and various outcomes, as well as the development of students’ motivation.

Motivation types under SDT have been measured and assessed separately, or combined into broad categories of IM and EM, and autonomous and controlled motivation. Many studies (e.g., Matthews, Hoessler, Jonker, & Stockley, 2013; Sturges, Maurer, Allen, Gatch, & Shankar, 2016) have found that HE students have higher levels of EM than IM. In general, students’ motivation has been found to be associated with various outcomes in a predictive manner.

IM has been positively associated with desired outcomes such as adjustment to university, greater self-esteem (Petersen et al., 2009), lower stress (Baker, 2004; Petersen et al., 2009), and a stronger sense of well-being, higher life satisfaction, and meaning (Bailey & Phillips, 2016). Self-determined motivation in attending HE also leads to a higher perception of institutional service quality, greater satisfaction, and student loyalty (Chong & Ahmed, 2012a). On the contrary, poor-quality EM has been found to be related to worry (Ryan & Connell, 1989) and increased anxiety (Bailey & Phillips, 2016). Similarly, AM predicts greater stress, poorer adjustment to university, and greater psychological illness (Baker, 2004), reduced self-esteem (Petersen et al., 2009), lower levels of meaning in life, higher levels of anxiety and depression, and poor adjustment (Bailey & Phillips, 2016).
The association between motivation and academic performance is less clear. Baker (2004) found that EM, IM, and AM were not related to subsequent academic achievement among UK second-year students. Petersen et al. (2009), on the contrary, found that among South-African disadvantaged first-year students, AM was negatively associated with academic performance while IM had a positive association and only extrinsic externally regulated motivation significantly predicted a small variance of performance. Yet, Bailey and Phillips (2016) found that among Australian students, only IM to gain knowledge and to accomplish tasks were significant positive predictors of performance. Among US first-year students, Conti (2000) found that both IM and EM positively predicted academic performance. Sturges et al. (2016) found that introjected and external motivations most significantly predicted final grades among human anatomy and physiology students. Matthews et al. (2013) assessed three different measures of academic performance; only IM to accomplish was significantly positively related to all measures, while the other two types of IM had different patterns of effects. These differences may be due to different measures of performance and motivation being used.

A few studies (e.g., Müller & Palekčić, 2005; Pan & Gauvain, 2012; Ratelle, Guay, Laros, & Senécal, 2004) have examined the development of students’ motivation within the HE context. Ratelle at al. (2004) examined students’ motivation from the end of their last secondary school year until the end of their second year in college. They found that during this transition period, students’ motivation types had different patterns of fluctuation among student groups, but on the whole, controlled motivation was more stable than autonomous motivation, with IM increasing over time while controlled motivation decreased. Yet, they also identified a small group of students whose AM remained moderately high and stable while their intrinsic and identified motivations decreased. Similarly, Kyndt et al. (2015) found an increase in students’ autonomous motivation across the five time points from the beginning of the last year in secondary school up until the first semester of Year 2. Controlled motivation was found to increase slightly when students transitioned from secondary school to HE, and AM to remain stable from the start of HE.

In contrast, both Müller and Palekčić (2005) and Pan and Gauvain (2012, in their 3-year longitudinal studies found that the level of students’ autonomous motivation decreased from Year 1 to Year 2. The two studies, nevertheless, had different findings regarding autonomous motivation from Year 2 to Year 3. Müller and Palekčić found that students’ autonomous motivation increased again whereas Pan and Gauvain did not. Besides, Pan and Gauvain focused only on autonomous motivation while Müller and Palekčić also assessed controlled motivation and found that all the motivational regulatory styles exhibited a high stability over the 3 years. Furthermore, Pan and Gauvain found that parental autonomy support positively predicted Chinese students’ autonomous learning motivation whereas Müller and Palekčić did
not find an association. Using a different instrument, Brahm, Jenert, and Wagner (2017) assessed only IM and EM across the first year over four time points. They found that although students started their studies with a higher level of IM compared to EM, both types of motivation declined significantly throughout the academic year and only increased again at the end of the year.

### 3.4.3 Motivation and self-regulated learning

Like motivation, SRL is a broad research area in the educational domain. The aim of this section is not to thoroughly review the SRL literature; instead, it simply aims to highlight the link between motivation and SRL that has been pointed out by researchers. The purpose of this is to provide a theoretical rationale for the use of SRL as an external criterion in assessing the validity of the AMS (Vallerand et al., 1992, 1993) among Vietnamese students.

SRL is the self-regulation of academic learning and performance. It has been found to be an important element of students’ learning and success (Zimmerman & Schunk, 2011), especially in HE (Cohen, 2012; Park, Edmondson, & Lee, 2012; Pintrich & Zusho, 2007; Robbins, Lauver, Le, Davis, & Langley, 2004). The association between motivation and SRL is now broadly supported (Berger & Karabenick, 2011). Lens and Vansteenkiste (2008) describe the use of SRL strategies as a “motivationally driven process” since students’ motivational resources will largely impact their use of self-regulation. Indeed, Zimmerman and Schunk (2008) summarise the functions of motivation in the SRL literature as being one or more of the following: (a) a precursor to SRL, (b) a mediator of SRL, (c) a concomitant of SRL outcomes, and (d) a primary outcome of SRL. The role of motivational processes in SRL is crucial as they initiate, guide, and sustain student efforts to self-regulate their learning (Zimmerman & Schunk, 2008).

Different motivational constructs have been empirically linked to students’ use of SRL strategies. For example, task value, self-efficacy beliefs, and goal orientations have been found to have a direct effect on SRL strategies (Neuville, Frenay, & Bourgeois, 2007). Similarly, Wolters (1998) found that efficacy beliefs predicted students’ use of SRL strategies. IM leads to the use of deep cognitive and metacognitive strategies while EM leads to superficial learning strategies (Young, 2005). In their qualitative study, Berkhout et al. (2015) found that the use of SRL among medical students in the clinical environment was largely influenced by the goals students perceived and the level of autonomy they experienced.

Several models of SRL have been proposed (e.g., Biemiller, Shany, Inglis, & Meichenbaum, 1998; Boekaerts, 1997; Butler & Winne, 1995; Hadwin & Oshige, 2011; Pintrich, 2004; Pintrich & De Groot, 1990; Wolters & Hoops, 2015; Zimmerman, 2002), each emphasising different aspects of SRL (Pintrich, 2000). These models can be roughly classified as component
oriented or process oriented (Winne & Perry, 2000). Many self-report instruments have been developed specifically to measure SRL in HE (see Roth, Ogrin, & Schmitz, 2016 for a review).

The Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, & McKeachie, 1991, 1993) is based on the traditional component-oriented model proposed by Pintrich and colleagues (Garcia & Pintrich, 1991; Pintrich & De Groot, 1990). Under this model, SRL is understood as “the strategies that students use to regulate their cognition (i.e., use of various cognitive and metacognitive strategies) as well as the use of resource management strategies that students use to control their learning” (Pintrich, 1999, p.459). Although recently Pintrich (2000, 2004) has incorporated common aspects of many of the SRL models and developed a conceptual framework for classifying the different phases and areas for regulation in the classroom context, new instruments guided by this framework have yet to be constructed. The MSLQ remains the most widely used measure of SRL (Roth et al., 2016).

3.4.4 Vietnamese university students’ motivation

Despite the rich literature on university students’ motivation, very little is known about Vietnamese students’ motivation. Only two studies, both of which were qualitative, were identified that explored issues related to students’ pursuit of university education. These studies were reported in the last two years, reflecting the current situation in Vietnam.

In one study, Andrews (2016) focused on high school students’ expectations and preparations for university. The majority of Andrews’ research was conducted with students at an experimental high school in the capital city of Hanoi. Data were collected through class discussions about university plans and through eight one-on-one interviews. A supplemental part of the research was conducted with enrolled students at a university, also in Hanoi, in the form of focus group interviews. Andrews’ study demonstrated four key findings. First, many Vietnamese students did not have clear ideas of a career path until the last years of high school, or even until they had commenced their university study. Second, whereas the teacher’s role in the university process is nonsignificant, parental behaviour exerted a substantial influence on students’ perceptions of, and decisions about, university. Third, students prepared for university by preparing for the university entrance exam, and stress concerning the implications of the results of this test was noted by 12th-grade students. Finally, students had mixed emotions regarding their university expectations: enrolled university students found the transition to be challenging as it was different from their expectations while high school students were excited about the transition.

In another study, Yao (2015) investigated the motivation of Vietnamese graduate students to attend the Vietnamese-German University, that is, to become international students in their own
country. The study was conducted using semi-structured interviews guided by a push-full-factors conceptual framework. The students reported choosing this university because of the benefits of a German degree, the instruction being in English, and the lower cost compared with studying abroad.

Apart from these two studies, others were identified that examined students’ motivation and other factors. Among English-majored students, both L. T. Tran (2007) and T. T. H. Phan (2010) found that students had both intrinsic and extrinsic motivation to learn English, yet most of the time they were extrinsically motivated (T. T. H. Phan, 2010). From survey data, Ngo et al. (2017) found both English-majored and non-English-majored students to have high levels of motivation to learn English as a means for the future. They also found that English-majored students were more intrinsically motivated. Trang and Baldauf Jr (2007) and Tuan (2011) assessed demotivation among non-English-majored students and found that students often experienced demotivation in their English study. T. D. Nguyen, Shultz II, and Westbrook (2012) found that learning motivation significantly positively influenced perceived quality of college life among business students. And in another study, instructor ability was found to have a positive impact on business students’ learning motivation (T. T. M. Nguyen & Nguyen, 2010).

There is little empirical information available about Vietnamese university students’ motivation. With an identified goal of Vietnam’s government stated as the improvement of the quality of its HE and graduates, more extensive research is needed to understand and foster students’ motivation, which serves as an important factor in students’ learning. The following section will go on to present the AMS (Vallerand et al., 1992, 1993), a widely used instrument in student motivation research that exhibits potential application in the study of Vietnamese students’ motivation.

### 3.5 Measuring academic motivation with the Academic Motivation Scale

The AMS (Vallerand et al., 1992, 1993) is one measure used to assess HE students’ motivation. Based on SDT, motivation is operationalised in the AMS as the underlying “why” of behaviour and focuses on perceived reasons for engaging in the activity. The scale asks the question “Why do you go to college?” and suggests 28 possible answers to that question, reflecting the different types of motivation as specified by SDT. Thus, the AMS allows the measurement of both quantity and quality of students’ motivation and has been used on students from different year levels. The AMS results are sometimes interpreted as students’ entry motivation, at other times as students’ ongoing motivation.

The AMS is made up of seven subscales of four items (see Appendix A), each assessing three types of IM (IM to know, to experience stimulation, and to accomplish), three types of EM
(external, introjected, and identified regulation), and AM. The integrated motivation type under SDT was not included as it did not distinguish itself from identified regulation (Vallerand et al., 1992). Scores for the subscales can be used separately or combined into broader categories (i.e., IM -- EM -- AM, or autonomous motivation -- controlled motivation -- amotivation). In addition, the AMS allows for the calculation of a self-determination index for each participant. The index allows for the assessment of the level of self-determination in a participant’s motivation: the higher the index, the more self-determined the individual, which means better quality motivation.

The scale’s psychometric properties have been examined on samples from various countries, and on both post-secondary and secondary students. Many researchers have assessed the factor structure, validity, reliability, and temporal stability of the instrument. Overall, the AMS has been found to be a reliable and valid measure of academic motivation, and the subscales have gained support to be domains of academic motivation. The subsequent sections will elaborate on different facets of the psychometric properties of the AMS.

3.5.1 Factorial structure

In assessing the dimensionality of the AMS, past research has typically employed confirmatory factor analysis technique (CFA) to test three competing models: 3-, 5-, and 7-factor models. In the 3-factor structure, the AMS subscales are combined into three broad categories of IM, EM, and AM (according to the traditional classification). In the 5-factor model, the three IM subscales are combined into one general IM factor as originally proposed by SDT, whereas the EM subscales remain separate. Fit indices are used to assess the fit of each model and to compare the three models against each other.

In most of these studies, the 7-factor model is found to outperform the 5- and the 3-factor models. And the proposed 7-factor structure is deemed to provide good fit to the data, although the level of fit may vary across studies. The 7-factor structure of the AMS has been confirmed in post-secondary samples from Canada (Vallerand et al., 1992), the US (Fairchild, Horst, Finney, & Barron, 2005; K. J. Smith, Davy, & Rosenberg, 2010), Malaysia (Chong & Ahmed, 2012b), Ghana (Akoto, 2014), Argentina (Stover, de la Iglesia, Boubeta, & Liporace, 2012), Chile (Orsini et al., 2015), and Turkey (Can, 2015); and on high school samples from Greece (Barkoukis, Tsorbatzoudis, Grouios, & Sideridis, 2008), Argentina (Stover et al., 2012), Singapore (Caleon et al., 2015), Norway (Utveg & Haugan, 2016), and China (Zhang, Li, Li, & Zhang, 2016). Some researchers report adding error covariances (e.g., Stover et al., 2012; Utveg & Haugan, 2016; Vallerand et al., 1992) to the 7-factor model, but these error terms are barely discussed.
In some studies (e.g., Cokley, Bernard, Cunningham, & Motoike, 2001), the proposed model did not have adequate model fit; nevertheless, it was not rejected. Furthermore, some studies also found that the proposed model had better fit when some items were removed, for example, item 27 on the subscale of IM to accomplish (Stover et al., 2012), or item 1 on the external regulation subscale (Can, 2015). Cokley (2015) found that none of the three competing models could adequately describe academic motivation of Black American students. The author then performed exploratory factor analysis (EFA) and six factors were extracted but interpretation of the factors was difficult as some factors consisted of items from multiple subscales.

A much greater number of studies have adapted the AMS to measure students’ motivation and its correlations with various antecedents and outcomes such as performance, interest, and dropout rates (e.g., Baker, 2004; Fortier, Vallerand, & Guay, 1995; Guay & Vallerand, 1996; Vallerand, Fortier, & Guay, 1997). Some of these studies simply collapsed the three IM subscales into a single factor (e.g., Grouzet, Otis, & Pelletier, 2006), or even further reduced the number of items on the combined IM subscale (e.g., Pan & Gauvain, 2012), or further combined the EM subscales (e.g., Cavusoglu & Karatas, 2015). A number of studies used EFA to identify the number of factors that described their samples, resulting in 5- (e.g., Bailey & Phillips, 2016; Karagüven, 2012; Koludrovic & Ercegovac, 2015; Lim & Chapman, 2015), and 4-factor (e.g., Ardeńska et al., 2016; K. J. Smith et al., 2010) structures. In another study, Alivernini and Lucidi (2008) conducted CFA with only one IM subscale and therefore confirmed the 5-factor structure.

3.5.2 Validity

The validity of the AMS has typically been tested through the relationships among the seven subscales to establish if a simplexlike pattern of correlation exists as hypothesised by SDT. Researchers have also assessed the validity of the AMS through correlations between the AMS subscales and other motivational scales, as well as other psychological constructs relevant to education (i.e., determinants and consequences) to see if these relationships are aligned with predictions from SDT and the pertinent literature.

3.5.2.1 Correlations among the subscales

The continuum of relative autonomy in SDT suggests that the AMS subscales are correlated in a simplexlike pattern whereby adjacent subscales have stronger correlations than subscales further apart and subscales at the opposite ends display the highest levels of negative correlations. The three types of IM are not differentiated on the continuum. Yet, it is worth noting that according to SDT, the self-determination continuum has IM as the anchor on the autonomous end and external regulation as the anchor on the controlled end (Deci & Ryan, 2012a, 2012b). AM is not
placed on this continuum as it reflects non-regulation. However, instead of external regulation, research on the AMS has usually treated AM as an anchor on the controlled end of the continuum.

Research findings regarding the simplexlike pattern of correlations among the AMS subscales have been mixed. In a small number of studies, the continuum was mostly (e.g., Orsini et al., 2015; Vallerand et al., 1993) or fully (e.g., Barkoukis et al., 2008) supported. Other studies found partial (e.g., K. J. Smith et al., 2010), limited (e.g., Can, 2015; Cokley, 2000; Fairchild et al., 2005), or no support (e.g., Caleon et al., 2015; Zhang et al., 2016) for the simplexlike pattern. Different deviations from the simplexlike pattern have been identified. For example, IM has often been found to correlate more positively with introjected regulation than with identified regulation (e.g., Cokley, 2000; Fairchild et al., 2005; Utvær & Haugan, 2016; Vallerand et al., 1993) while AM has been found to be more negatively correlated with one form or the other of EM than with IM (e.g., Can, 2015; Orsini et al., 2015; K. J. Smith et al., 2010). AM is sometimes even found to have positive correlations with IM (e.g., K. J. Smith et al., 2010). Cokley (2000) further found a stronger correlation between the IM to accomplish subscale and two EM subscales than that among the EM subscales themselves. Similarly, Orsini et al. (2015) found introjected motivation to be more strongly positively correlated with one IM subscale than with identified regulation.

Based on these mixed results, some researchers have raised concerns about scale construction (e.g., Fairchild et al., 2005) or about the theory underlying the AMS (Cokley, 2000). Fairchild questioned the distinctiveness of the IM subscales since they were highly correlated, whereas Cokley suggested that introjected regulation may be more representative of self-determination than previous assumption. However, once again, these mixed results could have been due to the fact that AM has been included in assessment of the simplexlike pattern of correlations. Or, indeed, some items may need to be reconstructed.

3.5.2.2 Criterion-related validity

The AMS has been reported to display criterion-related validity (e.g., Fairchild et al., 2005; Vallerand et al., 1993) with other instruments such as the Children’s Academic Intrinsic Motivation Inventory (Gottfried, 1986), the Task Orientation and Work Avoidance subscales (Nicholls, Patashnick, &Nolen, 1985), and the Work Preference Inventory (Amabile, Hill, Hennessey, & Tighe, 1994). Criterion-related validity of the instrument has also been examined via correlational analyses between the AMS subscales and other theoretically related constructs. Constructs used to assess the validity of the AMS have included academic self-concept, positive affect and emotions, intrinsic interest, task orientation, concentration, learning climate, autonomy, competence, relatedness, school satisfaction, IM, teacher autonomy support, and
academic engagement (e.g., see Caleon et al., 2015; Cokley et al., 2001, Orsini et al., 2015; Vallerand et al., 1993; Zhang et al., 2016).

Past findings have largely supported the hypothesised correlations between the AMS subscales and other variables, such as academic self-concept (Vallerand et al., 1993), mastery approach goals (Fairchild et al., 2005), enjoyment (Barkoukis et al., 2008 – Study 2), and deep motives (Orsini et al., 2015). Unexpected findings often involve introjected regulation, which displays stronger positive correlations with outcomes than hypothesised, such as with task orientation (Fairchild et al. 2005) and engagement and perceived teacher autonomy support (Caleon et al., 2015). Furthermore, the correlations between AMS subscales and academic performance in terms of grade point average (GPA) have been inconclusive (e.g., Cokley et al., 2001; Fairchild et al., 2005; Orsini et al., 2015).

3.5.3 Reliability and temporal stability

The internal consistency of the seven AMS subscales has typically been assessed with the use of the Cronbach’s alpha. Overall, the subscales have been found to have satisfactory levels of internal consistency. In some studies, all seven subscales have Cronbach’s alpha values above the threshold of .70, for example, from .70 to .86 (Cokley et al., 2001), from .70 to .90 (Fairchild et al., 2005), from .75 to .86 (Zhang et al., 2016), from .77 to .85 (Caleon et al., 2015), and from .79 to .87 (K. J. Smith et al., 2010), with the identified regulation subscale having the lowest value in most cases.

However, in other studies, only six subscales have satisfactory alpha values while the other subscale falls short of .70, which most of the time applies to the identified regulation subscale. For example, the identified regulation subscale has an alpha value of .62 (Vallerand et al., 1992), .60 (Vallerand et al., 1993), and .65 (Orsini et al., 2015) while the other subscales range from .83 to .86, from .76 to .86, and from .75 to .83, respectively. But with only four items, researchers have often accepted this level of reliability. In one study (Can, 2015), Hancock’s coefficient $H$ was reported instead of Cronbach’s alpha and values ranged from .79 to .89. And coefficient $H$ for the identified regulation subscale increased from .69 to .79 when item 10 was removed.

The AMS has demonstrated acceptable temporal stability through test-retest correlations. Vallerand et al. (1992) had 57 students complete the AMS twice over a 1-month period and reported a mean test-retest correlation of .79 and the identification subscale had higher alpha values of .72 and .78 for the pre-test and post-test respectively. Similarly, Orsini et al. (2015) reported correlation coefficient scores of pre-test and post-test between .70 and .78; and Zhang et al. (2016) reported test-retest correlations of .57 (identified regulation subscale) to .81.
Overall, internal consistency values across studies demonstrate that the AMS is a reliable measure of academic motivation. And satisfactory test-retest scores show that the AMS has temporal stability across time. However, the identified regulation subscale has consistently been found to have the lowest internal consistency, both in studies with (e.g., Zhang et al., 2016) and without a post-test (Orsini et al., 2015). This fact suggests that this subscale may be problematic and need revising under specific circumstances (Fairchild et al., 2005).

### 3.6 Summary

This chapter has reviewed the literature relating to (a) three motivation theories, namely, EVT, achievement goal theory, and SDT, and the line of research on instrumental motivation; (b) research on motivation and learning in HE; and (c) the AMS. Although EVT and achievement goal theories are extensively used in motivational research in education, they are more suitable for research on task-specific motivation. With the aim of obtaining an overall picture of Vietnamese students’ motivation in deciding to pursue university education and their ongoing academic motivation, this study chose SDT as its guiding theory. Specifically, it utilised two of the six minitheories within SDT, organismic integration theory and goal contents theory, to study the quality of students’ motivation in terms of the what and why. The concept of instrumental motivation was elaborated and employed as it offered insights in explaining university students’ motivation.

Motivation in HE was approached as encompassing three separate but interlinked aspects of entry motivation, ongoing motivation, and future motivation (Round, 2005). There have been large volumes of research on HE students’ motivation, but very scant research on Vietnamese university students. Only a few studies examining Vietnamese university students’ motivation were identified, with the majority investigating students’ motivation in learning English.

Finally, the chapter reviewed research on the psychometric properties of the AMS, which was chosen as the data-collection instrument in this study. Despite the wide use of the AMS, most previous studies were conducted on student populations from Western countries, with dominantly individualist cultures (Cokley, 2015). More recently, there have been attempts to validate the AMS in Asian populations from collectivist-oriented cultures like Malaysia (Chong & Ahmed, 2012b), Singapore (Caleon et al., 2015), and China (Zhang et al., 2016). Results from these studies have found support for the use of the scale in their corresponding cultures. Nevertheless, the AMS has not been validated in Vietnam.

Like Malaysia and Singapore, Vietnam has historically been heavily influenced by Chinese culture (Littrell, 2006). Recent-day Vietnam still manifests many deeply rooted tenets of Confucianism in its education system (Truong et al., 2017). Vietnamese students share many
characteristics with students from other Confucian heritage cultures (T. T. Tran, 2013a). The fact that support has been found for the use of the AMS in some Asian populations suggests that it may be applicable in the Vietnamese context.
CHAPTER 4: METHODOLOGY

4.1 Introduction

Given the limited literature around the general academic motivation of Vietnamese university students, the purposes of this mixed methods research project were twofold: first, it sought to obtain an overall understanding of students’ motivation through directly asking students questions on issues related to their motivation, as well as through collecting quantitative data using survey based on the Academic Motivation Scale (AMS) (Vallerand et al., 1992, 1993), a well-established instrument. Second, it aimed to assess the psychometric properties of the AMS in the current sample to test its applicability in studying Vietnamese students’ motivation.

To these aims, the study sought answers to the following research questions (RQ):

RQ1: What are the psychometric properties of the AMS in the current sample?
   a. Does the proposed 7-factor structure or an alternate structure of the AMS best fit the observed data?
   b. Do scores on the AMS subscales reflect strong reliability?
   c. What are the relationships among the AMS subscales?
   d. What are the relationships between the AMS subscales and the three Motivated Strategies for Learning Questionnaire (MSLQ) subscales of organisation, elaboration, and critical thinking?

RQ2: What are Vietnamese students’ motivational orientations as measured by the AMS?

RQ3: What are the effects of demographic characteristics on Vietnamese students’ motivation?

RQ4: What are Vietnamese students’ views on issues related to their motivation?
   a. Why do students go to university?
   b. How do students make their choice of degree program?
   c. What affects students’ motivation in their daily study?
   d. How does students’ motivation change over the course of their study?

This chapter reports the implementation of the study, including its research design, the research site, sampling, procedures, and instrumentation. Steps taken to prepare the data for analyses are then presented. Next, the analyses employed in analysing the data are discussed. Finally, the chapter addresses ethical issues related to the study.
4.2 Research design

This study adopted a convergent parallel mixed methods design to draw a more complete picture of the phenomenon of Vietnamese students’ motivation through both quantitative and qualitative data. First, an extensive survey was conducted using the AMS to assess the quantity and quality of the respondent students’ motivation. This was then complemented by rich details of their personal views on issues around their motivation assessed in the parallel interview process, providing the capacity to integrate the information collected from these data to inform discussions responding to the above RQs.

The study used pragmatism as its philosophical basis. Pragmatism is “a deconstructive paradigm that debunks concepts such as ‘truth’ and ‘reality’ and focuses instead on ‘what works’ as the truth regarding the research questions under investigation” (Tashakkori & Teddlie, 2003, p. 713). Pragmatists make use of all approaches available to understand the problem under investigation (Creswell, 2014). This paradigm allows researchers to be flexible with their methods, and hence be guided by actual situations and by their purpose in conducting the research. Pragmatism advocates for the use of both qualitative and quantitative approaches in a single study, and acknowledges that researchers’ personal values do influence interpretation of results (Teddle & Tashakkori, 2009). Pragmatism takes an explicitly value-oriented approach to research, and as R. B. Johnson and Onwuegbuzie (2004) noted, it is considered the ideal framework for mixed methods research.

Mixed methods research has been understood in various ways with differing specificity and content. The definition of mixed methods research adopted in the current study is that proposed by R. B. Johnson, Onwuegbuzie, and Turner (2007). The authors analysed and compared 19 definitions by leaders in the field, then incorporated the key themes they found into the following definition:

Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration. (p. 123)

As such, there are multiple benefits of mixed methods research. First, it allows researchers to be creative and flexible in their designs, to use multiple approaches, and to select methods that best answer their research questions. Second, mixed methods designs provide triangulation (convergence), complementarity (overlapping or different views), and development (extension of findings from first method) arguably beyond what is available from single method designs.
(Teddlie & Tashakkori, 2009). Moreover, mixed methods research switches the focus of research from methodology to research questions. Research questions will decide which method(s) should be used to obtain useful answers (R. B. Johnson & Onwuegbuzie, 2004). In other words, researchers can be flexible in designing their research to best answer their questions.

Mixed methods research designs can be categorised into two major types: mixed model and mixed method (R. B. Johnson & Onwuegbuzie, 2004). Mixed-model designs are those where qualitative and quantitative approaches are mixed within or across the stages of the research process. In contrast, mixed-method designs generally have a qualitative phase and a quantitative phase in the overall research study. For a design to qualify as mixed method, only the findings need to be mixed or integrated. The order of the phases and the proportion of each phase or approach are at the researcher’s discretion. The researcher can also decide when and how to mix the qualitative and quantitative data sets to achieve their aims and address their questions (Leech & Onwiegizbe, 2009). The research questions necessitate designs that best answer them and that assist the researcher in acquiring a complete picture of the issue(s) under investigation (Tashakkori & Teddlie, 2003).

The aim of the current study was to obtain an overall picture of issues related to Vietnamese students’ motivation at the university level. Therefore, the convergent parallel design (Figure 4-1) was chosen. The purpose of this design is “to obtain different but complementary data on the same topic” (Morse, 1991, p. 122, cited in Creswell & Clark, 2011). This is a suitable design when the researcher wants to obtain a more complete picture of the problem under investigation by synthesising complementary quantitative and qualitative findings (Creswell & Clark, 2011). The two types of data are collected and analysed independently of each other, and each provides information about different facets of the phenomenon. Results from quantitative and qualitative analyses are then integrated or connected in the discussion of findings. In this study, more focus was placed on quantitative data collection and analysis.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure4-1.png}
\caption{The convergent parallel mixed methods design.}
\end{figure}

(Adapted from Creswell & Clark, 2011)
In this study, quantitative data answered RQs 1, 2, and 3 regarding the psychometric properties of the AMS and students’ motivation, whereas RQ4 was answered using qualitative data obtained from in-depth interviews. Finally, the qualitative findings helped to further understand the results of the quantitative analyses. Details about the procedures for implementing the current research are presented in section 4.5 below. All details related to participants, instrumentation, data preparation, and data analyses are presented in what follows. Results from the analyses and a discussion of the findings will be presented in Chapters 5 through 7.

4.3 The research site

The study was conducted at a high-ranking multidisciplinary public university in the North of Vietnam. It is one of the largest universities in the country with over 30,000 undergraduate and postgraduate students (as of May 2015), with an annual intake of approximately 5,700 mainstream undergraduate students. In addition to undergraduate programs, the university provides postgraduate training including both coursework and research degrees. In 2015 it offered 100 different undergraduate programs. As of 2017, there are seven member universities and five member schools within the target university.

This research site was chosen for two reasons. First, it is a large and multidisciplinary university, which allows the collection of data from participants with diverse background characteristics. Therefore, the research findings are not supported only in this under-researched space but would be partially applicable to similar populations from other universities in Vietnam, which are largely monodisciplinary. Further, as the researcher worked for 9 years as an academic staff member, her familiarity with the site would bring considerable advantages in gaining access (Marshall & Rossman, 2010) and in understanding the participants and the responses.

