

**Chinese students' adjustment to studying in UK Higher Education: Academic  
self-efficacy and psychological well-being**

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## **Abstract**

With the internationalization of higher education and the rapid economic and social development of China the number of Chinese international students pursuing higher education in the UK has expanded considerably over the past several decades. These sojourners face a variety of challenges, both academically and psychologically, in their adjustment to this new cultural environment.

This longitudinal research explored the academic self-efficacy and psychological well-being of Chinese international students and the relationships between these two variables over time, during their adaptation to UK higher education. In addition to Chinese international students in UK universities, data were also obtained from Chinese university students in China to be used as a comparison sample to better understand the general academic and psychological status of Chinese students studying in their home country. Data was collected through a quantitatively driven mixed methods design utilizing questionnaires and semi-structured in-person interviews. The questionnaire included brief measurements of academic self-efficacy, academic stress level, personality, and flourishing scale.

Findings show academic performance, academic stress, academic support, and English language proficiency contribute greatly to students' academic self-efficacy. Interactions with host nationals, social difficulty, academic stress, discrimination, and personality were proven to be predictive of students' psychological well-being. Findings also revealed that students' academic self-efficacy and psychological well-being are positively correlated with each other across time. These findings will be useful for faculty, staff, and even future international students to enable them to better understand the adjustment difficulties faced and to offer programming and support to facilitate this process.

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## **Author's Declaration**

I hereby declare that the work contained in this thesis is original and I am the sole author, except where otherwise referenced, and it is the result of research that has been conducted since the official commencement of this degree programme. This work has not, in whole or in part, previously been published and has never been submitted for award at this, or any other, university.

## **1 Introduction**

This chapter presents a brief introduction of this thesis background, including a summary of the current international students in UK higher education, particularly those regarding international students the gap in the literature in this field and the aim of this thesis. A summary of the key terms related to this study is illustrated in this chapter. Theoretical framework, significance of the study, and research strategy are introduced to provide a better understanding of the general background of Chinese international students. At last, the chapter outlines of this thesis is illustrated.

### **1.1 Introduction**

It is not surprising that the UK, with many world-class universities, attracts a large number of international students. Around 19% of all students in UK higher education came from other countries in the academic year 2016-17, and Chinese students accounted for almost 21.5% of all international students, more than a fifth of the total, according to data released by the Higher Education Statistics Agency (HESA) in 2018. Consistently, research into the experience of international students shows that, despite growing multiculturalism, especially in UK higher education, their cultural adjustment is still complex process that is at time confusing and distressing. Among the challenges that overseas students face in their intercultural experiences, academic life, as learning adaptation, is regarded as critical and difficult (Spencer-Oatey & Xiong, 2006). Those challenges are commonly accompanied by increased stress, frustration, anger, fear, or depression as part of the international students' emotional adaptation, which could lead to psychological issues. However, international students' adjustment to studying within a new culture is still often overlooked, as there is limited research into their experience, especially their motivation and well-being, (Chin, Demarinis, & Fritz, 2008; Li, 2008). Few programmes of psychological research have explored the academic self-efficacy and psychological well-being of international students. This study aims to explore Chinese students' experience of adaptation to studying in UK higher education, specifically their academic self-efficacy and psychological well-being. The possible relationships between those two adjustment variables during various time periods will also be investigated. At last, this study will assess whether, and in what way, international Chinese students' perceived academic self-efficacy and psychological well-being might change overtime as an effect of their changing living environment.

In addition, it is suggested that international students from different backgrounds tend to have particular difficulties and their own study preferences (Barker, Jones & Ramsay, 2006). Ho, Duan and Tang (2014) emphasized the critical role of culture in shaping the thoughts, behaviours, and the psychological states of individuals. This implies the

importance of understanding the participants' cultural backgrounds in psychological research. Considering that this study focuses on exploring the academic and psychological adjustment of Chinese students only in UK higher education, it is worth knowing the general academic and psychological status of Chinese students studying in their home country. It is also meaningful to measure how different the academic self-efficacy and psychological well-being of Chinese students in different learning environments could be by comparing these two groups of Chinese students, specifically those studying in the UK and those in China. As the level of cross-cultural adjustment, including psychological adjustment, varies from different sojourning groups due to the difference of their characteristics (Kennedy & Ward, 1993), it is important to understand Chinese students' specific characteristics including those Chinese students in Chinese higher education.

## 1.2 Key Terms

*Psychological well-being.* The concept of psychological well-being has been widely used by researchers and health advisors to refer to an individual's mental health status or general psychological functioning (Andrews & Robinson, 1991). Deci and Ryan (2008) concisely defined psychological well-being as a combination of positive affective states such as happiness, feeling good and functioning with optimal effectiveness in individual and social lives. There are two important facets in psychological well-being, subjective well-being and "eudaimonic" well-being (Diener, 2000). Subjective well-being includes feelings of happiness, life satisfaction, and positive affect/emotions (Diener, 1984; Diener, 2000). Another aspect of psychological well-being, "eudaimonic" well-being, is regarded as the purposeful and meaningful aspect of psychological well-being, which is defined as "the fulfilment of human potential and a meaningful life" (Chen, Jing, Hayes, & Lee, 2013, p. 1034). It involves pursuing meaning in life and perceived thriving in the face of existing challenges (Ryff and Singer, 1998; Ryff, Singer, & Love, 2004; Ryff & Singer, 2008). In another word, it emphasizes human flourishing and focuses more on positive functioning (Samman, 2007). Ryff (1989) has developed a model that breaks down psychological (eudaimonic) well-being into six dimensions including self-acceptance, personal growth, purpose in life, environmental mastery, autonomy, and positive relations with others.

*Academic self-efficacy.* Academic self-efficacy was defined by Pajares & Schunk (2002) as an "individuals' confidence in their ability to successfully achieve academic tasks at a designed level" (p. 17). Bandura (2006) refers to academic efficacy as "students' beliefs in their efficacy regulate their learning activities and to master academic subjects" (p. 10).

*Mental health.* Mental health refers to "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work

productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2001a, p.1).

*Academic stress.* Academic stress refers to the stress or pressure caused by academic related demands (Wilks, 2008). It occurs to students normally when they cannot meet the requirements with respect to academic studies. Excessive academic stress can affect students’ academic performance and mental health negatively (Misra, McKean, West & Russo, 2000).

### **1.3 Theoretical Framework**

Ward and Searle (1991) proposed a model of cross-cultural adaptation, which incorporates psychological and sociocultural dimensions to explore the nature of the difficulties experienced by international students. A shining point in Ward and Searle’s (1991) work is that it combined culture learning, stress and coping, and social identification theories, the three main theories in studying international student adjustment issues (Searle & Ward, 1990; Ward & Kennedy, 1999). Ward and Kennedy (1999) regard psychological adjustment and sociocultural adjustment as the central processes of cultural adaptation. Psychological adaptation refers to students’ adjustment to stress, anxiety, depression, and other emotions caused by living in a new environment. In another word, in the context of this study it is international students’ psychological well-being in a new cultural environment. Sociocultural adaptation relates more to daily life, interaction, academic, and work adjustment, which are all closely associated with social skills, interaction with host nationals, or the cultural leaning paradigm (Spencer-Oatey & Xiong, 2006). Accordingly, psychological adjustment is predicted by loneliness, stress, personality, sociocultural adaptation, and social support (Akhtar, 2012; Pedersen, 1991; Poyrazli & Lopez, 2007; Searle & Ward, 1990). It is widely recognized in the academic literature that factors including language competency, academic study, and interaction with host nationals contribute to international students’ sociocultural adaptation (Brown & Holloway, 2008; Gu & Maley, 2008; Searle & Ward, 1990). As shown above, the factors affecting international students’ psychological well-being, may also be predictors of their sociocultural adaptation, as these two aspects of adjustment are often connected.

### **1.4 Significance of Study**

With the growth of internationalisation in higher education and the increasing numbers of international students, increasing anecdotal and empirical reports are detailing that a high proportion of international students are depressed while studying abroad (Carroll & Ryan, 2005). Wan (1996) suggested that schools must be aware of this issue and of these international students’ home cultures to help them overcome difficulties and frustrations in adjusting to study abroad life and cross-cultural differences. However, there is still limited

research focusing on international students' adjustment experience of studying within a new cultural environment (Chin et al., 2008; Li, 2008).

As a result of the rapid economic development in China, there has been a rapid increase in the number of Chinese student studying overseas. However, there is still limited research specifying their unique needs and challenges, especially from the students' perspective (Gu & Maley, 2008). The difficulties that international students experience, and the psychological status of international students in the process of adjusting to study abroad, have become issues that need to be researched and addressed thoroughly. Few programmes of research have explored both the academic self-efficacy and psychological well-being of international students and the relationships between these two variables over time, and even fewer have included a sample of Chinese international students in UK higher education.

Moreover, there has been no comparative study of the academic self-efficacy and psychological well-being of Chinese students who are studying in universities in the UK and those in universities in China, to the researcher's knowledge, as yet. There is thus a clear need for this present study, to attempt to better understand Chinese international students' adjustment to studying at UK universities.

This study will enrich the findings of existing research, draw the attention of both educational researchers and international students, and enable students to be aware of the challenges that they are expected to face to potentially reduce future misunderstanding, and stress.

### **1.5 Research Strategy**

A longitudinal panel design in a sample of Chinese students in UK universities and a comparative study design in samples of both Chinese students in UK higher education and in China higher education will be applied to explore the following research questions:

- 1) What is the level of academic self-efficacy in Chinese international students studying in the UK?
- 2) How do the academic self-efficacy and psychological well-being of Chinese international students change during their adjustment to studying in UK higher education over one academic year?
  - a. Are these changes correlated with each other?
  - b. What factors are related to these changes?
- 3) Among Chinese nationals, are there any differences in the academic self-efficacy and psychological well-being between those studying in UK higher education and in Chinese higher education?

With the first two research questions, the intent was to identify what factors affected Chinese international students' academic self-efficacy and psychological well-being, how they had influenced students over an academic year, and to explore the relationships between Chinese international students' academic self-efficacy and psychological well-being, including how these two aspects had changed and correlated with each other over time. The last research question aimed to understand the academic and psychological status of university students in China, and compare it with Chinese international student in the UK.

For the first group of participants, Chinese international students in the UK, this longitudinal research applied mixed methods, which integrated quantitative and qualitative data collection and analysis. Questionnaire survey and semi-structured interview were conducted three times over the academic year in the same sample. Only questionnaire survey was used to collect data from the second group of participants, university students in China.

The questionnaire is predominantly structured with closed question items but does include two open questions that allow respondents to answer in their own words. The first section collects students' personal details including gender, university, year of study, IELTS score, and the total length of their stay in Britain. The next section is comprised of 3 scales: the Motivated Strategies for Learning Questionnaire (MSLQ): Self-efficacy for learning and performance, focusing on measuring students' academic self-efficacy; the Ten-Item Personality Inventory (TIPI), a brief measure of the Big-Five personality dimensions, including extraversion, agreeableness, conscientiousness, emotional stability and openness to experiences (Gosling, Rentfrow & Swann, 2003); and the Psychological Flourishing Scale (PFS) (Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi & Biswas-Diener, 2009), generally measures the respondent's self-perceived success in essential areas of well-being including social relationships, self-esteem, purpose, and optimism.

Additionally, respondents' levels of academic stress were assessed through the direct question "How stressful was your academic life this term?" that is scored in a 10-point Likert-type format regarding the levels of stress. There are two open questions to gather respondents' self-perceived changes in their academic self-efficacy and psychological well-being.

Semi-structured interviews consisted of warm up questions and five open-ended questions used to get a detailed account of participants' views, and to find the context in which the factors of academic self-efficacy and psychological well-being mentioned in the questionnaire were experienced in their lives. The interviewees were asked about the issues probed in the questionnaire in order to develop a comprehensive understanding of their



academic motivation and psychological well-being in the process of cross cultural adaptation.

## **1.6 Chapter Outline**

This present thesis is comprised of nine chapters. Chapter one introduces the purpose of this current research, and give an overview of the key research questions. Chapter two examines past research relevant to the adjustment of international students at a higher education level, especially their academic status and psychological well-being. It also explains the challenges facing by international students in their adjustment to study abroad. The purpose of chapter three is to provide a deeper understanding of the context, including the background of higher education in China and in the UK Chapter four focuses on how the research questions have been addressed and measured. The first part of the chapter present the approaches and procedures used for data collection, later parts of the chapter covers the pilot study. Chapters five and six are devoted to present and discuss the quantitative findings from questionnaires in the sample of Chinese international students in the UK, and university students in China respectively. A general comparison between these two groups of participants is illustrated at the last part of this chapter. This is followed by chapter seven which presents a critical analysis of the quantitative data from longitudinal interviews in the sample of Chinese international students in the UK Chapter eight generalizes a critical assessment of the findings, and discusses the relevant issues described in the literature review section. The last chapter summarizes the study, illustrates the implication for practice and further research.

## **2 Context**

This chapter provides a brief introduction of the background of international higher education, and a summary of the important developments in higher education in China and the UK over the last century, including influential policies in Chinese and UK higher education, particularly those regarding international students. The changes in modern China are also introduced to provide a better understanding of the general background of Chinese international students. At last, the cultural background of Chinese students is illustrated.

### **2.1 Background of International Higher Education**

In the process of adapting to the needs of the technological and social transitions brought by industrialization, the role of education systems today has changed from simply teaching low-level skills to providing a vital route for humans to gain advanced skills and to improve their employability and cognitive competencies to live a productive life (Bandura, 1997). Another influence on the background for the development of education is the global environment, which has accelerated the internationalization of learning.

In terms of the internationalization of higher education specifically, this has been defined by Wit (1999) as “the process of integrating an international dimension into the teaching, research and service functions of the institution” (p. 2). Pursuing a degree abroad is one of the representative activities of the internationalization of higher education and a common phenomenon that is discussed widely with regard to various aspects (Rumbley, Altbach & Reisberg, 2012; Wit, 1999). As an opportunity, it is valued by learners and their support systems for the better or more effective education many of them receive outside of their home countries. In detail, there could be a number of reasons students tend to choose to pursue further higher education abroad; including personal growth, intercultural ability improvement, career development and so on. On the other hand, the contributions that international students make to the development of higher education in the systems they enter abroad, in terms of the academy, culture and finance, are significant (Schweisfurth & Gu, 2009). Consequently, higher education institutions are often devoted to developing internationally and targeting the international market.

Undoubtedly, the UK, with a high reputation for education especially at the university level, attracts a huge amount of students worldwide to come to achieve their goals of study (Binsardi & Ekwulugo, 2003). The UK Council for International Student Affairs (UKCISA) reported the increasing number of students from abroad coming to study in UK higher education, which proves the continued attractiveness of UK higher education. For example, in the past five years, the number of Chinese students coming to study in UK universities has increased at a rate of 6% every year (Education UK, 2015). International

Student Statistics: UK Higher Education (2018) pointed out that Chinese students are the largest group of international students studying in UK higher education and the number has increased from 83,790 in 2012-2013 to 95,090 in 2016-2017 according to statistics released by UKCISA (UK Council for International Students Affairs). Education UK (2015) listed some general reasons for choosing a UK education, including gaining a world-class education, opening doors to a dream career, perfecting English language skills, having the adventure of a lifetime, joining a friendly international community, getting great value for money, discovering, creating, and, innovating. With various motivations, students start their intercultural adaption journey through studying in the UK, a variety of issues concerned with international students in UK higher education are proposed and discussed.

### **2.1.1 Teaching International Students**

With the internationalisation of higher education (HE), challenges for lectures and universities also arise, especially for HE institutions in the UK, which is the second largest destination for international students (Universities UK International, 2017). The requirements for teachers and schools' awareness on the increased cultural diversity in universities have to be met. It was argued that many lecturers are anxious with facing unfamiliar student characteristics and needs due to the cultural gap between them and international students, and are uncertain of how to meet the expectations of the universities (Carroll & Ryan, 2007). A number of papers focused on providing tips for understanding international students, and strategies for helping faculty teach international students effectively (Croese, 2011; Young-Davy, Rice, Yerian, & AEI Faculty, 2013; Kisch, 2014). "If you don't know your students, how can you teach them well?" (Paul Roberts, lecture, Nov, 2014). It was pointed out that a better understanding of international students' adjustment difficulties in a new learning environment, their culture background, and empathetic attitude is important for teachers working in an across culture environment (Gu & Maley, 2008). This is also critical for improving international student experiences, and teaching more effectively, thus helping them achieve academic success.

## **2.2 Higher Education in the UK**

With the global dominance of the English language, the influence of the British Empire has fostered beliefs in British education being the best in the world, and with this reputation for high quality education and research the attractiveness of UK higher education is great, particularly for international students. A country's social and political policies, economic environment, and decisions all influence the development of its universities.

### **2.2.1 Increase in Tuition Fees**

One of the important and obvious changes in the modern higher education in the UK is the increase in tuition fees, especially for UK home university students. The tuition fee for new

undergraduate home students in England has increased dramatically, tripling from £3,000 in 2006 to a cap of £9,000 a year in 2012 (Ball, 2014). This tuition fee has increased each year since, and increases annually according inflation from 2017-18 onwards. Currently, the average tuition fee levels in England rank as the second highest across all types of universities in the world, second only to the US (Bolton, 2018). The direct effect of this dramatic fee increase is that the total number of applicants to UK universities in 2012 was down by 6.6%, or 46,500 applications, compared with 2011 (Bolton, 2018). It was believed that all applicants, particularly students from England and the EU, were directly affected by this massive change (Bolton, 2018). There are debates on the 2012 changes and the impact of these higher fees. Many are concerned that the introduction of higher fees in England would make higher education inaccessible to poorer students (Coughlan, 2017). However, Murphy, Scott-Clayton, and Wyness (2017) found that the rise of tuition fees had led to "increased funding per head, rising enrolments, and a narrowing of the participation gap between advantaged and disadvantaged students" (p. 2) increasing quality, quantity, and equity in higher education. This could be explained by English education's distinctive comparatively generous loan system (Murphy, Scott-Clayton, & Wyness, 2017). As a result, these English students will graduate with average debts of more than £50,000, including maintenance loans (Coughlan, 2017).

With respect to the tuition fees for international student in the UK, in order to cope with the continually rising expenditure of higher education, caused by the growing number of UK university students, the government has introduced and regularly approved increased tuition fees for non-UK students since the early 1970s (Altbach, 2015). Considering the massive contribution of the international students' tuition fees to overall university income and expansion, as well as the UK economy, fees for all non-UK students will continue to increase (Altbach, 2015).

### **2.2.2 Influential Policies Regarding International Students**

The UK is the second most popular destination in the world for students and large numbers of international students bring economic, social, and cultural benefits to the UK (Walker, 2014). In order to leverage the economic advantages of international education for the UK, Prime Minister Tony Blair's PMI (Prime Minister's Initiative) and PMI 2 were launched by the UK government between 1990 and 2009 to increase the total number of international students studying in the UK by developing its expertise in international student recruitment and to promote the UK education brand as a world leader through encouraging collaboration between the government and universities (Li, 2015; Lomer, 2017). In particular, PMI 2 made revisions to the student visa system through reduced limitations on international students' eligibility to work during degree courses to better enable them to

support and manage themselves. Meanwhile, the degree programmes available to international students were also expanded (Lomer, 2017).

Another influential policy for international students in UK higher education is the Border Control policy launched by the Coalition Government from 2010 to 2013, which had a detrimental effect on many of the policies previously instituted by Blair's administration. Border Control policies aiming to cut net migration, including international students, to reduce overall immigration numbers has significantly impacted recruitment of international students from Asia, despite their contribution to strengthening the UK economy (Li, 2015; Lomer, 2017). This policy has been highly politicised by the UK Border Agency, the UK Council for International Student Affairs (UKCISA, 2015), and UK universities. The government's lack of careful consideration of the non-economic requirements of immigration, including students, was emphasized by the UKBA and UKCISA (2015) argued that the Border Control policy not only resulted in the decrease of overseas student recruitment levels, but also tarnished the reputation of UK higher education worldwide.

The growth in the number of international students pursuing higher education in the UK slowed in 2016 for the first time (Wang & Miao, 2017). This has been mainly caused by the British government's policies on education and immigration, which increased limitations on international students' eligibility to obtain work permits and reduced their opportunities to stay on to gain work experience after graduating from British universities.

### **2.3 Higher Education in China**

There have been massive changes in higher education in China caused by the opening of China and its rapid economic development, particularly over the last few decades. A few significant reforms in the Chinese education system have had profound impact on modern Chinese higher education, including resuming the National Higher Education Entrance Exam (Gaokao) in 1977 (Brandenburg & Zhu, 2007), the Open Door policy in the 1990's, 211 and 985 Project Planning between 1990-2000 (Altbach & Salmi, 2011), the Thousand Talents Scheme in 2008 (Wang & Miao, 2017), and the One Belt and One Road policy since 2013 (Wang & Miao, 2017). Chinese higher education has played a vital role in developing China into a global education power, which also significantly contributed to China's economic growth and social development.

#### **2.3.1 Chinese Higher Education System**

This section briefly introduces the development of the Chinese higher education system, which mainly focus on the significant reforms in Mainland China since 1949, after the People's Republic of China was officially formed. The Ministry of Education of the People's Republic of China (MOE) is the government authority for all strategies, policies

and plans for educational reform and development. Its responsibilities include all education related matters. The Chinese higher education system is distinct in having both academic and communist party governance structures. Chinese Communist Party officials are responsible for administrative university management structures at all levels, and their priority is to supervise and provide guidance for the ideological and political focus of each university (Brandenburg & Zhu, 2007). Furthermore, it is important to note that Confucian educational values have had profound impacts on education in modern China, including higher education. It has been argued that Gaokao, the Chinese university entrance examination, is reflective of 'post-Confucian values' or the 'Confucian heritage culture', in comparison it with the imperial KeJu civil service examination (Marginson, 2011; Yang, 2014).

Chinese higher education developed slowly with limited funding in the era of the planned economy between 1949 and 1978, this was also a key transitional phase of higher education in China (Brandenburg & Zhu, 2007). China's higher education was led by the Chinese Communist Party to ensure it followed an appropriate political nature and completely served the national needs of the new country's rapid economic development (Ouyang, 2004). Unfortunately, the Great Proletarian Cultural Revolution, from 1966 until 1976, caused the closure of universities and cancellation of university entrance exams (Andreas, 2009), which was a disaster for the Chinese educational system (Brandenburg & Zhu, 2007). Consequently, an entire generation remained vastly uneducated. A significant turning point for Chinese higher education was the opening of China. Deng Xiaoping's (the leader of the People's Republic of China from 1978 until 1989) Open Door Policy marked the end of the Cultural Revolution (Brandenburg & Zhu, 2007) and the National College Entrance Examination (Gaokao) and universities were reopened in 1977. In line with the great expansion in tertiary education, higher education institutions began to charge tuition fees in the 1990s (Wan, 2006).

### **2.3.2 China's Higher Education Expansion**

The Chinese government made a strategic decision to undertake a speedy and large-scale expansion of higher education at the turn of the 21st century, including building more universities and expanding the number of degree courses in response to the demands of knowledge and information (Wan, 2006) According to data 2017 from the People's Republic of China Ministry of Education, the number of National Higher Institutions reached 2,913. As a result, the number of newly enrolled university students has increased dramatically; from 1998 to 2005 the number had more than quadrupled (MOE, 2008). The population and proportion of Chinese graduates continued growing, especially in undergraduate degrees. There were 23.91 million enrolled university students in 2012 (MOE. 2013). However, entry

into the universities is still competitive and the competition has become fiercer, particularly, for the top and most famous institutions (Brandenburg & Zhu, 2007).

With respect to the strong competition among Chinese students, the influences of the one-child policy cannot be ignored. Because of the policy, the vast majority of the population who were born in the late 1970's and after were the only children in their families. They had been given complete attention and love from their parents, becoming the centre of their families; their education, therefore, was a major priority (Yang, 2014). In fact, modern Chinese families spend a significant proportion of the family income on their children's education and preparation for their university entrance exams. In addition, it was argued that the one-child policy resulted in a lack of independent ability and a firm sense of determination in the current generation (Sue & Sue, 1990). This could partly explain why some Chinese students had a strong sense of loss when leaving their parents and studying abroad.

### **2.3.3 Internationalisation of Higher Education in China**

The Chinese government launched two important aims, Projects 211 and 985, in the 1990s to improve the quality of higher education in China, and enhance its place of competition in their on-going internationalization (Brandenburg & Zhu, 2007). In order to cope with the challenges of global higher education in the 21st century, Ministry of Education in 1995 introduced planning for Project 211, which specifically provided additional funding to support 100 universities to improve their research standards, and promote the socio-economic development of the country (Brandenburg & Zhu, 2007). These universities were also encouraged to participate in internationalisation activities (Wan, 2006). Project 985 was introduced in 1998, aiming to raise the standards of the top Chinese universities to be at an international level in terms of academic achievement and research performance. It equipped these universities with additional resources to improve their international competitiveness in the global system of higher education (Altbach & Salmi, 2011).

In 2010, the National Outline for Mid and Long-Term Education Planning and Development was introduced, not just to continue promoting the internationalisation of China's higher education system by improving its quality to meet world-class standards, but also to enhance China's international education status through attracting outstanding academics to work in China by financial encouragement (Altbach & Salmi, 2011).

#### **2.3.1. China as a Destination for International Students**

China, as the most popular destination in Asia for international students and the third most popular globally, is on its track to replace the UK as the second most popular country for international students by 2020 (Wang & Miao, 2017). Since "One Belt and One Road" was initiated by China in 2013, it is also called the Silk Road Economic Belt and the 21st-century

Maritime Silk Road is a development strategy focuses on connectivity and cooperation between Eurasian countries, more international students, particularly those from countries along Belt and Road, have enrolled in China's education institutions (Ma, 2016). It was reported that the average growth of the number of international students enrolled in China's education institutions reached 20 percent per year, especially from the 37 countries along the Belt and Road route, who accounted for most of the growth (Wang & Miao, 2017).

With the process of the Belt and Road route projects, and the rise of China's economy and international profile, China continues to attract more international students, which is seen as a great opportunity to promote Chinese culture and spread the Chinese language (Wang & Miao, 2017). Actually, the Chinese language has become much needed due to globalization, for the purposes of personal careers, business cooperation, or preparing for other globalization challenges (Wang & Miao, 2017).

### **2.3.2 Return of Chinese Students After Study Abroad**

China is the world's largest source country for international students; its number of students studying abroad has been growing steadily from 1978 until the present (Wang & Miao, 2017). In 2017, there were 608,400 Chinese students abroad for advanced studies, an 11.74% increase on 2016 (MOE, 2018). The majority were self-funded (88.97% of all students studying overseas), however, state sponsorship still assisted a large number of those studying in overseas programmes (MOE, 2018; Wang & Miao, 2017).

The Thousand Talents Scheme was launched in 2008, aiming to encourage Chinese academics working overseas to return to work in China by offering fast track promotion opportunities and high salaries (Wang & Miao, 2017). Because of these inducements, more and more students have returned to China after studying overseas, especially after the 18th National Congress of the Communist Party of China in 2012; in total, 83.73% of all students studying outside the country returned to China after completing their course graduation (Wang & Miao, 2017). Returning academics tend to have global insight after exposure to an international educational environment, which potentially contributes to strengthening the Chinese higher education system and China's further development.

## **2.4 Cultural Background of Chinese Students**

The characteristics of culture are complex, which make it difficult to define. Spencer-Oatey (2004) referred to culture as an explanatory variable and concluded that culture is

a fuzzy set of basic assumptions and values, orientations to life, beliefs, policies, procedures and behavioral conventions that are shared by a group of people, and that influence (but do not determine) each member's behavior and his/her interpretations of the 'meaning' of other people's behaviour. (p. 4)



It is believed that culture is always both socially and psychologically distributed in a group (Spencer-Oatey, 2004). Students with diverse culture backgrounds and exceptionalities, implying that there are differences in their languages, behaviours, and attitudes. Chinese students cultural background contributes to the culture diversity within the higher education in UK. A few typical representatives of Chinese culture were discussed and presented by a variety of researchers in relation to cross-cultural studies. Lu and Gilmour (2004) claimed that collectivism, harmony, interrelationships and social norms are emphasized by Chinese people. They often pay more attention to the values of a virtuous life and various relationships in society due to the critical influence of Chinese Confucianism (Veenhoven, 1991; Watson, 2007). With respect to authority and conformity, the Chinese culture values collectiveness and cooperation instead of individuality, competition, and independence, which are stressed in Western cultures; it emphasizes self-control instead of self-expression (Wan 1996). In terms of study abroad, traditional Chinese culture contributes to the differences that exist in various aspects of daily life such as learning styles, education systems, socials, communications styles and linguistic expressions between Chinese and the host country (Wan, 1996). All of these identified differences that impact the learning lives of Chinese international students in the UK require them to adjust and overcome the concerns and difficulties caused.

Considering the impact of culture on teaching and learning, these learners differ in their approaches (Slavin & Davis, 2006). Confucian heritage, the Confucian culture of learning with ideals and practices in education, still plays a critical role in modern China (Jin & Cortazzi, 1998), and is absolutely influential for Chinese sojourning students. Its core educational beliefs, include absorptive learning of essentials, respectful learning, collectivist learning, behavioural reform, pragmatic learning, effortful learning, and affinity for poetic ambiguity (Tweed & Lehman, 2002). Xia (2017) argues an important point to clarify is that Confucian absorptive and respectful learning do not prevent questioning and evaluating, as Confucius's conception of learning also expresses the idea in Zhong Yong (Wang, 2006) that reflective thinking and enquiry are basic and important approaches to learning. In fact, questioning and reflection, especially after class or attempts to absorb taught knowledge, have encouraged in the Confucian tradition through to Modern China.

Cortazzi and Jin (1997) compared the academic expectations of the Chinese and the British, according to their cultures of learning. They categorized Chinese cultural of learning as, for instance, collective consciousness, passive participation, mastery, and transmission, whereas British culture of learning includes an individual orientation, active involvement, creativity, and originality. For Chinese sojourning students in a Western learning culture the differences in academic expectations are reflected in both

student-teacher relationships and preferred learning styles (Bear, Yang, Glutting, Huang, He, Zhang & Chen, 2014; Biggs 1996; Chan, 1999; Edwards & Ran, 2006). The Confucian view of the relationship between students and teachers is very different from the view of Western university teachers. For instance, from the Confucian traditional view of hierarchical relationships, Chinese are encouraged to respect people who provide knowledge, such as teachers (Bear, et.al., 2014; Sit, 2013). To maintain order and harmony, Chinese students owe respect to their teachers and are expected to listen attentively throughout class with limited discussion; teachers have absolute authority in the class and are responsible for initiating interactions in class (Bear, et.al., 2014; Biggs 1996; Sit, 2013). In contrast, Western university teachers perceive of their role as being that of facilitator, organizer, and friendly critic; students are encouraged to engage in dialogue and discussion in class actively (Cortazzi & Jin, 1997). British academics view verbalization and argumentation as essential ways of learning (Chan, 1999; Cortazzi & Jin, 1997).

In terms of preferred methods of teaching and learning by Chinese students, Confucian heritage emphasizes the importance of memorizing, such as of texts, which is regarded as a significant strategy for learning, and allows students to show respect for both the authors and the reading material directed by their teachers (Chan, 1999; Hui, 2005). This is against Western academic policies in general, where memorization is considered a surface learning approach, rather than promoting deep understanding (Sit, 2013; Cortazzi & Jin, 1997). However, there are Western researchers (e.g. Biggs, 1996; Chan, 1999; Lee, 1996) who have pointed out that learning through repetition is a different concept from rote learning. Rote learning is defined as memorizing without understanding, whereas, learning through memorization is considered to be a deep approach for successful learning, leading to a deepening of understanding over time, and can be intertwined with the concept of learning through understanding (Biggs, 1996; Chan, 1999; Xia, 2017). Confucian methods of learning value effortful, pragmatic, and respectful acquisition of knowledge (Sit, 2013). Edwards and Ran (2006) recommend that both British academics and Chinese learners develop a conscious awareness of the cultural differences in their respective teaching and learning, particularly those that may be more likely to cause cross-cultural misunderstandings. It is believed that a suitable or accommodating teaching and learning approach for international teaching exists despite potential cultural differences in teaching and learning (Biggs, 1999).

In addition to the influence of their Confucian heritage on Chinese sojourning students' learning approaches, the culture gap between people from two cultures, here specifically between Chinese and British, is also reflected through social psychology. The typical social psychology of Chinese people, including models of Chinese social behaviour, interpersonal

processes, and communication patterns, includes interdependence, connectedness, conformity, and harmony (Bond & Hwang, 1986; Wang, 2016). These aspects are rooted in Chinese culture, and the influence of Chinese cultural values on Chinese sojourning students in UK higher education explains the cultural shock that they experience when studying in a Western country. British culture emphasizes individualism, for instance, through self-esteem, self-efficacy, and beliefs in self-reliance, which is opposite to Chinese tradition; thus Chinese students from an interdependent society easily feel frustration when living in an individually-centred society (Kitayama, Duffy, & Uchida, 2007; Wang, 2016).

Understanding the Chinese cultural influences on Chinese learners' approaches to studying and social behaviours helps to develop an appreciation of the differences between Chinese and British cultures, as well as with developing and maintaining a positive attitude towards Chinese sojourning students' flexibility and adaptability in the new living environment.

### **3 Literature Review**

#### **3.1 Psychological Well-being**

According to Winefield, Gill, Taylor and Pilkington (2012), people with high psychological well-being report feeling happy, capable, well-supported, satisfied with life, at a satisfactory level of emotional and behavioural adjustment. On the contrary, people with low psychological well-being report that they lack the ability to cope with difficult situations which could lead to mental disorders such as feelings of depression, anxiety and helplessness. Thus the importance of psychological well-being is described as a key determinant of overall health by the World Health Organization (2001) that is deeply interdependent with physical and social health. The variables of psychological well-being include subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence and self-actualization of one's intellectual and emotional potential (WHO, 2001). All of these aspects consist of psychological well-being status, however, people's psychological well-being status changes during different time periods as a result of experiencing different issues and living in various environments could be affected by exposing to different situations (Mori, 2000). Although the main strands of literature on models of well-being focus relatively more on subjective well-being (Chen et al., 2013), this present study applies the human flourishing aspect of psychological well-being, as international students indeed have to strive to function and to develop themselves to be able to face the challenges of living abroad to successfully achieve their goals. Therefore, psychological well-being is conceptualized as "eudaimonic" well-being, the positive aspect of psychological functioning in the current study.

This study focuses not just on the factors that affect Chinese international students' psychological status negatively, but also on exploring the factors that have a positive impact on it. By analysing both sides of student psychological well-being it is hoped that more well-rounded and practical advice can be provided for international students to cope with the difficulties inherent in adjustment to a new environment. The adjustment difficulties that students confront in the new academic and social environment may lead to psychological distress, including depression, anxiety, and somatization, as well as mental health problems.

#### **3.2 Psychological and Sociocultural Adjustment**

A variety of theories and studies have been applied and conducted to explore, analyse and explain human adjustment processes for a new environment from different perceptions (Maddux, 2013). Ward and Kennedy (1999) regard psychological adjustment and sociocultural adjustment as the central process of cultural adaptation. Psychological adaptation refers to students' adjustment to stress, anxiety, depression and other emotions caused by

living in a new environment. Sociocultural adaptation is more about daily life, interaction, academic and work adjustment, which are closely associated with social skills or the cultural leaning paradigm (Spencer-Oatey & Xiong, 2006).

Hall and Oberg (as cited in Brown, 2008) defined cultural shock as “anxiety that results from losing the familiar signs and symbols of social intercourse, and their substitution by other cues that are strange” (p. 6). Learning shock refers to “some unpleasant feelings and difficult experiences that learners encounter when they are exposed to a new learning environment” (Gu & Maley, 2008, p. 229). Between cultural shock and learning shock, language shock is considered the major stressor that overseas students confront (Gu & Maley, 2008). As a consequence of those “shocks,” feelings of anxiety, shame and inferiority and emotional reactions of frustration, embarrassment, nervous and tension are commonly connected to the problems experienced by international students’ in the process of cultural adaptation (Brown, 2008). Those emotions that could emerge from daily life, including social and learning life, thus contribute to international students’ status of psychological well-being. More specifically, they are significantly related with overseas students’ progress in achieving their purposes of studying abroad, such as enhancing language competency and employability (Ward & Searle, 1991).

### **3.2.1 Bandura’s Self-Efficacy and Adjustment**

Another core theory of social cognitive psychology that has been applied by researchers to explore the relationship between perceptions of personal competence and adaptation; how people manage to adapt and adjust to life’s challenges is what Bandura (1977, 1997) calls self-efficacy. Self-efficacy refers to ‘beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments’ (Bandura, 1997, p. 3). Bandura’s theoretical four sources of self-efficacy beliefs include mastery experience, vicarious experience, verbal/social persuasion, and physiological and affective states (Bandura, 1997). Mastery experience, as the foremost source of self-efficacy, contributes to build an individuals’ self-belief is quite direct and obvious (Maddux, 2005). Successful experience will enhance self-efficacy, while a failed experience lowers it. A direct experience of mastery is claimed to be the most effective way to increase self-efficacy (Bandura, 1997). Successful experiences in mastering a task, achieving a goal, or adjusting to a new culture all raise beliefs in our capabilities to succeed. The second source of self-efficacy, vicarious experience, refers to the impact of observing and modelling another individual’s self-efficacy.