Due to central governance of HE in Vietnam (see section 2.5.2), the undergraduate curriculum include a general knowledge component and a specialised knowledge component. At public institutions, students have to take a number of compulsory philosophy and ideology courses. At the participating university, these compulsory courses are generally taught in the first year of enrolment. Classes for these courses are organised such that students in each class are from different degrees within the same academic element. Students at this university also take a compulsory three-level language course, which is organised over three semesters starting from Year 1, and the lower levels are prerequisites of the higher levels.
4.4 Sampling

Participants for the quantitative component were recruited from traditional first-year students taking compulsory general knowledge classes in the second semester of the 2014/2015 academic year. First-year students were targeted because of the crucial role of the first year in students’ transition from high school to university. Motivation is dynamic; it changes over time. Therefore, to better enhance students’ motivation in learning, it is important to understand their motivation at the beginning of their academic journey.

Participant recruitment was conducted during class and no offer of course credit or other incentive was used to encourage participation. Because the researcher was unable to attend all stages of the data collection, quantitative data were collected with the help of course lecturers and a research assistant who administered the surveys and who was also an academic staff member at the research site. With the approval of each course lecturer, the research assistant gave an oral presentation and distributed a written description giving a brief overview of the study. It was emphasised that the study focused on non-mature-age first-year students, and that by returning the completed survey, students expressed their consent to participate in the study; thus, no written consent form was necessary. This information was also included in the survey cover sheet. A copy of the survey is available in Appendix A. Students who were not in the target group or who did not wish to participate were able to leave.

Participants for the semi-structured interviews were recruited from level 3 language classes in the first semester of the 2015/2016 academic year. The majority of students in these language classes were from the same student cohort for the survey, who had then moved to Year 2. Occasionally there were students from higher year levels who had not completed or passed this course, who were also invited to participate. This student population would provide greater insights into the dynamics of student motivation, as well as deeper understanding of the survey results.

With the support of the academic unit in charge of this language course, the researcher identified classes with students from mixed year levels. In each class the researcher gave an introduction to the study, an explanation of the purpose of the interviews, and an oral invitation to participate. The researcher aimed to have two interview participants from each of the seven academic elements with the largest number of undergraduate students across the whole participating university (making a total of 14). At the beginning of each interview, which was conducted on campus, the participant was given an information sheet and was asked to sign a form expressing their consent to participate in the interview, as well as to allow the interview to be recorded.
4.5 Procedures

Table 4-1 summarises the procedures for carrying out this study. The first step was translating the survey instrument into Vietnamese, the native language of the participants. At this stage, questions for the semi-structured interviews were also formulated. Next, a pilot study was conducted to gain students’ feedback on the accuracy, clarity, and cultural appropriateness of the survey questions. Once the instrument had been finalised, the main study was carried out.

<table>
<thead>
<tr>
<th>Step</th>
<th>Purpose</th>
<th>Actions taken</th>
</tr>
</thead>
</table>
| 1    | Preparing instruments for data collection | - Translation of the scales into Vietnamese  
- Construction of demographic questions  
- Formulation of interview protocols for semi-structured interviews |
| 2    | Piloting the translated survey and interview procedure | - Administration of translated survey to 26 students  
- Interview with one student |
| 3    | Finalising instrument | - Revision of translated survey and interview protocols |
| 4    | Collecting data concurrently | - Administration of paper-and-pen surveys to 940 first-year students to collect quantitative data  
- One-to-one interviews with 14 students |
| 5    | Preparing data for analysis | - Quantitative data: responses were entered into computer software, missing data were handled, assumptions were checked  
- Qualitative data: Interviews were transcribed |
| 6    | Analysing data | - Quantitative data: statistical analyses  
- Qualitative data: qualitative content analysis |
| 7    | Synthesis and conclusions | - Quantitative and qualitative results were discussed together |

The translation stage was necessary because the scales used in this study were developed in English, which is a foreign language in Vietnam. No translated and validated versions of these scales were available in Vietnamese. Only a small number of students are fluent in English. Therefore, the scales were translated into Vietnamese following standards for scale adaptation.

The interview protocol (see Appendix B) was prepared with questions intended to elicit participants’ responses to the qualitative RQ4. For each subquestion in RQ4, there was one question and several guiding subquestions. The main questions were to be asked in all interviews. However, the guiding questions could be flexible, allowing for other questions that would emerge depending on actual responses. The aim of the study was to understand students’ perspectives regarding their motivation, not their personal experiences. Therefore, some questions were made impersonal. Sample questions were: “Why did you decide to go to
“What do you think are the main reasons students want to go to university?”; “In your opinion, what factors affect students’ motivation in their study?”; and “Has your motivation changed? How?”

The pilot test and data collection will be discussed below, whereas details about instrumentation, data preparation, and data analyses will be presented in subsequent sections.

4.5.1 Pilot test

After the survey was prepared in Vietnamese, it was pilot tested on first-year students at the participating university. This was undertaken to identify any practical issues in the final survey before administration (van Teijlingen & Hundley, 2001) taking into account students’ feedback on accuracy, clarity, and appropriateness of the survey questions. The pilot study was undertaken in a level 2 language class, a similar environment to that where the final administration would also occur. All the students (26 in total, all first year) who were present participated in the pilot study.

An introduction to the research program and an explanation of the purpose of the pilot study were orally presented to the participants by the research assistant. After the students had completed the survey, they were invited to give feedback about the wording and content of the survey items. Minor changes were then made to the translated instrument, which will be discussed in section 4.6.2 below. One student was then invited for a one-to-one interview via skype with the researcher, guided by the formulated questions. There was no need to modify the interview protocol that had been prepared.

4.5.2 Quantitative data collection

The survey consisted of a cover sheet (see Appendix C), a brief introduction to the study, and the survey items. The survey cover sheet was prepared following the guidelines established by Griffith University. The surveys were administered in general knowledge classes by the research assistant. The number of students in each class varied between 70 and 100. The research assistant approached one or two general knowledge classes in each academic element in relevance to their size.

A total of 940 surveys were distributed and 678 were returned, a response rate of 72.13%. This sample accounted for approximately 10% of the total number of first-year students for the 2014/2015 academic year at the participating university. The quantitative data collection was completed during May, 2015, as students were approaching the end of their second semester at university.
4.5.3 Qualitative data collection

Due to the timing of exams and university break, the qualitative data collection was scheduled in October 2015, a month after the academic year resumed. In line with the convergent parallel mixed methods design, it was appropriate that the two data sets were collected independently of each other. Qualitative data were collected through semi-structured one-to-one interviews. In conducting the interviews, the researchers followed the protocol that had been prepared.

All the interviews were conducted in Vietnamese and on campus, either in the classroom after the lesson or at an outdoor area. Participants were informed that the data collected would be confidential, they would be anonymous, and they could remove themselves from the research at any time. The researcher gave each participant a copy of the information sheet (Appendix D). Written consent was obtained from all participants, and with the participants’ consent, the interviews were recorded. The interviews were approximately 30 minutes long and were completed over 4 weeks.

4.6 Instrumentation

4.6.1 Measures

The survey was aimed at obtaining data for RQs 1, 2, and 3, and was composed of three main sections, including a demographic section, the AMS (Vallerand et al., 1992, 1993), and three subscales from the MSLQ (Pintrich et al., 1991, 1993), namely organisation, elaboration, and critical thinking. The three subscales from the MSLQ were designed to act as external criteria in assessing the validity of the AMS.

An overview of the survey is presented in Table 4-2, with the full survey provided in Appendix A. Given the fact that the cover sheet was more than two pages long, it was assumed that some students would not expend the effort to read it. Therefore, to encourage participation, a brief introduction of the research program was prepared and incorporated into the first page of the survey.

Demographic information (Part A)

This section collected information regarding students’ background: their gender, academic element, family members’ education, and family financial capacity or socioeconomic status. Specifically, it asked students who in their immediate family had a postsecondary degree, including university and college degrees. Family financial capacity was assessed in terms of how easy it was for students’ families to pay for their study.
Table 4-2. Overview of the Survey

<table>
<thead>
<tr>
<th>Vietnamese students’ academic motivation survey</th>
<th>Part A</th>
<th>Part B</th>
<th>Part C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeking information about</td>
<td>- Demographic details (gender, academic discipline, family educational background, family financial capacity)</td>
<td>Academic motivation</td>
<td>Self-regulation</td>
</tr>
<tr>
<td>- GPA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of questions</td>
<td>5</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>Question type</td>
<td>- Multiple choice</td>
<td>7-point Likert scale</td>
<td>7-point Likert scale</td>
</tr>
<tr>
<td>- Open-ended</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Self-reported GPA (incorporated in Part A)

Because the survey was conducted in the second semester, students were asked to report their GPA for the first semester at university. While some researchers question the reliability of self-reported GPA, others support the predictive power of GPA. For example, Pascarella and Terenzini (2005) concluded that GPA had a strong positive association with student persistence, degree completion, and graduate school enrolment. Furthermore, Kuncel, Credé, and Thomas (2005) found in their meta-analysis that self-reported GPA reflects actual GPA to a reasonable degree of accuracy, especially for those students with high ability and good GPA.

Academic Motivation Scale (Part B)

Students’ motivation was measured by the AMS (Vallerand et al., 1992, 1993). The AMS includes seven subscales, assessing three types of intrinsic motivation (IM) (to know, to experience stimulation, and to accomplish), three types of extrinsic motivation (EM) (external regulation, introjected regulation, and identified regulation), and amotivation (AM). The integrated regulation type of EM as proposed by SDT is not included in the scale as the authors found that integrated regulation did not distinguish itself from identified regulation (Vallerand et al., 1992). The classification of IM into three subtypes is an extension of SDT.

Each subscale is made up of four items answering the question “Why do you go to college?” Respondents are asked to indicate the applicability of the statements on a 7-point Likert scale (from 1 = “Does not correspond at all” to 7 = “Corresponds exactly”). A higher score on any subscale is indicative of a higher level of endorsement of that type of motivation. Thus, on all
subscales, a higher score indicates a higher level of the corresponding type of motivation. Some statements on the scale are: “To prove to myself that I am capable of completing my college degree”, “In order to have a better salary later on”, and “I can’t see why I go to college and frankly, I couldn’t care less”.

The developers of the AMS reported satisfactory levels of internal consistency, with a mean alpha of .81, and temporal stability, with a mean test-retest correlation of .79, and factorial validity of the scale (Vallerand et al., 1992). In a follow-up study, Vallerand et al. (1993) demonstrated subsequent concurrent and construct validity between the AMS and other motivational constructs and across its own constructs. Furthermore, Grouzet et al. (2006) showed that the AMS is time and gender invariant, which allows it to accurately test developmental and gender hypotheses. More information about the psychometric properties of the AMS can be found in section 3.3 above. In this study, Cronbach’s alphas of the subscales ranged from .73 (EM-external regulation) to .85 (AM), with a mean of .78.

*Motivated Strategies for Learning Questionnaire (Part C)*

The MSLQ (Pintrich et al., 1991, 1993) was developed to assess college students’ motivational orientations and their use of different learning strategies for a college course. Respondents are asked to rate on a 7-point Likert scale how true each statement is of them (from 1 = “not at all true of me” to 7 = “very true of me”). Many of the original items use phrases referring to a particular course, for example “in this class” or “of this course”. Therefore the items used for this study were reworded to refer to strategies in college study in general.

The MSLQ is made up of 15 different subscales grouped into two sections: a motivation section and a learning strategy section. The subscales on the MSLQ can be used separately or together to suit the purpose of the researcher (Pintrich et al., 1991). The motivation section consists of 31 items that assess students’ goal orientations, task value and ability beliefs, and test anxiety. The learning strategy section includes nine subscales with 50 items assessing students’ use of different cognitive and metacognitive strategies, as well as strategies for managing different resources. The cognitive strategies covered in the MSLQ include rehearsal, elaboration, organisation, and critical thinking.

Three of the available cognitive strategies subscales were chosen for use in the current study: organisation, elaboration, and critical thinking. Organisation (four items) refers to the selection of appropriate information and the construction of meaningful connections among the information that needs to be learned. Elaboration (six items) refers to building internal connections between items to be learned. It helps to connect new information with previous
knowledge. Lastly, critical thinking (five items) refers to the degree to which students apply prior knowledge to solve problems more efficiently and to make better decisions.

According to requirements set out by MOET, the governing body of education in Vietnam, courses in HE degree programs fall into two categories of knowledge: general knowledge and professional knowledge, with the latter one further includes disciplinary knowledge and area-specific knowledge. General knowledge courses generally account for 40% of the study load. HE courses in Vietnamese universities are generally given two to three credit points. Thus, for a degree that requires about 150 credit points, Vietnamese students have to take far many more courses than their Australian peers. Therefore, it is anticipated that students will have to make use of a wide range of strategies to succeed in their study, especially the three strategies of organisation, elaboration, and critical thinking, which appear to be the most appropriate among those assessed by the MSLQ. A combination of these three strategies is expected to help students make connections among and meaning out of the many courses to be covered.

To the researcher’s knowledge, at the time of data collection for this study, the MSLQ had not been validated in Vietnam. However, the purpose of this study was not to validate the MSLQ, but instead to use self-regulated learning strategies as external criteria in assessing the validity of the AMS in the targeted population. Therefore the MSLQ was assumed to have validity in the current population. Coefficient alphas for each subscale as reported by Pintrich et al. (1993) are .75 (for organisation), .64 (for elaboration), and .80 (for critical thinking). In this study, the values are .75, .84, and .80, respectively.

4.6.2 Translation of the AMS and the MSLQ

Both the AMS and the MSLQ were developed in English, a foreign language in Vietnam. Furthermore, the researcher was aware that the majority of the targeted population were not fluent in English. It was therefore necessary to translate the measures into Vietnamese (Chapman & Carter, 1979; van de Vijver & Hambleton, 1996), the native language of the participants.

The first step was translating the scales from English into Vietnamese. This was done independently by the researcher with her former colleague, both native speakers of Vietnamese who had previously taught English at the participating institution. Their experience working with university students in Vietnam and exposure to the English language and culture allowed them to identify potential cross-cultural differences between the two languages, which would support the equivalence of the translated measures. It was made clear from the beginning that the MSLQ items where necessary would be modified to reflect learning strategies in general, not for a specific course. The two translators then compared their translations and negotiated on
differences, leading to a first draft version. Notably, both translators found that the instructions on both the AMS and MSLQ required rewording to provide clear meanings in Vietnamese.

The first draft was then reviewed by a panel of three educational doctorate students in Australia, who previously had worked as academics in Vietnam. They examined the original scales and cross checked with the translated version. Minor refinements were made during this process. For example, it was noted that two items on the AMS could be translated slightly differently. One phrase was “a more prestigious job”, which could be simply translated into Vietnamese as “a better job”. Another statement regarding the value of college education reads “because eventually it (a college education – researcher’s note) will enable me to …” The reviewers believed it would be better to change “it” (i.e., a college education) to “tầm bằng” (i.e., the certificate, meaning acquisition of a university degree). The review panel suggested that these two items needed special attention during the pilot test. No changes were recommended for the MSLQ.

The third step in the translation process involved piloting the translated instrument for face validity. The 26 participants (see section 4.5.1) were asked to complete the survey in Vietnamese and take notes of any items that were ambiguous or inappropriate. In general, the students reported that they did not have problems reading and understanding the items. However, when asked about the two items that were highlighted by the review panel, most of the students commented that the alternatives would sound more familiar. Therefore, the suggestions by the review panel were adopted.

Finally, the modified draft translation of the measures was reviewed by a linguist and lecturer who is also a distinguished translator in English and Vietnamese. He compared the translation with the original and commented that the translation was the best and closest possible equivalent of the scales in Vietnamese. All modifications to the scales are reported in Table 4-3.
### Table 4-3. Modifications to the Measures

<table>
<thead>
<tr>
<th>Scale</th>
<th>Item</th>
<th>Original wording</th>
<th>Modified wording</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Instruction</td>
<td>Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college.</td>
<td>Below are some reasons students go to university. On a 7-point scale, please indicate how accurately each of these reasons applies to you.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does not correspond at all</td>
<td>Absolutely inaccurate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corresponds a little</td>
<td>A little accurate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corresponds moderately</td>
<td>Moderately accurate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corresponds a lot</td>
<td>Very accurate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corresponds exactly</td>
<td>Absolutely accurate</td>
</tr>
<tr>
<td></td>
<td>08</td>
<td>In order to obtain a more prestigious job later on.</td>
<td>In order to obtain a better job in the future.</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Because eventually it will enable me to enter the job market in a field that I like.</td>
<td>Because eventually the certificate will help me enter the job market in a field that I like.</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>For the pleasure that I experience when I feel completely absorbed by what certain authors have written.</td>
<td>For the pleasure when I feel completely absorbed by what authors have written.</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>In order to have a better salary later on.</td>
<td>In order to have a better income later on.</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>Because I believe that a few additional years of education will improve my competence as a worker.</td>
<td>Because I believe that a few additional years of education will help me be more competent when I start working.</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.</td>
<td>Because college helps satisfy my quest for study.</td>
</tr>
<tr>
<td>MSLQ</td>
<td>Instruction</td>
<td>The following questions ask you about your learning strategies and study skills for this class. Again, there are no right or wrong answers. Answer the questions about how you study in this class as accurately as possible. Use the same scale to answer the remaining questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the numbers between 1 and 7 that best describes you.</td>
<td>Below are descriptions of learning strategies and study skills that students often use. Please indicate how accurately each of the descriptions applies to you, on a 7-point scale.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not at all true of me</td>
<td>Absolutely inaccurate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Very true of me</td>
<td>Absolutely accurate</td>
</tr>
</tbody>
</table>

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4.7 Data preparation

This study employed a convergent parallel design so the collection and analysis of the two types of data were independent of each other. This section presents how the two sets of data were prepared for analysis.

4.7.1 Quantitative data preparation

Responses from the 678 returned pen-and-paper surveys were entered into the Statistical Package for the Social Science (SPSS) version 22 (IBM Corp, 2013) program. The data set was then prepared for analysis, resulting in a final sample of 648 for analysis. Since the AMS served as the main source of quantitative data for the research questions, data cleaning and preparation were performed primarily on this part of the survey. The results presented in this section are mainly related to data obtained on the AMS; only the section on handling of missing data will include the MSLQ.

4.7.1.1 Handling of missing data

Because the AMS is made up of seven subscales, each with only four items, missing answers were checked against each subscale as well as across the whole scale. The majority of incomplete responses were missing between one and three values across the whole AMS scale, with only four responses containing between four and seven missing values. It was decided at this stage that the eight responses with two or more missing values per subscale be removed from the sample to avoid potential problems that partial data can cause (Graham, 2009).

The instrument for quantitative data collection in this study was a self-report survey, with a risk of respondents giving careless answers. Careless responding can have detrimental effects on research results and is therefore undesirable (Osborne & Blanchard, 2011); however, no direct screening methods were incorporated into the survey. Therefore, two criteria were employed to identify careless responses: longstring answers and scores of similar magnitude across all subscales. Applying these criteria, 22 responses were identified and removed (DeSimone, Harms, & DeSimone, 2015; Maniaci & Rogge, 2014; Meade & Craig, 2012).

Missing value analysis was conducted on the remaining sample (N = 648). An overall summary of missing values on the AMS is presented in Figure 4-2. The missing rate across the whole 28-item scale was only .61%, which is considered inconsequential in statistical inferences (Schafer, 1999, cited in Dong & Peng, 2013). However, when there are missing data, the researcher needs to choose among the available methods to deal with the problem. With such a small rate of missing data, any method for handling missing data could be applied, with expectedly similar results (Tabachnick & Fidell, 2013). In this data set, missing values were spread across 13.58%
of the total sample, so deletion of responses with missing data points would decrease the power of statistical tests (Graham, 2009) and therefore was not the appropriate method.

![Figure 4-2. Overall summary of missing values on the AMS (n = 648).](image)

Instead, missing values were further examined on each variable to determine the best method of imputing missing data. Results revealed that on the item level, the missing rate was also very small, from .2 to 1.4%. An investigation of the pattern of missing data further revealed that data were missing with an arbitrary pattern, that is, there was no systematic occurrence of missing data. In addition, the survey was administered at only one point of time and there was no condition that would predictably affect participants’ choice of whether or not to give answers to a certain survey item, thus allowing the assumption that missing data were missing at random.

Given the characteristics of the data set, EM imputation was chosen as the method of dealing with missing data. EM imputation uses the Expectation-Maximization algorithm to predict the missing values based on the observed values for a respondent (Enders, 2001). EM imputation would result in a complete data set that could be used in statistical software to perform standard analysis (Graham, 2009; Scheffer, 2002). Parameter estimates obtained from this single imputed data set are believed to be reliable and approximate to the population average (Graham, 2009). With a trivial proportion of missing data in the current study, EM imputation was therefore the most appropriate technique and was performed on the AMS to produce a complete data set for confirmatory factor analysis (CFA).

Finally, in assessing the MSLQ data, two responses had more than 50% missing values. These were removed, leaving a sample of 646 in correlation analysis between the AMS and the MSLQ subscales. The missing rate across the 15 MSLQ items was only .70%. On the item level, two items had 1.5 and 3.1% missing values while all other items had from .2 to .9% missing values. Therefore, EM imputation was also employed to predict the missing values and produce a complete data set for correlation analysis.
4.7.1.2 Distribution

The imputed AMS data set was then checked for univariate and multivariate distribution. On the item level, most variables deviated slightly from normality, eight variables had skewness above .80, and five variables had kurtosis above .80. The highest values for univariate skewness and kurtosis were -1.23 and 1.22 respectively. Given the Central Limit Theorem, and taking the sample size into account, it was assumed that the data were normally distributed regardless of the skewness and kurtosis statistics (Field, 2013; Norman, 2010). Additionally, test statistics in CFA have been found to be robust with univariate skewness of up to 2.0 and kurtosis of up to 7.0 (Curran, West, & Finch, 1996).

Multivariate normality of the data set was checked with Mardia’s coefficient. The result was 174.925, indicating lack of multivariate normality. This nonnormality was expected as the AMS variables are ordinal, which means they are discrete, thus are nonnormal by definition (Rhemtulla, Brosseau-Liard, & Savalei, 2012). Furthermore, absence of multivariate normality of observed variables is common in practice (Lei, 2009). Therefore, even though the data set did not meet the assumption of normal distribution, no transformation was performed on the variables.

4.7.1.3 Outliers

Univariate outliers were detected using z-scores with a cut-off value of 3.29, that is, if a case had an absolute z-score greater than 3.29 (p < .001, two-tailed test), it was considered an extreme value (Field, 2013; Tabachnick & Fidell, 2013). Results revealed that two variables on the AMS contained outliers. Each of items 15 and 22 on the EMER subscale had 11 outliers. All these univariate outliers had a value of 1 while the next lowest value within the normal range was 2. Therefore, it was decided that no transformation was needed and that these univariate outliers be kept in the sample.

Multivariate outliers were then detected by examination of Mahalanobis distance ($D^2$) for each case. The criterion for multivariate outliers is Mahalanobis distance at $p < .001$ (Tabachnick & Fidell, 2013). With 28 degrees of freedom, the critical value for Mahalanobis distance was $\chi^2_{28} = 56.892$ and thus 33 responses were identified as multivariate outliers. Cook’s distance (D) was then examined to assess the influence of each case. Finally, Mahalanobis distance was plotted against Cook’s distance to identify cases high in these two values. Graphic representation suggested that there were only several extreme cases. Examination of the data set revealed that these extreme responses all had legitimate values. Therefore, all outliers were retained for analysis.
4.7.1.4 Multicollinearity

All 28 variables on the AMS data set with 648 responses were then checked for multicollinearity, which is the problem with a correlation matrix when variables are too strongly correlated, that is, variables having correlation coefficients at or above .90 (Tabachnick & Fidell, 2013). Inspection of the bivariate correlation matrix among the variables revealed that no correlation index was above .90, thus no multicollinearity was evident.

In conclusion, data screening was performed on all the AMS variables. After 30 responses were removed from the sample, EM imputation was performed to estimate missing values. The imputed data set was checked for outliers. No transformation was performed on all the variables as the identified univariate and multivariate outliers all had legitimate values. There was no evidence of multicollinearity, so the AMS data set with 648 responses was considered ready for analysis. In correlation analysis involving both the AMS and the MSLQ, the final sample was only 646, where two responses were further removed on the MSLQ.

4.7.2 Qualitative data preparation

All interview recordings were transcribed verbatim following the transcription rules outlined in Kuckartz (2014). Unnecessary utterances and sounds were excluded, and language and punctuation were slightly smoothed. The resulting text documents for analysis were coherent, simple to understand, and represented the actual words used by the interviewees. Each interview was transcribed into a separate document with details of the participant retained. Interview transcripts were not translated into English; instead, analysis was done on the original data. Only those sections that are included in the presentation of results were translated into English by the researcher and cross checked for accuracy by the same person who translated the instrument into Vietnamese.

4.8 Data analyses

The data analyses consisted of two phases: quantitative and qualitative data analysis. The analyses of the two data sets were undertaken independently of each other. Results and findings were then considered together to draw a more comprehensive picture of issues related to Vietnamese students’ motivation. An overview of the analytical methods of the two data sets is presented in Table 4-4. Subsequent sections will explain in details the steps taken during data analyses.
Table 4-4. *Overview of Data Analyses*

<table>
<thead>
<tr>
<th>Data set</th>
<th>Analysis technique</th>
<th>Purpose</th>
<th>N</th>
<th>RQ addressed</th>
</tr>
</thead>
</table>
| Quantitative| Descriptive statistics           | - To explore students’ responses to the survey items  
- To examine the reliabilities of the AMS subscale scores  
- To examine patterns of students’ motivation                                                                                                                        | 648|              |
|              | Multivariate analysis (factorial MANOVA) | - To examine the effects of demographic characteristics on students’ motivation                                                                                                                                   | 648| 3            |
|              | Confirmatory factor analysis     | To test if the 7-factor structure of the AMS fits the data                                                                                                                                                    | 648| 1a           |
|              | Correlation analysis            | - To examine the strength of the relationships among the AMS subscales  
- To examine the strength of the relationships between the AMS and the three MSLQ subscales                                                                      | 648| 1c           |
|              | Qualitative                     | Thematic qualitative text analysis - To understand students’ views on issues related to their motivation                                                                                               | 14 |              |

4.8.1 Quantitative data analysis

SPSS version 22 (IBM Corp, 2013) and the IBM SPSS AMOS version 23 (Arbuckle, 2014) computer programs were used to analyse the quantitative data. A number of statistical techniques were used, including descriptive statistics, multivariate analysis of variance (MANOVA), correlation analysis, and CFA.

4.8.1.1 Descriptive analysis

First, descriptive analysis was undertaken on the original data set to explore participants’ responses to the survey items on both the AMS and the MSLQ, including the central tendency and distribution. After the AMS had been revised in CFA, descriptive statistics was performed again on the revised model to address RQ1b regarding the reliability of the AMS subscales and RQ2 regarding students’ motivational orientations.

Item reliability was assessed via factor loading and squared multiple correlation coefficient. At the scale level, reliability refers to its overall consistency. A measure with high reliability will produce similar results under consistent conditions. The reliability of a measure can be estimated in a number of ways, but it is most often assessed via test-retest reliability and internal consistency reliability. The latter assesses how closely related a set of items are as a group.
Items forming a scale or subscale should show high levels of internal consistency, indicating that the items measure the same construct.

Internal consistency reliability is most commonly estimated via Cronbach’s alpha coefficient, but there have been concerns over the usefulness of Cronbach’s alpha (e.g., Sijtsma, 2009). In congeneric models like the one-factor models of motivation types in this study, Cronbach’s alpha should only serve as a lower bound estimate of the true reliability (Holmes-Smith, 2015). Therefore, two other measures were also employed: Hancock and Mueller’s coefficient H (Hancock & Mueller, 2001), and construct reliability (Fornell & Larcker, 1981). The use of these statistics in addition to Cronbach’s alpha allowed for the comparative assessment of the scale’s reliability.

Hancock and Mueller’s coefficient H for each AMS subscale was computed using the following formula:

$$H = \frac{1}{1 + \frac{1}{\lambda_1^2} + \frac{1}{\lambda_2^2} + \ldots + \frac{1}{\lambda_n^2}}$$

where the \( \lambda \)'s are the standardised factor loadings obtained from the fitted one-factor models in CFA.

Construct reliability captures the degree to which a set of measures “indicate” the common latent construct. It is similar to, but is less conservative than, the variance extracted measure as an indicator of the shared variance in a set of measures. Construct reliability was computed from the fitted one-factor models as follows:

$$\rho_\eta = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \theta_i}$$

where \( \rho_\eta \) is the measure of construct reliability, \( \lambda_i \) is the standardised loading for each observed variable, and \( \theta_i \) is the error variance associated with each observed variable.

Based on the fitted model, subscale means were recomputed using factor score weights of the items obtained from the corresponding fitted one-factor models in CFA. The method of adding simple unit weights of the item scores in each subscale was not employed because CFA results revealed that the items did not contribute equally to the composite score representing the
construct, thus unit weight addition would yield an incorrect estimate (Holmes-Smith, 2015). CFA factor score weights were rescaled so that they totalled one (1). This was possible because factor score weights are proportional weights (Holmes-Smith, 2015).