Bandura (1997) introduced three modes of modelling influence, including television and other visual media, development of cognitive skills, and self-modelling of capabilities. People’s beliefs in their capabilities will be raised as they observe others who are similar to

them, or others they consider role models, and learn from their experiences. Others' experiences in overcoming difficulties through tenacious effort and perseverance can strengthen an individual's belief in possessing the capabilities for success. Self-efficacy also comes from verbal persuasion; it is believed that being persuaded that we possess the capabilities or having personal capabilities highlighted strengthens our efficacy beliefs (Bandura, 1997; Maddux, 2005). Positive feedback and encouragement given by persuaders, especially by influential people, motivates us to spend sustained effort, to enhance our perceived efficacy. The last sources of self-efficacy are physiological and affective states as Bandura (1997) assumed that mood has an impact on personal self-efficacy judgement. It was suggested that high levels of stress or depression, and other negative emotions, are likely to dampen efficacy beliefs, whereas positive emotions can raise an individual's confidence in their capabilities.

Self-efficacy's important contribution to the body of research on human being's perceived competence/control and psychological adaptation and adjustment is highlighted by Maddux (2013), Lewis (2013) and Schunk (2013). Bandura (1977, 1994) defined self-efficacy as people's beliefs about their capabilities to perform specific actions at designated levels. It affects people's choice of activities, including "how much effort they will spend, and of how long they will sustain effort in dealing with stressful situation" (Bandura, 1977, p. 194). It is believed that self-efficacy beliefs determine how people feel, think, motivate themselves and behave in the face of obstacles and adverse experiences (Adams & Bandura, 1977). People with different levels of self-efficacy could behave or perform the same task differently (Bandura, 1994). Bandura (1977) argues that "the stronger the perceived self-efficacy, the more active the coping efforts" (p. 194).

In terms of the role of self-efficacy beliefs in human adaptation and adjustment, it is summarized thoroughly by Lewis and Maddux (1995) as the critical "impact on goal setting and persistence toward goals, cognitive efficiency, and emotional adaptiveness" (p. 62). It is believed that perceived self-efficacy determines how people will react/behaviour when they encounter a variety of difficulties and challenging tasks that are caused by living in a new environment. For example, will they choose to face problems or avoid them; how much effort they intend to devote to solve the problems and what extent of persistence they hold while tackling the issues.

More specifically, how self-efficacy theory will be related to international students' adjustment to a new learning environment can also be told from the crux of self-efficacy. Maddux (2013) concluded it to be "the initiation of and the persistence at behaviours and courses of action are determined primarily by judgments and expectations concerning behavioural skills and capabilities and the likelihood of being able to successfully cope

with environmental demands and challenges” (p. 4). Students’ judgments of their abilities to deal with the various challenges of studying in a foreign country could determine whether they intend to participate more daily, work harder and persist longer, or not, in the process of adjusting to the study environment (Schunk, 2013). This indicates that self-efficacy could determine international students’ performance and achievement/adjustment outcomes. On the contrary, students’ adjustment experience, for example high/low achievement in one subject or success/failure to tackle a problem could all be the source of their self-efficacy in return which influences the level of self-efficacy. Concerning the sources of self-efficacy, a learner’s self-efficacy comes from personal mastery experience, vicarious experience of observing others, verbal persuasion and states of physiological arousals (Adam & Bandura, 1977). This implies that for international students, the challenges of changing living environment could affect their self-efficacy, and the level of their self-efficacy could change and be formed during different time periods/stages due to the cognitive processing of diverse sources.

### **3.2.2 Concerns about Overseas Study**

The growth in the international student population is viewed as a positive development, however, these students’ adjustment difficulties include academic difficulties, loneliness, psychological problems, and so on and they must also be addressed (Hickey, O’Reilly & Ryan, 2010). There is no doubt that overseas students face a considerable number of challenges in their intercultural experience. Westwood (1990) pointed out that international students encounter various difficulties and concerns in the process of adapting to an unfamiliar educational setting in a new culture. Church (1982) categorized the difficulties that foreign students face as academic, personal and sociocultural. Language related difficulties during academic study and adjustment to the new educational system are listed as academic problems for overseas students; feelings such as depression, loneliness and confusion, financial issues, housing difficulties and so on are all regarded as personal problems; sociocultural problems refer to foreign students’ problems with social interactions including communication barriers, racial discrimination and so on (Church, 1982). Furthermore, with regard to international students’ emotions through their cross-cultural experience, Church (1982) argued that increased stress, frustration, anger, fear, or depression can be common. All these difficulties and the above emotions could affect international students’ psychological well-being and contribute to their failure in achieving their goals for study abroad.

Poor adjustment to UK higher education and the associated difficulties have been shown to impact overseas students’ mental health/psychological well-being, as well as through poor academic achievement (Gu & Maley, 2008). Gu and Maley (2008) examined

the personal, pedagogical, and psychological challenges of Chinese international students' adjustment to British universities. Chinese students enrolling in different degree programmes were recruited for questionnaires and interview, and their British lecturers from different educational institutions participated in semi-structured interviews to illustrate their personal experiences with Chinese international students. The students were required to reflect and comment on their universities, teachers, and understanding of the English culture and life in the UK in the questionnaire, and to also provide detailed accounts of their experience in the semi-structured interviews. The findings revealed that Chinese students had strong motivation to adjust themselves to the new cultural environment due to the heritage of Confucianism. Linguistic competence, personality and maturity, loneliness, and social support were identified as important factors in the process of sojourner adaptation. In particular, this study emphasized that Chinese international students' experiences of feelings of alienation from the local society and isolation have been psychologically challenging, and are also identified as the most stressful aspect that international students experienced. With the increasing numbers of international students, Wan (1996) suggested that schools must be aware of this issue and international students' home culture to help them overcome difficulties and frustrations in adjusting to study abroad life and cross-cultural differences.

### **3.3 Chinese Students' Adjustment to UK Higher Education**

As discussed earlier, international students encounter various difficulties in the process of adjusting to a new learning environment, while those challenges could differ for students from different backgrounds. It is believed that there exist differences between Western and Eastern students in terms of their well-being (Tang, Duan, Wang & Liu, 2014). Bennett (1995) claimed that students from different cultures differ in cognitive styles, self-expression and communication styles. Ho, Duan and Tang (2014) demonstrated the reasons the cultural factor can be a challenge to psychological research, as it shapes an individuals' beliefs, behaviours and psychological states; and this is also why the cultural background of the subjects of this study must be considered for understanding and analysing their psychological well-being. Wan (1996) also pointed out the importance of understanding international students' home culture in helping them adjust to the education system and culture in the host country, thus contributing to their success in leaning.

#### **3.3.1 Chinese Students in UK Higher Education**

With the internationalization of higher education, and the rapid economic growth of and development in China, the number of Chinese students choosing to study abroad has been growing steadily in recent decades, especially at the higher education level. Although the increase has slowed over the past year, Chinese still make up the largest group of



international students around the world (Wang & Miao, 2017). Unsurprisingly, the UK is one of the most popular destinations for international students, and ranked fourth among the most popular countries hosting Chinese students (Wang & Miao, 2017). Higher Education Statistics Agency (HESA) data showed that the number of Chinese students in UK HE has increased remarkably in recent decades, especially in the last ten years.

The 2017 annual report on the development of Chinese students studying abroad claimed that, in terms of the academic subjects these students pursue in higher education, foreign language and literature studies, education and business management degree programmes are most popular. Similarly, The International Student Statistics: UK Higher Education (2018) reported that business and administrative studies, and social studies have great popularity among all international students.

This rapidly increasing proportion of Chinese international students in Western countries, especially in English speaking countries, such as the USA, the UK, and Canada has drawn great attention from many researchers and university academics (e.g. Edwards, & Ran, 2006; Holmes, 2004; Kwon, 2013; Yan & Berliner, 2009; Ye, 2006; Wan, 1996; Wang, Heppner, Fu, Zhao, Li & Chuang, 2012; Wang & Shan, 2007; Wei, Heppner, Mallen, Ku, Liao, & Wu, 2007; Zhang & Brunton, 2007; Zhang & Goodson, 2011). However, to the researcher's knowledge, there are few studies (including Edwards & Ran, 2006; Gu, 2009; Gu, 2011; Gu & Maley, 2008; Huang, 2013; Iannelli & Huang, 2014; Quan, He, & Sloan, 2016; Spencer-Oatey & Xiong, 2008; Wang, 2010; Xia, 2017; Yu & Moskal, 2018; Zhou & Todman, 2008) that have explored the adjustment experience of Chinese international students studying in UK higher education.

Spencer-Oatey and Xiong's (2008) study explored Chinese students' psychological and sociocultural adjustments to a British university. Chinese international students enrolling in an English foundation course were recruited for questionnaires and interview. Measures including Zung's (1965) Self-Rating Depression Scale and Ward and Kennedy's (1999) Sociocultural Adaptation Scale were used in the questionnaire. This study found that the majority of students had experienced psychological or sociocultural adjustment difficulties, including interactions with host nationals and difficulties in adjusting to daily life. More importantly, these two variables were found significantly highly correlated with Chinese students' psychological stress.

In a more recent study, Yu and Moskal (2018) compared Chinese students in business and non-business schools in a UK university in order to explore their intercultural experience and the meaning of quality interactions based on their responses to the social environment, from the students' perspectives. It was pointed out that high quality intercultural contact plays an important role in international students' adjustment to the

new culture, which also benefits the intercultural competency of English students. The findings of this study also indicated that the large number of Chinese students, particularly those in business schools, made for even fewer limited opportunities for them to establish relationships with the local students or societies around the university, because of their Chinese national peer group bubble. In another word, it was claimed that the lack of a diverse environment was another obstacle that these students face in establishing intercultural contact, which disadvantaged Chinese international students' cross-cultural learning and personal growth in the sojourns.

The cultural backgrounds of various Western countries, including the academic atmosphere, local community, and living environment, can be quite different from each other, and its influence on international students' adjustment varies. It was pointed out that Chinese students in the UK generally possess strong motivation to adjust to the new learning environment and adapt to the local community (Gu & Maley, 2008). Despite this, the academic, sociocultural, and psychological challenges that Chinese students have encountered when studying in British universities have been illustrated in various studies (e.g. Gu, 2009; Iannelli & Huang, 2014). The poor academic performance of Chinese students in UK universities, including academic attainment, has been focused upon. Iannelli and Huang (2014) focused on Chinese graduates from UK universities, focusing on the changes in their patterns of participation and attainment. They analysed the data collected by the HESA on degrees awarded by UK universities at three time periods in 1999/2000/2001, 2005, and 2009. Factors including the major source of their tuition fees, first-degree attainment, and highest qualification on entry were considered. It was found that these graduates achieved lower attainment levels compared to other international students as well as home students at the undergraduate level (Iannelli & Huang, 2014).

Other related academic issues, such as student-teacher relationships, group work, and competence in the English language have also been identified (e.g. Edwards & Ran, 2006; Huang, 2013). For instance, Edwards and Ran's (2006) study on meeting the needs of Chinese international students in the UK has results that support these students' widespread complaint of lecturers in the UK being busy and uncaring. Edwards and Ran's (2006) report focused on providing effective higher education for Chinese students based on the experience of university teachers and administrators in the UK. Regarding competence in English, it has been highly doubted that these students' English language skills have improved due to studying in the UK, an English-speaking country (Wright & Schartner, 2013). Wright and Schartner (2013) examined the social interaction and adaptation among international postgraduates in a sample of students studying applied linguistics and TESOL (Teaching English to Speakers of Other Languages) in the UK. A longitudinal and

mixed-method study was designed to collect data through self-reported diary entries and semi-structured interviews. The findings of this study indicated that these international students remained feeling frustration due to failure to establish interactions with English speakers, and this interaction with host nationals was therefore commonly avoided (Wright & Schartner, 2013). However, it has also been suggested that Chinese international students are very adaptive to the new academic environment, and willing to work hard and invest effort in their studies to achieve academic success, when they do have a support network and harmonious student-teacher relationships (Xia, 2017). Xia's (2017) research explored Chinese postgraduate students' motivation and expectations for studying abroad through focus groups and in-depth interview with Chinese master's students in UK universities.

Another mentioned finding was that the differences in culture and expectations between UK universities and Chinese students have contributed to the misunderstandings and challenges of adjustment (Edwards & Ran, 2006). Gu and Maley (2008) argue that both sociocultural and psychological factors greatly affect Chinese students' adaptation. These factors include, for example, the perceived isolation of Chinese students, psychological frustration and emotions due to a new living environment, and anxieties in relation to health care challenges (Edwards & Ran, 2006; Gu & Maley, 2008). Furthermore, the individual differences of Chinese international students in personality and maturity, and personal growth in the process of adjusting were also identified as factors affecting their experience in the UK

### **3.4 Challenges International Students Face**

To meet the demands of learning and living in a new environment, international students encounter a variety of intercultural challenges and struggles in their adaptation, both academically and psychologically. They face significant difficulties, including language barriers, loneliness, discrimination, academic stress, and differences in education systems, social mores, and cultural customs, all of which may affect their academic achievement and social engagement (Berry, 2006; Carroll & Ryan, 2007). Coping with each challenge associated with the changing environment can be overwhelming for international students and may lead to stress; even simple things in daily life can be an issue for these vulnerable incomers (Aydinol, 2013; Carroll & Ryan, 2007). Researchers have studied these academic and social challenges to come to a better understanding of international students and help to enhance their experience abroad (e.g. Andrade, 2006; Aydinol, 2013; Edwards, & Ran, 2006; Forbes-Mewett & Nyland, Holmes, 2004; 2008; Lee & Ciftci, 2012; Wang & Shan, 2007; Ward and Masgoret, 2004). For example, Burns (1991) identified challenges facing international students by comparing international

students and local students. Tseng and Newton's (2002) research concentrated on international students' strategies for well-being at an American university. The following sections will provide a review of several studies that have addressed the academic and psychological concerns international students tend to face.

### **3.4.1 Academic Concerns**

#### **3.4.1.1 Academic Performance**

In Spencer-Oatey and Xiong's (2006) survey about Chinese students' psychological and sociocultural adjustments to Britain, it is shown that academic life (learning adaptation) is regarded as critical and difficult for those overseas students. With no doubt, academic adjustment plays an important role in international students' overall adjustment outcomes. Westwood (1990) also pointed out that the biggest concern of the students' life is academic achievement, and international students face a variety of academic difficulties during their learning in the UK. Grayson's (2008) study about the experience of international students in Canada universities found that more than 74% of international students had academic difficulties, and compared to 65% for domestic students. Academic performance is often reported as the major concern of international students (Chin, Demarinis & Fritz, 2008). However, Swain (2014) reported that new research shows that Chinese undergraduate students in UK universities had lower academic attainment than those from other countries. The poor academic performance of Chinese students has been a concern of many educational researchers who pointed out that failure to adapt their approaches to learning, the language barrier, and cultural and educational system differences all could contribute to this (Swain, 2014).

#### **3.4.1.2 Language Barrier**

A language barrier is a direct and obvious challenge for international students whose native language is not English while studying in the UK. English language competence has been frequently noted as a critical factor that has an effect on the overall adaptation experiences of international students, affecting both their academic study and social life (e.g. Schutz & Richards, 2003; Senyshyn, Warford & Zhan, 2000). In particular, linguistic proficiency as an essential study skill, requires international students have adequate English skills, including listening, academic reading, formal writing, and spoken language, to master their daily study, to understand their lectures, to participate in discussion, and so on, allowing them to achieve good exam results. A lack of adequate English ability leads to anxiety in their study, and may decrease international students' confidence during their academic sojourn (Spencer-Oatey, 2010). Student sojourners with limited language proficiency tend to have restricted range in their language use, and their interactions in English largely rely on native speakers, such as their tutors, supervisors, and friends (Brown, 2008; Brown &

Holloway, 2008).

Research on the impact of language proficiency on international students has argued that low competence in English has been one of the biggest barriers for their academic success (Andrade, 2006; Zhang & Mi, 2010). In fact, many international students have expressed their desire for interaction in English on and off campus, and have looked for opportunities to improve their English proficiency in a range of academic and social settings (Wright, 2010; Wright & Schartner, 2013). However, results of Wright's (2010) one-year longitudinal study showed there was no obvious change in the language proficiency scores for the majority of Asian international students in the UK, indicating that there were no significant improvements in these students' language proficiency. Meanwhile, these sojourners expressed great dissatisfaction with their initial expectations to improve their English language skills, especially their spoken English ability, and complaints of a lack of opportunities to interact in English (Wright, 2012).

#### **3.4.1.3 Adapting to New Education System**

In addition to English language barriers (Furnham & Erdmann, 1995; Gareis, Merkin, & Goldman, 2011), there are a number of others obstacles concerning international students in their new academic environments. As noted earlier in the section detailing Chinese students' cultural background and its influence on education, international students must cope with a different student and teacher relationship, new teaching and learning styles, and work to integrate themselves into the new academic education system in their host country. Academic difficulties, including class discussions, their lack of discussion skills, their workload, and challenging group work, often a new experience for these sojourners, have been highlighted by international students (Perry, Weatherford, & Lausch, 2016). Improving our understanding of the academic challenges faced by student sojourners is important for universities to enable them to develop strategies for helping international students cope with their new academic environment (Ward & Masgoret, 2004), and for international students to raise their own awareness of their diverse academic difficulties, in order to achieve academic success.

#### **3.4.2 Psychological Concerns**

Other than academic performance, another concern related to international students' adaptation to a new learning environment is their psychological aspects of studying abroad. The degradation of students in higher education has been reported by Sarmiento (2014). Specifically, for international students, Abdulrahman, Lloyd and McGuire's (2010) survey showed that concerns for mental health status are significantly increasing, and psychological problems are more acute when compared with local students. Not surprisingly, with the increasing number of international students, UK higher education

institutions have been advised to pay attention to and support the mental health of their diverse international students (YoungMinds, 2006).

A number of mental stressors will place their psychological well-being at a great risk when international students are adjusting to a new living environment (Mori, 2000). They experience not only the difficulties of adapting to a new learning system, but also the stress from adjusting to an unfamiliar culture (YoungMinds, 2006). Furnham and Trezise (1983) found that due to these additional pressures and frustrations in the foreign environment, international students tend to have higher a incidence rate of psychological disturbance than native students. Language barriers, the distance from family and friends, and the confusion caused by cultural differences all can contribute to the depression, anxiety and stress of international students. Moreover, financial burdens and high expectations from families could also deteriorate international students' mental health. As a consequence of continuous exposure to these stressful situations, a variety of symptoms, for example, persistent lack or loss of appetite and sleep, low stamina and energy levels, headaches and other physically unhealthy signs develop in international students at the university level (Thomas & Althen, 1989). Except for diminishing immune functions, it is also common to find mental disorders and the following physical illnesses tend to cause students to lose focus on achieving their goals and the capability to obtain satisfaction from overcoming challenges. International students who are affected by mental illness may suffer from a lack of confidence, the ability to create happiness and even the ability to function in everyday life, however this urgent concern is traditionally overlooked (Mori, 2000).

### **3.5 Academic Self-Efficacy**

In educational contexts, students' academic achievement has been associated with a range of variables and researchers have applied various theories to illustrate influential factors and make efforts to predict it. Not surprisingly, self-efficacy beliefs, which operate as a key factor of human competence, have subsequent effects on learning and academic motivation and achievement, which are supported by many research results (Pajares & Schunk, 2002; Pajares, 1996). The ways self-efficacy beliefs contribute significantly to educational self-development is demonstrated by Pajares (1996) as the concept that "self-efficacy beliefs mediate the effects of skills or other self-beliefs on subsequent performance by influencing effort, persistence, and perseverance" (p. 552).

Academic self-efficacy was defined by Pajares & Schunk (2002) as an "individuals' confidence in their ability to successfully achieve academic tasks at a designed level" (p. 17). Bandura (2006) refers to academic efficacy as "students' beliefs in their efficacy regulate their learning activities and to master academic subjects" (p. 10). According to Bandura (1997), self-efficacy is a contributing factor and a better predictor in learning and

achievement situations; its correlation with academic achievement is illustrated in detail that “the more self-efficacious students at each ability level manage their work time better, were more persistent, and were less likely to reject correct solutions prematurely” (p. 215). Self-efficacy beliefs determine the course of action and subsequently affect academic performance (Bandura, 2006). In another word, beliefs in personal efficacy enhance effort and persistence in academic activities. The positive association between self-efficacy beliefs and academic achievement is supported by a number of research findings (e.g. Pajares & Schunk, 2002; Ahmad, Azeem, & Hussain, 2012; Komarraju & Nadler, 2013). Ahmad, Azeem and Hussain’s (2012) work also addressed self-efficacy beliefs’ critical role in predicting students’ varied academic performance. Jr’s (2006) outcomes supported that academic self-efficacy beliefs predict college students’ academic outcomes and college success. This all reflects Pajares & Schunk’s (2002) statement that students with high self-efficacy, who believe in their own ability in achieving an academic goal, are more likely to engage in academic activities and master the task instead of avoiding it, compared with the students who doubt their capability to perform successfully in school. Similarly, it was found in Komarraju and Nadler’s (2013) study that students with high self-efficacy tend to self-regulate their motivation and persist in coping with challenges, and set both mastery and performance goals to gain knowledge, and achieve high grades and outstanding performance. In this way, these self-efficacious students are capable of achieving academic success. It is claimed that perceived self-efficacy beliefs affect different aspects of students’ academic functioning cognitively and motivationally, as it promotes their engagement in educational activities, thus enhancing their academic competencies involving level of motivation and level of academic achievement (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Komarraju & Nadler, 2013).

Another important and relevant argument on the power of self-efficacy based on the available evidence is that “efficacy beliefs have similar effects on human functioning across cultures” (Oettingen, 1995, p. 171). Lee and Ciftci’s (2014) research explored the influence of multicultural personality, assertiveness, and academic self-efficacy on international students’ adaptation. The results showed that Asian international students’ socio-cultural adjustment was mediated by their perceived academic self-efficacy, and the researchers claimed that academic self-efficacy beliefs had a positive impact on international student’s adjustment to their host country. Moreover, it has also been argued that Asian international students pay more attention to their academic performance and achievements than other international students or domestic students (Mordkowitz & Ginsburg, 1986).

Overall, self-efficacy – the exercise of control is extremely important, especially for

students at universities who are expected to be independent learners, and are in charge of arranging time and place for academic activities. Besides, parents and schools' influence on their academic motivation is not as profound as the earlier education environment (Bandura, et al., 1996).

### **3.5.1 Changes in Students' Self-Efficacy**

According to Bandura's (1968) social cognitive theory, everyone has a self-system that allows them to self-regulate and self-reflect their thoughts, feelings and behaviours. This ability enables individuals to self-evaluate their own experiences and interpret that information as one of the contributors to the sources of self-efficacy beliefs. People form their own perceptions of their capability to perform tasks through valuing their experience; Bandura (1997) thus concluded that mastery experience is one of the most influential sources of self-efficacy beliefs. To some extent, this source of self-efficacy allows changes to occur in people's perceived efficacy beliefs overtime through various experiences and self-reflecting; their new experiences or different ways of interpreting information could impact their self-efficacy levels.

Another point of view to demonstrate how individuals' self-efficacy levels could change is that self-efficacy is context-specific (Bandura, 1997). It means that self-efficacy beliefs could change from time to time and be impacted by environment changes. With regard to the academic level of self-efficacy beliefs, it has been confirmed that students increase/decrease in their self-efficacy levels during their transition to a higher level of education by Le Blanc et al. (2013) who studied changes overtime in students' self-efficacy from both the academic level and the task level. For those international students who progressed to a higher level of study within a totally different education system, cultural background and living environment, their self-efficacy levels are more likely to become unstable over various time periods.

As a result, educators and psychologist have expressed concerns about the possible negative changes of the determining factors of students' motivations, such as the changes in students' academic self-efficacy within an academic year, which might impact their motives and affects their academic achievement. Le Blanc, Schaufeli and Ouweneel's (2013) study supports the social cognitive view of the influence of changes in self-efficacy. The results show that when changes occur to students' self-efficacy levels, most likely their motivation and behaviours, such as their engagement in activities and performance in school, would be impacted.

### **3.5.2 Contributors to Changes in International Students' Academic Self-Efficacy**

In addition to the above theories which present how changes could happen to student's academic self-efficacy, as demonstrated in the earlier content about international students'



concerns, a variety of variables could contribute to their academic adjustment. Anderson (1994) demonstrated that the academic study process of international students involves the interaction of both emotions and cognitions. This, again, supports the potential variance in international students' academic self-efficacy. The prediction of international students' variance in academic self-efficacy is partly based on factors including expected difficulty or obstacles such as language difficulty, different learning and teaching styles, feeling uncomfortable with the interactions in classroom within group work, with faculty, teachers or peers; both positive and negative incidents in the process of adjustment play an important role in changes in academic self-efficacy (Barker et al., 2006). Apart from these expected obstacles, international students reported diverse factors responsible for affecting their academic self-efficacy including academic work load, meeting deadlines, course difficulty, career concerns, academic performance (exam/dissertation scores), time management issues, financial burdens, personal goals, adjustment to the campus environment, lack of academic support, social activities, and emotions (Misra, McKean, West, & Russo, 2000; Holmes, 2004; Von Ah, Ebert, Ngamvitroj, Park, & Kang, 2004; Zhang & Brunton, 2007; Kwon, 2013). All types of difficulties encountered by international students affecting their academic self-efficacy may contribute to their academic stress at the same time.

### **3.5.3 Academic Stress**

A number of researchers have illustrated the definition of academic stress (e.g. Verma & Gupta, 1990; Carveth, Geese, & Moss, 1996; Wilks, 2008). Wilks (2008) claimed that academic stress is “the product of a combination of academic related demands that exceed the adaptive resources available to an individual” (p. 107). Academic related demands of the student life are the source of academic stress (Wilks, 2008). Similarly, Verma and Gupta (1990) pointed out that experience of academic failure, or even frustration caused by the possibility of failure, could lead to a mental and emotional pressure or tension, amounting to academic stress. Carveth, Geese, and Moss (1996) argued from the student's perception and described academic stress as the student's sense of urgency or lack of time to learn and develop the required extensive amount of content. Accordingly, taking and studying for exams, grade competition, and mastering knowledge in an adequate time were predicted as the greatest sources of academic stress (Abouserie, 1994).

With respect to the academic stress among international students, as noted earlier, adjusting to a new education system, exposure to the new learning environment, educational institution, educational concepts, social settings, and a variety of other adaptation issues may bring academic stress. It was found that too many stressful life events and significant levels of stress can lead to depression and serious emotional health issues,

thus affecting students' academic performance negatively (Brown & Ralph, 1999; Tennant, 2002). This was supported by Andrews and Wilding (2004), as well as Stanley and Manthorpe's (2001) study in universities in the United Kingdom, which claimed that students experiencing an overload of academic stress may experience mental health problems consequences. These students who suffer from mental and other health problems are then more likely to perform academic tasks poorly, thus meeting more academic failure, which then increases their academic stress (Wilks, 2008). Additionally, Akhtar's (2012) study focused not just on the predictors of international student's acculturative stress, academic stress, and psychological well-being, but also explored the relationship between academic stress and psychological well-being. Besides, a comparison between international students and their German counterparts was made to examine the potential differences between the two groups. The findings of this study identified that meeting deadlines for submitting papers, difficulty in receiving good grades, and presenting oral reports in front of the class or group are the common stressors. The findings also indicated that the level of academic stress is significantly positively correlated with distress symptoms (i.e. anxiety, depression, and somatization), a high level of academic stress may lead to psychological symptoms. Overall, academic stress is negatively associated with students' academic performance, which is the most direct and important source of academic self-efficacy.

### **3.6 Psychological Well-being**

Due to the large percentage of people who report suffering from mental illness in recent decades (YoungMinds, 2006), psychological well-being has become a term and concern that is widely discussed by scholars from various cultures, especially in the higher educational area (e.g. Schweitzer, 1996; Mori, 2000; Furr, Westefeld, McConnell, & Jenkins, 2001), as university students' distress levels are significantly higher than the general population (Adlaf, Gliksman, Demers, & Newton-Taylor, 2001). The survey results of Furr et al. (2001) revealed that more than half of the university students in the United States experienced emotional distress right after they began their studies. Similarly, Schweitzer (1996) found that nearly half of the university students in Australia were suffering from psychological distress. All this available evidence indicates the prevalence of significant psychological problems and distress levels among university students (Adlaf et al., 2001). However, unsurprisingly, foreign students are at even higher risk of experiencing psychological problems than host national students due to diverse stresses and the unavoidable life changes of living in a new environment (Mortenson, 2006; Sandhu & Asrabadi, 1994). With the increasing international students population there is

an urgency to explore these psychological issues, and understand these students' current mental health status.

### **3.7 Predictors of International Students' Psychological Well-being**

The results of Kennedy and Ward's (1993) comparative studies of sojourner adjustment showed that international students' psychological adjustment during cross-cultural transitions can be affected and predicted by life changes, locus of control, social difficulties and social support variables. Among all those variables, life changes, satisfaction with relationships with host nationals, extraversion/personality and social difficulty all together consist of 34% of the variance in psychological adjustment (Searle & Ward, 1990). More specifically, personal variables such as age, sex, length of residence in the host country, cultural distance, cross-cultural training, cross-cultural experiences, incidence of life changes, host language proficiency, quality and quantity of social support have all been linked to the sojourners' psychological adjustment to a new environment. Thus, those varieties of factors all would contribute to the changes of international students psychological well-being during a cross-cultural transition. A few of general significant predictors of psychological well-being among international students, including social support, personality, discrimination, academic stress and academic self-efficacy are illustrated in the following sections.

#### **3.7.1 Social Support**

Tardy (1985) addressed the positive influence of social support on human's physical and mental health and identified five aspects of it to clarify the concept. In terms of direction, social support is both given and received. Second, the quantity and quality are two components to measure support availability. Third, people's satisfaction with their social support and description consists of two facets of social support. With regard to the network of social support, there are six types of people: family, close friends, neighbours, co-workers, community and professionals who potentially offer four main types of social support: emotional support, involving such as caring, love, trust and empathy; informational support, including offering advices and suggestions; instrumental support means sharing of tasks, and responsibilities, skills; the last social support type is appraisal, which provides information for self-evaluation, such as feedback and affirmation (Tardy, 1985).

There is no doubt that social support plays a critical role in students, especially international students' psychological adjustment. Ramsay, Jones and Barker (2007) claimed that adequate social support is a critical contribution for the survival of international students in a foreign cultural environment. It was found that international students with adequate social support experienced less adjustment stress than those who lacked or lost

social support (Yeh & Inose, 2003). Similarly, it was argued that that students' perceived levels of social support was negatively correlated with their acculturative stress levels (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004). Furthermore, Pedersen (1991) reported that students with inadequate social support also had lower academic achievement. Most importantly, loss and lack of social support lead to psychological stresses, such as tension, confusion, and depression, thus affecting students' psychological well-being negatively (Pedersen, 1991). In particular, international students are far away from their family and close friends, losing their traditional social support network, which may cause them feelings of loneliness and frustration, and contribute to low levels of psychological well-being. They face the challenge of developing a new social support system involving making new friends, building relationships with the local community, and coping with social difficulties that arise due to cultural differences. Adequate social support helps international students cope with stressful life events and adapt to the new cultural society, thus supporting their positive well-being. In the contrast, results have shown that international students who were unsatisfied with their social support, or lack or lose social support, are more likely drop out than those who were not (Scanlon, Rowling, & Weber, 2007).

#### *3.7.1.1 International students' relationships with host nationals*

With respect to the social support network, host nationals, such as home students and local residents, are important in the social network for international students as they are the individuals who may potentially offer them social support. Gareis (2000) claimed that interaction with foreign or local students has a significant impact on the future of international students. Researchers Searle and Ward (1990) and Ward and Masgoret (2004) have stated that social connections with host nationals affect international students' overall experiences positively, including improving their satisfaction in cross cultural adjustment and academic achievement. However, findings from previous research have shown that developing social networks, establishing meaningful connections and friendships with host nationals, has been extremely difficult for international students leading to a negative impact on their sociocultural adjustment (e.g. Hayes & Lin, 1994; Forbes-Mewett & Nyland, 2008; Zhou, Jindal-Snape, Topping, & Todman, 2008). Accordingly, this issue has occurred for a variety of reasons and has been widely discussed (e.g. Ward and Kennedy, 1999; Brown, 2009; Bodycott, 2012). Bodycott (2012) pointed out that cultural differences caused a failure in interaction between international and local students. Brown (2009) claimed that differences in language and cultural distance contributed to the complexity of establishing meaningful connections between international students and host nationals. Moreover, the host nationals' lack of interest in befriending or even engaging with international students

was suggested as one of the responsible factors for this issue (Yang, Teraoka, Eichenfield, & Audas, 1994; Alreshoud & Koeske, 1997; Brown, 2009).

The association between having host country language competence and international students' academic self-efficacy was discussed in an earlier section 2.4.1.2. However, the predictive relationship between international students' linguistic fluency and their interactions with home students and the local community is still under debate. Some studies have suggested that there is no significant relationship between linguistic fluency and forming ties with host nationals or developing cross-cultural friendship formation (Ward and Kennedy, 1999; Sias, Drzewiecka, Meares, Bent, Konomi, Ortega, & White, 2008; Brown, 2009). However, Ward and Masgoret's (2004) research on the impact of language proficiency argued that the how much student sojourners had contact with host nationals are affected by their linguistic proficiency. Ward and Masgoret (2004) collected data through a survey instrument that examined the personal characteristics of international students and a wide range of students' life aspects, including social relationships, educational experience, and academic progress, in a large sample of over 2700 students. Among all participants in their study, Chinese international students accounted for nearly half. The findings indicated that English language skills were still viewed as an impediment to establishing friendships with host nationals. More specifically, they said that student sojourners with a lack of language ability had less contact with the local host society, as low language competence acted as an obstacle to achieving effective interactions with home students and the local community.

### **3.7.2 Discrimination**

Available evidence on the consequences of discrimination for psychological well-being, based on assessments of a variety of psychological well-being factors, including self-esteem, depression, anxiety, psychological distress, and life satisfaction, has demonstrated that perceived discrimination has significantly negative effects on psychological well-being (Schmitt, Branscombe, Postmes, & Garcia, 2014). In particular, for vulnerable international students who are generally concerned about isolation and loneliness Hanassab (2006) found that they experience more discrimination off campus compared to on campus. As expected, all results indicate that student sojourners' experiences of prejudice and discrimination from the host nationals, resulted in less interactions between them, fostered an unwillingness to interact, and lead to multiple psychological problems (Hanassab, 2006; Klomegah, 2006; Mallinckrodt & Leong, 1992). The harmful effects of discrimination on international students' psychological well-being and cultural adjustments are significant and fundamental (e.g., Sandhu, 1995; Schmitt, et al., 2014; Yoon & Portman, 2004). Differences in culture have been claimed as one of

responsible factors for discrimination (Constantine, Okazaki, & Utsey, 2004; Mori, 2000; Yang & Clum, 1995) and Pedersen (1991) surveyed the research literature review on issues and concerns among counsellors working with international students, and suggested that cultural distance was positively associated with the level of discrimination and prejudice that international students perceived in their social events.

### **3.7.3 Personality**

Personality refers to individual differences in characteristic patterns of behaviour, cognition and emotion (patterns of behaving, thinking and feeling) (Mischel, Shoda, & Smith, 2004). The underlying basic factors of personality are generally broken into the Big Five components, which include openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism (Matthews, Deary & Whiteman, 2003). This Big Five model has been widely applied as a rich conceptual framework for integrating research findings and theory in personality psychology; its comprehensiveness and applicability across cultures has been approved through various research (McCrae & John, 1992). It has been replicated in a variety of languages and cultures including German, Chinese, Indian, etc.

Openness to experience is reflected “in a strong intellectual curiosity and a preference for novelty and variety” (Komarraju, 2011, p. 427). Individuals with high level of openness tend to seek for adventure and variety of experience (McCrae & John, 1992). Conscientiousness refers to the tendency of being disciplined, organized, dependable and achievement-oriented (Komarraju, 2011). People with high level of conscientiousness tend to “act dutifully and prefer planned rather than spontaneous behaviour” (Komarraju, 2011, p. 427). Conversely, low conscientiousness is often seen as flexible and spontaneous instead of reliable. Extraversion is exemplified by positive emotions, higher degree of sociability, assertiveness, and talkativeness (Toegel & Barsoux, 2012). Agreeableness is often perceived as being helpful, compassionate, cooperative, and sympathetic rather than suspicious and antagonistic towards others (Toegel & Barsoux, 2012; Komarraju, 2011). High agreeableness is often regarded as an individual’s trusting and helpful nature, consequently, Low agreeableness are often seen as the personality of being competitive or challenging (Komarraju, 2011). Finally, neuroticism is displayed through the “degree of emotional stability, impulse control, and anxiety” (Komarraju, 2011, p. 427). High degree of neuroticism is often perceived as unstable emotions and includes anger, anxiety, depression, and vulnerability (Toegel & Barsoux, 2012). These five major models have been used to demonstrate the nature of the relationship between personality and mental illness, academic achievement, learning style and cultural difference.

### **3.7.3.1 Personality and Psychological Well-Being**

The correlations between personality traits and psychological well-being (PWB) have been proven in a few studies (e.g., DeNeve & Cooper, 1998; Kokko, Tolvanen & Pulkkinen, 2013; Steel, Schmidt & Shultz, 2008). According to Kokko et al. (2013), among the five aspects of personality, neuroticism, extraversion and openness to experience were significantly associated with PWB. In particular, it was proven that low neuroticism and high extraversion was strongly associated with high psychological well-being (Kokko et al., 2013). Meanwhile, it was reported that agreeableness contributed to positive mental health, however, no findings are presented to argue the associations between conscientious and psychological well-being.

### **3.7.3.2 Personality and Academic Performance**

According to Poropat (2009), the Big Five framework of personality traits model is used to understand the relationship between personality and various academic behaviours. It is believed that personality traits make certain contributions to individual's academic performance (Meera, Karau, Schmeck & Avdic, 2011). Poropat (2009) argued that personality is associated with academic performance and it plays significant roles in individuals' academic achievement. The results of the meta-analysis of personality–academic performance relationships showed that academic performance was correlated significantly with the following three dimensions of personality: agreeableness, conscientiousness, and openness (Poropat, 2009). Among them, conscientiousness has the strongest association with academic performance. Meera, Karau, Schmeck, & Avdic (2011). Furthermore, particularly for international students, Lee and Ciftci (2014) reported that those with more assertive characteristics in their personality tend to have higher levels of academic self-efficacy.