Subscale means were used to assess students’ level of different types of motivation, as well as to compute a self-determination index (SDI) with the following formula:

\[
SDI = 2^*\left(\frac{(IMTK + IMTA + IMES)}{3}\right) + EMID - \left(\frac{(EMIN + EMER)}{2} + 2AM\right)
\]

(R. J. Vallerand, personal communication, Dec 19, 2014)

where IMTK, IMTA and IMES are scores on the three subscales of IM (that is, to know, to accomplish, and to experience stimulation, respectively) while EMID, EMIN and EMER are scores on the subscales of EM (that is, identified regulation, introjected regulation, and external regulation, respectively), and AM is the score on the AM subscale. This index indicated the overall level of self-determination in their university study among the participants, offering another criterion in assessing the quality of students’ motivation.

4.8.1.2 Confirmatory factor analysis

CFA is a statistical technique that is used to identify factors that account for the variation and covariation among a set of indicators. This technique is typically used in later phases of scale development or construct validation. To perform CFA, the researcher has to base on strong empirical or conceptual foundation to specify all aspects of the factor model and to evaluate the model. CFA is appropriate when the aim of the research is to compare how well different theoretical models explain the relationships among observed variables.

One purpose of the current study was to test whether the 7-factor structure of the AMS or an alternate structure would best fit the data (RQ1a). To this aim, CFA was the most appropriate statistical technique. Three competing models of the AMS were tested: the 7-factor model as proposed by Vallerand et al. (1992), the 5-factor model in which the three IM factors are combined into one general factor (following SDT’s classification of motivation), and the 3-factor model which consists of a general IM factor, a general EM factor, and an AM factor (according to the traditional classification).

In each competing model, latent variable variances were fixed to 1, error variances for the observed variables were not allowed to correlate, and the correlations among the factors were freely estimated. Bootstrap Maximum Likelihood (ML) estimation method was employed. Although ML is based on the assumption of multivariate normal and continuous data, it has been found to perform equally well as methods specific for ordinal variables once the number of
categories reaches five (Rhemtulla et al., 2012). In this study, survey items had seven categories, thus ML is an acceptable choice. Additionally, ML produces fit indices that are more reliable in evaluating model fit under various conditions, including violations of normally distributed data (Hau & Marsh, 2004; Hu & Bentler, 1998).

Following Hu and Bentler’s (1998, 1999) suggestion, a combination of fit indices was used in assessing overall model fit. These included the $\chi^2$, the standardised root mean square residual (SRMR), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), and the Tucker-Lewis index (TLI). The authors suggested the following cut-off values as indicators of good fit: .08 for SRMR, .06 for RMSEA, and .95 for TLI and CFI. Other researchers (e.g., Vandenberg & Lance, 2000) have recommended using Hu and Bentler’s criteria as excellent fit and traditional criteria as upper or lower limit, which are .10 or less for SRMR, .08 or less for RMSEA, and .90 or higher for TLI (and thus CFI as well). This study employed the latter approach in assessing model fit. Apart from assessing the general fit of each model, a $\chi^2$ difference test was also performed to compare the models. An initial analysis revealed that although the 7-factor model outperformed the other two models and had acceptable fit indices, the model still exhibited areas of local misfit and required further examination. The focus of data analysis therefore shifted to post-hoc refinement of the 7-factor model.

The AMS is a multifactor scale; hence, potential misfits may lie both within and among the subscales. Therefore, a series of 1-factor models were tested to ensure that the items within each subscale were valid measures of the latent construct they aimed to measure (Bollen, 2000). Hu and Bentler’s (1998, 1999) more stringent criteria were adopted to assess these 1-factor models. Apart from fit indices, parameter estimates for each 1-factor model were also examined to check factor loading and item reliability of each item. The greater the loading, the more accurately the item measures the construct underlying the factor. Conventional rules of thumb for factor loadings are: greater than .71 as excellent, .63 as very good, .55 as good, .45 as fair, and .32 as poor (Tabachnick & Fidell, 2013). Squaring the standardised factor loading of an item gauges its reliability ($R^2$), or how much total variance of the factor it accounts for. Higher values of $R^2$ represent better reliabilities of the items. In addition to parameter estimates, modification indices were explored to identify the sources of misfit and the solution in case a 1-factor model did not fit the data. The fitted 1-factor models were then recombined into a full model which was then retested.

4.8.1.3 Correlation analysis

Correlation analysis was performed to answer RQs 1c and 1d regarding the validity of the AMS. Latent factor correlations obtained from CFA were interpreted because they are disattenuated
for measurement error, thereby providing more accurate estimates of underlying relationship strengths (Schmidt & Hunter, 1996). Correlations among the AMS subscales were obtained from the revised 7-factor model. To obtain correlations between the AMS subscales and the three MSLQ subscales, three separate models were run in AMOS, each containing the final seven AMS factors and one of the MSLQ factors. At this stage, the focus was correlation statistics, not the fit of the model because this study assumed the validity of the MSLQ among Vietnamese university students. And in line with common practice in peer reviewed papers that compare correlations involving the AMS subscales, the obtained correlations were compared against each other, without any difference tests being performed.

SDT proposes that the types of motivation or regulation can be ordered along a continuum of relative autonomy. Therefore the construct validity of the AMS has typically been examined via correlations among the AMS subscales. The validity of the AMS is deemed to be supported if the interrelations among the subscales follow a simplexlike pattern, that is, adjacent subscales are more strongly correlated with each other than subscales that are further apart. Some researchers (e.g., Cokley et al., 2001; Fairchild et al., 2005) also examined the simplexlike pattern in correlations between the AMS subscales and related measures. This viewpoint was not adopted in this study.

As discussed in section 3.3.3.2.2, Ryan and Connell (1989) initially proposed that the four types of motivation -- external regulation, introjected regulation, identified regulation, and IM -- conformed to a simplexlike pattern of correlations, not a true simplex. Thus, AM was not considered an anchor on this continuum. Yet, in Vallerand et al.’s (1992, 1993) and other subsequent research, all the seven subscales were included in correlation analysis to assess the construct validity of the AMS. Therefore, there have been mixed results regarding the simplexlike pattern of correlations among the subscales.

To answer RQ1c in this study, correlations among the AMS subscales were assessed from Ryan and Connell’s (1989) standpoints. The AMS subscales were hypothesised to be correlated in such a way that: (1) the three IM subscales would most highly correlate with each other; (2) adjacent subscales would correlate more highly with each other than subscales that are further apart; (3a) AM would be negatively correlated with all the other subscales, and (3b) AM would be most negatively correlated with IM subscales.

RQ1d aimed at evaluating the criterion-related validity of the AMS through correlations between the seven AMS subscales with the three MSLQ subscales of organisation, elaboration, and critical thinking. According to SDT, self-regulated learning is associated with better quality motivation (Reeve et al., 2008). Therefore, it was hypothesised that the three MSLQ subscales would be (a) most positively correlated with the three IM subscales, (b) more positively
correlated with EM-identified regulation than with EM-introjected regulation and EM-external regulation, and (c) negatively correlated with AM. The criterion-related validity of the AMS is upheld when the correlations follow the hypothesised pattern.

4.8.1.4 Multivariate analysis of variance

A factorial MANOVA was conducted to explore the effect of students’ demographic characteristics (i.e., gender, study major, family educational background, and family financial capacity) on their motivation (RQ3). The four demographic variables served as independent variables (IVs) and the seven types of motivation served as dependent variables (DVs). Gender contained two categories, study major had seven categories corresponding to students’ academic elements, and family educational background and family financial capacity contained two categories each (i.e., the four options in the survey item were grouped into two categories).

In order to conduct a MANOVA, the data set must meet particular assumptions: independence, random sampling, multivariate normality, and homogeneity (equality) of covariance matrices (Field, 2013). As such, the data set violated the assumption of multivariate normality. According to Tabachnick and Fidell (2013), MANOVAs are robust to modest multivariate normality violations with a sample that is large enough, that is, minimum 20 cases in each cell. In the current study, there were 28 cells in MANOVA (4 IVs x 7 DVs); thus, the minimum sample size required for robustness would be 560 cases (28 x 20). Given that this data set contains 648 cases, the current sample size was large enough to compensate for the violations of multivariate normality.

The data set was further tested for the assumption of homogeneity (equality) of variance-covariance matrices, especially given that the groups in this study were of unequal sizes. Box’s M test statistic was significant ($p = .000$), thus the covariance matrices were not equal as assumed. Besides, Levene’s tests were significant for two of the seven DVs (i.e., EM- external regulation and AM), further confirming that the data set violated the assumption of homogeneity of variance. Accordingly, in the results section, Pillai’s Trace test statistic will be reported as it tends to be the most robust among the available multivariate statistics (Meyers, Gamst, & Guarino, 2006). To reduce Type I error rate, a more stringent alpha level of .004 was set to determine if the univariate $F$ tests for these DVs were significant (.05 divided by 12, which was the number of tests, as there were seven DVs) (Tabachnick & Fidell, 2013).

4.8.2 Qualitative data analysis

The qualitative data obtained from 14 one-to-one interviews were analysed using thematic qualitative text analysis, following the guidelines in Kuckartz (2014). Qualitative text analysis is
“a form of analysis in which an understanding and interpretation of the text play a far larger role than in classical content analysis, which is more limited to the so-called ‘manifest content’” (Kuckartz, 2014, p. 19). Qualitative text analysis has six key elements that distinguish it from other forms of qualitative data analysis, as follows:

1. It is the categories, the code-book and the process of coding that are central to the analysis.
2. It is a systematic approach that includes a set of clear rules for each of the individual steps of the analysis.
3. It involves classifying and categorising all texts of the entire data set and not only selected parts of the data.
4. It uses techniques to create categories based on the data.
5. It involves hermeneutic interpretation and reflection and is aware of the interactive form of the origin of the material.
6. It recognises quality standards and aims for intercoder agreement.

(Kuckartz, 2014, p. 22)

There are various methods and techniques within qualitative text analysis, but the most popular is thematic analysis, which is a basically inductive process. Analysis categories in thematic analysis are the actual content of the text, which can be classified into topics and subtopics. The process of thematic qualitative text analysis is presented in Figure 4-3. This form of analysis is most appropriate to highly explorative or descriptive research questions, and is used in cases with limited or fragmented existing literature about the phenomenon under investigation.

Given the obvious gap in the literature on Vietnamese university students’ motivation (see section 3.4.4), thematic qualitative text analysis was thus the appropriate method. Analysis was done on the interview transcripts in Vietnamese and only sections that are quoted in the results section were translated into English. The specific steps of qualitative analysis were as follows:

**Phase 1: Initial work with the text, highlight important text passages, and write memos**

The researcher read each interview transcript and identified particularly important text passages. Comments and observations of relevant information were also added where applicable. Initial ideas regarding further analysis of the text and short summaries of the interviews were recorded in memos.

**Phase 2: Develop main thematic categories**

The interview directly elicited answers to the qualitative research question (RQ2) in four areas according to the subquestions. Accordingly, there were four main thematic categories: students’
reasons for going to university, students’ choice of degree, students’ motivational change, and factors affecting students’ ongoing motivation.

Figure 4-3. Thematic qualitative text analysis process.
(Adapted from Kuckartz, 2014)

Phase 3: First coding process – coding all of the data using the main categories

The researcher first assigned codes related to the four categories identified above to text passages, section-by-section and line-by-line. Where a text passage referred to multiple topics, it was assigned to multiple categories.

The entire data set was coded, and coding units were the whole sections that pertained to a given topic. This ensured that the text passages would still be understood even when taken out of the context of the interview. Where there were clarifying questions, they were also included in the coding.

Phase 4: Compile all of the text passages that belong to the same main category and
Phase 5: Create subcategories inductively based on the data

All the text segments that were coded under the same thematic category were compiled into a list. Then subcategories were created for topics, emerging from the data. The list of
subcategories was then systemised and grouped into more general subcategories that would be suitable for further analysis. Interview responses were direct answers to the questions, therefore were clear in meaning and did not require formulation of new definitions.

**Phase 6: Second coding process – Code all of the data using the elaborate coding system**

The researcher assigned subcategories to each text passage. The units of coding were complete thoughts and sentences.

Regarding the issue of reliability of the coding, the researcher acknowledged that it was not possible to establish intercoder agreement as a team because this was her own thesis. Therefore, after the second coding was completed, all the coded material was examined by another native Vietnamese PhD candidate, who cross-checked to make sure that she agreed with the whole coding system and the assigned passages in each subcategory. Where there were coding disagreements, the two of them discussed their rationale to reach consensus. At the end of this phase, topic-related summaries were created for the subcategories and main categories.

**Phase 7: Category-based analysis and presentation of results**

In addressing the research questions using the coded text, the researcher asked herself the question “What do respondents have to say about this topic?” to make sense of the categories and to make meaningful and valid inferences from the data.

The last step was to prepare for the presentation of results. The researcher examined all the subcategories to select appropriate evidence to explain the results. Only these selected text segments were translated into English first by the researcher, and then checked by the other coder.

**4.9 Insider/outsider perspective**

A social researcher is influenced by the social world in which the research is being conducted, as well as by their assumptions, knowledge, biases, and values (Bryman, 2016). The researcher’s journey is influenced by certain assumptions that will have an impact on their research methodology and interpretations (O’Leary, 2017). In other words, the researcher conducts their research from both an insider’s (a.k.a. *emic*) and an outsider’s (a.k.a. *etic*) perspective, which has both advantages and disadvantages. Overall, as an insider, the researcher attempts to understand the phenomenon under investigation through the eyes of the research participants. As an outsider, the researcher applies existing theories and concepts to comprehend the research field.
What an insider ‘sees’ and ‘understands’ will be different from, but as valid as what an outsider understands (Smyth & Holian, 2008). Furthermore, “research from within (insider research) that is done by members of the organization under study is, and feels very different from, research that is conducted by and provided to organisations by outsiders” (Smyth & Holian, 2008, p. 33).

Therefore, it is important that social researchers reflect upon their roles to establish credibility for their research (Unluer, 2012). In the current research project, the researcher acted both as an insider and an outsider in the process.

As an academic staff at the participating university who was taking study leave abroad, the researcher played the role of an insider within the research site, with prior knowledge of and familiarity with the study context. Her understanding of the school culture and processes (Smyth & Holian, 2008) assisted the researcher in planning and conducting the data collection process. The researcher was able to act within the normal processes and procedures at the research site. Without this prior knowledge, it might have taken much longer and might have had fewer participants.

The researcher’s role as an insider offered the greatest advantage in the qualitative interviews. The researcher and the participants share the same mother language in which the interviews were conducted. Since there were no language barriers or difficulties, the conversational flow was smooth and the participants’ narratives, sounds, and meanings were clearly received by the researcher. Being an academic staff member at the participating university helped the researcher to quickly build rapport with the participants, resulting in trust and openness in the interviews. The researcher’s experience as academic staff allowed her to fully understand the respondents’ ideas, thoughts, and views. Nevertheless, being an insider might have hindered the researcher’s ability to obtain subtle information and clarification as she may have familiarised herself with the participants’ responses (Rabe, 2003).

At the same time, the researcher was also an outsider at the research site. She had left the research site two years prior to the time of data collection. During this time she was immersed in a western culture that is very different from her own. The researcher also studied existing theories and concepts that are widely used by researchers in the field. And the researcher allowed herself to be guided by the theory that had been selected. The survey questionnaires helped to obtain objective data. And in the interviews, by presenting herself as a doctorate student conducting a research which had the ultimate goal of supporting students’ learning, the researcher established herself as an outsider with expertise of the research area. The theory had guided the researcher in formulating the interview protocols and in elaborating the participants’ responses accordingly. This helped the researcher to understand the participants’ responses in light of the selected theory.
The researcher’s role as both an insider and an outsider contributed to the progression of the research and at the same time required her to be reflective of her role during the collection of data as well as in the interpretation of collected data. She had to be critical in reporting the answers to the qualitative questions of the research to ensure that they were not self-imposed or biased.

4.10 Ethical issues

As this study involved human subjects, a number of ethical issues were taken into consideration. Ethics clearance was obtained from Griffith University (Griffith University ethical reference number: EDN/10/15/HREC). Approval was also sought from the participating institution in Vietnam to allow the research team to approach the students. Participants were informed about the purpose of the research and were advised that their participation was voluntary and that they were free to withdraw at any stage, and that they would remain anonymous. The survey was constructed to ensure that students’ personal information could not be identified. In the interview, participants were assigned pseudonyms.

All the data collected remained confidential. The surveys were stored in a locked filing cabinet within the researcher’s office. Electronic data sets created from the survey and recordings as well as transcripts of the interviews were stored and password protected on the researcher’s personal computer. Besides, the measures used in this study were developed by other researchers. Hence, approval to use the AMS was sought from the authors (see Appendix E). The MSLQ, on the contrary, is now available in the public domain. Therefore, approval was not needed for the MSLQ.

4.11 Summary

This chapter has discussed issues related to the implementation of the current study, which was conducted at a high-ranking multidisciplinary university in Vietnam. Given the explorative and descriptive aim of the study and limited literature on Vietnamese university students’ motivation, the convergent parallel mixed methods design was chosen. Two different data sets were collected. Participants in the quantitative survey were 678 first-year students and qualitative interview participants were 14 students from Years 2 to 4, with the Year 2 students being from the same cohort as students in the survey. The final sample for quantitative data analysis included 648 responses. Statistical techniques employed were descriptive statistics, CFA, correlation analysis, and factorial MANOVA. Interview data were analysed using thematic qualitative text analysis. The following chapters will present results of data analyses.
CHAPTER 5: QUANTITATIVE RESULTS

5.1 Introduction

This study had two main aims of (a) examining students’ motivational orientations and their perspectives on different issues related to their motivation, and (b) assessing the psychometric properties of the Academic Motivation Scale (AMS) (Vallerand et al., 1992, 1993) in the current sample to test its applicability among Vietnamese university students. The convergent parallel mixed methods design was employed to collect and analyse two sets of data. The quantitative data were collected through 678 pen-and-paper surveys, which were composed of a demographic section, the full AMS, and three subscales from the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991, 1993). Data from the final sample of 648 survey responses were analysed statistically. Analyses were based on a complete data set with missing values being predicted via EM imputation. The qualitative data were obtained through 14 one-to-one interviews and analysed with thematic qualitative text analysis. Details about the implementation of the study have been presented in Chapter 4.

This chapter presents results of the analyses of the survey data to address the following research question (RQ):

RQ1: What are the psychometric properties of the AMS in the current sample?
   a. Does the proposed 7-factor structure or an alternate structure of the AMS best fit the observed data?
   b. Do scores on the AMS subscales reflect strong reliability?
   c. What are the relationships among the AMS subscales?
   d. What are the relationships between the AMS subscales and the three MSLQ subscales of organisation, elaboration, and critical thinking?

RQ2: What are Vietnamese students’ motivational orientations as measured by the AMS?

RQ3: What are the effects of demographic characteristics on Vietnamese students’ motivation?

To address these research questions, results from the following analyses are included in this chapter: descriptive analysis, confirmatory factor analysis (CFA), correlation analysis, and factorial MANOVA. In presenting the CFA results, inclusion of the relevant literature has been provided to support technical decisions and justification of findings.
5.2 Survey participants

Characteristics of survey participants including gender, major, family educational background, and family financial capacity are presented in Table 5-1. During data collection, the number of students from each academic element within the participating university that were invited was proportional to the size of the element. Therefore, the number of participants was reflective of the size of the corresponding academic element.

Table 5-1. Survey Participants (n = 648)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>160</td>
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</tr>
<tr>
<td>Female</td>
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<td><strong>Major</strong></td>
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</tr>
<tr>
<td>Social science</td>
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<td>20.4</td>
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<tr>
<td>Language</td>
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</tr>
<tr>
<td><strong>Family member with postsecondary education</strong></td>
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<td></td>
</tr>
<tr>
<td>Only parent(s)</td>
<td>52</td>
<td>8.0</td>
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<tr>
<td>Only sibling(s)</td>
<td>222</td>
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</tr>
<tr>
<td>Both parent(s) and sibling(s)</td>
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<td>12.3</td>
</tr>
<tr>
<td>None</td>
<td>294</td>
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<tr>
<td><strong>How easy it is for family to pay for their education</strong></td>
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<td>54.5</td>
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<tr>
<td>Difficult</td>
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<td>Very difficult</td>
<td>47</td>
<td>7.3</td>
</tr>
</tbody>
</table>

The majority of the survey participants were female (75.3%). Almost half of the participants (45.4%) were first-generation students. Most of the other students (34.3%) had only siblings with postsecondary education. For the large majority of the participants, their family either were able to manage (54.5%) or had some difficulty (34.7%) paying for their education. Only a small proportion (7.3%) indicated that it was very difficult for their family to pay for their education.

Student age was not requested on the survey. Most, if not all, commencing undergraduate students in Vietnamese universities are recent high school graduates, with a much smaller number who graduated from high school one or more years before their peers. Very rarely are there mature-age students in an undergraduate program in Vietnam, indicating that there was relatively little variance in age among participants.
5.3 Descriptive results of survey responses

This section provides a descriptive overview of the participants’ actual responses to the AMS and MSLQ items on the survey by subscale. Key descriptive statistics are provided (percentage distribution of responses, and deviation of responses), as well as the Cronbach alphas.

5.3.1 Responses on the AMS

The original seven AMS subscales with four items under each are presented in Table 5-2. Overall, respondents exhibited more and stronger agreement with items on extrinsic motivation (EM) subscales than with items on intrinsic motivation (IM) subscales.

The majority of responses were between 4 and 6 on IM to know (IMTK), and between 3 and 5 on IM to experience stimulation (IMES) and IM to accomplish (IMTA). Among the three IM subscales, IMTK had the most responses for scores 6 and 7, indicating that students in the current sample most valued the aspects of acquiring new knowledge. On the contrary, there were the most responses for scores 1 and 2 on IMES, implying that the students least valued the aspect of experiencing stimulation. Responses for IMTA were more spread across the scores, suggesting that the students had varied perceptions of the aspect of achievement.

There were similar patterns of responses on the EM subscales focusing on identified regulation (EMID) and external regulation (EMER), with most answers ranging between 4 and 7 and a rather high percentage of answers on the score of 7. This revealed that students in the current sample may be mostly motivated to study because of a career-related expectation. On the other hand, the responses on EM-introjected regulation (EMIN) items, assessing identified regulation, were more varied and there were more answers towards the “score 1” end, indicating that most students did not perceive studying in university as a way to show or prove their intelligence.

Finally, most responses on the amotivation (AM) subscale items had a score of 1 or 2, meaning that the participants largely disagreed with the statements, which referred to a lack of motivation. Yet, responses spread out on all scores, with a considerable percentage (from 14.4% to 27.2%) of answers scoring from 5 to 7. This suggested that a sizeable body of students were not motivated in their study.

Cronbach’s alpha values (see Table 5-2) showed that the AMS subscales had satisfactory reliability. The IMES and AM subscales had alpha values above .80, while the IMTK, EMID, and EMIN subscales had alpha values falling a little short of .80. The other two subscales, IMTA and EMER, had slightly lower alpha values, but which were above .70, thus were still reliable measures. After CFA was conducted, these values were recomputed to assess the reliability of the revised scale, which will be reported later in this chapter.
Table 5-2. Participants’ Responses on the AMS (n = 648)

<table>
<thead>
<tr>
<th>Item</th>
<th>% of responses</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>2.5 5.5 9.6 23.4 20.7 21.6 16.7 4.86 1.54</td>
<td>4.91 1.19 .79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>2.1 4.8 11.1 19.6 23.3 22.4 16.7 4.91 1.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>2.2 4.5 13.3 20.5 23.9 19.1 16.5 4.83 1.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>1.7 4.0 8.8 20.5 21.8 24.4 18.8 5.05 1.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>5.2 9.3 15.4 25.8 22.7 14.7 6.9 4.23 1.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>10.8 13.9 19.0 25.0 14.8 10.6 5.9 3.74 1.66</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>11.7 17.6 20.5 24.1 12.7 8.9 4.5 3.53 1.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>5.1 10.0 16.2 24.9 21.8 14.0 8.0 4.22 1.57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>3.9 9.1 14.2 23.4 19.6 18.7 11.1 4.46 1.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>5.8 10.9 15.3 24.1 20.7 13.3 9.9 4.22 1.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>7.2 12.5 18.4 26.4 18.4 11.7 5.4 3.93 1.57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>8.0 13.3 16.8 24.7 19.1 12.8 5.3 3.93 1.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>0 3.1 5.5 11.6 18.5 29.8 31.5 5.61 1.34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1.8 3.1 8.8 17.9 22.8 25.5 20.1 5.13 1.47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>1.7 2.9 7.4 15.4 21.6 26.1 24.9 5.30 1.47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>2.5 2.8 6.8 16.0 20.8 28.7 22.4 5.26 1.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07</td>
<td>11.4 11.0 7.9 20.5 17.7 17.9 13.6 4.30 1.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>11.0 12.4 18.5 21.1 17.0 11.4 8.6 3.90 1.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>20.2 17.0 18.4 20.2 13.7 6.0 4.5 3.26 1.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>7.1 9.9 13.1 26.2 17.8 15.3 10.6 4.26 1.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01</td>
<td>5.7 7.9 6.3 19.4 12.2 25.0 23.5 4.93 1.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08</td>
<td>2.0 3.4 4.6 13.3 21.1 28.6 27.0 5.42 1.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1.7 1.4 4.5 9.5 17.6 25.0 40.3 5.76 1.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>1.7 1.9 4.5 11.4 19.1 26.9 34.5 5.63 1.41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>37.7 21.5 13.7 10.0 6.3 5.4 5.4 2.64 1.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>31.5 16.0 11.0 14.3 10.2 9.7 7.3 3.14 2.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>45.8 16.8 11.1 11.9 5.9 4.8 3.7 2.44 1.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>41.7 18.5 9.1 11.4 6.3 6.8 6.2 2.67 1.93</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. M = mean; SD = standard deviation; α = Cronbach’s alpha; answers range from 1 = “does not correspond at all” to 7 = “corresponds exactly”.
5.3.2 Responses on the MSLQ subscales

This study focused on students’ motivation and on assessing the psychometric properties of the AMS. Therefore, the three MSLQ subscales (i.e., organisation, elaboration, and critical thinking) were selected only to be used in the assessment of the criterion-related validity of the AMS. Two cases from the sample for the AMS were further removed because they had more than 50% missing answers, resulting in a sample of 646 for the MSLQ data.

There are other self-regulated learning (SRL) strategies on the MSLQ but these three cognitive strategies were selected because of their crucial role in college learning. With organisation strategy, students select appropriate information and construct meaningful connections among the information that needs to be learned. With elaboration, students build internal connections between items to be learned. And with critical thinking, students apply prior knowledge to solve problems more efficiently and to make better decisions.

As can be seen in Table 5-3, the majority of answers across all MSLQ items ranged between 3 and 6 and the highest percentage was on scores 4 and 5. Of the three MSLQ subscales, the critical thinking subscale had the most answers on the lower end scores of 1 and 2 and fewer answers on the higher end scores of 6 and 7. The mean scores of responses on the subscales were 4.11 for organisation, 4.48 for elaboration, and 3.99 for critical thinking. This suggested that students in the current sample had average use of the three SRL strategies of organisation, elaboration, and critical thinking. Among the three strategies, the students appeared to have the least use of critical thinking, implying that Vietnamese students place more focus on the learning of knowledge than on practical application of what they learn. This may cause hinderance in achieving the aim of university education, which is preparing students for the workplace.

And similar to the AMS subscales, all three MSLQ subscales had satisfactory reliability, with Cronbach alpha values of .75, .80, and .84. These values were higher than those of the AMS subscales as exhibited from students’ responses.
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>% of responses</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>01</td>
<td>When I study the readings for a course, I outline the material to help me organise my thoughts.</td>
<td>8.5 14.7 17.3 25.1 18.0 10.5 5.9</td>
<td>4.11</td>
<td>1.17</td>
<td>.75</td>
</tr>
<tr>
<td>03</td>
<td>When I study for a course, I go through the readings and my class notes and try to find the most important ideas.</td>
<td>2.2 7.0 15.8 24.9 22.7 18.9 8.5</td>
<td>2.2 7.0 15.8 24.9 22.7 18.9 8.5</td>
<td>2.2 7.0 15.8 24.9 22.7 18.9 8.5</td>
<td>4.49</td>
</tr>
<tr>
<td>05</td>
<td>I make simple charts, diagrams, or tables to help me organise course material.</td>
<td>7.9 15.0 18.9 24.9 19.7 8.4 5.3</td>
<td>7.9 15.0 18.9 24.9 19.7 8.4 5.3</td>
<td>7.9 15.0 18.9 24.9 19.7 8.4 5.3</td>
<td>3.79</td>
</tr>
<tr>
<td>09</td>
<td>When I study for a course, I go over my class notes and make an outline of important concepts.</td>
<td>4.2 9.4 15.9 23.5 23.2 17.5 6.2</td>
<td>4.2 9.4 15.9 23.5 23.2 17.5 6.2</td>
<td>4.2 9.4 15.9 23.5 23.2 17.5 6.2</td>
<td>4.29</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07</td>
<td>When I study for a class, I pull together information from different sources, such as lectures, readings, and discussions.</td>
<td>2.2 5.6 11.4 25.7 26.0 18.1 11.0</td>
<td>2.2 5.6 11.4 25.7 26.0 18.1 11.0</td>
<td>2.2 5.6 11.4 25.7 26.0 18.1 11.0</td>
<td>4.48</td>
</tr>
<tr>
<td>08</td>
<td>I try to relate ideas in a subject to those in other courses whenever possible.</td>
<td>5.4 8.7 17.2 26.5 21.2 13.6 7.4</td>
<td>5.4 8.7 17.2 26.5 21.2 13.6 7.4</td>
<td>5.4 8.7 17.2 26.5 21.2 13.6 7.4</td>
<td>4.20</td>
</tr>
<tr>
<td>10</td>
<td>When reading for a class, I try to relate the material to what I already know.</td>
<td>1.7 4.3 12.4 22.5 29.1 18.9 11.1</td>
<td>1.7 4.3 12.4 22.5 29.1 18.9 11.1</td>
<td>1.7 4.3 12.4 22.5 29.1 18.9 11.1</td>
<td>4.74</td>
</tr>
<tr>
<td>12</td>
<td>When I study for a course, I write brief summaries of the main ideas from the readings and my class notes.</td>
<td>2.0 6.0 14.4 23.7 24.9 19.7 9.3</td>
<td>2.0 6.0 14.4 23.7 24.9 19.7 9.3</td>
<td>2.0 6.0 14.4 23.7 24.9 19.7 9.3</td>
<td>4.59</td>
</tr>
<tr>
<td>13</td>
<td>I try to understand the material in a class by making connections between the readings and the concepts from the lectures.</td>
<td>2.5 6.2 15.5 25.7 25.2 18.4 6.5</td>
<td>2.5 6.2 15.5 25.7 25.2 18.4 6.5</td>
<td>2.5 6.2 15.5 25.7 25.2 18.4 6.5</td>
<td>4.46</td>
</tr>
<tr>
<td>15</td>
<td>I try to apply ideas from course readings in other class activities such as lecture and discussion.</td>
<td>4.6 7.1 18.4 29.9 19.0 14.4 6.5</td>
<td>4.6 7.1 18.4 29.9 19.0 14.4 6.5</td>
<td>4.6 7.1 18.4 29.9 19.0 14.4 6.5</td>
<td>4.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>I often find myself questioning things I hear or read in a course to decide if I find them convincing.</td>
<td>7.6 17.8 20.0 24.8 13.9 11.1 4.8</td>
<td>7.6 17.8 20.0 24.8 13.9 11.1 4.8</td>
<td>7.6 17.8 20.0 24.8 13.9 11.1 4.8</td>
<td>3.72</td>
</tr>
<tr>
<td>04</td>
<td>When a theory, interpretation, or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence.</td>
<td>4.8 12.4 15.8 24.9 24.3 13.5 4.3</td>
<td>4.8 12.4 15.8 24.9 24.3 13.5 4.3</td>
<td>4.8 12.4 15.8 24.9 24.3 13.5 4.3</td>
<td>4.09</td>
</tr>
<tr>
<td>06</td>
<td>I treat the course material as a starting point and try to develop my own ideas about it.</td>
<td>4.8 10.2 19.5 27.3 20.9 10.8 6.5</td>
<td>4.8 10.2 19.5 27.3 20.9 10.8 6.5</td>
<td>4.8 10.2 19.5 27.3 20.9 10.8 6.5</td>
<td>4.08</td>
</tr>
<tr>
<td>11</td>
<td>I try to play around with ideas of my own related to what I am learning in a course.</td>
<td>4.3 8.5 17.8 22.6 23.5 15.5 7.7</td>
<td>4.3 8.5 17.8 22.6 23.5 15.5 7.7</td>
<td>4.3 8.5 17.8 22.6 23.5 15.5 7.7</td>
<td>4.30</td>
</tr>
<tr>
<td>14</td>
<td>Whenever I read or hear an assertion or conclusion in a class, I think about possible alternatives.</td>
<td>8.2 15.5 19.2 26.0 16.6 9.4 5.1</td>
<td>8.2 15.5 19.2 26.0 16.6 9.4 5.1</td>
<td>8.2 15.5 19.2 26.0 16.6 9.4 5.1</td>
<td>3.76</td>
</tr>
</tbody>
</table>

Note. M = mean; SD = standard deviation; α = Cronbach’s alpha; answers range from 1 = “not at all true of me” to 7 = “very true of me”.

Chapter 5: Results 1 – Students’ motivation
5.4 Psychometric properties of the Academic Motivation Scale

The psychometric properties of the AMS were assessed to test the applicability of the scale in the Vietnamese culture to study university students’ motivation. The AMS was assessed for its validity in terms of its factor structure, the relationships among the AMS subscales, and the relationships between the AMS and the MSLQ subscales. The reliability of the AMS was assessed both at the item and subscale levels.

5.4.1 Factor structure

In past research, CFA has typically been employed to assess the dimensionality of the AMS. Specifically, three alternate factor structures of the AMS have commonly been tested: the 3-, 5-, and 7-factor models. The 3-factor model combines the subscales into three broad factors: an intrinsic motivation (IM) factor, an extrinsic motivation (EM) factor, and an amotivation (AM) factor. This corresponds to the traditional classification of motivation. The 5-factor model includes a general IM factor, three EM factors, and AM. This is in line with the classification of motivation under SDT. Finally, the 7-factor model includes seven factors as proposed by the developers. The seven factors are: IM to know (IMTK), IM to experience stimulation (IMES), IM to accomplish (IMTA), EM -- identified regulation (EMID), EM -- introjected regulation (EMIN), EM -- external regulation (EMER), and AM. In this study, these three factor structures were tested in the CFA.

5.4.1.1 Initial results

In assessing model fit, a combination of fit indices as suggested by Hu and Bentler (1998, 1999) was used: the $\chi^2$, the standardised root mean square residual (SRMR), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), and the Tucker-Lewis index (TLI). Traditional cut-off values were used as indicators of good fit: .10 or less for SRMR, .08 or less for RMSEA, and .90 or higher for TLI and CFI (Vandenberg & Lance, 2000). The $\chi^2$ difference test was used to compare the models. Parameter estimates were also examined to assess factor loadings and item reliabilities. CFA results for the three competing AMS multifactor models are presented in Table 5-4.
Table 5-4. Fit Statistics of Multifactor Models

<table>
<thead>
<tr>
<th>Model</th>
<th>SRMR</th>
<th>RMSEA</th>
<th>90% CI</th>
<th>TLI</th>
<th>CFI</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2$/df</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-factor</td>
<td>.095</td>
<td>.094</td>
<td>[.090-.098]</td>
<td>.742</td>
<td>.764</td>
<td>2328.16*</td>
<td>347</td>
<td>6.71</td>
</tr>
<tr>
<td>5-factor</td>
<td>.066</td>
<td>.074</td>
<td>[.070-.078]</td>
<td>.841</td>
<td>.857</td>
<td>1538.07*</td>
<td>340</td>
<td>4.52</td>
</tr>
<tr>
<td>7-factor M1</td>
<td>.053</td>
<td>.063</td>
<td>[.059-.067]</td>
<td>.884</td>
<td>.899</td>
<td>1171.77*</td>
<td>329</td>
<td>3.56</td>
</tr>
<tr>
<td>7-factor M2</td>
<td>.051</td>
<td>.060</td>
<td>[.055-.065]</td>
<td>.911</td>
<td>.925</td>
<td>768.47*</td>
<td>231</td>
<td>3.33</td>
</tr>
<tr>
<td>7-factor M3</td>
<td>.056</td>
<td>.059</td>
<td>[.054-.064]</td>
<td>.917</td>
<td>.931</td>
<td>682.18*</td>
<td>209</td>
<td>3.26</td>
</tr>
</tbody>
</table>

Note. SRMR = standardised root mean square residual; RMSEA = root mean square error of approximation; CI = confidence interval; TLI = Tucker-Lewis index; CFI = comparative fit index. * $p < .001$

M1: original 7-factor model;
M2: revised 7-factor model with items 01, 02, 04, 27 removed;
M3: revised 7-factor model with items 01, 02, 04, 21, 27 removed.

Results showed that both the 3- and the 5-factor models had unsatisfactory fit to the data, with high values for RMSEA, while the TLI and CFI values were well below the cut-off value of .90. The $\chi^2$ difference test statistic showed that the original 7-factor model (M1) had significantly better fit than the 5- ($\Delta \chi^2 = 366.295$, $\Delta df = 11$) and the 3-factor models ($\Delta \chi^2 = 1156.393$, $\Delta df = 18$). Under traditional cut-off values for global fit indices, the fit of model M1 was acceptable (SRMR = .053, RMSEA = .063, TLI = .884, CFI = .899).

Examination of parameter estimates of model M1 showed that all factor loadings were significantly different from 0 with standardised factor loadings ranging from .60 to .83, except for the loading of item 01 (which was only .38). Among the 21 factor covariances, only two were not significant at $p < .05$, both involving AM. The variance explained by the factor ($R^2$) for the majority of the items ranged from .40 to .68. Two items had $R^2$ a little below .40. Item 01 again had the lowest $R^2$ value (.15).

However, evaluation of the standardised residuals indicated that model M1 did not reproduce the relationships among items well. There were 25 standardised residual covariances with absolute value above 2.58 (Byrne, 2010), more being positive than negative. This was indicative that the relationships among these variables were both under- and over-estimated by the model. No obvious pattern could be identified, except that a few items appeared in many of these residuals, suggesting that there were potential problems with the items.

Taken together, these results suggested that even though the original 7-factor model outperformed the 5- and the 3-factor models, it exhibited areas of local misfit and therefore required further examination. The focus of data analysis therefore shifted to post-hoc refinement of the original 7-factor model (M1). This was done by the fitting of seven 1-factor models before combining them into a full model to be retested.
5.4.1.2 Diagnosing model misfit

The AMS is a multidimensional scale; hence, potential misfits may lie both within and among the subscales. Therefore, a series of 1-factor models were tested to ensure that the items within each subscale were valid measures of the latent construct they aimed to measure (Bollen, 2000). Hu and Bentler’s (1998, 1999) more stringent criteria were adopted to assess these 1-factor models: .08 for SRMR, .06 for RMSEA, and .95 for TLI and CFI. This resulted in the models for EMID, EMIN, and AM having satisfactory fit, while the other four models had varying indicators of lack of fit indicated by RMSEA values above .06 (see Table 5-4).

Table 5-5. Fit Statistics of 1-factor Models

<table>
<thead>
<tr>
<th>Model</th>
<th>χ²</th>
<th>df</th>
<th>p</th>
<th>SRMR</th>
<th>RMSEA</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMTK – Intrinsic motivation to know</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original</td>
<td>14.535</td>
<td>2</td>
<td>.001</td>
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</tr>
<tr>
<td>IMES – Intrinsic motivation to experience stimulation</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>2</td>
<td>.010</td>
<td>.0166</td>
<td>.075</td>
<td>.977</td>
<td>.992</td>
</tr>
<tr>
<td>04 removed *</td>
<td>1.671</td>
<td>1</td>
<td>.196</td>
<td>.0079</td>
<td>.032</td>
<td>.997</td>
<td>.999</td>
</tr>
<tr>
<td>IMTA – Intrinsic motivation to accomplish</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Original</td>
<td>12.017</td>
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<td>.088</td>
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</tr>
<tr>
<td>27 removed *</td>
<td>.998</td>
<td>1</td>
<td>.318</td>
<td>.0092</td>
<td>.000</td>
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<td>1.000</td>
</tr>
<tr>
<td>EMID – Extrinsic motivation identified regulation</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Original *</td>
<td>1.832</td>
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<tr>
<td>EMIN – Extrinsic motivation introjected regulation</td>
<td></td>
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</tr>
<tr>
<td>Original *</td>
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<td>.325</td>
<td>.0098</td>
<td>.014</td>
<td>.999</td>
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</tr>
<tr>
<td>EMER – Extrinsic motivation external regulation</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Original</td>
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<td>2</td>
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<td>.0375</td>
<td>.123</td>
<td>.920</td>
<td>.973</td>
</tr>
<tr>
<td>01 removed *</td>
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<td>1</td>
<td>.285</td>
<td>.0076</td>
<td>.015</td>
<td>.999</td>
<td>1.000</td>
</tr>
<tr>
<td>AM - Amotivation</td>
<td>5.881</td>
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<td>.053</td>
<td>.0131</td>
<td>.055</td>
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<td>.996</td>
</tr>
</tbody>
</table>

* Final 1-factor models used in the revised M2.

Parameter estimates of the four misfitting 1-factor models (see Table 5-6) revealed that in each model, one item had very low factor loading and item reliability compared with the other items. Examination of item wording further revealed that these items had different wordings than the other items on the same subscale, thus confirming their low estimates. Therefore, four alternate 1-factor models were tested with the misfitting items being removed. Because each of these models only had three items, in each model, factor loadings of two items were constrained as equal. These items were identified by consulting their estimates in the original 1-factor models.
The revised 1-factor models (marked with asterisks in Table 5-5) improved significantly and fitted the data well.

### Table 5-6. Standardised Parameter Estimates of Misfitting 1-factor Models

<table>
<thead>
<tr>
<th>Item</th>
<th>IMTK Loading [R²]</th>
<th>Item</th>
<th>IMES Loading [R²]</th>
<th>Item</th>
<th>IMTA Loading [R²]</th>
<th>Item</th>
<th>EMER Loading [R²]</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>.57 [.32]</td>
<td>04</td>
<td>.57 [.32]</td>
<td>06</td>
<td>.66 [.43]</td>
<td>01</td>
<td>.35 [.12]</td>
</tr>
<tr>
<td>09</td>
<td>.77 [.59]</td>
<td>11</td>
<td>.82 [.67]</td>
<td>13</td>
<td>.67 [.45]</td>
<td>08</td>
<td>.69 [.47]</td>
</tr>
<tr>
<td>16</td>
<td>.73 [.53]</td>
<td>18</td>
<td>.84 [.70]</td>
<td>20</td>
<td>.71 [.51]</td>
<td>15</td>
<td>.86 [.74]</td>
</tr>
<tr>
<td>23</td>
<td>.73 [.54]</td>
<td>25</td>
<td>.70 [.48]</td>
<td>27</td>
<td>.56 [.31]</td>
<td>22</td>
<td>.75 [.56]</td>
</tr>
</tbody>
</table>

*Note.* Item reliabilities are in square brackets.

IMTK = intrinsic motivation to know; IMES = intrinsic motivation to experience stimulation; IMTA = intrinsic motivation to accomplish; EMER = extrinsic motivation external regulation.

On the IMTK subscale, item 02 was removed because in addition to “pleasure”, it also referred to “satisfaction” while the other items did not. Item 04 was removed from IMES because it is the only item that indicates the pleasure or intense feeling in college study resulting from the communication of ideas with other students, while the other items refer to reading activities. Communication among students is limited as the didactic pedagogy approaches are still very common in college classrooms in Vietnam (Director, Doughty, Gray, Hopcroft, & Silvera, 2006). Similarly, item 27 differed from the other items on the IMTA subscale in that it refers to the satisfaction when students’ quest for excellence is met. Meanwhile, the other items simply imply academic accomplishments. Lastly, whereas the other items on the EMER subscale are short prepositional phrases of purpose, item 01 is a complex sentence negating the possibility of prestigious employment. It is therefore very likely that respondents misinterpreted the item.

The fitted 1-factor models (three original and four revised) were then recombined to create a modified 7-factor model (M2) and retested. The fit of this model is discussed next.

#### 5.4.1.3 Refining the best fitting model

As reported in Table 5-4, fit indices of model M2 already improved significantly compared to the original model ($\Delta \chi^2 = 403.30$, $\Delta df = 98$, $p < .01$). Yet, there were still 19 standardised residual covariances with absolute values greater than 2.58. Model statistics suggested that item 21 on the EMIN subscale had potential cross loadings and high residual covariances with items on other subscales. This may be due to its content. Whereas item 21 indicates self-worth as being intelligent, other EMIN items connect self-worth with doing well or completing college study. Therefore, item 21 was removed and model M3 was tested. Fit statistics of M3 are reported in Table 5-4. A $\chi^2$ difference test showed that M3 had significantly better fit than M2 ($\Delta \chi^2 = 86.29$, $\Delta df = 22$, $p < .01$). Further modifications would result in overfitting of the model.
Thus, although still having 10 standardised residual covariances greater than 2.58 in absolute value, M3 was accepted as the best fitting model for the data ($\chi^2 (209) = 682.18; p < .01; \text{SRMR} = .046; \text{RMSEA} = .059; \text{TLI} = .917; \text{CFI} = .931$).

In total, when applied on Vietnamese university students, the AMS retained its 7-factor structure with five items (items number 01, 02, 04, 21, and 27) removed and no error covariances added. In comparison, the AMS fitted among Malaysian university students ($\chi^2 (324) = 2182.41; p < .01; \text{RMSEA} = .055; \text{TLI} = .909; \text{CFI} = .920$) with all 28 items retained and a few added error covariances (Chong & Ahmed, 2012b), which were not specified. Similarly, the original AMS by Vallerand et al. (1992) fitted only with the addition of 22 error covariances.

### 5.4.2 Scale reliability

Scale reliability of the revised 23-item AMS was assessed using different measures based on model M3. At the item level, factor loadings and squared multiple correlations were examined. All unstandardised loadings were statistically significant ($p < .001$), indicating that the items load on the hypothesised factors. As observed in Table 5-7, the 23 items on M3 had standardised factor loadings ranging from .63 to .84 ($p < .001$), with four loadings above .80, 11 loadings from .70 to .79, and average loading being .73. In other words, all items had good or excellent factor loadings, indicating that they were good measures.

The squared multiple correlation (SMC) for an observed variable is the communality estimate for the variable and represents the percent of variance in the variable that is explained by its latent factor. The SMC may be interpreted as the reliability of the indicator variable, and is roughly equivalent to “item reliability”. As reported in Table 5-7, all SMCs were from .40 to .71. Fourteen of the items had SMC values above .50, which means more than 50% of the variance in the item was explained by the latent factor, indicating that they were good indicator variables. SMC values of .30 are indicative of acceptable observed variables. Thus, the nine items with SMC between .40 and .49 were acceptable indicators of the latent factors.
Table 5-7. Standardized Parameter Estimates of the Revised 23-Item Model

<table>
<thead>
<tr>
<th>Item</th>
<th>IMTK</th>
<th>IMES</th>
<th>IMTA</th>
<th>EMID</th>
<th>EMIN</th>
<th>EMER</th>
<th>AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>09</td>
<td>.74</td>
<td>[.55]</td>
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<td>11</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.82</td>
</tr>
<tr>
<td>Average</td>
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<td>.79</td>
<td>[.62]</td>
<td>.68</td>
<td>[.46]</td>
<td>.68</td>
</tr>
<tr>
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<td>.46</td>
<td>.47</td>
<td>.47</td>
<td>.58</td>
<td>.59</td>
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</tbody>
</table>

*Note.* Factor loadings for subscale items are outside of square brackets; squared multiple correlations are in square brackets. IMTK = intrinsic motivation to know; IMES = intrinsic motivation to experience stimulation; IMTA = intrinsic motivation to accomplish; EMID = extrinsic motivation identified regulation; EMIN = extrinsic motivation introjected regulation; EMER = extrinsic motivation external regulation; AM = amotivation.

The variance extracted estimates were also computed for each factor (see Table 5-7). The variance extracted estimate represents the overall amount of variance in the indicators that is accounted for by the latent construct (Fornell & Larcker, 1981). Four of the seven latent constructs had variance extracted estimate above .50, which suggests that the items were representative of the underlying constructs. The variance extracted estimates of the other three latent constructs fell just short of .50 (from .46 to .47), suggesting that the items were adequately representative of the constructs.
On the subscale level, reliability was assessed with three measures (see Table 5-8): Cronbach’s alpha, coefficient H (Hancock & Mueller, 2001), and construct reliability (Fornell & Larcker, 1981).

Table 5-8. Subscale Reliabilities and Means of the Revised 23-item AMS

<table>
<thead>
<tr>
<th></th>
<th>IMTK</th>
<th>IMES</th>
<th>IMTA</th>
<th>EMID</th>
<th>EMIN</th>
<th>EMER</th>
<th>AM</th>
<th>Average</th>
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<td>Cronbach’s α</td>
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<td>.83</td>
<td>.72</td>
<td>.78</td>
<td>.72</td>
<td>.80</td>
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<td>.78</td>
</tr>
<tr>
<td>Coefficient H</td>
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<td>.72</td>
<td>.79</td>
<td>.73</td>
<td>.82</td>
<td>.86</td>
<td>.79</td>
</tr>
<tr>
<td>Construct reliability</td>
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<td>.83</td>
<td>.72</td>
<td>.78</td>
<td>.72</td>
<td>.81</td>
<td>.85</td>
<td>.79</td>
</tr>
<tr>
<td>Mean</td>
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<td>3.74</td>
<td>4.21</td>
<td>5.32</td>
<td>4.16</td>
<td>5.67</td>
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</tr>
<tr>
<td>MeanSD</td>
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<td>1.42</td>
<td>1.29</td>
<td>1.14</td>
<td>1.42</td>
<td>1.24</td>
<td>1.56</td>
<td>1.33</td>
</tr>
</tbody>
</table>

Note. IMTK = intrinsic motivation to know; IMES = intrinsic motivation to experience stimulation; IMTA = intrinsic motivation to accomplish; EMID = extrinsic motivation identified regulation; EMIN = extrinsic motivation introjected regulation; EMER = extrinsic motivation external regulation; AM = amotivation.

Whereas Cronbach’s alpha is based on sample correlations, both coefficient H and construct reliability are based on parameter estimates of the fitted model. All reliability values of all subscales were above .70, indicating that the items within each subscale had good internal consistencies. In other words, all seven subscales of the revised 23-item AMS were reliable measures of the corresponding latent constructs.

5.4.3 Relationships among the AMS subscales

The AMS subscales are hypothesised to be correlated in a simplexlike pattern that represents a continuum (Vallerand et al., 1993). The AMS extended SDT in distinguishing IM into three subtypes. Initially, Ryan and Connell (1989) did not include AM in the assessment of the simplexlike pattern of correlations. Yet, research on the AMS has often included AM in this assessment. This study adopted Ryan and Connell’s approach. The following hypotheses were made regarding the associations among the AMS subscales: (1) the three IM subscales would most highly correlate with each other; (2) adjacent subscales would correlate more highly with each other than subscales that are further apart; (3a) AM would be negatively correlated with all the other subscales, and (3b) AM would be most negatively correlated with IM subscales.

Table 5-9 reports both zero order and latent factor correlations among the revised AMS subscales. In what follows, latent factor correlations are interpreted because they are disattenuated for measurement error and provide more accurate estimates of relationship strengths (Schmidt & Hunter, 1996). Only two published papers (i.e., Fairchild et al., 2005; Zhang et al., 2016) were identified that also reported latent factor correlations; therefore,
comparison between findings of this study with past research will be limited. Overall, apart from AM, the other six subscales were significantly correlated with each other at the .01 level.

**Table 5-9. Correlations among the AMS and the MSLQ Subscales**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IMTK</td>
<td>--</td>
<td>.77**</td>
<td>.82**</td>
<td>.72**</td>
</tr>
<tr>
<td>IMES</td>
<td>.60**</td>
<td>--</td>
<td>.77**</td>
<td>.47**</td>
</tr>
<tr>
<td>IMTA</td>
<td>.62**</td>
<td>.58**</td>
<td>--</td>
<td>.61**</td>
</tr>
<tr>
<td>EMID</td>
<td>.57**</td>
<td>.37**</td>
<td>.46**</td>
<td>--</td>
</tr>
<tr>
<td>EMIN</td>
<td>.48**</td>
<td>.48**</td>
<td>.68**</td>
<td>.44**</td>
</tr>
<tr>
<td>EMER</td>
<td>.38**</td>
<td>.15**</td>
<td>.35**</td>
<td>.62**</td>
</tr>
<tr>
<td>AM</td>
<td>-.27**</td>
<td>-.05**</td>
<td>-.07**</td>
<td>-.38**</td>
</tr>
</tbody>
</table>

Note. Latent factor correlations are above the diagonal; zero-order correlations are below the diagonal. IMTK = intrinsic motivation to know; IMES = intrinsic motivation to experience stimulation; IMTA = intrinsic motivation to accomplish; EMID = extrinsic motivation identified regulation; EMIN = extrinsic motivation introjected regulation; EMER = extrinsic motivation external regulation; AM = amotivation. Org. = Organisation; Ela. = Elaboration; Cri. = Critical Thinking. **p < 0.01.

The three IM subscales were highly correlated (r from .77 to .82). The variation among these correlations was less than among those reported in Fairchild et al. (2005) (.71 -- .87), but was comparable with results reported in Zhang et al. (2016) on Chinese high school students (.85 -- .91 and .92 -- .96 for the two samples). This supported the distinction among the three IM subtypes in the current sample. The three EM subscales also displayed moderate (rEMIN-EMER = .52) to high (rEMID-EMER = .79) correlations with each other.

Regarding the magnitude of correlations among adjacent subscales, a number of deviations from the expected simplexlike pattern were observed. First, IMTA and EMIN had the strongest correlation with each other (r = .95) instead of with other subscales of the same motivation category. Indeed, EMIN had higher correlations with all three IM subscales than with the other two EM subscales. Second, there were a number of higher correlations between distant subscales than between adjacent subscales. Specifically, EMIN is further apart on the continuum but it had stronger correlations with IMES (r = .62) and IMTA (r = .95) than did EMID (rEMID-IMES = .47 and rEMID-IMTA = .61). Correlations among the three EM subscales also did not follow the hypothesised pattern. EMID correlated more strongly with EMER (r = .79) instead of with EMIN (r = .58), which is closer to it. Similarly, EMER correlated more with EMID (r = .79) instead of with EMIN (r = .52). Therefore, it was concluded that the simplexlike pattern was only partially supported.
To better understand these deviations, the magnitude of correlations between IM and EM factors was examined. On the whole, correlations between IM and EM factors in the current study tended to be higher than those obtained in studies with non-Asian samples (e.g., Can, 2015; Orsini et al., 2015; K. J. Smith et al., 2010). Correlations across subscales ranged from moderate to high (from $r_{IMTA-EMER} = .46$, to $r_{IMTK-EMID} = .72$), except the low correlation between IMES and EMER ($r = .19$). Among these, some were of similar magnitude, for example, $r_{IMTK-EMIN} = .63$, $r_{IMES-EMIN} = .62$, $r_{IMTA-EMID} = .61$; and $r_{IMTA-EMER} = .46$, $r_{IMTK-EMER} = .47$, $r_{IMES-EMID} = .47$. The correlation between IMTA and EMIN was particularly high ($r = .95$), yet comparable with that found in Chinese vocational high school students ($r = .94$) reported in Zhang et al. (2016). This is indicative of a potential overlap between IM and EM constructs, which had also been pointed out by other researchers (e.g., Akoto, 2014; Cokley et al., 2001; Stover et al., 2012).

Finally, AM had negative associations with all the other subscales, supporting hypothesis 3a. Yet, its correlations with IMES, IMTA, and EMIN were very small and statistically nonsignificant. Further, the correlations between AM and the other subscales did not support hypothesis 3b. Specifically, it correlated more negatively with EMID ($r = -.46$) than with IMTK ($r = -.33$).

### 5.4.4 Relationships between the AMS and MSLQ subscales

Self-regulated learning is associated with better quality motivation (Reeve et al., 2008). In other words, motivation types are expected to predict the use of self-regulated learning strategies. In this study, three MSLQ subscales were used to assess the criterion-related validity of the AMS, namely, organisation, elaboration, and critical thinking. Therefore, it was hypothesised that the three MSLQ subscales would be (1) most positively correlated with the three IM subscales, (2) more positively correlated with EMID than with EMIN and EMER, and (3) negatively correlated with AM.

Latent factor correlations between the AMS and MSLQ subscales (presented in Table 5-9) were obtained through CFA of three 8-factor models, each comprising all the AMS subscales and one MSLQ subscale. All correlations, except that between AM and critical thinking, were statistically significant ($p < .01$). The correlations between IM subscales and the three MSLQ subscales ranged from moderate (.52) to high (.74). All three MSLQ subscales had the strongest correlations with IM subscales. With regards to EM subscales, only the elaboration subscale had higher positive correlation with EMID ($r = .52$) than with both EMIN and EMER as hypothesised. The organisation subscale was comparatively equally associated with EMID ($r = .53$) and EMIN ($r = .55$). Meanwhile, the critical thinking subscale was less positively correlated with EMID ($r = .46$) than with EMIN ($r = .59$). Lastly, AM had negative correlations with all three MSLQ subscales, although the association between AM and critical thinking was
not statistically significant. On the whole, it was concluded that the results largely supported the hypotheses. The AMS predicted students’ use of self-regulated learning strategies. In other words, the AMS supported the demonstration of a level of criterion-related validity.

### 5.5 Students’ motivational orientations

Given the fit of the revised 23-item AMS 7-factor model and adequate reliability and validity of the scale, descriptive statistics was performed to explore Vietnamese students’ motivational orientations. Three measures were assessed: subscale means to identify the types of motivation that were most prevalent, mean scores of autonomous and controlled motivation categories to understand if students’ motivation was more autonomous or controlled, and Self-Determination Index (SDI) to reveal the degree of self-determination in students’ pursuit of HE. Results are reported in Table 5-10.

The fitting of 1-factor models in section 5.4.1.2 revealed that the items did not contribute equally to the composite scores representing the constructs. Thus, subscale means were computed using factor score weights obtained from the corresponding fitted 1-factor models in CFA. Autonomous motivation comprised IM and EMID. Controlled motivation included EMIN and EMER. In order to compute scores for these two broad categories of motivation, subscale means were summed and averaged.