### **3.7.3.3 Multicultural personality and adjustment**

The multicultural personality is regarded as contributing to an individuals' multicultural effectiveness, which has a positive effect on adjustment to a new cultural environment (Van Oudenhoven & Van der Zee, 2002). Multicultural personality, consisting of open-mindedness, emotional stability, and social activism or initiative personality traits, may enhance international students' ability to adjust to a new intercultural situation (Lee & Ciftci, 2014; Ponterotto, 2010; Van Oudenhoven & Van der Zee, 2002). Individuals with a multicultural personality indicate that they have the desire to interact with people and appreciate and learn about other cultures (Van Oudenhoven & Van der Zee, 2002). Multicultural effectiveness would benefit international students' adjustment in coping with the diverse difficulties of living in a new environment (Lee & Ciftci, 2014).

### **3.7.4 Self-Efficacy and Psychological Well-Being**

As illustrated above, perceived self-efficacy is a compatible concept of mental health (WHO, 2001) and its relationship with psychological well-being is especially addressed within educational settings. The three factors of self-efficacy theory, the initiation of and persistence at behaviours, courses of action are believed to be of great importance to human psychological adjustment at various stages (Maddux, 1995). From the view of Bandura's (1997) self-efficacy theory in a changing society, people cannot avoid confronting difficulties in their lives, however what makes them different is their perceptions of the capability to solve problems as it determines how they will view the challenges in a variety of situations, how much effort they plan to make and how determined they are about tackling the issues. Self-efficacy is described by Bandura (1997) as a critical element of generating an individual's capacity and action for problem solving in the process of adaptation and adjustment. Lewis and Maddux (1995) also support Bandura's (1997) perceptions concerning human adaptation by arguing that a sense of personal self-efficacy is essential for human psychological adjustment. Most importantly, the concept of self-efficacy beliefs includes being able to cope with a variety of stressors (Bandura, 1997). For people with low level of self-efficacy, they "view difficult task[s] through the lens of fear" (Singh & Udainiya, 2009, p. 228), thus they continuously feel the pressure of adjustment challenges and experience emotions such as anxiety, confusion and depression. For this reason, it is believed that low levels of self-efficacy are concerned with feelings of depression, anxiety and helplessness, thus affecting human psychological well-being negatively. On the other hand, Singh and Udainiya (2009) argue that people with strong self-efficacy have the belief to pull through and survive challenging situations, instead of feeling stressed easily as those people with weak self-efficacy beliefs would.

Another perspective to demonstrate the relationship between self-efficacy beliefs and psychological well-being is from Bandura's (1977) self-efficacy theory and exercise of control. Concerning the psychological adjustment of humans, Bandura (1977) pointed out that individuals who have belief in being able to control and manage their anxieties, uncertainty and other negative attitudes toward challenges in the process of adaptation would experience less stress compared with people who lose control of their feelings. Actually, Bandura's (1977) self-efficacy is based on the social cognitive theory that assumes that a sense of control is a basic characteristic that shows human can act, achieve and progress effectively in society. Similarly, Lewis and Maddux (1995) interpreted the relationship between sense of self-efficacy and psychological well-being as that individuals' beliefs of loss of control over their lives are the main reasons for those general issues with people's mental health such as feelings of anxiety, helplessness and depression.



This all could be concluded by Bandura's (1977) perceptions of self-efficacy which sustains that what makes people feel pressure and anxious is their own beliefs of not being able to deal with potential challenges in a changing society.

In order to prove the role of self-efficacy in enhancing mental health in the process of adjustment, self-efficacy theory and exercise of control has been applied to predict emotional distress including depression, anxiety, and fear and has indicated that self-efficacy beliefs of control of anxiety and other emotional behaviours can effectively improve distressing moods and develop positive attitudes, which could benefit mental health. All in all, it is suggested that low levels of sense of control easily develop beliefs of anxiety, helpless and hopeless which contribute to mental sickness. The function of self-efficacy beliefs is described by Bandura (1997) and Maddux (1995) as a "mediator" of people's attitudes, which determines people's emotional responses to various circumstances by controlling trains of thoughts.

### **3.7.5 Academic Self-Efficacy and Psychological Well-Being**

The changes in study and living environment could cause a series of problems for foreign students and the role of international students' self-efficacy beliefs in overcoming challenges could be critical for their psychological adjustment (Ahmad, Azeem, & Hussain, 2012; Pajares & Schunk, 2002). For example, it is common for overseas students to confront academic difficulties at various stages of their learning adjustment to the education system of the host country, while students who have the belief to conquer study related problems are highly engaged in academic activities, even when facing difficulties in various study situations. Their strong sense of control leads them to choose to tackle problems with a positive attitude instead of abandon themselves through negative emotions. However, for learners with low levels of academic self-efficacy who doubt their own capabilities to study and master knowledge, especially when encountering problems in academic settings they tend to continuously feel stressed and fail to manage their thoughts. Continued exposure to the pressures of academic learning, and the demands of student life lead to academic stress, anxiety, and depression, and result in poor academic performance. As noted earlier, academic self-efficacy has been suggested as one of the strongest predictors of academic performance (Bandura, 2006; Komarraju & Nadler, 2013), in return academic performance is the most direct source of academic self-efficacy (Maddux, 2005). Thus, considering the importance of academic performance to international students (Spencer-Oatey & Xiong, 2006), high levels of academic self-efficacy help them to achieve positive overall adaptation outcomes. Consistent feelings of depression and anxiety due to academic issues contribute to the decrease in students' psychological well-being.

Academic self-efficacy, as the significant predictor of a student's academic performance and academic stress, is also predictive of psychological well-being.

### **3.8 Chapter Summary**

With no doubt, by sharing the same culture, Chinese students tend to have their own tendencies in adjusting to UK HE. Social and cultural background variables actively contribute to the motivational differences, thus the study of motivational characteristics of students are generally conducted within particular ethnic groups (Dornyei & Ushioda, 2011). Academic adjustment, which can be largely measured by academic self-efficacy and self-regulation, is a crucial part of international students' overall adaption to study abroad and could potentially influence student well-being across various time periods.

With the growth in the large number of international students choosing to study in UK higher education it is valuable to understand their motivational and psychological well-being journey during the cross-cultural sojourn. With no doubt that intercultural experience plays a significant role in an individual's life, it has been described in many different ways by researchers (Brown, 2008 & GU, 2009). Gu (2009) believes that successful intercultural experience "can be a transformative learning process which leads to a journey of personal growth" (p. 40). However, there is still limited research into international students' experience in the UK in detail (Pelletier, 2004). Community on Cultural Psychiatry (as cited in Chin, DeMarinis & Fritz, 2008) claimed that it is critical to evaluate cultural groups individually to understand their acculturation and adaptation needs thoroughly. This study aims to explore only Chinese students' adaptation experiences in studying in UK higher education. Specifically, their academic self-efficacy and psychological well-being in the adjustment of studying in UK higher education will be measured. Meanwhile, the possible relationship between those two adjustment variables in a sample of Chinese students at UK universities will be investigated. At last, this study will also assess how international Chinese students' perceived self-efficacy and mental health change overtime due to the effects of a changing living environment. The present study differentiates itself by focusing on psychological aspects of students' adjustment to UK culture. It also examines how academic self-efficacy correlate with their intercultural adaption progress and how it could influence their psychological adjustment in the UK.

## **4 Research Methodology**

### **4.1 Introduction**

This chapter introduces the research design, research instrument and procedure. A pilot study including measures and results are presented at the later part of this section. As demonstrated earlier, the research questions of this thesis are,

- 1) What is the level of Chinese international students' academic self-efficacy in UK higher education?
- 2) How do Chinese international students' academic self-efficacy and psychological well-being change during their adjustment to studying in UK higher education over an academic year?
  - a) Are these changes correlated with each other?
  - b) What are the causes?
- 3) Among Chinese nationals, are there any differences in the academic self-efficacy and psychological well-being between those studying in UK higher education and in Chinese higher education?

### **4.2 Research Design**

This project is a longitudinal and comparative study, which utilizes both quantitative and qualitative data collection tools. According to Menard (2008), "in longitudinal research, data are collected on one or more variables for two or more time periods, thus allowing at least measurement of change and possibly explanation of change" (p. 3). With reference to longitudinal studies on motivation Hox, Peetsma, Roeleveld, Stoel and Wittenboer (2006) asserted that longitudinal designs may allow researchers to collect critical data in terms of the changes and growth of an individual in motivation. Regarding longitudinal panel design, Creed, Patton and Prideaux (2006) claimed that cross-lagged models were ideal to "test the longitudinal associations between two different measures independent of the stability and contemporary associations of the measures" (p. 57). More specifically, researchers are able to explore not only the various stages that international students go through when adjusting to new cultures, but also the causal relationships between variables, such as Chinese students' academic motivation and mental health in their adjustment to studying in UK universities.

Meanwhile, Dornyei and Ushioda (2011) argue that "the study of motivation concerns the immensely complex issue of human behaviour: because the number of potential determinants of human action is very extensive" (p. 8). The complexity and context-sensitive nature of students' motivation contributes to the necessity for combining quantitative and qualitative methodologies in this present research. Bryman (as cited in Cirocki, 2013) views quantitative and qualitative research as two different approaches

which are both valuable in answering the same research questions. They both help with finding sufficient data to answer every question as comprehensively as possible (Gorard & Taylor, 2004).

Specifically, considering the exploration of the international student experience in a host country, quantitative data, which is committed to the interpretive understanding of the human experience, is a valuable methodology to apply in the present project. Considering the variability of students' academic self-efficacy, the complexity of students' psychological well-being in the process of adaptation, and the difficulty inherent in measuring them, a longitudinal design with mixed research methods is optimal and will allow the researcher to enrich the general understanding and gather reliable data. Regarding the comparative strategy, a quantitative comparative study of the academic self-efficacy and psychological well-being of Chinese students registered in UK higher education and Chinese higher education will allow the researcher to collect rich data about Chinese students' characteristics and analyse which characteristics may affect their adjustment to studying in UK higher education as a sojourner group.

### **4.3 Participants**

The participants in this research comprise 2 groups of Chinese students. The first group includes 209 full-time Chinese students in UK universities; 42 of whom are on a three-year undergraduate degree course, and 136 are either on a one year taught postgraduate master's degree course, 31 on a PhD programme. These are Chinese students (age between 17-30 years old) who have already studied EFL for at least nine years before progressing to UK higher education and their English level is considered intermediate. These participants including, both females and males, were in different years of study and from various departments in two universities located in north of England. For Chinese undergraduate students, the majority have completed a Higher Education Foundation Course in their first year in the UK, a portion of the participants came to study in UK universities directly after finishing senior high school in China, and just a few of them completed A-Level courses in their first two years in the UK, prior to progression to study for degrees at UK universities. On the other hand, most of the Chinese postgraduate participants came to study in the UK directly after finishing their undergraduate degree in China, and this is the very first time that they lived in a different culture and new environment. A small portion of these students might have a few years of work experience in China prior to studying in UK higher education.

Undergraduate students are selected because this group tends to live in a more diverse environment when compared with master's students, thus they have more chance to experience interactions with people from different backgrounds and to have various

emotions in this process of intercultural adaptation. For example, they are more likely to be exposed to an environment where English is used as the medium of communication (accommodation, society, classroom, graduate or part-time job applications in the UK). In contrast, prior to their study in the UK master's students are aware of visa constraints and the difficulties of finding a graduate job within one year. As such, most of them plan to return to their home countries, only staying in the UK temporarily and this might contribute to a potential lack of motivation to adapt to the local culture. However, master's students account for the biggest proportion of international students in higher education and the biggest proportion of Chinese overseas students. Because of this it is worth developing a strong understanding of their motivation and well-being in the process of adapting to study in UK higher education. Selecting both undergraduate and postgraduate Chinese students as participants may provide more diverse and rich data for this research. Moreover, this will allow the researcher to compare data from these two samples and find their general and specific concerns or difficulties that they face in their adjustment to UK higher education.

Table 4. 1 Questionnaire Participants' Profile (U.K.)

Status	N	Gender		IELTS (M)	Subject studied by faculty	Year of Study				Length in the U.K.
		F	M			1	2	3	4	
U.G.	42	37	5	6	Archaeology, Biology, Economics, Management, Language and Linguistic science	10	26	6		18.9 months
M.A.	136	109	27	6.5	Management, Music, Education, Language and Linguistic science, Mathematics, Electronic Engineering	136				5.6 months
Ph.D.	31	26	5	7	Education, Health Science, Politics, Computer Science, Language and Linguistic science	8	19	2	2	19.75 months
Total	209	172	37	6.5						14.75 months

*Notes.* Participants' IELTS scores were achieved before they study in the U.K. Length in the U.K. was calculated during the first round of data collection. Participants' average IELTS score and average length of time that they had spent in the UK were reported in this table. F: female, M: male, (M): average score.

The second group of participants will be 295 full-time Chinese students from Harbin Science and Technology University in China. Harbin Science and Technology University is renowned for electromechanical engineering science; it also integrates engineering, economy, management, humanities and law. The previous academic performance of students in this university varies according to their college entrance examination scores; however, it is slightly above the overall average. Those 295 Chinese students (aged between 18-22 years old) are in different years of their undergraduate programme and from various departments. None of them had experience studying abroad prior to their participation in this study. The reason for choosing undergraduate students as the participants in this population is that the majority of Chinese students in Chinese higher education are registered for undergraduate study, with only a limited amount of students in postgraduate programme. To some extent, this group of students would be more generally representative of Chinese students in Chinese higher education than of postgraduates.

#### 4.4 Research Instrument and Procedure

Questionnaire and interviews are carried out in different time periods for data collection. Questionnaires were administered to both groups of Chinese students and interviews were conducted with Chinese students in UK universities. These interviews were all conducted in Chinese, the first language of the participants, to ensure that participants were able to fully understand the questionnaire items and express their opinions more exactly, instead of being restricted to limited expressions in their second language.

Table 4. 2 Outline for Quantitative Data Collection

Date	Participants	Sample Size		Instruments	Variables
June 2016-March 2017	Chinese students at universities in UK	209	46 undergrads	Questionnaire & Interviews	Academic self-efficacy Personality
			163 masters&PhD		
June 2016	Chinese students at universities in China	295 undergrads		Questionnaire	Social support Psychological well-being

##### 4.4.1 Questionnaire

The first instrument is the electronic questionnaires administered to 209 Chinese students in UK higher education three times during the first two terms of an academic year; and paper questionnaires administered to 295 Chinese students in Chinese higher education

conducted once at the end of the summer term. Respondents in the UK received an email with the questionnaire to complete included at the end of the first term, and at both the beginning and end of the second term. To be more specific, questionnaires were sent two weeks before each term ends, (week 8 of each term) and were expected to be responded to by week 10.

In terms of choosing time lags for a panel design, Selig and Little (2012) pointed out that it is critical for research to design an appropriate lag which offers enough time for a change or effect to happen, but also not create a gap of too long in case the effect disappears. The researcher choose week 8 of each term to carry out the questionnaire, which provides sufficient time for Chinese students' academic adjustment to occur but still within one term. For those participants in Chinese higher education, the Chinese version of the questionnaire was conducted during the break time in their on campus lecture. This Chinese questionnaire was paper based so that the researcher was better able to send it out and get responses from participants efficiently.

Questionnaire, as a quick way to collect data, allows the researcher to collect feedback from a large number of respondents. In addition, it encourages respondents to provide anonymous feedback on their experience, opinions, attitudes and feelings with openness and honesty (Cohen, 2000). The current questionnaire consists of three parts; personal details, motivation, and well-being. Section A is on students' personal details including gender, university, year of study, IELTS score, length of stay in Britain and so on. Section B is comprised of 3 scales that measure certain variables of psychological well-being individually.

#### **4.4.1.1 Measures**

All measures including questionnaires and interview questions can be found in Appendix. *Motivated Strategies for Learning Questionnaire (MSLQ)*. The first scale in section B focuses on students' academic self-efficacy. It is a 7-point Likert scale with 5 questions that are all selected from the Motivated Strategies for Learning Questionnaire (MSLQ): self-efficacy for learning and performance. MSLQ was designed to assess college students' motivation and their use of learning strategies, and has been widely applied in educational and psychological studies. The reliability and predictive validity of the MSLQ was proven in Garcia, Pintrich and Smith's (1993) research. This self-report questionnaire measures motivation from three dimensions including value, expectancy and affect; self-efficacy for learning and performance and control beliefs for learning subscales are included in the expectancy component (Pintrich, Smith, Garcia & McKeachie, 1993). Items from the Self-Efficacy for Learning and Performance subscale are intended to measure both efficacious appraisals of ability and performance expectations (Pintrich et al., 1991). Items

include, for example, “I’m confident I can understand the most complex material presented by the instructor in this course,” “I’m confident I can understand the basic concepts taught in this course.”

*Academic Stress.* Respondents’ levels of academic stress were assessed by a direct question “How stressful was your academic life this term?” that is scored on a 10-point Likert-type format regarding to the levels of stress.

*Ten-Item Personality Inventory- (TIPI).* TIPI consists of ten single items with a 7-point Likert scale ranging from 1 (disagree strongly) to 7 (agree strongly). It was designed and developed for a brief measure of the Big-Five personality dimensions when very short measures are needed and personality is not the primary focus of the research. The Big-five personality has been proven with a well established framework and its dimensions which include extraversion, agreeableness, conscientiousness, emotional stability and openness to experiences have been validated and practiced in various of countries from different backgrounds (Gosling, Rentfrow & Swann, 2003). TIPI as an extremely short measure of personality, it takes only a minute to complete which, eliminated item redundancy and participant boredom (Gosling et al., 2003). Each item is comprised of two descriptors (e.g., extraverted, enthusiastic) to which subjects indicate their agreement/disagreement, and begins with the common stem, “I see myself as.” Five of the items are reversed-scored. TIPI is a single item measure with simple wording, thus it reduced fatigue and frustration of subjects answering the questionnaire. For this study, personality is one of the variables to predict respondents’ psychological well-being and being short and brief have high priority in terms of selecting the measures.

*Psychological Flourishing Scale.* The last section of the current questionnaire measures participants’ levels of psychological well-being through Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi & Biswas-Diener’s (2009) Psychological Flourishing Scale (PFS). It comprises 8 brief items using a 7-point Likert-type format (1 = strongly disagree and 7 = strongly agree), which generally measure the respondent's self-perceived success in essential areas of well-being including social relationships, self-esteem, purpose, and optimism (Diener et al., 2009). All items are phrased in a positive direction. Total scores can range from 8 (Strong Disagreement with all items) to 56 (Strong Agreement with all items). The PFS is based on a number of recently developed psychological theories of human flourishing which argue that competence, relatedness, and self-acceptance are the psychological needs for all human beings (Ryff, 1989). Additionally, purpose and meaning, good social relationships, optimism and engagement are also critical to human well-being (Diener et al., 2009). Thus, the PFS was designed to measure respondents’ psychological well-being through items specifically focused on having supportive and



rewarding relationships, contributing to the happiness of others, being respected by others, having a purposeful and meaningful life, being optimistic, being engaged and interested in one's activities, feeling competent and capable in activities. A sample item is "I lead a purposeful and meaningful life". The Psychological Flourishing Scale provides a single psychological well-being score; with a higher mean score of the whole scale indicating a higher degree of well-being in important aspects of functioning and flourishing of respondents. It has been proven to be strongly correlated with other psychological well-being scales such as Ryff Scales of Psychological Well-being and Ryan's Basic Need Satisfaction in General Scale (Diener et al., 2009).