From subscale means, SDI was computed with the following formula:

\[
SDI = 2\times((IMTK + IMES + IMTA)/3) + EMID - ((EMIN + EMER)/2 + 2\times AM)
\]

(R. J. Vallerand, personal communication, Dec 19, 2014)

Scores for SDI range from -18 (very little self-determination) to +18 (extreme self-determination). In a personal communication with the author (R. J. Vallerand, 19/12/2014), it was mentioned that most people tested with this score obtained scores around 10. SDT allows for the assessment of students’ levels of self-determination in their study. Higher scores indicate higher levels of self-determination, or better quality of motivation.
From Table 5-10, it can be observed that respondents in the current sample scored higher on EM subscales ($M_{EM} = 5.05$) than on IM subscales ($M_{IM} = 4.29$). Specifically, respondents scored highest on the EMER subscale ($M = 5.67$), indicating that external regulation is the most prevalent form of motivation amongst the participants. In other words, students were mostly motivated by the prospect of a better job in the future that a university degree would bring. The mean for the EMID subscale was nearly equally high ($M = 5.32$), suggesting that, at the same time, students in the current sample were motivated to study because they saw university education as personally important. It could be inferred that for Vietnamese students, university education was primarily important because it was associated with greater opportunity of getting a better job in the future.

The next important type of motivation in the current sample was IMTK ($M = 4.93$), which meant the fact of learning new things also served as an important source of motivation. Among EM subscales, EMIN had a mean that was more comparable with those of IM subscales, thus explaining its higher correlations with IM subscales. Finally, a mean score of 2.66 on AM suggested that a body of respondents were not motivated in their daily study.

Examined from a different perspective, students’ motivation was both autonomous and controlled. Yet, the mean of controlled motivation (4.91) was slightly higher than that of autonomous motivation (4.55). This pattern of motivation that emerged from the revised AMS 23-item scale was similar to the pattern of motivation that emerged from the original.

In terms of the level of self-determination in their study, the current sample did not score high on SDI ($M = 3.69$, $SD = 4.44$), with scores ranging from -14.66 to +13.16. This was lower than the average score of Malaysian university students of 5.04 reported in Chong and Ahmed (2012). But Malaysian students’ SDI scores were computed on the original data and subscale.
means were computed using unit weights. The low SDI average reported in this study indicated that Vietnamese students had rather low levels of academic self-determination.

5.6 Effects of demographic characteristics

Based on the revised 23-item AMS with subscale means calculated using factor score weights, a factorial MANOVA was conducted to assess the effects of the independent variables (IVs) of demographic characteristics (gender, study major, family educational background, and family financial capacity) on students’ motivation assessed through the seven AMS subscales, tested at both the univariate and multivariate levels. This was achieved through factorial MANOVA. To address the violation of the assumption of homogeneity (equality) of variance, Pillai’s Trace test statistic was used. Results were also interpreted with caution. In testing the significance of the univariate F statistic of the IVs on the seven motivation types, a more robust alpha level was set at .004 (family wise alpha of .05 divided by 12 tests) to reduce Type I error (Tabachnick & Fidell, 2013).

5.6.1 Main effects

As reported in Table 5-11, two of the four demographic IVs, namely, study major and family financial capacity, had significant multivariate main effects on students’ motivation. Multivariate statistics for the IV of study major were: \( F(42, 3570) = 2.187, p = .000, \) Pillai’s Trace = .151, partial \( \eta^2 = .025; \) and for the IV of financial capacity were: \( F(7, 590) = 2.649, p = .011, \) Pillai’s Trace = .030, partial \( \eta^2 = .030. \)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Pillai’s Trace</th>
<th>( F )</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>( p )</th>
<th>Partial ( \eta^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (G)</td>
<td>.023</td>
<td>1.994</td>
<td>7</td>
<td>590</td>
<td>.054</td>
<td>.023</td>
</tr>
<tr>
<td>Study major (M)</td>
<td>.151</td>
<td>2.187</td>
<td>42</td>
<td>3570</td>
<td>.000</td>
<td>.025</td>
</tr>
<tr>
<td>Family educational background (E)</td>
<td>.023</td>
<td>1.940</td>
<td>7</td>
<td>590</td>
<td>.061</td>
<td>.023</td>
</tr>
<tr>
<td>Family financial capacity (F)</td>
<td>.030</td>
<td>2.649</td>
<td>7</td>
<td>590</td>
<td>.011</td>
<td>.030</td>
</tr>
<tr>
<td>G * M</td>
<td>.096</td>
<td>1.376</td>
<td>42</td>
<td>3570</td>
<td>.055</td>
<td>.016</td>
</tr>
<tr>
<td>G * E</td>
<td>.028</td>
<td>2.423</td>
<td>7</td>
<td>590</td>
<td>.019</td>
<td>.028</td>
</tr>
<tr>
<td>G * F</td>
<td>.027</td>
<td>2.320</td>
<td>7</td>
<td>590</td>
<td>.024</td>
<td>.027</td>
</tr>
<tr>
<td>M * E</td>
<td>.063</td>
<td>.901</td>
<td>42</td>
<td>3570</td>
<td>.653</td>
<td>.010</td>
</tr>
<tr>
<td>M * F</td>
<td>.101</td>
<td>1.455</td>
<td>42</td>
<td>3570</td>
<td>.029</td>
<td>.017</td>
</tr>
<tr>
<td>E * F</td>
<td>.012</td>
<td>1.041</td>
<td>7</td>
<td>590</td>
<td>.401</td>
<td>.012</td>
</tr>
<tr>
<td>G * M * E</td>
<td>.039</td>
<td>.659</td>
<td>35</td>
<td>2970</td>
<td>.939</td>
<td>.008</td>
</tr>
<tr>
<td>G * M * F</td>
<td>.071</td>
<td>1.012</td>
<td>42</td>
<td>3570</td>
<td>.450</td>
<td>.012</td>
</tr>
<tr>
<td>G * E * F</td>
<td>.006</td>
<td>.496</td>
<td>7</td>
<td>590</td>
<td>.838</td>
<td>.006</td>
</tr>
<tr>
<td>M * E * F</td>
<td>.072</td>
<td>1.027</td>
<td>42</td>
<td>3570</td>
<td>.423</td>
<td>.012</td>
</tr>
<tr>
<td>G * M * E * F</td>
<td>.045</td>
<td>1.286</td>
<td>21</td>
<td>1776</td>
<td>.172</td>
<td>.015</td>
</tr>
</tbody>
</table>
Because the IVs of study major and financial capacity had significant multivariate effects on students’ motivation, their univariate effects on each type of motivation were further examined (see Table 5-12). With an adjusted alpha level of .004 to reduce Type I error (Tabachnick & Fidell, 2013), the IV of study major had a significant univariate effect on IM to know \((p = .002)\) and on IM to experience stimulation \((p = .000)\). On the contrary, family financial capacity did not have any significant univariate effect on the different motivation types in this sample.

### Table 5-12. Test of Between-Subject Effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>IMTK</th>
<th>IMES</th>
<th>IMTA</th>
<th>EMID</th>
<th>EMIN</th>
<th>EMER</th>
<th>AM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study major</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(F)</td>
<td>3.464</td>
<td>4.452</td>
<td>1.423</td>
<td>3.033</td>
<td>1.817</td>
<td>2.295</td>
<td>1.619</td>
</tr>
<tr>
<td>(p)</td>
<td>.002</td>
<td>.000</td>
<td>.203</td>
<td>.006</td>
<td>.093</td>
<td>.034</td>
<td>.139</td>
</tr>
<tr>
<td>Partial (\eta^2)</td>
<td>.034</td>
<td>.043</td>
<td>.014</td>
<td>.030</td>
<td>.018</td>
<td>.023</td>
<td>.016</td>
</tr>
<tr>
<td><strong>Family financial capacity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(F)</td>
<td>1.315</td>
<td>.434</td>
<td>1.656</td>
<td>.233</td>
<td>.050</td>
<td>6.508</td>
<td>.182</td>
</tr>
<tr>
<td>(p)</td>
<td>.252</td>
<td>.510</td>
<td>.199</td>
<td>.629</td>
<td>.823</td>
<td>.011</td>
<td>.670</td>
</tr>
<tr>
<td>Partial (\eta^2)</td>
<td>.002</td>
<td>.001</td>
<td>.003</td>
<td>.000</td>
<td>.000</td>
<td>.011</td>
<td>.000</td>
</tr>
<tr>
<td><strong>Gender x Family educational background</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(F)</td>
<td>8.897</td>
<td>1.045</td>
<td>.824</td>
<td>.064</td>
<td>1.457</td>
<td>.091</td>
<td>.096</td>
</tr>
<tr>
<td>(p)</td>
<td>.003</td>
<td>.307</td>
<td>.364</td>
<td>.800</td>
<td>.228</td>
<td>.763</td>
<td>.757</td>
</tr>
<tr>
<td>Partial (\eta^2)</td>
<td>.014</td>
<td>.002</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td><strong>Gender x Family financial capacity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(F)</td>
<td>.607</td>
<td>1.158</td>
<td>1.112</td>
<td>.261</td>
<td>2.607</td>
<td>3.226</td>
<td>2.384</td>
</tr>
<tr>
<td>(p)</td>
<td>.436</td>
<td>.282</td>
<td>.292</td>
<td>.609</td>
<td>.107</td>
<td>.073</td>
<td>.123</td>
</tr>
<tr>
<td>Partial (\eta^2)</td>
<td>.001</td>
<td>.002</td>
<td>.002</td>
<td>.000</td>
<td>.004</td>
<td>.005</td>
<td>.004</td>
</tr>
<tr>
<td><strong>Study major x Family financial capacity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(F)</td>
<td>1.583</td>
<td>.793</td>
<td>2.307</td>
<td>1.430</td>
<td>2.829</td>
<td>1.191</td>
<td>1.974</td>
</tr>
<tr>
<td>(p)</td>
<td>.150</td>
<td>.576</td>
<td>.033</td>
<td>.201</td>
<td>.010</td>
<td>.309</td>
<td>.067</td>
</tr>
<tr>
<td>Partial (\eta^2)</td>
<td>.016</td>
<td>.008</td>
<td>.023</td>
<td>.014</td>
<td>.028</td>
<td>.012</td>
<td>.019</td>
</tr>
</tbody>
</table>

*Note. IMTK = intrinsic motivation to know; IMES = intrinsic motivation to experience stimulation; IMTA = intrinsic motivation to accomplish; EMID = extrinsic motivation identified regulation; EMIN = extrinsic motivation introjected regulation; EMER = extrinsic motivation external regulation; AM = amotivation.*

The Levene’s test statistics for IM to know \((p = .474)\) and IM to experience stimulation \((p = .537)\) were nonsignificant, indicating that the group variances on these DVs were equal, thus the Sheffé posthoc test was used for comparing pairwise group means for study major. No significant group mean difference was observed among the study majors on the DV of IM to know. However, there were several significant group mean differences among the study majors on IM to experience stimulation. Mean and mean differences \(\Delta M\) on IM to experience stimulation by study majors are reported in Table 5-13.

As observed in Table 5-13, students with a study major in natural sciences tended to have less IM to experience stimulation than students in the other groups, as indicated by their lower mean score on this type of motivation, compared with the other six groups. Meanwhile, students with
a study major in social sciences appeared to have the highest level of IM to experience stimulation, as indicated by the positive mean differences when this group was compared against the other groups. Other than these two observations, there was no other noticeable pattern of mean differences by study major.

Table 5-13. Group Mean and Mean Differences on IM to Experience Stimulation by Study Major

<table>
<thead>
<tr>
<th></th>
<th>MN</th>
<th>ΔM = 1.1080</th>
<th>ΔM = .4658</th>
<th>ΔM = .5483</th>
<th>ΔM = .3777</th>
<th>ΔM = .9104</th>
<th>ΔM = .6717</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>(2)</td>
<td>ΔM = -1.1080</td>
<td>M = 4.3040</td>
<td>p = .029</td>
<td>p = .211</td>
<td>p = .060</td>
<td>p = .995</td>
</tr>
</tbody>
</table>

Note. M = mean; ΔM = mean difference = A - B.

Among the 42 pair-wise comparisons, mean differences were only statistically significant between students of social sciences and students of (a) natural sciences (p = .000) and (b) languages (p = .029); and between students of natural sciences and students of education (p = .024). Students of social sciences had significantly higher levels of IM to experience stimulation than students of natural sciences (ΔM = 1.1080) and languages (ΔM = .6422). Meanwhile, students of natural sciences had significantly lower levels of IM to experience stimulation than students of education (ΔM = - .9104).

In total, in the current sample, students’ study major and family financial capacity appeared to significantly impact their motivation in daily study while students’ gender and family educational background did not exhibit any apparent effect. Yet, study major and family financial capacity influenced students’ motivation in different ways. Students’ study major had significant effects on students’ overall motivation as well as specifically on students’ IM to experience stimulation. Students majoring in natural sciences exhibited the lowest level of IM to experience stimulation. Meanwhile, students’ family financial capacity only had an overall effect on students’ motivation.
5.6.2 Interaction effects

Four demographic variables were included in the analysis, resulting in various combinations of interaction. Results from MANOVA (see Table 5-11) revealed that three interactions had statistically significant multivariate effect on students’ motivation. The three interaction effects were between (a) gender and family educational background \([F(7, 590) = 2.423; p = .019;\]
\(\text{Pillai’s Trace} = .028; \text{partial } \eta^2 = .028\); (b) gender and family financial capacity \([F(7, 590) = 2.320; p = .024; \text{Pillai’s Trace} = .027; \text{partial } \eta^2 = .027\]; and (c) study major and family financial capacity \([F(42, 3570) = 1.455; p = .029; \text{Pillai’s Trace} = .101; \text{partial } \eta^2 = .017\].

The interaction effect among all four IVs on each of the seven motivation types was further examined, revealing only one significant univariate effect at the adjusted alpha level of .004. The interaction between students’ gender and family educational background had significant effect on students’ IM to know: \([F(1) = 8.897, p = .003, \text{partial } \eta^2 = .014\].

With caution, it appeared that students’ family educational background influenced students’ motivation through gender. When a member in the family already had postsecondary education, students were more likely to be motivated in obtaining university education. This influence could be stronger on male students than on female students due to the role of the son in the Vietnamese family and the role of males in the society as a whole. A male student would later become the ‘leader’ of his own family, thus his parents might want to help prepare him through university education. A student from a family with postsecondary education background would tend to be exposed to a certain area of knowledge through the family member who had the education. This would enhance their motivation to learn more about that area, or their IM to know in general.

Family financial capacity also appeared to affect students’ motivation through gender. It was very likely that this effect would be smaller in families with higher financial capacities that could more easily afford to send their children, both male and female, to high school and eventually to university. But in less well-off families, a choice may have had to be made regarding which child would receive financial support and investment to pursue university education. Students who could see that they were given the chance to continue their education over their female siblings then may potentially be more motivated to study so as not to disappoint their family.

Lastly, family financial capacity may have influenced students’ motivation through their study majors. Students may have made their degree choices based on various factors, but their family financial capacity may have played a significant role. It was very likely that students chose a study major that had promising prospects of a better future career. With the associated higher
pay students might feel that they could support their family in return for their investment on and commitment towards their education.

5.7 Summary

This chapter has reported results from statistical analyses of 648 survey responses. The survey data addressed RQ1 regarding the psychometric properties of the AMS, RQ2 regarding students’ motivation in their daily study, and RQ3 regarding the effects of demographic characteristics on students’ motivation.

Initial results from the CFA revealed that although the 7-factor structure outperformed the 5- and 3-factor structures of the AMS and had acceptable fit, it exhibited areas of misfit. Therefore, the focus of analysis shifted to post-hoc refinement of this model. The final 7-factor AMS model retaining 23 items of the original 28 items fitted the data well. The reliability of the scale was then assessed at both the item and the subscale levels. Results showed that the revised AMS was a reliable measure.

Correlation analysis was then performed on this model to assess the validity of the revised scale. First, the correlations among the AMS subscales were examined to test if a simplexlike pattern of correlations existed. Then, correlations between the AMS subscales and the three MSLQ subscales were examined to assess the criterion-related validity of the AMS. The simplexlike pattern of correlations was only partially supported among the AMS subscales alone, but was upheld in correlations between the AMS subscales and the three MSLQ subscales. Furthermore, the latter set of correlations followed the hypothesised pattern, implying that the AMS was a good predictor of self-regulated learning strategies. Therefore, despite the results regarding the construct validity of the AMS in terms of the simplexlike pattern, the overall results provided initial support of the validity and reliability of the AMS as a measure of motivation among Vietnamese students.

Descriptive statistics was then performed to explore students’ motivational orientations. Overall, students in this study reported higher levels of EM than IM. The levels of endorsement of specific motivation types varied from moderately low (amotivation), to moderate (IM to experience stimulation, IM to accomplish, and EM with introjected regulation), and to moderately high (EM with external regulation, EM with identified regulation, and IM to know). Students scored highest on the EMER subscale, indicating that they were most motivated to study due to reasons relating to future employment. Yet, the students display roughly equal strengths of autonomous and controlled motivation. However, the level of self-determination in their daily study was rather low in the current sample.
The results of the factorial MANOVA revealed a complex combination of effects of students’ demographic characteristics (that is, gender, study major, family educational background, and family financial capacity) on their ongoing motivation. Study major had significant main effects on students’ overall motivation and specifically on students’ IM to know and IM to experience stimulation. Students’ family financial capacity only had significant main effect on students’ overall motivation whereas gender and family educational background did not have significant main effects, either at the multivariate or univariate level. Meanwhile, three of the interactions among these demographic characteristics had significant multivariate effects on students’ motivation. These were interactions between (a) gender and family educational background; (b) gender and family financial capacity; and (c) study major and family financial capacity. Only the interaction between gender and family educational background had significant univariate effect on students’ motivation, specifically on students’ IM to know.

The results of statistical analyses of the survey data revealed a complex picture of Vietnamese students’ motivation. In the following chapter, results from qualitative analysis of the interviews will be presented, providing explanations to the quantitative results presented in this chapter based on students’ perspectives.
CHAPTER 6: QUALITATIVE RESULTS

6.1 Introduction

In addition to collecting quantitative data through a survey, this study also collected qualitative results through one-to-one interviews to explore participants’ perspectives on issues related to students’ academic motivation, including both entry and ongoing motivation. Specifically, the interview questions elicited students’ responses to address the following research question:

RQ4: What are Vietnamese students’ views on issues related to their motivation?
   a. Why do students go to university?
   b. How do students make their choice of degree program?
   c. What affects students’ motivation in their daily study?
   d. How does students’ motivation change over the course of their study?

The interviews followed a protocol using a series of guiding questions. In many interviews, extensive discussion then occurred around these areas through further clarification and added details. Questioning also provided the opportunity for the interviewees to reflect both on themselves and also to offer more general perspectives on students’ motivation. And as much as the researcher tried to be objective and allowed herself to be guided by the selected theory, the discussions during the interviews and the interpretation of collected data may have been influenced by her role as an insider at the research site.

This chapter presents results from thematic qualitative text analysis of the interview data with four predetermined thematic categories derived from subquestions in RQ4. The chapter starts with an introduction of the interview participants. Then it gives an overview of the interview results. Next it presents the interview results around the four predetermined themes of reasons for going to university, degree choice, factors affecting students’ ongoing motivation, and motivational change. Because this study gave more weight to the quantitative component, only key results from the interviews are elaborated with limited quotes from actual responses.

6.2 Interview participants

Interview participants (see Table 6-1) included 14 students (1 male and 13 female), two of whom were from each of the same academic elements as in the survey. Participants were drawn from students in Years 2 \( (n = 7) \), 3 \( (n = 2) \), and 4 \( (n = 5) \) of their study, with the Year 2 participants from the same cohort as those surveyed.
Table 6-1. Interview Participants (n = 14)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>13</td>
</tr>
<tr>
<td>Year</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Family member with postsecondary education</td>
<td></td>
</tr>
<tr>
<td>Only parent(s)</td>
<td>1</td>
</tr>
<tr>
<td>Only sibling(s)</td>
<td>5</td>
</tr>
<tr>
<td>Both parent(s) and sibling(s)</td>
<td>0</td>
</tr>
<tr>
<td>None</td>
<td>8</td>
</tr>
<tr>
<td>Parents’ occupational background</td>
<td></td>
</tr>
<tr>
<td>Farmers</td>
<td>6</td>
</tr>
<tr>
<td>Others</td>
<td>8</td>
</tr>
</tbody>
</table>

Among the eight first-generation student participants, five had cousins who had had postsecondary education. Another participant had an older sister who started but did not complete university. Only two students were from the city where the participating university is located while the other 12 were from other provinces.

Six among the interview participants had parents who make a living from rice fields while the other eight students had parents working in other occupations. Vietnam has a long history and tradition of rice cultivation but rice farmers are often among those with the lowest income. Thus, rice-growing families often experience more financial hardship.

6.3 Overview of interview results

Table 6-2 provides an overview of interview results. The subcategories are derived from participants’ responses. A brief explanation of the subcategories is provided, together with the number of participants who gave the information.
### Table 6-2. Overview of Interview Results

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Subsequent sections will elaborate on these thematic categories and subcategories. Only the most compelling quotes that directly supported the arguments will be presented. After the quotes had been selected, they were translated nearly verbatim from Vietnamese to English, only with redundant words being removed. Where reference is made to a particular interviewee, this example indicator is used: (R1, y1, F), which means respondent number 1 who was in Year 1 and is a female.

### 6.4 Reasons for going to university

When asked why they went to university in the first place, the participants gave different reasons, both economic and noneconomic. The reasons are presented in their order of importance or degree of popularity that emerged from the data.
Filial piety

As defined in Chapter 2, filial piety is a virtue of respect that individuals must show for their parents, elders, and ancestors (McLeod & Nguyen, 2001). It is a core value of Vietnamese culture. Although the interview participants did not explicitly use the term, it was clear that for many students, the determination to go to university (i.e., to pass the entrance exam) was to demonstrate filial piety towards their parents. Eleven out of the 14 participants mentioned parental influence as an important factor in their decision to go to university. For some, this was indeed the first and most important factor. R6 (y3, F) answered, “Why I went to university? First, it was because of my parents. They strongly wished that I could go to university.” Similarly, another student explained, “The most important of all motivations that made me want to go to university was the urge from my parents” (R10, y2, F).

As early as the beginning of secondary school, students could already feel their parents’ expectation of them going to university: “Since my secondary years, my parents’ most important goal was that I could pass the exam to go to university” (R10, y2, F). As a result, students soon started to focus on preparing for the university entrance exam: “Since the beginning of upper secondary school, I concentrated on my study so that I could pass the entrance exam” (R1, y4 M). Passing the entrance exam to be able to attend university became very important to students because it was seen as a way to “pay back” to their parents: “One reason I go to university is to pay back to my parents. […] Many of my friends tried to pass the entrance exam to make their parents happy” (R8, y2, F).

Due to the conventional role of the son in Vietnamese society, male students may feel more pressured to fulfill their parents’ wish. As the only male participant in the interviews, who had older sisters who were not able to go to high school because of his family’s finances, said, “I am the youngest child and the only son so from my early years my parents and my sisters had high expectations that I could study further […] Therefore I had to try my best” (R1, y4, M). Similarly, first-generation students (n = 3) felt stronger expectation from their parents:

My parents really expected that I would pass the exam. No one in my extended families, on both my father’s and mother’s side, has been to university. So far, I am the only one. Thus, it may have been even more meaningful, more important for my parents than for me that I passed the exam and went to university. (R8, y2, F)

Family influence

In addition to demonstrating filial piety towards their parents, most of the student participants (n = 11) were also motivated to go to university by looking at their parents, siblings, or relatives.
who had completed university education. These 11 participants are all from rural areas and explained that they could see how these siblings and relatives had a better life than those who never went to university. Therefore, they were inspired from these role models and wanted to pursue their university education.

*From my parents, [...] I could see how hard our life was, and I felt that education could make my life better. And after my brother and sister, one had finished, and one had also gone to university, I had more motivation to go to university.* (R14, y4, F)

Some participants (n = 2) believed that some students may go to university as a continuation of their family tradition: “Or if their family have a tradition of studying [meaning parents or siblings have had university education], they will continue that tradition” (R3, y2, F).

**Social norm**

Vietnam is a collectivist country where there is a high level of personal interaction among the members of a community, which can exert a high level of influence on the individuals. It was therefore not surprising that more than half of the participants (n = 8) mentioned that their motivation to go to university was influenced by “the society”. Students grew up with the idea that going to university was the natural next step upon finishing high school.

*Since my early years in school, older people around me kept saying “when you finish school, you must go to university.” Therefore I was always conscious that when I finished grade 12, I had to go to university. I did not really think why I would have to do so.* (R11, y2, F)

The idea could be deeply implanted in students to such a degree that the whole idea of going to high school was about preparing for university:

*The only goal during my upper secondary years was to study to take the university entrance exam; I hardly had any other thought. It felt like since the first day in upper secondary school, I was already overwhelmed with the word “university”.* (R9, y4, F)

Students (n = 7) were exposed to this idea so repeatedly that they believed that going to university was simply a social trend:

*Generally speaking, students will have the thought to sit for the entrance exam; it’s like a norm, a popular habit. It seems to be an unspoken social norm that upon finishing secondary school, students will have to sit for the university entrance exam. That kind of thing. [...] But in Vietnam people tend to prefer universities to vocational schools.* (R4, y2, F)
Even one student who strongly emphasized that going to university was paying back to his parents said, “To be honest, sitting for the exam might have just been to be in line with the social trend” (R1, y4, M). And when asked, the participants indicated that they perceived a social preference for universities over colleges or vocational schools. This meant that students would only go to college or vocational school if they could not get into a university.

The participants explained that this idea originated from a common belief in the value of university education: “I see that people generally say that going to university, obtaining a university degree will make it easier to find a job later on” (R14, y4, F); or “[...] It means most people believe that one has to go to university if he wants a better life” (R1, y4, M). According to the students, this belief was widespread: “I think it is a deeply rooted thought in people’s mindset. Everyone thinks so” (R6, y3, F). Students responded to this social influence by forming the wish to go to university: “I have a feeling that we are now influenced more by the surrounding circumstances than by our own wish. It is because of the influence of the circumstances that we have the wish to go to university” (R14, y4, F).

**Future prospects**

All participants wanted to find a job upon graduation, and they were aware that going to university was not the only way nor would it guarantee employment. Yet, they (n = 8) still believed that a university degree would help them find a job more easily. They said similar things like “There are many paths to success, but the path of university education is easier” (R5, y4, F); or “Of course there are many pathways to success, but undertaking university education, in my opinion, is the easiest path” (R10, y2, F). A college degree would also lead to employment but these participants preferred university: “[...] I felt that only by going to university would I have a better chance to find a job than if I went to college or a vocational school” (R11, y2, F).

Students’ expectation of better future prospects may have resulted from their parents’ guidance or from the people around them. Yet, this expectation could be rather simple like “I just simply thought I would go to university so that after 4 years, with the degree I would be able to find a job more easily” (R4, y2, F). The participants believed that their peers shared the same thoughts. Two participants, in particular, asserted that a university degree was a prerequisite of a “stable” job: “For us, university education is a must; it is a tool for me to get a stable job later on” (R13, Y3, F), and “I feared that if I had some vocational training instead of university education, my job might not be stable” (R3, y2, F).
**Saving face**

In Vietnamese culture, the concept that best matches “face” is **thể diện**, which is defined in the *Vietnamese Dictionary*, a compilation by linguists working at the Linguistics Institute of Vietnam, as ‘things that make other people respect us when [they are] in contact [with us]’ (*những cái làm cho người ta coi trọng khi tiếp xúc*) (Hoang et al., 2002, p. 932). In examining its collocational expressions, H. N. Pham (2007) pointed out that the connotation of personal face in Vietnamese culture encompasses both an individual’s social image and good qualities of the community, especially the immediate and extended families, to which the individual belongs. An individual’s social image includes personal qualities or capabilities and social roles that the individual wants to be acknowledged with. And Vietnamese people tend to place more emphasis on saving face than on gaining it (T. Q. T. Nguyen & Simkin, 2017).

The interviewed students \( (n = 5) \) considered going to university as an important way to save face for themselves and their families. In a high school environment where all their peers were also studying hard and aiming to go to university, students did not want to fall behind: “I didn’t want to be inferior to my peers, so I was determined to go to university” (R9, y4, F). In a rural community, being in high school was already interpreted as being academically capable. People in the community expected to see these capable students go on to university in the city. It was therefore personally important for rural students to go to university because “[...] they fear that if they do not go to university, they will be judged as inferior” (R14, y4, F). This could create a sense of pressure on students that they had to go to university:

> And back home, people think that not being able to go to university means doing bad academically or the like. Therefore I had to go to university. [...] I had to pass the exam; otherwise I would be talked about behind my back. (R11, y2, F)

Attending university could become a family reputation issue instead of a personal matter:

> I knew I had to pass the exam to save face for my parents, for my family, and above all, to save myself from feeling guilty, being stressed. [...] because I knew how things would turn out if I didn’t pass the exam to university. [...] And if I had failed, my parents would have felt miserable having to say [to the people that would come to her parents’ convenience store] that I had not passed. (R7, y2, F)

**Quest for learning**

Another important reason for students \( (n = 4) \) to go to university but not college was that they wanted to gain knowledge in the areas of interest. They explained that they would not be able to obtain this knowledge if they went to a 3-year college or a vocational school. Thus they
expected that university education would equip them with the knowledge and skills necessary to
embark on their preferred careers.

I conducted a search and found out that the knowledge for the major of information
technology that I wanted to pursue was only best offered at university level. I couldn’t
just teach myself or undertake some vocational training. Therefore I decided to go to
university to pursue this career. (R1, y4, M)

This quest for learning appeared to be more applicable to those students who had clear career
goals. Yet, for those with long-term academic goals, this was also an important reason:

Going to university was the only path that I was going to take. My goal is not just to
have a university degree, but to study further. So I wanted to go to university, because
to undertake a master’s degree, if you have a college degree or vocational training
you’re not eligible. (R10, y2, F)

**Quest for experience**

According to the participants, upper secondary students, especially those in the countryside,
would only hear from other people and from the media what university life was like. And there
were controversial viewpoints. Adults who had not been to university would say to students
positive things about university, whereas enrolled students from the same community would say
that university would not be like what high school students expected. Thus, students \((n = 2)\)
developed a strong motivation to have first-hand experience with university life: “I really
wanted to go to university. I wanted to see what it is like in a university, to see what students
do” (R13, y3, F).

University-related information is not readily accessible in the countryside because Vietnamese
universities in general, the participating university in particular, are located in big cities. For
country students, going to university means independence from parents and support, which can
be challenging, yet at the same time exciting with new experiences. This also became a
motivation for one student:

I went to lower and upper secondary schools in town, away from my parents. I felt like I
changed gradually. I knew more people and more things. Then I felt that university was
something new, I would meet more people, or I would change, expand my knowledge. I
wasn’t sure how I would change once I got to the capital city. So I wanted to give it a
go. (R11, y2, F)
**Default motivation**

Upon finishing secondary school, students generally have three options: going to university, undertaking vocational training, or entering the labour market. Talking of themselves and of students in general, two participants indicated that going to university was the best choice to make.:

> My friends were like me. Everyone says that at this stage, it is best to go to university, compared with going to a vocational school or entering the labour market. Going to university is best at this stage. [...] Everyone here refers to the people around me. (R10, y2, F)

> If we don’t want to go to university, we’ll have to go to a vocational school, or take up some work. [...] But in Vietnam people tend to choose university instead of vocational school. (R4, y2, F)

Going to a vocational school means entering the labour market earlier than going to university. It appears that where possible, students will try to delay starting work, as one of the above two students said, “Going to a vocational school means we won’t be able to fully enjoy our youth” (R10, y2, F).

From the reasons for going to university discussed above, it appeared that students in this study, and Vietnamese students more generally, tended to make academic decisions based more on reasons external to themselves than on internal reasons. Yet, many of these reasons can be explained in relations with Vietnamese culture. These reasons also suggested a complexity in students’ entry motivation.

Filial piety is a core cultural value, which explains the foremost influence of parents on students’ decisions. Similarly, community spirit and sense of belonging is another core value in Vietnamese culture. The family is an immediate community with whom individuals have the most interactions since they were born, and individuals experience much influence from family members. It is also culturally important for individuals to save face not just for themselves but also for their families. The easiest way for students to do this is to thrive academically and to go to university.

On a personal level, the most common reasons for university attendance among Vietnamese students appeared to be expectations of better future prospects, although students may not have clear ideas of these prospects. Going to university to fulfil the quest for learning was also perceived as a means of preparing for the future. The promises of new life experiences tended to be more motivating for students from the countryside than those from the city. And apart from
personal and family-related reasons, a number of students also decided to pursue university education by default.

6.5 Degree choice

Once students decide to take the university entrance exam, they need to make a choice regarding the program and the university. And because students may not meet the requirements for their preferred program, they often have a second-choice option. Students in this study tended to make choices based on interest, parents’ orientation, and social trend.

Interest

Eight participants mentioned that their choice of major was based firstly on their interest. They might not have been clear about possible career paths but they knew they wanted to know more about a certain subject area. This interest could be purely personal and general, such as for this language student: “I chose this program purely because I liked it. I wanted to learn more about the country” (R14, Y4, F), or specific, with regards to what they could do with the knowledge gained from their education:

I was very interested in studying law. [...] It was actually because I wanted to be able to solve all problems. [...] Overall it is to protect myself and my family. I think my main motivation is to be able to solve all problems. (R13, y3, F)

Another student’s interest in a subject area was inspired by someone they admired:

It was a coincidence. At that time, when I didn’t know what to choose, I came across an article about this lawyer who provided service to poor people free of charge. I quite admired that, and then I made up my mind to pursue this career. (R6, y3, F)

According to the interviewees, students’ interest in a subject area or a major would not normally be strong enough to turn into their passion, and most students indeed did not know what they were passionate about:

Not because of passion because students don’t know what their passion is. We never had the chance to discover our passion. We just liked this a bit, that a bit; only a bit, not so passionate that we would definitely pursue it. I don’t deny that some students follow their passion, but that is only a small number. (R9, y4, F)

Students do not follow their passion, because they do not know what their passion is. (R2, Y4, F)
Two participants who attended specialised high schools explained that their preference for the current program was simply an advancement of what they were already studying: “It was simply a continuation of what I was studying. I did not really think that would specialise in anything. What you already study, you go on. It was that simple” (R4, y2, F). This also meant they would be in a better position on the entrance exam with the knowledge they already obtained from high school.

The participants attributed this lack of clarity to the main focus of high school being placed on preparing for the university entrance exam, whereby did they not have a chance to discover their interest or passion. A second-year student said:

When I was in grade 12 could not tell what I liked. Even now I still don't know what job I will do in the future. I don't even know what job I like to have. I feel very unclear. [...] Very few of my peers are clear what they want to do later on. Most of them just study for the sake of studying. (R11, y2, F)

**Parents’ orientation**

Apart from their interest, more than half of the participants (n = 9) relied on their parents’ orientation in choosing their degree program. If students had a preference, their parents’ consultation would provide additional support for their choice: “I wanted to study economics, then I asked my mother what program I should choose. She asked what I wanted to study. I told her and she agreed that it would be good to study international economics” (R3, y2, F). But if students did not have their own preference, they would often take up what their parents suggested:

I asked my parents what they wanted me to study. And they said they would like me to study either medicine or education. I knew I wouldn't make it to study medicine. For me, the choice of major back then was not serious. I did not really care what major I would choose. So I decided to make my parents happy. (R9, y4, F)

When the parent or another family member was already in a professional area, it was more likely that students would be guided to follow suit: “Some may follow their families' traditions, as there are some students in my group whose parents work in the legal field” (R6, y3, F).

**Social trend**

Students (n = 7) in the current study also turned to their peers to see what choices were popular and they would pick one for themselves. They would choose a degree that they saw many of their peers were also considering:
Because it was a trend that people liked economics. And I was not an exception. I also liked economics. [...] The whole class were after economics. And I followed them. In my year, economics was very popular. My friends chose economics because it was trendy. If you ask them if they were passionate about it, they would not be able to say whether they were passionate or not. (R2, y4, F)

There were 52 students in my class. And there must have been 45 or 46 of them who chose to study economics. It was just a trend. No one was really passionate. (R9, y4, F)

This is particularly true for the students who were from rural areas where there is limited access to information about the labour market. They may not even be aware of professions that can be associated with the program. They choose a program by observing what people do: “They don't know what university is like. When they had to make a choice, it was the environment that gave them orientation” (R1, y4, M).

In so far as degrees are concerned, the interview results revealed a lack of self-determination in Vietnamese students’ choices. Students’ decisions were influenced to a large extent by parents’ orientation and social trend. Even when there was some interest in the selected study area, the interest was generally of a rather small magnitude. It was more of a choice over other areas because students had had more exposure to that particular study area. This would result in students’ lack of understanding their suitability to the study area.

**6.6 Factors affecting students’ ongoing motivation**

Once students commence their university study, a number of factors that affect their ongoing motivation come into play. The initial reasons they go to university translate into their academic goals, which largely determine their motivation. The family continues to exert influence on students’ motivation. Furthermore, the curriculum, the courses, and teaching and assessment all have important effects on students’ motivation. Besides these, relationships with peers also have an impact on students’ motivation to study.

**Goals**

Goals in university study were mentioned by 11 interviewees as an important factor in students’ motivation; and in fact it could be inferred that this was the most important factor. According to the participants, these goals were initially largely determined by students’ reasons for going to university, and in turn, they affected students’ academic attitude and results: “I think that the initial motivation, the initial reasons to go to university, determines our goals, our academic attitudes, and it will greatly affect our results” (R6, y3, F). Once students could identify their goals, they would be able to figure out what needed to be done to achieve them.
Students who went to university to satisfy their quest for knowledge in a subject area of interest had the highest level and the best quality of motivation.

[...] It's completely different from those who study with a passion. I know some students who study this because they love it. When they're in class, they listen attentively and take in every single word the lecturers say. [...] and they often study really well. (R6, y3, F)

Similarly, those with clear professional aspirations were viewed as having more motivation:

Those who know that they want to be a judge or lawyer, they use that motivation to study. I see them study a lot. I can say that they do everything necessary. They already have an orientation. That gives them motivation. Other students will often have to admire them. (R13, y3, F)

But according to the interviewees, a greater number of students went to university without a clear professional aspiration: “I think most of us don’t know yet what path we will take, or what career we want to pursue” (R4, y2, F). Yet, they still wished to find a good job after graduation and for them, obtaining a good academic record was the answer. Thus, the main goal among this group of students was to thrive academically, even if they did not enjoy their study: “I feel that students' motivation in studying is mainly to get high marks. It's like studying in order to get a good looking record” (R3, y2, F). In other words, these students were extrinsically motivated.

Finally, students with the mere goal of obtaining a university degree had the least quantity and the worst quality of motivation. Students with this goal were either going to university only to fulfill their parents’ wish or to have the status of being a university student. They would just do the minimum required to pass courses and graduate. Studying became rather aimless; it was even felt as an obligation: “I know some students who follow their parents' arrangement. Studying is for them like a burden. They seem to get more bored. I think so” (R6, y3, F); or

[many of my classmates] told me that they don’t like law. For them, studying feels hard and tiring; it’s like torture going to school. They feel cranky when they have to do assignments. Maybe for many of them going to school is like a pressure because they can’t have a part-time job, hang out with friends, or do what they want to do. They feel obliged to attend lectures, to do this and to hear that; therefore they are fed up and don’t like to study. (R13, y3, F)
Family

As mentioned above, Vietnamese university students are on the whole financially dependent on their parents and siblings. Thus, parental influence on students’ study is significant. This continues from school to university. The participants ($n = 7$) acknowledged parental influence on their ongoing motivation to study.

*Apart from the students themselves, I believe the family is important. If the family encourage the student, they’ll have more motivation to study. I can see that many students try to study mainly to pay back to their parents, or not to disappoint them. [...] For me, my parents’ expectations are the greatest motivation that helps me to get to year 3 where I am now.* (R6, y3, F)

Parental influence expressed itself through the expectation and hope that students perceived their parents had of them. Therefore, they were more determined and motivated to study with an ultimate goal of finding a job so as not to disappoint their parents.

*In my academic element, there are many students from rural areas [...] They are very hard-working. I think it’s partly because of their parents. Their parents may not have high levels of education, but they place expectations on their children. These students can feel their parents’ expectations [...] They are more aware of the importance of doing well in university.* (R8, y2, F)

The participants agreed that students from lower socioeconomic backgrounds and from rural areas who had to live on their own in the city for their education tended to be more motivated to study. Being away from their parents helped them better understand their parents’ love and care for them. And students are self-motivated to do well in their study to express filial piety to their parents.

*I suppose students whose families are less-advantaged are more appreciative. They think that their families are financially uncomfortable but still try to send them to university. When they are away, it is harder for their parents. They will have more motivation than those who are more advantaged. They may think more deeply, and therefore have motivation to study so that they can help their parents.* (R3, y3, F)

Curriculum

Most participants ($n = 10$) indicated that the curriculum negatively affected their motivation. They believed that there were too many courses: “*There are seven or eight courses per semester, so on average, over the course of 4 years, we have to take almost 100 courses, many*
of which are not logically related” (R9, y4, F). Some students may find this number overwhelming while others could cope. Nevertheless, they shared the view that they did not understand the meaning of and the value in certain courses. One participant said:

> It's not that the curriculum is too intense, but it's full of courses that are superficial, unrelated, or hard to understand, then we start to feel overwhelmed. I feel that many courses are far from practice, so I don't get much out of them. (R3, y2, F)

Similarly, another student explained her experience of learning a compulsory course which she could not see why they had to learn:

> We need to know what the course is for, what practical applications it has. For example, I had to study “soil science” but I didn't know the purpose of that course. My friends also don't know what we will do with it later on. (R2, y4, F)

It appeared that information about the usefulness and practicality of courses would trigger interest in students. But when this information was not well presented or conveyed, students gradually lost interest in their study, and thus became less motivated.

**Teaching and assessment**

Apart from the curriculum itself, the participants (n = 7) mentioned that the teaching style of instructors and assessment methods could also affect their motivation, in both positive and negative ways. From the responses, it could be inferred that the most common style of teaching was didactic, a style in which the instructor speaks most of the time. When the instructor could effectively convey to students the content that they were expected to learn, or could make students feel a connection with the instructor, students were more motivated. The students would then develop interest in the course and want to learn more. But when the instructor failed to do either of these, the students became less motivated:

> When I was in year 1, I read for all courses, I studied every day. Overall I enjoyed studying and felt effective. But then I kept having instructors who seemed to ignore students; they made me lose interest in their courses. (R13, y3, F)

Then there was the new approach to this didactic teaching where students are supposed to work in groups either in class or in a project. But students felt that group work like this was not as effective as it could be. Students would have to remain in the same groups for the whole course. Not all group members made equal contributions, and this was not monitored and assessed appropriately. Therefore, after some courses, students would be able to form their own groups and would enrol in the same class for future courses. Then they became more motivated.
Test-based assessment was commonly used, including a mid-semester and an end-of-semester test. For these tests, students would be informed of the scope of content that would be tested. Therefore, they were only motivated to study the learning that was required for the tests:

*Our tests are restricted within 20 questions only. It seemed enough for us to try to remember them. We just need to memorise them, don’t even need to understand. In fact we don’t understand anything. When we finish the course we still don’t understand anything. We just try to swallow a stack of texts for the test as we don’t know which question will be asked.* (R2, y4, F)

Only one participant mentioned a new teaching style that was experimented on her class. With this, the instructor was more like a guide, and there were different forms of assessment. There was a lot more interaction between the instructor and students, and students were expected to work independently. The student said that at first she felt overwhelmed with the amount of study she had to do, but as she got used to it, she was motivated because she felt autonomous in her study:

*In year 1, our class was chosen for the experiment of a new method, the learner-autonomy method. At first we felt quite stressed; we had to word hard but did not know where to obtain the information needed or how to synthesise things into a presentation. It was a bit tiring, and we lost enthusiasm. But we gradually got used to it. Now we find it very interesting although it’s rather time-consuming; but we feel happy.* (R11, y2, F)

This participant believed that it would take a long time for this new teaching style to be widely adopted and practised in Vietnam. She explained that this would require improved quality of instructors and learning resources, as well as a shift in students’ attitudes towards learning and expectations. She also believed that this teaching style would result in more motivated students and better learning outcomes.

**Peers**

Lastly, students’ (*n = 5*) motivation was influenced by their interaction with their peers. Many Vietnamese students, and most of the participants (*n = 12*), are from other towns and go to university in the city on their own. When they first started, they did not know each other and felt a loss of connection with friends like they had in high school. Further into the first semester, students started to make new friendships and find groups they belonged to, which gave them motivation to go to school: “*Yes [feeling related to friends gives them motivation. I feel like each day at school is a fun day]*” (R6, y3, F). And when students observed their good friends trying hard or doing well in their study, they too spent more effort on their study:
In university the environment is more proactive. I see my peers, many of them are very good and I know them, so I have the motivation to try to catch up with them. If I’m just a bit lazy I’ll fall back behind. (R10, y2, F)

Yet, peer influence could also be negative: “Those whose motivation goes down is because they are tempted by friends [to do bad things] or some social thing” (R9, y4, F).

It was clear from the interviews that Vietnamese students’ motivation in daily study was affected by personal, familial, as well as institutional factors, along with peer influence. Apart from personal and familial factors, it was clear that institutional factors had important influence on students’ motivation, which appeared to occur in a systematic manner. The curriculum and the courses tended to have some mismatch with study majors and job requirements. Course contents were not explicit and assessment did not promote active learning. Accordingly, teaching was still mainly focused on delivery of knowledge. Students’ engagement and motivation therefore appeared to depend greatly on relationships and relatedness with lecturers.

6.7 Motivational change

All participants (n = 14) said that their motivation changed as they progressed further in their candidature. According to the seven participants who were in Years 3 and 4, students’ motivation changed noticeably from Year 1 to Year 2, then remained rather stable afterwards. The other seven Year 2 participants also shared a similar viewpoint that there was a pattern of motivational change within the first year and that overall, students’ motivation changed for the better. In explaining these changes, the participants implied the important role of the first-year experience.

It was clear from the interview responses that Vietnamese first-year students would not pay as much focus and attention on their study as they should. There were two possible reasons for this. The first reason was that “going to university” was simply about “passing the university entrance exam”. Students focused their high school years on preparing for the entrance exam once they had the intention of going to university. As a result, their “passing the exam” was considered a big relief and accomplishment, after which they rewarded themselves with being relaxed in their study.

After enrolment, like many other students, I said to myself that I had been through a hard time so I should relax a bit. The first semester I relaxed ... a bit ... too much, and so my results were quite disappointing. (R5, y4, F)
This excitement could last till the end of Year 1: “I think that till the end of year 1, many Vietnamese students still feel excited about their passing the exam. They are still in that mood, so they can be lazier” (R13, y3, F).

The second reason for students’ lack of focus and attention in the first year was the fact that they were rather ill-prepared for university study. Students would start university in a blank state: “We did not really know what we had to do, or how we should study in university. We just attended lectures, but did not have goals like we do in year 2” (R8, y2, F). They even assumed that university study would be similar to studying in school with pushes and reminders from their teachers. When this was not the case, students found it hard to be in charge of their study:

My friends comment that, and I also feel that, studying in university is not the same as in secondary school. It’s also rather different from what we imagined. We have to be more active ... but we cannot always discipline ourselves. In secondary school, whenever we felt it was too hard, we got bored, or lazy, our teachers or parents would urge us to study. Now that does not happen anymore. So in university we are generally lazier than we were in secondary school. (R10, y2, F)

Consequently, students could not identify their study goals and were not very motivated to study. This led to their lower academic performance and achievement in Year 1: “My results for the first semester were not up to my expectation” (R5, y4, F). But this, in turn, triggered in students a motivation to do better. In addition, towards the end of Year 1, students had come to understand what university study was about and what was expected of them, and their study motivation increased: “After one year, students are used to it [the study environment in university], they can identify their goals, then their motivation changes. With clear goals, their motivation is surely better” (R1, y4, M); or “In Year 2, we have got used to this environment; we know what we need in our field, what we need to learn more. Then we have clearer goals. [...] then we’ll spend more effort” (R8, y2, F).

Students’ motivation also appeared to change critically when students had more exposure to real life experiences. The three participants who did not choose their programs out of free will became more interested in their study as a result of gaining knowledge about the subject matter:

When I discovered that I had to change to another program, I was not quite happy. But after some time, I started to like it a bit. [...] But later I could find my interest and became more hard-working. (R12, y2, F)

This was also the case with having positive experiences with their future job: “I took up a part-time tutoring job. I saw that my student made progress; therefore I started to like teaching” (R2, y4, F).
Yet, some students \((n = 1)\) lost interest and became less motivated in their study after having the chance to discover their passion through participation in extracurricular activities. This student participated in an on-campus skills club and found that she gained a lot more practical knowledge from this club's activities than from her lectures. She said, “I can even skip lectures to join the club if they are holding any event” \((R3, \, y2, \, F)\). She believed many other club members had the same attitude. It also happened that this student felt that the curriculum was too heavy although she started off with great excitement and had actually tried to get the best results for all her first-year courses.

The recognisable pattern of students’ motivational change as revealed from the interviews pointed out that Vietnamese students appear to be underprepared for university study and that the first year was crucial to students’ motivation and engagement. In later years student could better self-motivate themselves. This implied that if universities aimed to promote students’ motivation and learning, it was necessary that measures be designed that target the early phases of students’ candidature. These measures could focus on preparing students, both academically and emotionally, for university study and expectations.

### 6.8 Summary

The interview data addressed RQ4, helping to understand students’ motivation in their decision to pursue university education and in degree choice, factors affecting their ongoing motivation, as well as their motivational change. The four reasons for going to university most commonly mentioned by students were filial piety, family influence, social norm, and future prospects. Other reasons included saving face, quest for learning, quest for experience, and default motivation. The students made their choice of degree based on three main factors: personal interest, parents’ orientation, and social trend. In their daily study, the students were influenced by their goals, the family, the curriculum, teaching and assessment, and peers. Students’ motivation changed in a noticeable pattern from Year 1 to Year 2, and stayed more stable afterwards.

Throughout students’ university journey, the family appeared to have an important influence on their decisions and behaviour. Familial influence appeared to be the most significant during high school years when students had to make decisions regarding university attendance and degree choice. After students commenced their university study, familial influence tended to be less significant but remained important. Such influence was in line with Vietnamese culture with community spirit/sense of belonging and filial piety being two of the core values.

The influence of family, especially of parents, implied a complexity in students’ entry as well as ongoing motivation. If, in making decisions and performing study-related behaviour to make
their parents happy, students perceived this as being a personal value, then their motivation would be more autonomous, or of better quality. On the contrary, if students did so in order to save face for themselves and for their families, and not to be seen as a disrespectful child, then their motivation would be more controlled, or of poorer quality.

The interview results also pointed out the complex influence of institutional factors on students’ ongoing motivation. This helped universities to have a better understanding of their role in students’ learning instead of leaving it all to students to be responsible for their own learning. If universities had the intention to improve their graduate quality, there is undoubtedly a lot that they could do.
CHAPTER 7: DISCUSSION AND CONCLUSION

7.1 Introduction

In previous chapters, the context of Vietnam in which this mixed methods study was conducted was introduced (Chapter 2), the relevant literature was reviewed (Chapter 3), the procedures for implementation of the study were outlined (Chapter 4), and the results from analyses of survey data (Chapter 5) and interview data (Chapter 6) were presented. This chapter first discusses the findings presented in the preceding chapters in relation to the theoretical framework of self-determination theory (SDT) and instrumental motivation, relevant literature, and Vietnamese culture and the higher education (HE) context. Then the chapter goes on to discuss the contributions and implications of the study, followed by the limitations of the study. Recommendations for future research are presented next and the chapter concludes with a summary of the whole study.

Given the rapidly increasing levels of student participation in HE in Vietnam, and associated issues with both the quality of learning and the transfer of these skills into employment outcomes, a better understanding of student motivation offers both valuable insights into this group and also strategies through which such concerns can be addressed. This research has, based on the Academic Motivation Scale (AMS) (Vallerand et al., 1992, 1993) firstly profiled the motivation of a large group of Vietnamese university students, for example demonstrating that for this group, external factors do in many cases strongly influence their levels of motivation, from their initial choice of study area, through their engagement during their learning, to their desired future directions. Finally, an assessment of psychometric properties of the AMS has provided support for the validity and reliability of a revised 7-factor AMS model as a measure of motivation among Vietnamese students, confirming this as a valuable tool for future applications.

7.2 Discussion of findings

This section discusses both survey results and interview results. The discussion will be organised around three themes: (a) students’ motivation for university participation and degree choice; (b) students’ ongoing motivation, and (c) situating the AMS within the Vietnamese context. Explanations are based on the Vietnamese culture, students’ responses in the interviews, as well as the guiding theory. The results of the correlations among the AMS subscales are discussed with reference to the few identified published articles that also reported model-based correlations.
7.2.1 Students’ motivation for university participation and degree choice

7.2.1.1 Motivation for university participation

In order to understand students’ motivation to engage in daily study, it was important also to understand students’ motivation more broadly to attend university, that is, to understand their entry motivation (Round, 2005). The analysis of 14 individual interviews with students from Years 2 to 4 contributed to this goal. The students reported both economic and non-economic reasons, supporting findings from previous research (e.g., Bartram, 2016a, 2016b; Phinney, 2006). Family-related reasons were the most influential in these students’ decisions to go to university. Interview participants mentioned reasons such as filial piety and family influence, as well as future employment prospects and social norms.

In Vietnam, paying for a child’s education is mainly the responsibility of the parents. Therefore, for many students, the choice to attend high school already requires a financial commitment from family members, especially those students from the countryside who could leave school to work on the farm. The students in this study were conscious of this financial commitment and felt a moral obligation towards their parents, reporting that their parents had very high expectations of their attendance at university. Therefore, for these students, studying to pass the entrance exam was considered an important way to demonstrate filial piety. Some of these students reported high levels of stress associated with considering the possibility of failing the exam. Similar findings have been reported by Andrews (2016) who conducted interviews with high school students from an experimental high school in the capital city of Vietnam.

As discussed in Chapter 2, family, especially the parents, play a crucial role in students’ decisions to undertake university education because filial piety and family interdependence are among the core cultural values in Vietnamese society. Family influence among Vietnamese students is similar to that among students from other collectivist cultures. For example, Malaysian students (Kutty, 2014) highlighted five factors in their decision to participate in university, two of which were family-based motivation and the role of siblings and extended family. While studies report that parental expectations had positive impacts on students’ decisions regarding university participation in collectivist cultures in Vietnam and Malaysia, high parental expectations may have negative impacts on students’ university aspirations in a Western culture like Australia (Low, 2015). The influence of this cultural value of family interdependence extends to students with an Asian background in American society (Phinney et al., 2006).

Among the students interviewed, two other important reasons that informed their decisions to go to university were social norms and future prospects. In a collectivist culture, such as
Vietnam, there are high levels of social interactions, especially among those from the same communities. Students reported that during their last years in secondary school they were having conversations with older people in their community, who were encouraging them to continue to university. The students reported that the idea was suggested in such a way, and by so many community members, that attending university became the natural unquestionable next step for the students, without them necessarily being aware of what it meant to attend university. Students reported that the idea that attending university would lead to better future prospects was first suggested by their parents. In many cases this was because parents had experienced some hardship in their lives that they attributed to their lack of education. This again reflects another important cultural value in Vietnam, that is, respect for learning and knowledge.

Although the students expected to gain access to better opportunities with a university degree, few described that obtaining knowledge for future use through their university study was a motivation for university attendance. The students largely associated university study with obtaining a degree only. Another reason mentioned by students for attending university was to save face. Given that the students had been successful in completing high school, they reported that they did not want to be seen as being incapable by not going on to university. This again can be explained by the community spirit or sense of belonging aspect of Vietnamese culture.

From an SDT perspective, Vietnamese students’ motivation to attend university was primarily extrinsic with varying forms of regulation: from external regulation (i.e., to avoid having to join the workforce straight after high school), to introjected regulation (i.e., to save face), and to identified regulation (i.e., important to go to university so as not to disappoint parents). Based on the occurrences of the reasons mentioned in the interviews, it can be inferred that among these three types of regulation, students experienced higher levels of external regulation and identified regulation. Examined from a goal content perspective within SDT, or the what of behaviour, these reasons reflect more extrinsic goals, which are outward oriented. Many of the students also appeared not to have long-term life goals or aspirations. The focus of attending university was more about pleasing their parents and making a decision that was acceptable to their community.

### 7.2.1.2 Motivation for degree choice

The students who participated in the interviews reported that the decision to go on to university was made as early as Year 10 when they started high school, but the pressure was not felt strongly until the end of Year 11. Most of the students did not choose a degree until they were required to complete the application during the second half of Year 12. For those unclear about what they wanted to study at university, the decision was made based on consultation with parents (n = 9) or observations of peers (n = 7). Andrews (2016) also found that Vietnamese
high school students’ degree decisions were often influenced by parents. The students reported that when making their selection, neither they themselves nor their peers were fully aware of what the degrees were about or what they could do afterwards. They chose degrees that were popular. More than half of the interviewed students reported some interest in their chosen area of study from the beginning, and many indicated that they noticed that other students tended to become more interested in their areas of study only after they had enough exposure to, and understanding of, their areas.

Vietnamese students appeared to have relatively low levels of self-determination in their process of degree choice. According to the participants, the primary source of information about university degrees was the annual handbook of universities and degrees published by the Ministry of Education and Training. Students also received information about university degrees and potential future jobs through discussion with the people they knew who were currently attending, or who had recently finished, university.

The students interviewed also indicated that they did not have career orientation at high school. Instead, career orientation was only offered to students in the format of career fairs that were held at each university. The students reported that they believed that school-based career orientation and guidance should be provided from early high school onwards to help students make better degree and career choices. While there are programs to help prepare high school students for university, they are relatively new and students may ignore them, as Andrews (2016) discovered. As some students mentioned in the interviews, they did not understand what jobs they could have after graduation, and many of the degree titles in the handbook sounded unfamiliar to them. The students who were interviewed for this study appeared to have very little knowledge about future careers and required skills, and this may be related to the structure of the tertiary sector in Vietnam rather than cultural reasons, given that Malaysian students in a study by Kok and Ang (2015) were mostly motivated to choose a degree for career choice and prospects of employment.

The consequence of this lack of information about university study was that the students interviewed in this study were underprepared for the expectations of daily university tasks. In the interviews, the students stated that they believed most students start university with an expectation that instructors will teach in a similar way to high school, including high levels of guidance and support for student learning. Faced with different pedagogical approaches and expectations, students reported feeling disappointed, shocked, and sometimes overwhelmed. There were no student study support services available to them at the participating university, apart from a brief orientation session after their enrolment. Therefore, if students could not adjust to the new learning style on their own, common consequences would be a passive
approach to learning and performance that was below expectations. Passiveness in academic engagement among Vietnamese students has also been identified by T. T. Tran (2015) as an important reason for their poor graduate employability.