*Psychological well-being status.* There is an open question related to the respondents' self-perceived status of their psychological well-being at the end of the current questionnaire. The question is "If the status of your psychological well-being have changed overtime, why has it changed?"

This questionnaire is structured with closed question items predominantly, which produce data that can be analysed quantitatively for patterns and trends. According to Cohen (2000), the simple rule of selecting types of questionnaires is that the larger the size of sample, the more structured and closed the questionnaire needs to be. In addition, this current questionnaire includes two open questions that allow respondents to answer in their own words. In this way, the researcher is able to capture greater qualification in participants' response. It can also provide the researcher with insights into explanations for respondents' feedback. Therefore, the advantage of this questionnaire is that it allows the conductor to collect well-rounded data not only in terms of combining closed and opening questions, but also the contexts by mixing different intercultural adaption scales and connecting them with psychological well-being. Another benefit of the current scale is the shortness in terms of not only the number of the questions but also the extreme brevity of the items within each subscale. For a longitudinal study of respondents' self-report perceptions, it is critical to employ brief single-item measures to reduce fatigue and frustration as participants are required to provide feedbacks multiple times during data collection (Gosling, Rentfrow, & Swann, 2003).

#### **4.4.1.2 Chinese Version of the Questionnaire**

A Chinese version of the original English questionnaire was utilized to collect data in this research. The participant Chinese students have been learning English for many years prior to their study in university, however it is still not easy to measure whether their English level is high enough to understand the original English questionnaire and answer the questions. Thus, it is necessary to use a Chinese version of the questionnaire as an equivalent instrument for the targeted population in the present research. All of the scales

applied in this questionnaire were already translated into Chinese versions and validated with Chinese participants in various research fields and evaluated by a number of researchers (Li, 2014; Lee, Yin & Zhang, 2010; Rao & Sachs, 1999). It is important to validate the Chinese version of scales, especially for psychological research. Ho, Duan and Tang (2014) claimed that culture shapes an individual's thoughts and psychological states, and also moderates the relationship between self-esteem and life satisfaction. Most of the psychological measuring scales are originally in English, which represent western ideas majorly, however, for Asian whose culture, such as Chinese beliefs, is a very different from western culture. As such, only translating the original English scales to other languages cannot guarantee they still have well-established psychometric characteristics to reliably measure people from different cultural backgrounds. Evaluation and validation of the translated language versions of scales are critical for data reliability prior to conducting the research.

Chinese version of Motivated Strategies for Learning Questionnaire (MSLQ). Rao and Sachs' (1999) study was related to the confirmatory factor analysis of the Chinese version of the Motivated Strategies for Learning Questionnaire and supported the scale's construct validity with a sample of Chinese students. Meanwhile, the reliability of MSLQ in the Chinese setting was also confirmed in Lee, Yin and Zhang's (2010) research.

Chinese version of the Psychological Flourishing Scale. The Psychological Flourishing Scale has been proven to have good psychometric characteristics in different countries and cultural backgrounds in previous studies (Diener et al., 2010; Esch et al., 2013; Hone et al., 2014; Silva & Caetano, 2013; Sumi, 2014). Specifically, the results of Tang, Duan, Wang & Liu's (2014) study demonstrated the satisfactory psychometric properties of the simplified Chinese version of the Scale among a Chinese community (Mainland China). In other words, the Psychological Flourishing Scale is proven to be appropriate in assessing psychological well-being in a Chinese community population.

#### **4.4.2 Interview**

McMillian (2012) pointed out that interviews provide "greater depth and richness of information" especially in face-to-face interviews which allow the interviewer to "observe nonverbal responses and behaviours" (p. 167). The interviewer is then able to have an idea about the additional questions to ask the subjects to help clarify or explain their answers. Meanwhile, semi-structured interviews are described as "exploratory and insightful" by Cirocki (2013) as they offer the opportunity for the researcher to probe and explore unforeseen issues by asking further questions. Interview as a main method of qualitative research generally offers the depth and richness of the research phenomenon (Bailey, Hennink & Hutter, 2011). It allows the participants to express their inner feelings about

adjusting to UK higher education in detail. Also, the researcher is able to discover the related issues that cannot be found through analysis of questionnaire results. There is no doubt that semi-structured face-to-face interview as another important data collection instrument in this project will allow the researcher to obtain more accurate responses from the subjects.

Another instrument is the semi-structured face-to-face interviews with 12 of the respondents, individually. Among the participants were three men and nine women, of whom four were undergraduate students, four were master's degree students, and another four were PhD students. They were classified into three groups according to their study programme in this way. Within each group, there were two with relatively high scores and another two with lower scores from the previous scales in the questionnaire.

Table 4. 3 Interview Participants' Profile

Status	ID	Gender	IELTS	Subject studied by faculty	Year of Study	Length in the U.K.
U.G.	1	F	6	Archaeology	3	2.5 years
	2	F	6	Biology	2	2.5 years
	3	F	6	Economic	3	3.5 years
	4	F	5	Management	1	6 months
M.A.	1	M	5.5	Management	1	1.5 years
	2	M	5.5	Management	1	1.5 years
	3	F	6	Music	1	3 months
	4	F	7	Education	1	3 months
Ph.D.	1	M	7	Education	2	2.5 years
	2	F	7	Education	4	4.5 years
	3	F	7	Health Science	3	3.5 years
	4	F	7	Education	2	2.5 years

*Notes.* Participants' IELTS scores were achieved before they study in the U.K. Length in the U.K. was calculated during the first time of the interview.

In order to choose the participants for the interview who can reflect the diversity and breadth of the sample population, extreme case sampling as one type of purposive sampling technique is employed for the qualitative data collection of this research. It means that the participants for the interview are chosen because they are considered special and more extreme. These extreme cases are useful because they can provide significant insight into the phenomenon being studied, and present the diversity of the whole sample, which helps with guiding future research and practice (Laird 2012). It is therefore valuable to select the participants who scored either extremely high or low in the psychological well-being measure scales for the following interviews. Meanwhile, the researcher will

need to know and understand what are the causes that those participants scored really high while others had bad outcomes from the psychological well-being scales. By selecting the extreme cases for the interview, it allows the research to explore the reasons behind the more extreme high/low scores from a descriptive way.

Each student will be interviewed three times in total separately during the vacation period of each term. At the first round of qualitative data collection, the first interview lasted approximately 20 minutes; and then about 5-10 minutes for the second and final rounds. All interviews were conducted in a private study room. The researcher's reflections and notes were prepared to compare with the interview transcripts. All conversations were recorded for the purpose of translation, transcription and analysis after securing permission from participants. Interviews will be conducted in Chinese and transcribed immediately afterwards. Researcher's reflection and notes will be prepared to compare with the interview transcripts.

#### 4.4.2.1 Contents

These semi-structured interviews consist of two parts which are closely related to international students' experiences in the UK. It begins with two items as warm up questions to make the participants feel comfortable and ready to answer spontaneously without concern. Part two consists of four open-ended questions which will be used to explore students' experiences, get a detailed account of their views, and to find the context in which the factors of well-being mentioned in the questionnaire are experienced. The interviewees were asked about the issues probed in the questionnaire in order to develop a comprehensive understanding of their academic motivation and psychological well-being in the process of cross cultural adaptation. This interview was conducted after the questionnaire to allow the respondents to elaborate on some of the data from the questionnaire as they are encouraged to reflect on their experience that were pointed out. Interview data will provide a richer picture of their psychological experiences in the process of intercultural adaptation.

Table 4. 4 Outline for Qualitative Data Collection

Respondents	No. in total	Time Date	Location	Length	Notes
Undergraduate	4	Dec/Mar/June	Private study	20-25mins	
Masters	4	Dec/Mar/June	room in library	20-25mins	
PhD	4	Dec/Mar/June		20-25mins	

*Note.* N = 12.

## **4.5 Statistical Analysis**

The correlation between the results of Chinese students' academic self-efficacy and psychological well-being in the same time period was evaluated by SPSS firstly. A series of Pearson correlations was applied to examine the potential correlated relationships between the two variables. Afterwards, the scores of Chinese students' academic self-efficacy in different time periods were compared and analysed through SPSS to explore the possible change of it within the academic year; ANOVA was also performed to find the differences among time periods. Meanwhile, how students' academic self-efficacy in the previous time period might affect the following one was also examined. Surely, the scores of Chinese students' psychological well-being in various periods were analysed in the same way. Last, the possible crossed associations between academic self-efficacy in the previous period and psychological well-being in the following period were assessed through SPSS.

## **4.6 Pilot Study**

Pilot study as a crucial element of a good study design allows the researcher to assess the likely success of proposed instruments (Teijlingen & Hundley, 2002). In order to assess the adequacy of research instruments, testing the reality and reliability of the research protocol, a pilot study with the questionnaire and interview was conducted prior to data collection for the main study.

### **4.6.1 Questionnaire**

A pilot study which was intended to improve the internal validity of the questionnaire was administered with pilot subjects approximately three months before the main study. Valuable feedback from the participants and findings from the pilot data informed the researcher which sections of the questionnaire needed to be revised and redesigned for a better research protocol. The first two parts of the questionnaire were proven realistic through the pilot study, however it was important to replace the last two scales with more workable measuring scales. The instruments, results and findings of this questionnaire pilot study will all be presented in this section.

#### **4.6.1.1 Participants**

Participants for this pilot study were 20 Chinese students (4 males and 16 females) from the University of York and York St John University, including 10 undergraduates, 3 master's students and 7 PhD students. Their ages ranged from 18 to 28 years ( $M=22.95$ ,  $SD=3.10$ ). Direct contact with potential study participants in person, on the phone or on the internet was used as one of the recruitment methods. The researcher directly got in touch with Chinese colleagues in her office who were students from various departments in the University of York and spoke with her Chinese flat mates as potential participants. Some

of the participants were recruited through the snowball sampling method in which the Chinese students who confirmed participation in this pilot study were asked to share the contact details of their acquaintances, especially classmates and flat mates who were Chinese international students in the UK.

#### **4.6.1.2 Measures**

*Motivated Strategies for Learning Questionnaire (MSLQ).* Academic self-efficacy was measured by Self-efficacy for Learning and Performance: a 7-point Likert scale with 5 questions which were all selected from the academic self-efficacy subscale of Pintrich, Smith, Garcia & McKeachi's (1993) Motivated Strategies for Learning Questionnaire (MSLQ). MSLQ was designed to assess college students' motivation and their use of learning strategies, and it has been widely applied in educational and psychological studies. The reliability and predictive validity of the motivated strategies for learning questionnaire is proved in Garcia, Pintrich and Smith's (1993) research. This self-report questionnaire measures motivation from three dimensions including value, expectancy and affect; students' self-efficacy and control beliefs for learning consists of the expectancy subscales (Pintrich, Smith, Garcia & McKeachie, 1993).

*Academic Stress.* Respondents' levels of academic stress were assessed by the direct question "How stressful was your academic life this term?" that was scored on a 10-point Likert-type format regarding the levels of stress.

*\*Berlin Social Support Scales.* Three items with a 4-point Likert-type scale regarding Received Social Support were selected from Berlin Social Support Scales (BSSS) which were designed by Schulz and Schwarzer (2003) to measure students' perceived emotional support and instrumental support.

*\*Eysenck Extraversion Scale.* Three items with a 7-point Likert scale from the Extraversion Scale of the Eysenck (1975) personality questionnaire were selected to measure participants' self-rating extraversion. A low score indicates introversion while a high score indicates extraversion.

*\*Rotter's Locus of Control Scale.* Three items with a 7-point Likert scale (a high score = External Locus of Control, a low score = Internal Locus of Control) were selected from The Locus of Control Scale, which was developed by Rotter (1966). It measures generalized expectancies for internal versus external control of reinforcement (Parkes, 1985).

*\*Ryff Psychological Well-being Scale (PWBS).* PWBS was developed by Ryff (1989) and is scored on a 6-point Likert scale. It consists of 18 statements that represent 6 factors of psychological well-being: autonomy, environment mastery, purpose in life, personal growth, self-acceptance and positive. The construct validity of Ryff's scales of

psychological well-being have been evaluated by Springer and Hauser (2006) and Dierendonck (2005).

*Psychological well-being status.* There is an open question related to the respondents' self-perceived status of their psychological well-being at the end of the current questionnaire. The question is "If the status of your psychological well-being has changed overtime, why has it changed?"

\* The measures for the main study are partly different from the ones in the questionnaire which were administered in this present pilot study due to the findings of it.

#### **4.6.1.3 Procedure**

Face-to-Face Questionnaire. Initially, the participants were asked to read the research information sheet to be informed that the data being collected were only for research; and then asked to sign the written informed consent form. All participants agreed to voluntarily participate in the pilot study and completed the questionnaire package. All the information collected was done so anonymously and remained confidential. This process took around 20 minutes for each participant in a private study room in the library, they were given 10 minutes to answer the questionnaires and another 10 minutes to provide feedback to identify ambiguities and difficult questions. The first 5 participants could pause at anytime to ask the researcher to clarify the questions that confused them. They were also allowed to give advice whenever they had ideas about the questionnaire. Notes of each participant's questions and advice were written during the conversations for the further improvement of the questionnaires.

#### **Results**

In order to test the reliability of all the subscales from the questionnaire used in this study, pilot data analysis was performed using SPSS and is presented in this section. In all analysis, age and gender were not considered as control for demographics. Subgroups were created to assess the differences in variables among the undergraduate, master's and PhD students and include academic self-efficacy, social support, personality, locus of control and psychological well-being.

The means and standard deviations of respondents' ages, IELTS scores, length of time spent in the UK, academic pressure and all study variables are presented in Table 4.3; the subgroups' (undergraduates, master's and PhD) average scores are shown in Table 4.4. It shows that the respondents for this pilot study had been in the UK for almost 12 months on average ( $M=4.85$ ) and their academic pressure was on a slightly high level ( $M=5.75$ ). However, as can be seen in Table 4, the academic pressure differences among subgroups of participants are quite obvious; PhD students reported the highest academic pressure

(M=6.33) among the three subgroups, and master's students had the lowest level of academic pressure (M=4)

Table 4. 5 Means, Standard Deviation of Key Study Variables

	IELTS	Length in the UK	Academic Pressure	MSLQ_ Composite	Berlin_ SS	Eysenck_ extraversion	Locus of control	Ryff_PS
Mean	6.45	4.85	5.75	4.43	4.45	3.35	3.13	4.48
SD	.67	1.95	1.99	.94	.74	.64	.50	.28

Note. N = 20

\* length in the UK 1=0-3months, 2=3-6months, 3=6-9months, 4=9-12months, 5=12-18months, 6=18-24months, 7=more than 24 months

Table 4. 6 Means of Subgroups by Programme

Programme		MSLQ_ Composite	Berlin_ SS	Eysenck_ extraversion	Locus of control	Ryff_PS	Academic Pressure
Under_ graduates	M	4.18	4.39	3.42	3.36	4.44	5.91
	SD	1.001	.84	.68	.48	.29	2.07
Masters	M	4.40	5.00	3.66	2.66	4.63	4.00
	SD	.87	.33	.33	.33	.25	1.00
PhD	M	4.90	4.28	3.06	2.94	4.46	6.33
	SD	.79	.65	.65	.39	.28	1.97

Note. N = 20; N (undergraduates) = 11, N (masters) = 3, N (PhD) = 6.

An interesting result from PhD respondents, as shown in Table 4.4, is that although they had the highest level of academic self-efficacy (M=4.9) among the three groups of participants, they were still under high academic pressure (M=6.33). In relation to well-being, master's students had the best (M=4.63) psychological status among the student groups. Meanwhile, Table 4.4 shows that they received the greatest social support (M=5.00), and felt the least academic pressure (M=4.00).

The correlations among all study variables are presented in Table 4.5. Academic pressure was positively related to length of stay in the UK (P=0.45). This indicates that the participants who stayed in the UK longer tended to experience higher academic pressure. Academic self-efficacy did not show any significant relationships with other variables. Social support is significantly correlated with extraversion at 0.48. In relation to psychological well-being, no significant correlations emerged with other variables. The reliability of all the subscales in this current questionnaire was analysed and the results were not satisfied except the MSLQ and Berlin Social Support Scale. This poor reliability



of subscales is the reason that the correlations of variables according to the three subgroups of respondents are not presented in this pilot study report.

The reliability of subscales in this current questionnaire is shown in Table 4.6. The coefficient of MSLQ ( $C=0.886$ ) is excellent, however the remaining coefficients of the subscales are quite poor. This proved that the internal consistency of the items in MSLQ was great, however, the internal consistency of the remaining subscales was unacceptable.

Table 4. 7 Correlations of Key Study Variables

	Length in the IELTS U.K	MSLQ_ Composite	Berlin SS	Eysenck_ extraversion	locus of control	Ryff_ PS	
IELTS							
Length in the UK	.438						
MSLQ_Composite	.289	.060					
Berlin_SS	-.359	.001	-.257				
Eysenck_extraversion	-.427	.169	-.187	.484*			
Locus of control	-.321	.022	-.076	-.013	.102		
Ryff_PS	.033	-.060	.229	.148	-.003	.057	
Academic Pressure	.326	.449*	-.221	.056	.058	-.070	-.365

Note. N = 20.

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

Table 4. 8 Subscales' Reliability

Scales	Cronbach's Alpha	N of Items
MSLQ	.886	5
Berlin Social Support Scale	.485	3
Eysenck's Extraversion Scale	.161	3
RPWS	.428	18

#### 4.6.1.4 Findings

The poor reliability of the Eysenck's extraversion, locus of control and Ryff's psychological well-being scale could be explained by the fact that the sample size is small, however, the fact that many reversed items were included in the scales (e.g. Eysenck's extraversion & RPWS) and there was complicated item wording may be other reasons. This also applies to the results that no significant correlations/relationships were found among the predictors and psychological well-being. However, the MSLQ was found to have great test reliability. In order to solve this dilemma and reach an acceptable internal consistency and reliability of the scales, two new short scales (TIPI & the FS) were

selected to replace Eysenck's extraversion, locus of control and Ryff's psychological well-being scale. The theoretical and statistical explanation explanations were demonstrated in the literature review and the questionnaire section in this chapter.

Although some of the results were unexpected, the findings suggest that there is obvious difference among the three subgroups of respondents in terms of academic self-efficacy, academic pressure and psychological well-being. Another indication from the findings that the length of the respondents has been stay in the UK was correlated with their academic pressure is that what programme the participants are taking is associated with their adjustment to UK study life. This can be partly explained by the different levels of academic tasks and academic self-efficacy of subjects from different study programmes. It implies to the researcher that dividing respondents into different subgroups according to their courses is necessary for the formal data analysis of this study.