From the analysis of the interviews in relation to existing literature, it can be inferred that many Vietnamese students are ill-prepared for university study. Their decisions for university participation and degree choice involve low levels of self-determination. University participation is, for the most part, a demonstration of filial piety, or to meet the expectations of the community more broadly. Rather than preparation for a particular job in the future, it is the degree itself that students expect to gain out of university education. Degree choice is mainly based on external factors, not on students’ interest; as one student said in the interviews, “we do not have any chance to discover our passions. We don’t know what we are passionate about.” Vietnamese students tend to be similarly unclear about what the degree involves, what is expected of them at university, and what is expected in the workplace. All of these findings imply potential issues at both the policy and institutional levels in Vietnam’s HE system that would result in low-quality graduates.

7.2.2 Students’ motivation in their daily study

First-year students’ motivation and its association with demographic characteristics were assessed based on students’ actual responses to the survey. Students’ motivation was measured with the AMS which assesses seven types of motivation. Accordingly, the students exhibited moderate levels of intrinsic motivation (IM) and extrinsic motivation (EM), with the level of EM being slightly higher than that of IM. The main source of IM among the students was their interest in learning new knowledge (or IM to know) while the main EM type was EM with external regulation resulting from expectations for better future prospects. Assessed from another perspective, the students experienced similar magnitudes of autonomy and control in their motivation. Yet, the level of amotivation (AM) among the students was only moderately low, instead of being desirably low. The four demographic characteristics had very limited effects on students’ motivation, both at the univariate and multivariate levels. The interview findings supported and explained these survey results.

Study goals and motivation

According to the students in the interviews, students’ overall goals in university study, which were largely determined by their initial reasons to attend university, had major effects on students’ motivation in their daily study. Three broad types of goals were identified from the interviews. The first goal was to obtain knowledge, a goal shared by a group of students who had an interest in their study areas or who had clear professional aspirations. Students in this
group would have the highest level of IM. The second goal, which was reported to be the most common, was to thrive academically despite the absence of personal interest. Endorsing this goal were students who attended university without clear professional aspirations but who had a general wish to find a good job afterwards. It was personally important for students in this group to have a good academic record. They were mostly motivated by EM, with both identified and external regulations. The last type of goal, which was the least common, was simply to obtain a degree. Students with this goal would only do the minimum required work. Studying might feel like a burden to them; they were most likely to be amotivated.

It can be inferred from the interviews that for many Vietnamese students, their study goals are more extrinsic, that is, to prepare for future jobs, instead of being intrinsic for personal growth. Although students may not know what career paths they will take after graduation, they believe that with a good academic record, they are more likely to find better jobs. They are likely to study to the best of their ability as a way of realising their vision. Such instrumental motivation can be strong, but without clear career aspirations, it may not help students get the most out of their study. According to the interview participants, as students progress further in their candidature, they tend to gain more understanding of the careers options available with their degree and the skills required for the jobs. Their study goals can then change and become more directed and specific. With this, students’ motivation becomes stronger and of better quality.

**Curriculum, teaching, assessment, and motivation**

Apart from personal study goals, institution-related aspects of curriculum, teaching, and assessment also explained students’ ongoing motivation. The interviewed students reported that they themselves and their peers felt there were too many courses in the curriculum, some of which did not seem to have any direct connection with their chosen degree. With seven or eight courses each semester, the students felt that they did not have time to expand their readings of the courses. Most of the time the students would only try to cover the text books. There were also limited sources of study materials offered by the university, and the available resources were not always up-to-date. The students were aware that they could find more information related to the courses in English on the internet but stated that their English level was not good enough. The students reported that they felt overwhelmed with the amount of study required and therefore were selective of what courses to invest more time in, and what courses they would try to pass only. In other words, students’ motivation was instrumental with a short future time perspective.

Some of the interviewed students had part-time jobs to earn extra money as well as to gain work experience. They reported that many of the skills needed in their part-time jobs were not taught in university courses and, vice versa, many of the things they had to learn did not have any
practical application. Two senior students who had already started seeking job opportunities recalled that during their job interviews, the employers were not interested in their academic records but wanted to know more about the skills the students had. Yet, these students reported that they did not have the skills mentioned in the interviews as a result of their university study. It appears that the failure of university courses and curricula in preparing students for the requirements of the workplace justifiably explains why some of the interviewed students would choose to skip classes to attend other activities that they felt would bring about more practical learning.

When asked about why they felt that they were wasting time on certain courses, the interviewed students reported that there were two aspects of this. The first was the compulsory courses during the first year, the purpose of which was confusing for many students. Nor did they understand the purpose of ideology courses, which made up a large portion of the curriculum. Yet, one interviewee reported that she found one of these ideology courses very useful. Students were also required to participate in physical education classes, which many felt was a waste of time. The second aspect, according to the interviewed students, was associated with courses that were more related to their degree. The students did not see the value of certain courses to the completion of their degree. They reported that very few instructors would try to explain to students how a course was related to the degree, or to discuss future usefulness of a course. So if students perceived a course to be unrelated, they would be much less motivated to study. They admitted that when the instructors helped students to see the meaning of the course, and how the knowledge gained could be of benefit in the future, students were more motivated to study.

The interviewed students reported that lecturers’ teaching styles could have a great impact on students’ motivation. They explained that although instruction both in high school and at university is still quite didactic, there is a difference in students’ motivation in relation to teachers’ teaching styles. Students felt stronger connections with their high school teachers, who would know their names and make them study in case the students were lazy. But at university, students felt that most lecturers did not care whether students understood what was being taught or not. Therefore, students would be much less motivated and many would study only to pass the course. The students even reported that in such classes, many students would often keep themselves busy doing other things in class instead of paying attention to the lecture.

The interviewed students further explained that if students felt a connection with and enthusiasm from a lecturer, then they were more motivated and would push themselves to study in order not to disappoint the lecturer. In other words, when students felt a sense of relatedness to the lecturer, their motivation improved in quantity and quality, which is in line with SDT. It appeared that whether Vietnamese students were active or passive in class also depended on a
large extent on the teaching style of the lecturer. This effect of lecturers and teaching styles on students’ motivation and engagement resonates with T. T. Tran’s (2013a) findings, where Asian students studying tertiary education in Australia reported their passiveness being due more to situation-specific factors of teaching methodologies, amongst others, than to cultural factors.

Only one of the interview participants was in an experimental class where new teaching approaches were being trialled that focused on supporting students’ autonomy in their study. This student reported that although this style of teaching and learning required students to work much harder, the students in her class all loved it and benefited a lot from it. She believed, from her experience, that students would be much more motivated to study and would engage more if they had more autonomy over their study, although she acknowledged that this approach would require more facilities and resources than what were currently available. From an SDT perspective, this reflected the need for autonomy, which, when satisfied, leads to more and better quality motivation.

The interviewed students further reported on the way in which assessment could affect Vietnamese students’ motivation. On the whole, assessment was based on testing of factual knowledge through tests, the most important of which was the end-of-course test. With certain courses there were even guidelines as to what could be tested, right from the beginning of the course. Therefore, students were mostly motivated to only focus on studying what was required for the test. The results of this written test were felt by the students to be dependent greatly on the lecturer and marker. A fourth-year student recalled failing a course that she took with one particular lecturer while her peers, whom she felt was never as committed as she was, passed because they were taking the same course with a different lecturer. When she retook the course, she chose the “easy-going” lecturer and passed with high results. The interviewed students also reported that although new forms of assessment were being introduced, the assessment did not seem to be fair.

All these findings regarding curriculum, teaching, assessment, and learning supported those reported in Director et al. (2006), which served as an important input in Vietnam’s specific strategies to improve its HE. In their project, Director et al. observed undergraduate education in three study areas at select universities in Vietnam. Among their findings relating to curriculum and courses were “too many courses (over 200 credits to graduate)”, “lack of common or professional skills” (p. 2), and “not guided by explicit statements of expected student learning outcomes” (p. 3). Regarding teaching and learning, Director et al. found ineffective teaching methods whereby the focus was on presentation of factual knowledge and rote memorisation, in the presence of limited facilities and resources. In terms of assessment, Director et al. also pointed out a lack of clarity in the articulation and coordination of student learning outcomes at
the institutional, departmental, program, and course levels. Although Vietnam has made some progress in addressing some of the issues raised in Director et al.’s report, as evidenced by another report by the World Bank (2015a), it can be inferred from the interview responses that there is still a lot to be improved.

Demographic characteristics and motivation

A multivariate analysis of variance revealed that the four demographic characteristics of gender, study major, family educational background, and family financial capacity had complex effects on students’ ongoing motivation. Statistically, only study major had significant main effect at both the univariate and multivariate levels on students’ motivation. Family financial capacity had significant multivariate main effect, but not univariate main effect, on students’ motivation. Meanwhile, gender and family educational background did not have significant main effect on students’ motivation, either at the univariate or multivariate levels.

Apart from their main effect, the demographic characteristics also had statistically significant interaction effects on students’ motivation. Specifically, both family educational background and family financial capacity appeared to influence students’ motivation through their gender, while family financial capacity appeared to influence students’ motivation through their study major. Other than these, no other significant interaction effect was detected.

The statistical effects of demographic characteristics on Vietnamese students’ motivation are supported by the interview results as well as by cultural values of Vietnam. Some of the interview participants were asked if students’ motivation was similar across disciplines and majors. They reported a belief that it generally depended on students’ study area, although they were not able to elaborate on this. The interviewed students reported no observable typical gender differences in students’ motivation. Of the two family-related characteristics, the students reported family educational background as having more impact on students’ decisions to pursue university education, as discussed above. Yet, they reported an observation that students from families with lower socioeconomic status tended to be more academically engaged than students from more financially comfortable families. Indeed, the interviewed students reported family support, both financial and emotional, as an important source of their motivation to study.

Vietnamese people traditionally have respect for learning knowledge and expect to have better lives through education. So if a student exhibits good academic capacities, it is very likely that their family will make use of all available resources to financially support them to study further. When the students feel the commitment from their families, they are likely to do their best academically as a way to show respect to their families or to demonstrate filial piety, and to
repay their parents. It is also possible that students are enrolled in a certain degree because they perceive that the degree may help them get a specific high-paying job later on, which will allow them to support their family in return for their support.

One student in particular explained that whenever she felt overwhelmed and wanted to give up, she thought about her parents. She could see how disappointed they would be, and this motivated her to study again. Another student mentioned that he strongly believed that family support had the strongest influence on students’ ongoing motivation. For himself, he was very motivated to study because he was the only child who was sent to high school and now to university, due to financial hardship his family experienced. Another student reported that being away alone for her university study helped her to realise how much love and care her parents had for her. Therefore, she was much more motivated to achieve excellent results to get a good paying job in the future as a way to repay her parents.

Being historically influenced by Confucianism, the gender hierarchy in Vietnam is largely reflective of patriarchy where men are implicitly given more power than women and are entrusted with making important decisions. Therefore, educational opportunities are very likely to be given to the son if a choice has to be made as to which child will receive the family’s support to study further, unless the daughter undeniably excels. Thus, students may feel obliged to do well at university if their going to university is a privilege that their siblings may not have the opportunity to enjoy.

Motivational development

While the survey participants were all first-year students in their second semester, all the interview participants were in Years 2 to 4 and thus they were able to reflect on how their motivation had developed. Accordingly, a pattern of change was reported with students’ motivation in Year 1 being of lower quality and quantity compared to that in later years. The interviewed students reported that they observed fewer students starting university with an interest in their selected study area. Results from the survey data also revealed that first-year students endorsed higher levels of motivation resulting from external reasons than from personal interest. Therefore, it can be said that Vietnamese students start at a higher level of EM than IM, which is in contrast with findings from other cultural contexts, such as Swiss business students (Brahm et al., 2017).

Similarly to findings in Andrews (2016), the students in this study reported the focus of high school being preparing for university entrance exam, and the stress associated with the process. The students, when in high school, were not aware of what university study entailed. They naively believed that, as university students, they would have more freedom and more free time.
as there would not be any stress of studying for an exam like they were experiencing in high school. As a result, the students allowed themselves to be relaxed with their study and then did not achieve the high results that they wanted to. Most of the students reported that their lowest results were in the first semester of Year 1.

The interviewed students also explained their low achievement in Year 1 as being a consequence of their unpreparedness. In high school, the students would be pushed to study, if needed, by their teachers and parents. Therefore, the students did not expect that they had to take full responsibility for their own study at university. Only one of the interviewed students, who grew up in the city where the participating university is located, was adequately aware of the expectations that universities had of students. She learned this from the university lecturer with whom she took preparatory classes for the entrance exam. According to the interviewed students, they, as well as many of their peers, were disappointed because university study in particular, and university life in general, were not what they had expected, which is similar to findings from focus group interviews with university students reported in Andrews (2016). Consequently, many students felt overwhelmed and their motivation to study diminished.

According to the interviewed students, towards the end of Year 1, many students understood the need to be responsible for their learning, and what was needed to achieve the results they wanted. From then onwards, students were able to adjust their study habits and tended to achieve better results the further they progressed into their candidature. The students reported in the interviews that there was limited study support to help students transition from high school to university. The only briefing session provided at the beginning of Year 1 offered a glimpse of how to study at university, and this information was not retained by most students.

Another reason for students’ lower levels of motivation in Year 1 can be inferred, from interview responses, as resulting from the courses they were required to take, which were compulsory and more general and perceived by students to have little connection to their study majors. Students reported that once they started taking major-specific courses, which often occurred from Year 2, their interest levels increased and they became more motivated to study. A Year 2 student reported that despite applying for her current program in order to attend university, rather than due to interest in the program, she started to develop an interest in the study area after she had taken courses that related directly to her area of study. For some students, the development of an interest came much later. As a Year 4 student reported, she enrolled in education because she had failed her preferred program. She stated that it was only when she began her teaching practicum that she developed a real interest in teaching.
7.2.3 Situating the AMS within the Vietnamese context

Survey data from 648 participants were used to assess the psychometric properties of the AMS, with the broader view of assessing the scale’s applicability in the Vietnamese context. This was achieved via (1) confirmatory factor analysis (CFA) analysis of three alternative factor-structures of the AMS to identify the best fitting model, and (2) correlation analyses (2a) among AMS subscales, and (2b) between AMS and Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991, 1993) subscales to test the validity of the AMS. Overall, the results suggest that a revised 23-item AMS may be used as a reliable measure of Vietnamese university students’ motivation.

In CFA, three models were tested: the 3-, 5-, and 7-factor models. The original 7-factor model outperformed the 5- and 3-factor models but exhibited areas of misfit. Therefore, seven 1-factor models were fitted before they were recombined into the whole model, which better accounted for measurement errors within each subscale. This method of post-hoc model refinement distinguishes this study from previous research whereby error covariances were added to the full model (e.g., Vallerand et al., 1992) or individual items were removed from the full model (e.g., Can, 2015). One item was removed in four of the original 1-factor models, and a further item was later removed. The revised 7-factor model with 23 items had good fit to the data. All seven subscales had good internal consistencies, indicating that the modified AMS is a reliable measure of Vietnamese university students’ motivation.

Yet, the hypothesised simplexlike pattern of correlations among the subscales was not fully supported. One notable deviation was that the EM-introjected regulation (EMIN) subscale had higher correlations with all IM subscales than with EM-identified regulation (EMID) and EM-external regulation (EMER) subscales. Specifically, EMIN and IM-to accomplish (IMTA) had a near perfect correlation of .95, which was much stronger than in many previous findings but similar to results obtained from a Singaporean sample (Caleon et al., 2015). This further corroborates Cokley et al.’s (2001) assertion that EMIN is conceptually closer to IM, the reason being that EMIN items are associated with self-worth and self-competence. To better reflect the construct that EMIN is intended to measure, especially in Asian cultures, the items may need to be revised. Alternatively, it could be inferred that Asian students derive joy from a high feeling of self-worth.

The three IM subscales were reasonably highly correlated (rs from .77 to .82), suggesting that differentiation among the three types of IM was supported. Meanwhile, some researchers (e.g., Cokley et al., 2001; Zhang et al., 2016) have found higher correlations among IM subscales and have raised concern that they do not necessarily represent distinct motivation subtypes. Lastly, the low and non-significant correlations between the AM subscale and two of the IM subscales
(IM-to experience stimulation and IM-to accomplish) suggested that the latent constructs, as measured by these subscales, are independent of one another, instead of contrasting as hypothesised by the AMS. Again, as noted above, SDT actually proposes AM as an anchor on the continuum instead of EMER as proposed in the AMS. A number of past studies also found only limited support for this simplex structure and raised concerns about the theory underlying the AMS or the construction of the scale itself (e.g., Cokley, 2000; Fairchild et al., 2005). Therefore, the finding of this study were contradictory to some results, yet supported others.

On the whole, the simplexlike structure of the AMS was only partially supported by correlations among the subscales. Nevertheless, this structure was supported when the AMS subscales were correlated with the three MSLQ subscales. The three MSLQ subscales correlated with AMS subscales as hypothesised, with only one deviation. Cokley et al. (2001) also found that the correlations between motivation types and academic self-concept mostly supported the simplexlike structure. The finding in this study thus lent further support for the criterion-related validity of the AMS. Meanwhile, other researchers (e.g., Barkoukis et al., 2008 – study 2; Fairchild et al., 2005; Vallerand et al., 1993) found a positive correlation between EMIN and external criteria and concluded that the simplexlike pattern was only partially supported.

Subscale means indicate that Vietnamese students are both intrinsically and extrinsically motivated ($M_{IM} = 4.29; M_{EM} = 5.05$), with external factors having greater influence on students’ motivation. This finding is in line with previous studies that also examined motivation of Asian students to pursue university education using other methodological approaches or instruments (e.g., Kember et al., 2008; Kutty, 2014). Yet, the mean of EMIN (4.16) is more comparable with those of IM subscales, thus explaining its higher correlations with IM subscales than with other EM subscales.

The highest subscale means of EMER (5.67) and EMID (5.32) suggest that Vietnamese students are most motivated to study by future prospects. All items on EMER imply chances of a good job, a good life, and the good pay that a college degree promises. Similarly, EMID items involve going to university to prepare for a future career. This focus on the future is also reflected in Andrews’ (2016) study on Vietnamese high school students who also valued university mostly for its bridging role into adulthood and a job, instead of the experiences it brings.

The mean of IMTK (4.93) was the highest among the three IM subscales and the third highest of all, indicating that students in the current study are also highly motivated by the learning of new knowledge in university. Often when students decide to go to university, they already have some idea of a career they would like to pursue in the future and select their majors accordingly. Therefore, it is very likely that students expect to learn new knowledge in university which will
be useful for their future jobs. This further corroborates the role of a future job as the most important motivator.

In summary, these findings suggest that the 7-factor AMS with 23 items may be appropriate to study Vietnamese university students’ academic motivation, an area of research that has, until now, largely been unexplored. The modified subscales had satisfactory levels of reliability and validity.

7.3 Contributions and implications

Since Vietnam embarked on its reform agenda to improve the quality of its HE, much effort has been made and major changes have been achieved, but little attention has been paid to the issue of student motivation, which plays a critical role in students’ learning. Therefore, the findings from this mixed methods study have significant theoretical and practical contributions and implications, as discussed next.

7.3.1 Contributions

First, this study expands on the scant scholarship about Vietnamese university students’ motivation and contributes to the extant literature on student motivation. It is the first study that examines both students’ motivation to pursue university education and students’ motivation in their daily study, and it provides important insights. Based on students’ personal perspectives, the findings reveal the association between students’ entry motivation and their ongoing motivation. Students’ decisions for university participation and degree choice were based on both economic and noneconomic reasons and these reasons translate into their academic goals, which determine their ongoing motivation. Yet, the findings reveal that there is limited information supporting students in their decisions. This will obviously impact on how students progress in their study and apply their learning.

The findings also highlight the role of the first year in students’ motivation: it can serve to inform institutional and classroom measures to support students’ learning. Another important understanding that this study brings forth relates to students’ expectations of the curriculum and courses, as well as teaching and assessment. The findings reveal that students’ motivation increased if they could perceive the meaningfulness and usefulness of a course to their future jobs. More generally, this study suggests that students will be more engaged and motivated if there is transparency of information regarding courses and programs.

Second, by employing a convergent parallel mixed methods design, this study is able to provide both statistical evidence of students’ motivation and subjective viewpoints from students on issues related to their motivation. The combined understanding of the multiple facets of
students’ motivation that this study brings can serve as an important input in decisions and strategies to enhance students’ motivation and learning, ensuring that these decisions are not imposed from the top down or that they are not purely theory based. For example, from the survey finding that students were most extrinsically motivated to study for reasons concerning future employment and the interview finding that students were more motivated when they understood the connection of courses to their future jobs, HE institutions could strategise the development and delivery of courses as a way to promote students’ motivation and learning. Courses could be developed that are more directly related to students’ study major, or there could be a larger number of courses from which students can choose. More detailed information about courses could be made publicly available so as to prepare students for the courses or to ensure that students are in the most appropriate courses.

Third, this study was the first to validate the AMS in the Vietnamese HE context. The findings support the use of the AMS to study Vietnamese university students’ motivation. The technique of fitting 1-factor models distinguishes this study from others that also assess the psychometrics of the AMS. The findings suggest that some items may need to be revised to achieve not only higher reliability of the subscales in the Vietnamese culture but also the reliability of the measure as a whole.

Finally, this study sheds lights on the application of SDT in the Vietnamese culture. Even though the survey relied on an SDT-based instrument while the interviews asked more general questions, the survey and the interview results supported each other. Further, the interview responses could explain the survey results from an SDT point of view, taking into consideration cultural aspects of Vietnam. Overall, this study suggests that SDT can be used to study Vietnamese students’ motivation.

7.3.2 Implications

Several important implications can be drawn from this study that will serve to inform governmental and institutional policies and strategies, as well as classroom practices. First, the finding that students have unclear professional aspirations when choosing a degree program suggests a need for career orientation to be implemented earlier in high school. Schools could organise information sessions introducing to their students the current picture of the labour market with various career pathways and options. Such sessions should further provide students with information about basic requirements of multiple career options. This could be done in partnership between high schools and employers. Such events should be held at least once a year and be open to students from all school years, not just limited to Year 12 students. This may help students to have a basic understanding of the many options available to them, allowing them to make more informed decisions regarding the pursuit of university education.
Preparing students for university study has not been a priority in Vietnam. High school students should be prepared both academically and psychologically for university. Schools and universities can cooperate to organise mentoring programs where enrolled senior year university students are invited to work in close contact with school students to help the latter better understand university life and study. At universities, academic support should be made available to students more broadly instead of the scant offerings reported by students in the interviews. Student support services also need to be more structured and regular.

As the students reported in the interviews, a career advice or consultation service should be made available to students from early high school through to university. This service in high school could assist students to discover their interests, aspirations, and strengths and make more appropriate degree choices. Such interest-based choices may encourage higher IM than decisions based on social trends. At university, a service such as this could help students to better prepare for the labour market once they graduate and thus make their contribution to the economy that is expected from greater participation in HE.

It is clear from the analysis of the interviews reported that the transparency of the organisation of degree programs (including different study areas and courses) needs to be addressed by the university. Rather than students relying on government documents, the university could have such information available online to help prospective students understand the expectations of a given study area and program and associated career options.

Future directions for students are also an important consideration. Survey data revealed that Vietnamese students are more motivated in their daily study by extrinsic factors relating to future prospects than by intrinsic motivation. The interview results showed that students experience more and better quality of motivation when they perceive the usefulness of a course to their future jobs. This finding suggests an easy-to-implement measure to enhance students’ motivation. That is, course profiles and daily lectures should attempt to help students make meaningful connections between what they gain from the course and what they need in the workplace. There should also be more optional courses from which students can choose to provide them with a sense of autonomy in their study.

Thus, the findings of this research identify weaknesses in processes used to prepare students for the decision to enter HE, in students’ strategies in studying at university, and also in knowledge about how such study will position students in a future workforce. The understanding of these issues could help institutions, high schools and universities alike, to better prepare students for university study. Additionally, the validation of the AMS as a potential tool through which the motivation of HE students can be assessed offers a strategy with which future research could
assess changes in student motivation after the implementation of the recommendations suggested above.

7.4 Limitations and recommendations for future research

The limitations of the study relate mostly to concerns about its statistical approach. In CFA with only one data set, the areas of local misfit that are identified in the original model may simply be unique characteristics of the sample. Therefore, the factor structure and the final retained items may be unique to this sample. And the patterns and degrees of motivation identified in the current sample may also be unique to this cohort. And given that the 7-factor AMS model only fitted the data well after being refined, *a posteriori* analyses should have been replicated with another cohort of students. Furthermore, the study used cross-sectional, non-experimental data, which could have undermined the reliability of statistical inferences. The study also failed to assess factorial equivalency of the AMS among different groups of students, which was due to unequal sample sizes for the demographical categories examined, including degree programs. And even though the survey collected students’ GPA, only two thirds of the respondents gave the information. Statistical results showed no significant associations between students’ GPA and motivation. Interview participants further confirmed that GPA may not be a correct indicator of Vietnamese students’ achievement under the current systems of assessment. Therefore it was decided that the association between students’ motivation and GPA be omitted from the presentation of results.

Future research could test whether the current findings regarding the psychometric properties of the AMS can be replicated with other cohorts from the participating university, as well as from other universities in Vietnam. If the factor structure of the AMS revised version is confirmed in other samples, this would support the applicability of the AMS to study Vietnamese students’ motivation. Alternatively, a full adaptation study with both exploratory factor analysis and CFA could be conducted to validate the AMS for use among Vietnamese university students. In either case, more complex sampling is desirable to enhance the credibility of findings. Research could also be undertaken to assess the factorial variance/invariance of the AMS with Vietnamese students from different degree programs, genders, locations, socio-economic status, or family backgrounds. Future research also needs to identify other measures, besides GPA, to capture students’ learning and achievement to examine the association between students’ motivation and achievement.

Combining findings from the interviews in this study with the existing literature, researchers can develop surveys to capture, on a larger scale, students’ reasons for university attendance and their expectations, students’ motivation for degree choice, and perceived factors that influence
students’ motivation. This information will provide a bigger and more comprehensive picture of Vietnamese university students’ motivation. Specifically, it may help all parties concerned to understand students’ main motivations and expectations towards university study. Different measures may then be designed to adjust students’ expectations if needed, as well as to help institutions to better meet students’ expectations. An understanding of how students perceive the impact of various factors on their motivation, together with guidance from motivation theories, will help institutions and classroom instructors to develop and implement appropriate measures to enhance students’ motivation.

A second limitation of the study relates to the use of the MSLQ as external criteria in assessing the convergent validity of the AMS. The MSLQ itself has also not been validated in Vietnam, but was assumed to have validity to be used in this study, which could have caused the findings regarding the associations among the AMS and the MSLQ subscales to be spurious. Validation of the MSLQ in the Vietnamese context would therefore provide more credibility to the findings of this study. Future studies may also try to make use of other measures of self-regulated learning apart from the MSLQ.

Future research could explore in more details the associations between students’ motivation, their use of self-regulated learning strategies and academic achievement. Interview responses gave the impression that students’ learning is not properly assessed and elaboration and critical thinking are not crucial elements of academic success in Vietnam’s HE. More research is needed to understand constituents of academic success, including the use and the role of different self-regulated learning strategies, among Vietnamese university students. Such research would require more complex design and statistical analyses, as well as more complex sampling.

Another direction for future research is the associations between students’ motivation and other variables such as effort, self-efficacy, and adaptability. Understood as a person’s belief in his or her ability to achieve goals or complete tasks, self-efficacy has been demonstrated to explain both motivation and learning approaches among undergraduate students (Prat-Sala & Redford, 2010), and to predict motivation and performance in both cognitive and sport domains (Schunk, 1995). Therefore it can be reasoned that students’ self-efficacy affects students’ motivation, which in turn influences their adaptability and effort. Levels of effort are then correlational with levels of learning and achievement, which in turn affect students’ self-efficacy. Future research could test whether this pattern of correlations is present among Vietnamese students.

A third limitation pertains to weaknesses of a self-reported survey in the quantitative portion. Literature on self-report surveys identifies limitations such as the influence of social desirability as well as the care students take while answering long surveys. In this case, the students may
have responded in a way that they believed was socially and culturally acceptable instead of being true of themselves regarding their motivation and learning strategies. Given that the survey included 48 questions, the students may as well have not made real attempts to read and answer all the questions. Although some careless responses were detected, and removed, there were no questions embedded in the survey that would have allowed this to be checked, and it is likely that some careless responses were not detected.

Similarly, the ratio of female to male respondents (488:160 in the surveys, and 13:1 in the interviews) was lopsided, which was another limitation of the study. The surveys were administered in class and while there are often more female students at the participating university, more male students could have refused to return their responses. Except for one, in all of the other classes approached for recruitment of interview participants, there were both male and female students. Yet, no male student volunteered to participate; and female students also did not agree until further encouraged by the lecturers. This was what happened in the current study. Likewise, in another study where focus groups interviews were used (T. T. Tran, 2012), the author did not mention the gender of the participants. No further literature about the differences between male and female Vietnamese students was identifiable that could support this lopsided ratio.

Finally, the limitations in the use of a translated instrument are considered. Although measures were taken to ensure the equivalence of the translation to the original, it is likely that due to cultural and linguistic differences, the translated version may not have fully captured and transferred the abstract meanings of the statements in the original version – a version designed for a different cultural group. And again, although the translation was pilot tested, it was possible that survey participants may have interpreted the items in slightly different ways. All of these factors may have influenced the interpretation of the data. However, the survey results were largely supported by the interview results, thus confirming the validity of the survey results.

7.5 Conclusion

This study was conducted at a high-ranking multidisciplinary university in Hanoi, Vietnam, using a convergent parallel mixed methods design. The aim of the study was to obtain a multifaceted picture of Vietnamese university students’ motivation, given the rapid expansion of HE in Vietnam in recent years and the concerns over graduate skills and employability. The study was theoretically supported with evidence from the literature about the association between academic motivation and student learning. On a practical level, very little scholarship is available on academic motivation of Vietnamese university students.
Using data obtained from 648 surveys and 14 interviews, this study made a number of significant findings regarding students’ entry motivation and ongoing motivation, as well as the applicability of a Western theory and instrument in the Vietnamese context. The study helped to understand Vietnamese students’ motivation for university attendance and degree choice; the quantity and quality of students’ motivation in their daily study; the association between students’ entry motivation, as well as other factors, and their ongoing motivation; and the effects of demographic characteristics on students’ motivation. The study also provided initial evidence that the AMS, and SDT more broadly, can be applied in the study of Vietnamese university students’ motivation. With its findings supported by both statistical analysis and students’ own voices, this study has the potential to contribute to the national goal of reforming HE in Vietnam.
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APPENDICES

Appendix A: Survey

Survey in English

VIETNAMESE STUDENTS’ ACADEMIC MOTIVATION SURVEY

My name is Luong To Lan. I am doing my doctoral study at Griffith University, Australia. I was a teaching staff member at ULIS, Vietnam National University in Hanoi. My teaching experience has led me to conduct this study into students’ motivation to pursue postsecondary education and how their motivation affects their learning. My research is guided by self-determination theory, according to which a person’s motivation is under the influence of both personal and environmental factors; therefore external changes can lead to changes in one’s motivation. The results of this study will shed lights on the applicability of this theory in Vietnamese universities. If the theory is highly applicable, it will guide administrators and educators in their effort to enhance teaching and learning quality by fostering learners’ motivation. It may not be possible for you to experience potential changes that this project may bring about, but they will definitely be useful for students in the years to come. Therefore your corporation is greatly valuable to this research. I hope that you can spare ten minutes to complete this survey.

SELF-EVALUATION

On the scale from 1 (lowest) to 7 (highest), can you please evaluate:

1. The level of interest you have towards your study at university

2. The effectiveness of the learning strategies that you often use in your study
PART A. DEMOGRAPHIC INFORMATION

Please circle the best answer to questions 1 to 4. And please write the answer for question 5 in the space provided.

1. What is your gender?
   1.1. Male
   1.2. Female

2. What is your study major?
   2.1. Natural sciences
   2.2. Social sciences and humanities
   2.3. Languages
   2.4. Technology
   2.5. Business
   2.6. Education
   2.7. Law

3. In your family, who has a postsecondary degree?
   3.1. Only my parent(s)
   3.2. Only my sibling(s)
   3.3. Both my parent(s) and my sibling(s)
   3.4. None of them

4. How is it for you and your family to pay for your tuition and expenses?
   4.1. Very easy, we can easily pay for it.
   4.2. Not too easy, but we can still manage.
   4.3. Difficult.
   4.4. Very difficult.

5. What is your GPA for the last semester? __________

PART B. WHY DO YOU GO TO COLLEGE?

Using the scale below, please indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college.

<table>
<thead>
<tr>
<th>Does not correspond at all</th>
<th>Corresponds a little</th>
<th>Corresponds moderately</th>
<th>Corresponds a lot</th>
<th>Corresponds exactly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. Because with only a high-school degree I would not find a high-paying job later on. 1 2 3 4 5 6 7

2. Because I experience pleasure and satisfaction while learning new things. 1 2 3 4 5 6 7

3. Because I think that a college education will help me better prepare for the career I have chosen. 1 2 3 4 5 6 7

4. For the intense feelings I experience when I am communicating my own ideas to others. 1 2 3 4 5 6 7

5. Honestly, I don’t know; I really feel that I am wasting my time in school. 1 2 3 4 5 6 7

6. For the pleasure I experience while surpassing myself in my studies. 1 2 3 4 5 6 7

7. To prove to myself that I am capable of completing my 1 2 3 4 5 6 7
<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>In order to obtain a more prestigious job later on.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9.</td>
<td>For the pleasure I experience when I discover new things never seen before.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>10.</td>
<td>Because eventually it will enable me to enter the job market in a field that I like.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>11.</td>
<td>For the pleasure that I experience when I read interesting authors.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>12.</td>
<td>I once had good reasons for going to college; however, now I wonder whether I should continue.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>13.</td>
<td>For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>14.</td>
<td>Because of the fact that when I succeed in college I feel important.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>15.</td>
<td>Because I want to have “the good life” later on.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>16.</td>
<td>For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>17.</td>
<td>Because this will help me make a better choice regarding my career orientation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>18.</td>
<td>For the pleasure that I experience when I feel completely absorbed by what certain authors have written.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>19.</td>
<td>I can’t see why I go to college and frankly, I couldn’t care less.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>20.</td>
<td>For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>21.</td>
<td>To show myself that I am an intelligent person.</td>
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<td>7</td>
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<tr>
<td>22.</td>
<td>In order to have a better salary later on.</td>
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<td>6</td>
<td>7</td>
</tr>
<tr>
<td>23.</td>
<td>Because my studies allow me to continue to learn about many things that interest me.</td>
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<td>2</td>
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<td>5</td>
<td>6</td>
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<td>24.</td>
<td>Because I believe that a few additional years of education will improve my competence as a worker.</td>
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</tr>
<tr>
<td>25.</td>
<td>For the “high” feelings that I experience while reading about various interesting subjects.</td>
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<td>5</td>
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<td>7</td>
</tr>
<tr>
<td>26.</td>
<td>I don’t know; I can’t understand what I’m doing in school.</td>
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</tr>
<tr>
<td>27.</td>
<td>Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.</td>
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<td>7</td>
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<tr>
<td>28.</td>
<td>Because I want to show myself that I can succeed in my studies.</td>
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<td>7</td>
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PART C. LEARNING STRATEGIES

The following questions ask you about your learning strategies and study skills. There are no right or wrong answers. Answer the questions about how you study as accurately as possible. Use the same scale to answer the remaining questions.

<table>
<thead>
<tr>
<th>Does not correspond at all</th>
<th>Corresponds a little</th>
<th>Corresponds moderately</th>
<th>Corresponds a lot</th>
<th>Corresponds exactly</th>
</tr>
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</table>

1. When I study the readings for a course, I outline the material to help me organise my thoughts.  
2. I often find myself questioning things I hear or read in a course to decide if I find them convincing.  
3. When I study for a course, I go through the readings and my class notes and try to find the most important ideas.  
4. When a theory, interpretation, or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence.  
5. I make simple charts, diagrams, or tables to help me organise course material.  
6. I treat the course material as a starting point and try to develop my own ideas about it.  
7. When I study for a class, I pull together information from different sources, such as lectures, readings, and discussions.  
8. I try to relate ideas in a subject to those in other courses whenever possible.  
9. When I study for a course, I go over my class notes and make an outline of important concepts.  
10. When reading for a class, I try to relate the material to what I already know.  
11. I try to play around with ideas of my own related to what I am learning in a course.  
12. When I study for a course, I write brief summaries of the main ideas from the readings and my class notes.  
13. I try to understand the material in a class by making connections between the readings and the concepts from the lectures.  
14. Whenever I read or hear an assertion or conclusion in a class, I think about possible alternatives.  
15. I try to apply ideas from course readings in other class activities such as lecture and discussion.
FOLLOW-UP INTERVIEW

The researcher may want to invite you to participate in a further interview to better understand answers to the above questions, your perceptions of the roles of motivation in your learning and of factors that affect your motivation. Findings will inform administrators of possible measures that can be taken to better support your learning. Your participation is anonymous.

If you are willing to be contacted for an interview, please provide the following information:

Yes, I am willing to be contacted at:

Phone: ………………………………… or skype: …………………………………

Or email: ………………………………………………………………………

***** Sincere thanks for your participation *****
PHIỂU ĐIỀU TRA ĐỘNG LỰC HỌC TẬP CỦA SINH VIÊN


Do vậy sự hợp tác của các bạn sẽ rất có ý nghĩa đối với nghiên cứu này. Xin các bạn hãy bớt ra 10 phút để giúp trả lời bằng hồi dưới đây.

TỰ ĐÁNH GIÁ SƠ BỘ

Trên thang điểm từ 1 (thấp nhất) đến 7 (cao nhất), bạn hãy đánh giá:

1. Mức độ hứng thú đối với việc học đại học của bạn

2. Hiệu quả của các chiến lược học tập mà bạn thường sử dụng trong quá trình học ở đại học

Appendices 183
PHÂN A. THÔNG TIN CÁ NHÂN

Từ câu hỏi 1 đến câu hỏi 4, bạn hãy khoanh tròn câu trả lời đúng với bạn, và viết câu trả lời cho câu hỏi 5.

1. Giới tính của bạn?
   1.1. Nam 1.2. Nữ

2. Chuyên ngành của bạn là trong lĩnh vực nào?
   2.1. Khoa học tự nhiên 2.2. Khoa học xã hội và nhân văn
   2.3. Ngoại ngữ 2.4. Công nghệ
   2.5. Kinh tế 2.6. Giáo dục 2.7. Luật

3. Trong gia đình bạn, ai có bằng đại học hoặc tương đương?
   3.1. Chỉ có bố / mẹ 3.2. Chỉ có anh / chị
   3.3. Cả bố / mẹ và anh / chị 3.4. Không có ai

4. Đối với bạn và gia đình, việc trang trải các Chi phí liên quan đến việc học của bạn là …
   4.1. Rất dễ dàng 4.2. Vừa đủ
   4.3. Tương đối khó khăn 4.4. Rất khó khăn

5. Nếu có thể, bạn hãy cho biết điểm tổng kết học kỳ trước của bạn là …

__________

PHÂN B. Vì SAO BẠN ĐI HỌC ĐẠI HỌC?

Dưới đây là một vài lý do mọi người theo học bậc đại học. Bạn hãy cho biết mục đích chính xác của các lý do này đối với bạn thân bạn theo thang đánh giá từ 1-7. Bạn hãy khoanh tròn số tương ứng.

<table>
<thead>
<tr>
<th>Hoàn toàn không chính xác</th>
<th>Hơi chính xác</th>
<th>Chính xác</th>
<th>Khá chính xác</th>
<th>Hoàn toàn chính xác</th>
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</table>

1. Vì nếu chỉ có bằng tốt nghiệp phổ thông thì sau này tôi sẽ không tìm được công việc có lương tốt.
   1 2 3 4 5 6 7

2. Vì tôi thấy vui và thỏa mãn khi học được những điều mới.
   1 2 3 4 5 6 7

3. Vì tôi nghĩ rằng việc học đại học sẽ giúp tôi chuẩn bị tốt hơn cho ngành nghề mà tôi đã lựa chọn.
   1 2 3 4 5 6 7

4. Vì những cảm giác phân khối mà tôi có được khi nó
   1 2 3 4 5 6 7

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ra được ý tưởng của mình cho mọi người.

<p>| | | | | | | |</p>
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<tr>
<td>5.</td>
<td>Thời sự thì tôi không biết về sao. Tôi thời sự cảm thấy là mình đang lạng lờ thời gian đi học.</td>
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<td>6.</td>
<td>Vì cảm giác thích thú khi vượt qua được chính mình trong học tập.</td>
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<td>7.</td>
<td>Để chính mình với bản thân là tôi có khả năng hoàn thành bậc học đại học.</td>
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<td>8.</td>
<td>Để có được một công việc đáng giá hơn trong tương lai.</td>
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<td>9.</td>
<td>Vì cảm giác thích thú khi khám phá ra nhiều điều mới mà trước đây tôi chưa biết.</td>
<td>1</td>
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<td>10.</td>
<td>Vì sau này tấm bằng sẽ giúp tôi tham gia vào thị trường việc làm trong lĩnh vực mà tôi thích.</td>
<td>1</td>
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<tr>
<td>11.</td>
<td>Trước đây tôi từng có những lý do chính đáng cho việc học Đại học; nhưng giờ đây tôi không biết có nên tiếp tục học không.</td>
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<tr>
<td>12.</td>
<td>Vì cảm giác thích thú khi tôi đạt được những thành tích cao hơn so với chính mình.</td>
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<tr>
<td>13.</td>
<td>Vì tôi cảm thấy mình quan trọng khi tôi học giỏi ở đại học.</td>
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<td>14.</td>
<td>Vì tôi muốn có “cực sống tốt” sau này.</td>
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<td>15.</td>
<td>Vì cảm giác thích thú khi mở rộng kiến thức về các môn học mà tôi thích.</td>
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<td>16.</td>
<td>Vì việc học sẽ giúp tôi có lựa chọn định hướng nghề nghiệp tốt hơn.</td>
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<td>17.</td>
<td>Vì cảm giác thích thú khi tôi bị hoài toan cuốn hút bởi những gì các tác giả viết trong sách.</td>
<td>1</td>
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<tr>
<td>18.</td>
<td>Tôi không rõ vì sao tôi đi học đại học, và nói thật, tôi chẳng quan tâm.</td>
<td>1</td>
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<td>19.</td>
<td>Vì sự thỏa mãn khi tôi sắp hoàn thành được các hoạt động học có mức độ khó cao.</td>
<td>1</td>
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<td>20.</td>
<td>Để chứng tỏ tôi là người thành công.</td>
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<tr>
<td>21.</td>
<td>Để có thu nhập tốt hơn trong tương lai.</td>
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</tr>
<tr>
<td>22.</td>
<td>Vì việc học cho phép tôi tiếp tục học về nhiều thứ mà tôi thích.</td>
<td>1</td>
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<tr>
<td>23.</td>
<td>Vì tôi tin rằng thêm vào năm học sẽ giúp tôi có năng lực tốt hơn khi đi làm.</td>
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<tr>
<td>24.</td>
<td>Vì những cảm giác say mê khi tôi đọc về nhiều chủ đề thú vị khác nhau.</td>
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<tr>
<td>25.</td>
<td>Tôi không biết; tôi không hiểu mình đang làm gì ở đại học.</td>
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<tr>
<td>26.</td>
<td>Vì trường đại học giúp thỏa mãn nhu cầu học tập của tôi.</td>
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<tr>
<td>27.</td>
<td>Vì tôi muốn tự chứng tỏ là tôi có thể thành công trong việc học.</td>
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Appendices
PHẦN C. CÁC CHIẾN LƯỢC HỌC TẬP

Dưới đây là những miêu tả về các chiến lược và kỹ năng học tập sinh viên thường sử dụng. Bạn hãy cho biết mức độ chính xác của những miêu tả này đối với bản thân bạn theo thang đánh giá từ 1-7. Bạn hãy khoanh tròn số tương ứng.

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<th>Hoàn toàn không chính xác</th>
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</table>

1. Khi đọc các tài liệu học tập, tôi lập và đầy đủ để sắp xếp các ý để hồn
   1 2 3 4 5 6 7

2. Tôi thường chép văn/ phân biên những gì tôi nghe hay đọc trong môn học trước khi chấp nhận chúng.
   1 2 3 4 5 6 7

3. Khi học, tôi đọc qua các tài liệu đã và các ghi chép trên lớp và cố gắng tìm ra những ý quan trọng nhất.
   1 2 3 4 5 6 7

4. Khi một lý thuyết, tôi điểm giải hay kết luận được giáo viên đưa ra trên lớp hay trong tài liệu học, tôi sẽ đánh giá xem chúng có đủ căn cứ thuyết phục hay không.
   1 2 3 4 5 6 7

5. Tôi lập các bảng biểu đơn giản để giúp sắp xếp nội dung môn học.
   1 2 3 4 5 6 7

6. Tôi coi tài liệu môn học là tài liệu bạn đầu và cố gắng phát triển các ý tưởng riêng của mình về môn học.
   1 2 3 4 5 6 7

7. Khi học, tôi tổng hợp thông tin từ nhiều nguồn khác nhau, chẳng hạn như các bài giảng của giáo viên, các bài đọc, và các buổi thao luận.
   1 2 3 4 5 6 7

8. Tôi có giao liên hệ lưới với những người bạn lại với nhau.
   1 2 3 4 5 6 7

   1 2 3 4 5 6 7

10. Khi đọc tài liệu, tôi có giao liên hệ lưới với những người tôi đã biết.
    1 2 3 4 5 6 7

11. Tôi có giao ghi nhận lại nhiều ý tưởng khác nhau liên quan đến những gì học được qua môn học.
    1 2 3 4 5 6 7

12. Khi học, tôi tập tập những ý chính từ các bài đọc và các ghi chép trên lớp.
    1 2 3 4 5 6 7

13. Tôi có giao hiếu tài liệu trên lớp bằng cách liên hệ các bài đọc với các khái niệm trong các bài giảng.
    1 2 3 4 5 6 7

    1 2 3 4 5 6 7

15. Tôi có giao áp dụng ý tưởng từ các bài đọc vào các hoạt động trên lớp khác, chẳng hạn như trong các giới thiệu và các buổi thảo luận.
    1 2 3 4 5 6 7

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PHỞNG VẤN THÊM

Nhóm nghiên cứu có thể sẽ muốn phỏng vấn bạn để tìm hiểu rõ hơn về thông tin thu được từ bảng hỏi trên, đồng thời tìm hiểu rõ hơn về thái độ của sinh viên đối với động lực học tập và các yếu tố ảnh hưởng tới động lực học tập. Kết quả nghiên cứu sẽ cung cấp thông tin cho các cán bộ quản lý và giáo viên để từ đó có những biện pháp phù hợp nhằm hỗ trợ việc học tập của sinh viên. Danh tính của bạn sẽ được giữ kín.

Nếu đồng ý tham gia phỏng vấn thì bạn hãy cung cấp những thông tin dưới đây:

Có, tôi đồng ý tham gia phỏng vấn. Có thể liên lạc với tôi qua:

Điện thoại: ................................. hoặc skype: ........................................

Hoặc email: .................................................................

****** Xin chân thành cảm ơn sự hợp tác của bạn ******
Appendix B: Interview protocol

1. Why did you decide to go to university? (Tại sao bạn quyết định đi học đại học)
   a. What influenced your decision to attend university? (Yêu tố nào tác động đến quyết định đi học đại học của bạn?)
   b. What do you think are the main reasons students want to go to university? (Theo bạn, những lý do chính khiến sinh viên đi học đại học là gì?)

2. Why did you choose this university? Why did you choose your study major? (Tại sao bạn chọn trường này? Tại sao bạn chọn chuyên ngành đang học?)
   a. How do you think students make their degree choice? (Theo bạn thì sinh viên nói chung lựa chọn ngành học dựa trên những yếu tố nào?)

3. What do you think about the role of motivation in students’ learning? (Bạn nghĩ thế nào về vai trò của động lực học tập trong việc học của sinh viên?)
   a. How does motivation affect students’ learning? (Động lực học tập có tác động như thế nào đến việc học tập?)
   b. Can you give a general description of students’ motivation from your observation? (Bạn có thể miêu tả chung chung theo quan sát của bạn về động lực học tập của sinh viên không?)

4. In your opinion, what factors affect students’ motivation in their study? (Theo bạn, những yếu tố nào tác động tới động lực trong quá trình học tập của sinh viên?)

5. Has your motivation changed? How? (Động lực học tập của bạn có thay đổi không? Thay đổi thế nào?)
   a. How does students’ motivation change in general, from your observations? (Theo quan sát của bạn thì động lực học tập của sinh viên nói chung thay đổi thế nào?)
Appendix C: Survey cover sheet

SURVEY COVER SHEET

The Research Team:
Dr. Helen Klieve
Phone: (+61) 7 37355925 / Office location: M15 Rm 1.08
Dr. Elke Emerald
Phone: (+61) 7 37355722
To Lan Luong, EdD candidate
Phone: (+61) 7 37355654
School of Education and Professional Studies,
Griffith University (Mt Gravatt campus), Mt Gravatt, QLD 4122, Australia

Local contact person: Nguyen Minh Hue, phone: (+84) 97 8194565

Why is the research being conducted?

This project is focused around Vietnamese students’ motivation towards their university study. It seeks to understand why students pursue university education and how their motivation is related to their study. It also seeks to identify factors that affect Vietnamese students’ motivation.

As there is limited information about Vietnamese students’ motivation in general, this study will help both students and educators to know more about the subject area. Findings from the study will offer valuable insights for administrators and educators in their effort to support student learning.

What you will be asked to do

You will be asked to complete the attached questionnaire which has 48 questions and which should take no more than 15 minutes to complete. In this questionnaire, you will be asked why you go to university by indicating the extent to which the statements reflect the reason you go to university. You will also be asked to indicate how often you use certain learning strategies.

At the end of the questionnaire, there is a question asking you do indicate if you are willing to participate in a follow-up interview with the research team. The purpose of the interview is to understand your views towards issues related to your motivation. The interview will take around 30 minutes.
The basis by which participants will be selected or screened

Anyone receiving this questionnaire can participate by returning the completed questionnaire.

From among those indicating their consent to participate in follow-up interviews, the research team will contact potential participants.

The expected benefits of the research

The main benefits of the research will be a better understanding of students’ academic motivation so that future measures can be taken to foster students’ learning.

Risks to you

There are no foreseeable risks associated with being involved with this research project.

Your confidentiality

All data collected within this research will be DE-identified, with the survey collection process explicitly not seeking to identify you. You express your initial consent to participate in interviews by giving your phone number or e-mail address. While we will interview a number of students, the focus of such interviews is on students’ motivation. Thus in reporting the findings individuals will not be identified. This will be maintained for reporting, publication, and presentation of this research, where all data will be completely unidentifiable.

As required by Griffith University, all audio recordings will be erased after transcription. However, returned questionnaires and interview transcripts and analyses will be stored securely in a locked cabinet at Griffith University for a period of five years before being destroyed.

Your participation is voluntary

Participation for all is voluntary. All questions in the survey should be answered only if participants wish to. All participants have the ability to withdraw from this research project at any stage without explanation or consequence. Participation will not impact upon the relationship that any participant has with another participant or with their university/faculty.

Mechanism for distribution and return

This questionnaire is distributed and collected in class only. Participants are given 20 minutes to complete the questionnaire. Completed questionnaires will then be collected by the research team.

Questions / further information

If you require additional information or have any questions in regards to this research project, please contact Dr. Helen Klieve (h.klieve@griffith.edu.au) or Dr. Elke Emerald (e.emerald@griffith.edu.au).

The ethical conduct of this research

Griffith University conducts research in accordance with the National Statement on Ethical Conduct in Human Research. If potential participants have any concerns or complaints about the ethical conduct of the research project they should contact the Manager, Research Ethics on (+61-7) 3735 4375 or research-ethics@griffith.edu.au. Please quote the reference number for this project: EDN/10/15/HREC.
Feedback to you

The research team will provide an interim and final report to the university’s administration on their findings. Further discussions will also be held to provide information.

Privacy Statement – non disclosure

The conduct of this research involves the collection and use of personal information. The information collected is confidential and will not be disclosed to any other person without your consent. A de-identified copy of this data may be used for other research purposes. Your anonymity will be safe guarded at all times. Further information may be obtained from http://www.griffith.edu.au/privacy-plan or by phoning (+61-7) 3735 4375.

Expressing consent

If you complete and return this questionnaire, you are deemed to have agreed to participate in the survey. Returning the completed questionnaire also means that you have read and fully understood the information presented in the previous sections.

Question no.49 of the questionnaire seeks your consent to participate in a follow-up interview. By providing your contact details, you express an initial agreement. The research team may contact to invite you to participate in an interview which last about 30 minutes. If you agree to participate in the interview, you will be given an information sheet and asked to sign a consent form prior to the interview.
Appendix D: Information sheet and consent form for interviews

Information sheet

**Griffith UNIVERSITY**

**Vietnamese university students’ academic motivation**

**INFORMATION SHEET**  
*(for interviews)*

**The Research Team:**
- Dr. Helen Klieve  
  Phone: (+61) 7 37355925 / Office location: M15 Rm 1.08
- Dr. Elke Emerald  
  Phone: (+61) 7 37355722
- To Lan Luong, EdD candidate  
  Phone: (+61) 7 37355654 / (+84) 912 362 846
- School of Education and Professional Studies,  
  Griffith University (Mt Gravatt campus), Mt Gravatt, QLD 4122, Australia

**Why is the research being conducted?**

This project is focussed around Vietnamese tertiary students’ motivation towards their study. It seeks to understand why students pursue tertiary education and how their motivation is related to their study. It also seeks to understand students’ view towards motivation and to identify factors that affect Vietnamese students’ motivation.

As there is limited information about Vietnamese students’ motivation in general, this study will help both students and educators to know more about the subject area. Findings from the study will offer valuable insights for administrators and educators in their effort to support student learning.

**What you will be asked to do**

You are asked to have an individual interview via skype or telephone with the researcher. The interviews will take about 30 minutes. With your consent, the interview will be recorded.

**The expected benefits of the research**

The main benefits of the research will be a better understanding of students’ academic motivation so that future measures can be taken to foster students’ learning.

**Risks to you**

There are no foreseeable risks associated with being involved with this research project.
Your confidentiality

All data collected within this research will be DE-identified. The focus of the interviews is on students’ views of the role of motivation in their learning, their motivation to go to university and choose a degree program, factors that influence students’ motivation, and how students’ motivation changes.

Thus in reporting the findings, individuals will not be identified. This will be maintained for reporting, publication, and presentation of this research, where all data will be completely unidentifiable.

As required by Griffith University, all audio recordings will be erased after transcription. However, interview transcripts and analysis will be stored securely in a locked cabinet at Griffith University for a period of five years before being destroyed.

Your participation is voluntary

Participation for all is voluntary. All participants have the ability to withdraw from this research project at any stage without explanation or consequence. Participation will not impact upon the relationship that any participant has with another participant or with their university/faculty.

Questions / further information

If you require additional information or have any questions in regards to this research project, please contact Dr. Helen Klieve (h.klieve@griffith.edu.au) or Dr. elke emerald (e.emerald@griffith.edu.au).

The ethical conduct of this research

Griffith University conducts research in accordance with the National Statement on Ethical Conduct in Human Research. If potential participants have any concerns or complaints about the ethical conduct of the research project they should contact the Manager, Research Ethics on (+61-7) 3735 4375 or research-ethics@griffith.edu.au. Please quote the reference number for this project: EDN/10/15/HREC.

Feedback to you

The research team will provide an interim and final report to the university’s administration on their findings. Further discussions will also be held to provide information.

Privacy Statement – non disclosure

The conduct of this research involves the collection and use of personal information. The information collected is confidential and will not be disclosed to any other person without your consent. A de-identified copy of this data may be used for other research purposes. Your anonymity will be safe guarded at all times. Further information may be obtained from http://www.griffith.edu.au/privacy-plan or by phoning (+61-7) 3735 4375.

Expressing consent

If you agree to take part in the interview, you will be asked to complete the attached consent form. The researcher would like to record the interview with you. If you agree to have the interview recorded, please indicate this clearly.
Consent form

Vietnamese university students’ academic motivation:
An exploratory study

CONSENT FORM
(for interviews)

The Research Team:
Dr. Helen Klieve
Phone: (+61) 7 37355925 / Office location: M15 Rm 1.08
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Phone: (+61) 7 37355722
To Lan Luong, PhD candidate
Phone: (+61) 7 37355654 / (+84) 912 362 846
School of Education and Professional Studies,
Griffith University (Mt Gravatt campus), Mt Gravatt, QLD 4122, Australia

By signing below, I confirm that I have read and understood the information sheet and in particular have noted that:

- I understand that my involvement in this research will include completing a survey and participating in an interview if I express my consent to participate;
- I have had any questions answered to my satisfaction;
- I understand the risks involved;
- I understand that there will be no direct benefit to me from my participation in this research;
- I understand that my participation in this research is voluntary;
- I understand that if I have any additional questions I can contact the research team;
- I understand that I am free to withdraw at any time, without comment or penalty;
- I understand that I can contact the Manager, Research Ethics, at Griffith University Human Research Ethics Committee on (+61-7) 3735 4375 (or research-ethics@griffith.edu.au) if I have any concerns about the ethical conduct of the project; and
- I agree to participate in the project.

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Do you agree for the interview to be recorded? _____
Appendix E: Approval from the authors of the AMS

Seeking permission to use the AMS

To Lan Luong <tolan.luong@griffithuni.edu.au>

Hi,

You have the permission to use the AMS and you can download the scale from our web site:

http://www.er.uqam.ca/hobetj26710/lRCS/echelles_en.htm

AMS

To calculate a person's score on the AMS, you need to find the mean response for each of the subscales. These means will vary between 1 and 7. You then insert these means in the following formula which will allow you to calculate a self-determination index:

\[ \text{self-determination index} = \frac{2(\text{know}+\text{acc}+\text{stim}/3)}{\text{idem} - (\text{intro}+\text{reg}/2) + 2\text{amo}} \]

- know = intrinsic motivation to know
- acc = intrinsic motivation to accomplishments
- stim = intrinsic motivation to experience stimulation
- idem = identification
- intro = introjected regulation
- reg = external regulation
- amo = amotivation

This formula will give you scores ranging from -19 (very low self-determination) to +18 (extreme self-determination). Most of the people we have tested with this scale obtain scores around 10.

Highest level of self-determination: \[ 2((7+7+7)/3) + 7 - ((1+1)/2) + 2^1 \]

So:

\[ 2(14/3) + 7 - (1+1/2) + 2(1) = \text{would be the highest self-determined score} = 18 \]

14+7-3=18
I would like to mention that this scale has not been normalised. This index is only used for research purposes. Nevertheless, we noticed that a high index is associated with positive consequences and, on the opposite, a low index is associated with negative consequences for the person.

I hope these few words will help you.

I wish you good luck in your research project!

2014-12-08 12:41 GMT-05:00 Bob Vallerand <vallerand.bob@gmail.com>:

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Fellow
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Australian Catholic University

For more on passion: Prof Robert Vallerand 'Making a difference in people's lives' at Mind & Its Potential 2012

[Quoted text hidden]

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