Other than the primary findings from the pilot study, it should also be noted that the respondents provided a variety of valued feedback on the pilot study after completing the face-to-face questionnaire survey. All participants agreed that the length of the questionnaire was appropriate as they could retain focus on the questions until they were completed. The order of a few questions, the range of answers on the multiple-choice questions and some pieces of wording were recommended to be revised or shortened. In relation to the personal details section of the questionnaire, more questions and choices were added according to the subjects' feedback. For example, "Did you take a HND course in China?" (HND: Higher National Diploma is a higher education qualification of the UK. This qualification can be used to gain entry into universities at an advanced level, and is considered equivalent to the second year of a three-year university degree course. Many universities will take students who have completed their HND onto the third year of a degree course. In the case of Chinese undergraduate students, they will finish their HND at universities in China in 3 years and then continue their study as a third year student in UK universities.) "What was your score?"

#### **4.7 Ethical Considerations**

Ethical considerations, as one of the key issues in conducting research, have been addressed by the British Education Research Association (BERA). It is critical to submit an Ethical Issues Audit to the University of York's Education Ethics Committee prior to the data collection since ethical issues might arise at any stage of the research, including both in the data collection phases and the reporting of a study. According to BERA, an ethic of respect should apply to any individuals participating in the research, either directly or indirectly.

#### **4.8 Voluntary Informed consent**

Voluntary informed consent is essential before enrolling participants in a study. All participants were presented with an informed consent form, from which they could understand and agree to participate before providing data through questionnaires and interviews. In the case of this study, background information of the study, an explanation of the purposes of the research, a description of the study procedures, and benefits to the subjects are provided in the consent form. Meanwhile, participants were informed of their right to withdraw from the research for any or no reason, and at any time. The procedure for storing collected data and respondents' privacy protection were demonstrated in the form as well.

#### **4.9 Confidentiality and Anonymity**

Crow and Wiles (2008) claimed "anonymity and confidentiality of participants are central to ethical research practice in social research" (p. 2). All respondents were informed of the confidential and anonymous treatment of their data in any form of publication, including on the internet. The researcher assured each participant that data will be kept securely and any information that may possibly help to identify them will not be presented in reports, presentations and other forms of dissemination. All collected data will be stored on a password protected computer and mobile hard disk drive files that only the researcher has access to. Meanwhile, to meet individuals' expectations of privacy, the researcher assigned codes to represent respondents in the analysis of data.

## **5 Findings: Questionnaire survey in the UK**

### **5.1 Introduction**

The aim of this chapter is to examine the questionnaire data collected from Chinese international students in the UK at the three time periods used in this study. Participants' backgrounds are illustrated first. The results and SPSS analyses of the quantitative data collected by the questionnaire are reported in the next section. This is followed by frequency analysis of the short text answers provided in the questionnaires. Finally, a brief summary and discussion are presented in the end.

### **5.2 Participants**

The participants in this research comprised two groups of Chinese students. Participants in this current chapter was the first group, which was 209 (at Time One (T1) data collection) full-time Chinese students pursuing bachelor, master or doctorate degrees in UK universities. Approximately 20 percent of them were on a three-year undergraduate degree course, 65 percent on a one year taught postgraduate degree course and 15 percent on a PhD programme. These were Chinese students (age between 17-30 years old) who had already studied EFL for at least nine years before progressing to UK higher education, and their English level is considered intermediate. Those participants including, 82 percent of females and 18 percent of males, are in different years of study and mostly from various departments of two major universities in Yorkshire. Approximately 38 percent of the undergraduate participants were in year one, 40 percent and 22 percent were in second and third year respectively. They were mainly from business management school (almost 68 percent), about 19 percent were from economics department, approximately 11 percent from biochemistry and one respondent from archaeology. For PhD students, most of them (about 38 percent) were at their third year, 12 percent and 23 percent were in second and third year individually, 27 percent were at their fourth year. The majority of these PhD respondents (15) were from education department, 4 from linguistics and politics respectively, 2 from women study, economics, social policy and management individually, the rest 3 were from environment, health science and math. For those respondents who were undergraduate students, the majority had completed a Higher Education Foundation Course during their first year in the UK, while small portion of them came to study in the UK universities directly after finishing senior high school in China. Additionally, a very small number of them had completed A-Level courses in their first two years in the UK prior to progression to study at UK universities. On the other hand, nearly all (more than 97 percent) of the Chinese postgraduate participants came to study in the UK directly after finishing their undergraduate degree in China, and this was the very first time that they lived in a different culture and foreign environment. The remaining postgraduate

participants had prior experience of study abroad, such as short time period of studying in the U.S. as an exchange student.

### **5.3 Quantitative Analysis**

SPSS was used to analyse the data collected from the questionnaire at all three time points in the UK. Analysis of the data included correlation, frequency analyse, gender difference, one-way analysis of variance including one way repeated measures analysis of variance (ANOVA), and regression analysis.

#### **5.3.1 Missing data**

It is common for missing data to occur in longitudinal studies as this data collection process normally lasts over a series of time points. During T1 data collection, of the total 221 respondents in the study, 12 of them provided too much missing data that could not be calculated and used for analysis. Considering this is a small part of the sample, Complete Case Analysis was applied by discarding these 12 cases with missing values at all measurement occasions. In addition, multiple imputation as a widely used method to enable analysis, is straightforward and was conducted for the remaining missing values in the 209 cases at T1. For T2 and T3 data collection, there were no missing values for the responded cases. However, 16 and 21 individuals dropped out of the study at each time respectively. These respondents were not able to continue to participate in this research for various reasons. For example, during T2 data collection, one respondent informed the researcher via email that she/he was suffering from serious psychological issues and felt uncomfortable answering the remaining survey questions.

### **5.4 Results of quantitative data**

The N for time period one (T1), time period two (T2) and time period three (T3) of data analyses varied in size because some participants had missing data, as detailed above. According to Table 5.1, the mean age of this sample at T1 (N=209) was 24 years (SD = 2.62); 172 were female and 37 were male. The sample size at T2 was 193, 159 were female and 34 were male. The sample size at T3 was 172, 138 were female and 34 were male. The majority of the respondents were female. As Table 5.1 indicates, the results show nearly equal means at T1 and T2 on the academic self-efficacy scale (T1: M = 4.66, SD = 1.23; T2: M = 4.68, SD = 1.05) and academic stress level (T1: M = 6.32, SD = 1.92; T2: M = 6.36, SD = 1.97) individually, but notably better scores in the Flourishing Scale at T2 (M = 5.40, SD = 0.83) than at T1 (M = 5.30, SD = 0.88). Obviously, T3 has the highest mean of academic self-efficacy (M = 5.11, SD = 0.90), Flourishing Scale (M = 5.54, SD = 0.78), and the lowest mean of academic stress level (M = 5.96, SD = 1.64). The respondents' average scores for FS at T1, T2 and T3 all indicate that their average agreement level to the 8 items of FS was 'slightly agree'. Mean scores for academic self-efficacy scale (Table

5.1) show that, on average, students tended to rate their academic self-efficacy beliefs between point 4 and point 5 on the Likert scale. This indicates that as a whole the sample of 209 Chinese international students had a relatively medium sense of academic self-efficacy. It can be seen from Table 5.1 that participants' average IELTS score was 6.5 (SD = 1.05) and the average length of time they had spent in the UK was 14.75 months (SD = 18.16). Although the majority of participants (almost 65%) were on one-year taught master programme, the average length in the UK was still slightly more than a year; this could be because the remaining respondents, specifically including undergraduates and PhD students, had already stayed in the UK for several years.

Table 5. 1 Overall Means of Key Study Variables at All Three Time Points.

Factors	T1			T2			T3		
	M	SD	Skewness	M	SD	Skewness	M	SD	Skewness
Academic Self-efficacy	4.66	1.23	-.34	4.68	1.05	-.05	5.11	0.90	-.21
Flourishing Scale	5.30	0.88	-.72	5.40	0.83	-.34	5.54	0.78	-.74
Academic Stress	6.32	1.92	-.21	6.36	1.97	-.48	5.96	1.64	-.11
Extraversion	4.39	1.32	.17						
Agreeableness	4.79	0.86	.06						
Conscientiousness	4.64	1.14	-.12						
Emotional Stability	4.18	1.21	-.08						
Openness Experience	4.63	0.97	.20						
IELTS	6.50	1.05	-.42						
Length in UK (month)	14.75	18.16	2.41						
Age	23.57	2.62	1.14						

*Note.* N (T1) = 209 (female = 172, male = 37); N (T2) = 193 (female = 159, male = 34); N (T3) = 172 (female = 138, male = 34). T1 = Data collection time period 1; T2 = Data collection time period 2; T3 = Data collection time period 3; Academic self-efficacy was measured by using a 7-point scale with descriptors at “1” (“Not at all true of me”) and “7” (“Very true of me”); Flourishing Scale used a 1-7 Likert scale ranging from strongly disagree to strongly agree; Academic stress = Academic stress level. Academic stress level was measured by a 10 points Likert scale ranging from 1-10 (from no stress to extremely stressed). Extraversion, Agreeableness, Conscientiousness, Emotional Stability, Openness Experience were rated on a 7-point scale from that ranges from 1 (disagree strongly) to 7 (agree strongly). Extraversion, Agreeableness, Conscientiousness, Emotional Stability, Openness Experience, IELTS, Length in UK and Age were measured at T1 only.

Finally, as shown in Table 5.1, participants' academic stress level was relatively high at both T1 (M = 6.32, SD = 1.92) and T2 (M = 6.36, SD = 1.97), and medium in T3 (M = 5.96, SD = 1.64), on a 1 {no stress} to 10 {extremely stressed} scale of academic stress level.

Both Figures 5.1 and 5.2 demonstrate that more than 70% of the participants had academic stress levels above 6. It was shown that the majority of the respondents rated their academic stress levels relatively high, higher than the midpoint level (level 5), which indicates most of these Chinese international students had experienced high levels of

academic stress during the first and second term of their academic year. Furthermore, Figures 5.1 and 5.2 below show that the highest percentage category is academic stress level 7, accounting for 29% at T1 and 31% at T2. It can be told that respondents most frequently reported their academic stress level as 7 at both T1 and T2. Finally, 6% of the students reported their academic stress level as level 10 (extremely stressed).

Figure 1 Percentage Distribution of Participants' stress levels at T1

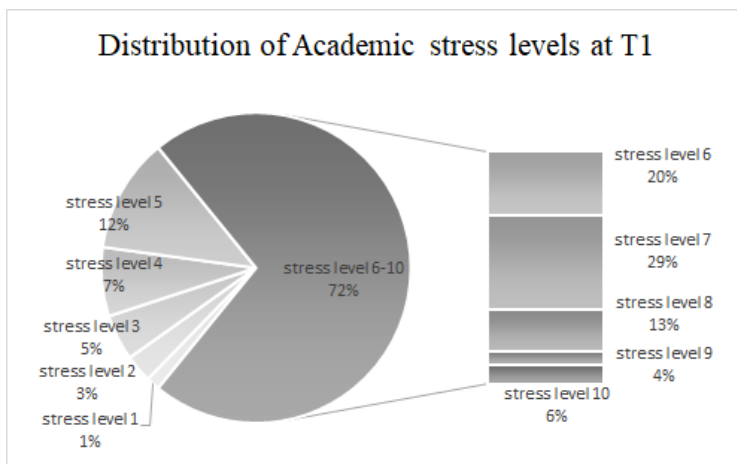


Figure 2 Percentage Distribution of Participants' stress levels at T2

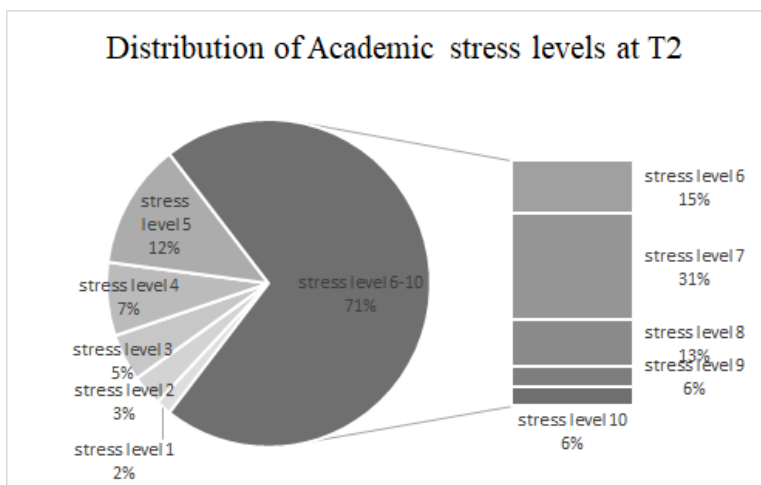


Figure 3 Percentage Distribution of Participants' stress levels at T3

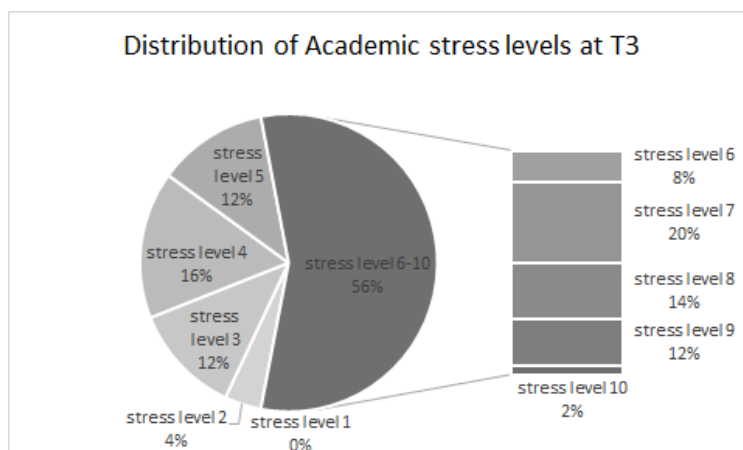


Figure 5.3 presents the percentages of each academic stress level category which was rated at T3. It reports that still more than half of the respondents rated their academic stress levels higher than the medium level five (56%). Same as T1 and T2, stress level 7 is the most frequently rated group, accounting for 20% of responses. There were 12% of students who rated their academic stress level as high as 9; and 2% of students reported their academic stress level as 10. It can be concluded that there were still a large number of Chinese international students that experienced high or even extreme academic stress during the last term.

Table 5. 2 Gender Differences in the Means for Academic Self-Efficacy Scale T1, Flourishing Scale T1, Academic Stress Level T1, Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness Experience.

Factors	Female		Male		df	t	d
	M	SD	M	SD			
AcaSE_T1	4.58	1.20	5.05	1.33	207	2.13*	0.37
FS_T1	5.29	0.93	5.35	0.61	207	0.51	0.08
Extraversion	4.47	1.38	4.05	0.97	207	-2.17*	0.35
Agreeableness	4.85	0.89	4.53	0.69	207	-2.42*	0.40
Conscientiousness	4.58	1.16	4.95	1.01	207	1.80	0.34
Emotional Stability	4.13	1.24	4.42	1.09	207	1.30	0.25
OpennessExperience	4.61	0.96	4.72	1.02	207	0.60	0.11
Academic Stress	6.31	1.86	6.35	2.23	207	0.12	0.02

*Note.* T1: N (T1) = 209, n (female) = 172, n (Male)= 37. T1 = Data collection time period 1; AcaSE = Academic self-efficacy Scale; FS = Flourishing Scale; Academic stress = Academic stress level. Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness Experience were measured at T1 only.

\* $p < .05$

An independent-sample t-test (Table 5.2) was conducted to compare the gender differences in the means for Academic self-efficacy Scale (T1), Flourishing Scale (T1), Academic stress level (T1), Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness Experience. There was a significant difference found in the means for academic self-efficacy in females (M = 4.58, SD = 1.20) and male (M = 5.05, SD = 1.33),  $t(207) = 2.13$ ,  $p < .05$ . This shows that men's academic self-efficacy mean scores were significantly higher than women's. This indicates that male participants tended to hold a better sense of academic self-efficacy than female students. This One-sample t-test



also demonstrates that Extraversion scores were significantly higher for women ( $M = 4.47$ ,  $SD = 1.38$ ) than for men ( $M = 4.05$ ,  $SD = 0.97$ ),  $t(207) = 2.17$ ,  $p < .05$ . Agreeableness for females ( $M = 4.85$ ,  $SD = 0.89$ ) was rated greater than for males ( $M = 4.53$ ,  $SD = 0.97$ ),  $t(207) = 2.42$ ,  $p < .05$ . The results in Table 5.2 also suggest that the two groups did not differ significantly from each other for the Flourishing Scale with  $t(207) = 0.51$ ,  $p > .05$ .

In order to find the correlations between Academic self-efficacy Scale, Flourishing scale, TIPI (Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness Experience), Academic stress level, IELTS and length in UK at T1 and T2 individually, a Pearson correlation (Table 5.3) was conducted.

The Pearson correlations at T1, as shown in Table 5.3 below the diagonal, all significant intercorrelations were positive except for the correlations with academic stress. Accurately, all significant correlations involved with academic stress were negative. Academic stress was strongly negatively correlated with Academic self-efficacy ( $r = -0.20$ ,  $p < .01$ ), Flourishing Scale ( $r = -0.19$ ,  $p < .01$ ) and Emotional Stability ( $r = -0.34$ ,  $p < .01$ ) separately, indicating that those participants with higher scores in academic stress levels had lower scores on academic self-efficacy, Flourishing Scale and Emotional Stability. It also means that students with a better sense of academic self-efficacy, higher scores in Flourishing Scale, and more stable emotions tended to experience less academic stress. Academic stress had the strongest significance level with Emotional Stability ( $r = -0.34$ ,  $p < .01$ ), and lowest with Extraversion ( $r = -0.15$ ,  $p < .01$ ).

As demonstrated in Table 5.3 at T1, Academic self-efficacy was strongly positively correlated with Flourishing Scale ( $r = 0.49$ ,  $p < .01$ ), Conscientiousness, ( $r = 0.20$ ,  $p < .01$ ), Openness Experience ( $r = 0.28$ ,  $p < .01$ ), IELTS ( $r = 0.32$ ,  $p < .01$ ) and Length in UK ( $r = 0.19$ ,  $p < .01$ ); modestly correlated with Emotional Stability at ( $r = 0.15$ ,  $p < .05$ ). Academic self-efficacy had the highest significance level with Flourishing Scale. It can be predicted that those participants with a good sense of academic self-efficacy also tended to hold a good sense of Conscientiousness, Openness Experience. Similarly, those respondents who rated themselves higher on the academic self-efficacy scale also had higher IELTS scores. It also indicated that the students who stayed longer in the UK tended to rate themselves higher on the Academic self-efficacy Scale.

Flourishing Scale was strongly positively correlated with four of the five aspects of personality including with Extraversion ( $r = 0.40$ ,  $p < .01$ ), Conscientiousness ( $r = 0.24$ ,  $p < .01$ ), Emotional Stability ( $r = 0.20$ ,  $p < .01$ ), and Openness Experience ( $r = 0.40$ ,  $p < .01$ ), and all the four correlations reached statistical significance at the 0.01 level. Agreeableness was not correlated with Flourishing Scale. It can be predicted that those students who scored higher in Extraversion, Conscientiousness, Emotional Stability or Openness

Experience scale tended to have better psychological well-being. Indeed, in terms of Flourishing Scale, a high score represents a person with many psychological resources and strengths. Flourishing Scale was also strongly correlated with IELTS at  $r = 0.18$ ,  $p < .01$ .

Table 5. 3 Correlations of Academic Self-efficacy, Flourishing Scale, TIPI, Academic Stress Level, IELTS and Length in UK at T1 & T2 Separately.

T1	T2									
	1	2	3	4	5	6	7	8	9	10
Academic self-efficacy		.59**	.07	-.078	.00	-.07	.13	-.15*	.32**	.13
Flourishing Scale	.49**		.17*	-.01	.07	-.02	.14	-.13	.06	-.07
Extraversion	.06	.40**						-.15*	.01	-.01
Agreeableness	.02	.08	-.17*					.11	.03	-.03
Conscientiousness	.20**	.24**	-.00	.14*				-.06	.06	.05
Emotional stability	.15*	.20**	-.02	.21**	.35**			-.34**	.03	-.07
Openness Experience	.28**	.40**	.18**	.02	.14*	.09		-.12	.09	.04
Academic stress	-.20**	-.19**	-.15*	.11	-.06	-.34**	-.12		.08	.26**
IELTS	.32**	.18**	.01	.03	.06	.03	.10	.06		.09
Length in the UK	.19**	-.02	-.01	-.03	.05	-.07	.04	.03	.09	

*Note.* Intercorrelations at T1 are presented below the diagonal, and at T2 are presented above the diagonal. T1 = Data collection time period 1; T2 = Data collection time period 2; N (T1) = 209; N (T2) = 193. Extraversion, Agreeableness, Conscientiousness, Emotional Stability, Openness Experience, IELTS and Length in UK were measured at T1 only.

\*\* . Coefficients are significant at  $p < .01$ .

\* . Coefficients are significant at  $p < .05$ .

Finally, Table 5.3 at T1 demonstrates that Extraversion was positively significantly correlated with Openness Experience ( $r = 0.18$ ,  $p < .01$ ), and negatively significant correlated with Agreeableness at  $r = -0.17$ ,  $p < .01$ . However, Agreeableness was significantly correlated with Conscientiousness ( $r = 0.14$ ,  $p < .05$ ) and Emotional Stability ( $r = 0.21$ ,  $p < .01$ ) separately. Conscientiousness and Emotional Stability were positively correlated at  $r = 0.35$ ,  $p < .01$ .

With the Pearson correlations at T2, shown in Table 5.3 above the diagonal, Academic self-efficacy was statistically positively correlated with Flourishing Scale at  $r = 0.59$ , and with IELTS at  $r = 0.32$  individually. Both of the correlations reached statistical significance at the 0.01 level. There was no significant correlation between academic stress and Flourishing Scale ( $r = -0.13$ ,  $p < .01$ ) at T2. However, Academic stress was negatively correlated with academic self-efficacy ( $r = -0.15$ ,  $p < .05$ ), Extraversion ( $r = -0.15$ ,  $p < .05$ ) and Emotional Stability ( $r = -0.34$ ,  $p < .01$ ) respectively. In contrast, Table 5.3 shows that

academic stress was positively and strongly correlated with length of time spent in the UK ( $r = 0.26, p < .01$ ). This indicates that those participants who have stayed longer in the UK tended to report higher levels of academic stress.

In summary, Academic self-efficacy Scale and Flourishing Scale were positively correlated at both T1 ( $r = 0.49, p < .01$ ) and T2 ( $r = 0.51, p < .01$ ). Academic stress at T1 and T2 was negatively correlated with the majority of the variables at both T1 and T2.

To explore the correlations of three key variables, Academic self-efficacy, Flourishing scale and Academic Stress at all three time periods, another Pearson correlation (Table 5.4) was conducted. The sample size for the variables' correlations between T1 and T2 adapted the size at T2 ( $N = 193$ ) as there were a few students at T1 that did not participate in the second round of the survey. Similarly, T3 ( $N = 172$ ) was the sample size of the variables' correlations between T2 and T3, and T1 and T3.

Table 5. 4 Correlations for Academic Self-efficacy, Flourishing Scale and Academic Stress Among T1, T2 and T3.

Measure	1	2	3	4	5	6	7	8
1. Academic Self-efficacy_T1								
2. Flourishing Scale_T1								
3. Academic Stress_T1								
4. Academic Self-efficacy_T2	.20**	.09	-.10					
5. Flourishing Scale_T2	.08	.16**	-.07					
6. Academic Stress_T2	.09	.07	.22**					
7. Academic Self-efficacy_T3	.47**	.34**	-.06	.81**	.47**	-.07		
8. Flourishing Scale_T3	.21**	.44**	-.17*	.54**	.76**	-.17*	.61**	
9. Academic Stress_T3	-.06	-.07	.36**	-.12	-.10	.77**	-.16*	-.24**

Note. N (correlation between T1 & T2) = N(T2) = 193; N (correlation between T1 & T3) = N(T3) = 172; N (correlation between T2 & T3) = N(T3) = 172. T1 = Data collection time period 1; T2 = Data collection time period 2; T3 = Data collection time period 3.

\*\* Coefficients are significant at  $p < .01$ .

\* Coefficients are significant at  $p < .05$ .

As shown in Table 5.4, between T1 and T2, Academic self-efficacy T1 was positively and strongly correlated with Academic self-efficacy T2 ( $r = 0.2, p < .001$ ). The same for Flourishing Scale and Academic stress, Flourishing Scale at T1 and T2 were significantly positively correlated at  $r = 0.16, p < .05$ ; academic stress at T1 was highly correlated with itself at T2 ( $r = 0.22, p < .001$ ). This indicates that those students who rated high/low scores of their academic self-efficacy at T1 tended to rate the same level at T2; those who

reported good scores for Flourishing Scale at T1 also reported relatively high scores at T2. At last, it can be predicted that those participants who experienced high/low levels of academic stress at T1 also held high/low levels at T2.

Table 5.4 also demonstrates that between T1 and T3, Academic self-efficacy T1 was highly positively correlated with itself at T3 ( $r = 0.47, p < .001$ ); and with Flourishing scale at T3 ( $r = 0.21, p < .01$ ). This implies that respondents with high level of academic self-efficacy at T1 tended to have a strong sense of academic self-efficacy and positive psychological and social functioning at T3. Flourishing Scale at T1 was highly correlated with itself at T3 ( $r = 0.44, p < .001$ ); and with academic self-efficacy at T3 ( $r = 0.34, p < .001$ ). It can be told that participants who scored high on Flourishing Scale at T1 also had a high score at T3, and tended to report high level of academic self-efficacy at T3. Academic stress at T1 was positively correlated with itself at T3 ( $r = 0.36, p < .001$ ) and negatively correlated with Flourishing Scale at T3 ( $r = -.17, p < .05$ ). This indicates that these students who had experienced relatively high academic stress levels at T1 tended to score low on Flourishing Scale at T3.

Table 5.4 also displays the correlations for Academic self-efficacy, Flourishing scale and Academic Stress between T2 and T3. It was shown that academic self-efficacy at T2 was highly significantly correlated with itself and Flourishing scale at T3 ( $r = 0.81, p < .01$ ;  $r = 0.54, p < .01$ ). It indicates that students who had high levels of academic self-efficacy at T2 scored high on Flourishing scale at T3. Flourishing scale at T2 was positively statistically correlated with itself at T3 and academic self-efficacy at T3 separately ( $r = 0.76, p < .01$ ;  $r = 0.47, p < .01$ ). This implies that those respondents with high scores on Flourishing scale at T2 also reported high academic self-efficacy levels at T3. Academic stress at T2 and T3 were significantly correlated at  $r = 0.77, p < .01$ . Academic stress at T2 was also correlated with Flourishing scale at T3 negatively at  $r = -0.17, p < .05$ . There was no correlation between Flourishing scale at T2 and academic stress at T3 ( $r = -.1, p > .05$ ). At last, Table 6 presents the correlations for Academic self-efficacy, Flourishing scale and Academic Stress at T3. It can be seen that academic self-efficacy at T3 was positively correlated with Flourishing scale at T3 ( $r = 0.61, p < .01$ ).

All in all, academic self-efficacy, Flourishing scale and academic stress at one time period were all positively correlated with themselves at the remaining two time periods respectively, meaning that students who reported high level of academic self-efficacy during their first term continued having a strong sense of academic self-efficacy at the other two time points; respondents who scored high on Flourishing scale at T1 tended to achieve high scores on it at both T2 and T3 again; students who experienced high levels of

academic stress at the beginning of the academic year, most likely felt depressed for the study during the following times of that year as well.

In order to further examine the relationships among Chinese international students' academic self-efficacy, psychological flourishing, academic stress, and the five dimensions of personality, correlational analyses with composite were conducted at three time points (T1, T2 & T3) as shown in Table 5.5. The results show that composite academic self-efficacy was highly correlated with Flourishing scale ( $r = 0.58, p < .01$ ), Openness Experience ( $r = 0.25, p < .01$ ), and IELTS ( $r = 0.23, p < .01$ ) and significantly correlated with Conscientiousness ( $r = 0.16, p < .05$ ), and Length in the UK ( $r = 0.17, p < .05$ ). It indicates that students with high academic self-efficacy tend to score high on Flourishing scale, Conscientiousness and Openness experience. It also implies that students who have stayed longer in the UK are more likely to score high for composite academic self-efficacy. As expected, these students with high IELTS scores also hold a strong sense of academic self-efficacy. All in all, this finding is similar to the correlations findings of academic self-efficacy with Flourishing scale at T1 and T2 respectively, and with the remaining variables (Table 5.3).

Table 5. 5 Correlations for Composite Academic Self-efficacy, Flourishing Scale and Academic Stress Level of Three Time Points, Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness Experience.

Measure	1	2	3	4	5	6	7	8	9
1. Academic self-efficacy									
2. Flourishing Scale	.58**								
3. Extraversion	.13	.35**							
4. Agreeableness	-.03	.04	-.17*						
5. Conscientiousness	.16*	.23**	.03	.16					
6. Emotional stability	.06	.12	-.01	.22*	.41**				
7. Openness Experience	.25**	.30**	.14	.00	.10	-.08			
8. Academic stress	-.12	-.18*	-.12	.19*	-.17*	-.28**	.01		
9. IELTS	.23**	.10	.03	.01	.08	.07	.09	.08	
10. Length in the UK	.17*	-.00	.02	.02	.02	-.12	.06	.16*	.10

Note. N = N (T3) = 172

\*\* . Coefficients are significant at  $p < .01$ .

\* . Coefficients are significant at  $p < .05$ .

Composite psychological Flourishing Scale was positively and significantly correlated with Extraversion ( $r = 0.35, p < .01$ ), Conscientiousness ( $r = 0.23, p < .01$ ) and Openness experience ( $r = 0.3, p < .01$ ) individually. However, results indicated an inverse relationship between the scores on Flourishing Scale and the levels of academic stress for

these Chinese students,  $r = -0.18$ ,  $p < .05$ . This implies that students who scored high on Extraversion, or Conscientiousness, or Openness Experience also score high for flourishing scale. Alternatively, those students who reported high levels of academic stress tend to report low scores on Flourishing Scale.

Moving to correlations between the five dimensions of personality, Agreeableness was significantly positively correlated with Emotional Stability ( $r = 0.22$ ,  $p < .05$ ), and negatively correlated with Extraversion ( $r = -0.17$ ,  $p < .05$ ). Emotional Stability was significantly highly correlated with Conscientiousness at  $r = 0.41$ ,  $p < .01$ . At last, Table 5.5 shows that academic stress was positively correlated with Length in the UK at  $r = 0.16$ ,  $p < .05$ . This implies that students who have stayed in the UK longer reported higher levels of academic self-efficacy.

In general, the results suggest that composite academic self-efficacy and Flourishing Scale are highly intercorrelated at  $r = 0.58$ ,  $p < .01$ . Among the five dimensions of personality, Extraversion, Conscientiousness and Openness Experience were highly positively correlated with students' psychological Flourishing ability. The longer that these Chinese international students stayed in the UK, the more likely that they were to have higher levels of academic self-efficacy; but also experience higher levels of academic stress.

In summary, academic self-efficacy and Flourishing Scale were highly intercorrelated at all three time points individually (T1:  $r = 0.49$ ,  $p < .01$ ; T2:  $r = 0.59$ ,  $p < .01$ ; T3:  $r = 0.61$ ,  $p < .01$ ) and compositely ( $r = 0.58$ ,  $p < .01$ ). The same holds for Extraversion and Flourishing Scale, they were positively correlated in all correlational analysis. Academic stress was negatively correlated with Flourishing Scale at T1, T3 and compositely, but not significantly at T2.

A one-way between subjects ANOVA was conducted to compare the undergraduates, masters and doctoral students' Academic self-efficacy, Psychological Flourishing Scale and Academic Stress level (Table 5.6). There was a statistically significant difference between groups at the  $p < .01$  level for Academic Self-efficacy [ $F(2, 206) = 7.88$ ,  $p = 0.00$ ]. Significant differences were found between groups at the  $p < .05$  level for Psychological Flourishing Scale [ $F(2, 206) = 3.52$ ,  $p = 0.03$ ] and Academic Stress level [ $F(2, 206) = 3.67$ ,  $p = 0.03$ ].

Table 5. 6 One-way Analysis of Variance of Academic Degree in Academic Self-efficacy, Psychological Flourishing Scale and Academic Stress Level

		SS	df	MS	F	p
Academic self-efficacy_T1	Between Groups	22.51	2	11.26	7.88	.00
	Within Groups	294.11	206	1.43		
	Total	316.62	208			
Flourishing Scale_T1	Between Groups	5.33	2	2.67	3.52	.03
	Within Groups	156.13	206	.76		
	Total	161.46	208			
Academic Stress_T1	Between Groups	26.42	2	13.21	3.67	.03
	Within Groups	740.73	206	3.60		
	Total	767.16	208			

Note. N = 209. T1 = Data collection time period 1.

Table 5. 7 Group Differences in the Means for Academic self-efficacy Scale, Flourishing Scale, and Academic Stress Level at Time One Data Collection Period.

Measures	Undergraduate (1)		Master (2)		PhD (3)		post hoc
	M	SD	M	SD	M	SD	
AcaSE_T1	4.37	1.35	4.56	1.17	5.38	1.06	3 > 1, 2
FS_T1	5.01	1.04	5.35	0.85	5.45	0.68	3 > 1
Academic Stress	6.91	1.92	6.05	1.82	6.53	1.90	1 > 2

Note. N = 209. n (undergraduate students) = 45, n (master students) = 130, n (PhD students) = 34. AcaSE = Academic self-efficacy Scale; FS = Flourishing Scale; Academic Stress = Academic stress level. The Numbers in parentheses in column heads refer to the numbers used for illustrating significant differences in the last column titled "Post hoc."

Post hoc comparisons using the TUKey HSD test (Table 5.7) indicated that the mean score of Academic Self-efficacy for PhD students (M = 5.38, SD = 1.06) was significantly different than undergraduates (M = 4.37, SD = 1.35) and masters (M = 4.56, SD = 1.17). However, Academic Self-efficacy for masters (M = 4.56, SD = 1.17) did not significantly differ from undergraduates (M = 4.37, SD = 1.35). Taken together, these results suggest that PhD students rated themselves the highest for Academic Self-efficacy.

In terms of Flourishing Scale, post-hoc TUKey's HSD tests showed that PhD students (M = 5.45, SD = 0.68) had significantly higher scores than undergraduates (M = 5.01, SD = 1.04) at the .05 level of significance. All other comparisons were not significant. For Academic Stress, results suggested that undergraduates (M = 6.91, SD = 1.92) had significantly higher levels than masters (M = 6.05, SD = 1.82). In summary, Chinese

international undergraduate students reported lower both academic self-efficacy and psychological flourishing than PhD students.

A multiple linear regression (Table 5.8) was calculated to predict students' Psychological Flourishing at T1 based on their academic self-efficacy and academic stress levels at T1, personality variables, and IELTS score. Table 5.8 demonstrated the possible predictors for participants' Psychological Flourishing at T1. It was found that Academic Self-efficacy at T1 (Beta = 0.37,  $p < .001$ ), Extraversion (Beta = 0.35,  $p < .001$ ), Agreeableness (Beta = 0.11,  $p < .05$ ), Openness Experience (Beta = 0.21,  $p < .001$ ) were significant and positive predictors. Academic degree, Academic Stress at T1, Conscientiousness, Emotional Stability and IELTS were not significant predictors.

Table 5. 8 Regression Analysis Summary for Academic Self-efficacy at T1, Personality Variables, Academic Stress Level at T1, IELTS Score and Academic Degree Predicting Students' Psychological Flourishing at T1.

Variable	B	SE B	$\beta$
Academic self-efficacy_T1	.26	.04	.37**
Extraversion	.24	.04	.35**
Agreeableness	.11	.06	.11*
Conscientiousness	.07	.05	.01
Emotional Stability	.05	.04	.07
Openness Experience	.19	.05	.21**
Academic Stress_T1	-.01	.03	-.02
IELTS	.03	.05	.04
Academic degree	.02	.08	.02

Note.  $R^2 = .46$ . adjusted  $R^2 = .44$  (N = 209) Predictors: Academic self-efficacy at T1, Academic Stress at T1, Academic degree (undergraduate, master, PhD), Agreeableness, Emotional Stability, Openness Experience, Extraversion, Conscientiousness, and IELTS.

\*\* . Coefficients are significant at  $p < .001$ .

\* . Coefficients are significant at  $p < .05$ .

Another multiple linear regression (Table 5.9) was calculated to predict students' composite Psychological Flourishing at T1, T2, and T3; based on their composite academic self-efficacy and academic stress levels at the three time points, personality variables, and IELTS score. By using composite T1, T2, and T3 variables, it allows the researcher to analyse students' overall psychological well-being, academic self-efficacy and academic stress in a whole academic year. The results showed that composite academic self-efficacy significantly predicted composite score of Flourishing scale ( $\beta = 0.52$ ,  $p < .001$ ), as did



extraversion ( $\beta = 0.27, p < .001$ ) and openness experience ( $\beta = 0.13, p < .05$ ). Academic Stress, agreeableness, conscientiousness, emotional stability, academic degree and IELTS were not significant predictors.

Table 5. 9 Regression Analysis Summary for Composite Academic Self-efficacy, Personality Variables, Academic Stress Level, IELTS Score and Academic Degree Predicting Students' Composite Psychological Flourishing of Three Time Points.

Variable	B	SE B	$\beta$
Academic self-efficacy	.41	.05	.52**
Academic Stress	-.03	.03	-.06
Extraversion	.14	.03	.27**
Agreeableness	.08	.05	.10
Conscientiousness	.06	.04	.10
Emotional Stability	.00	.04	.00
Openness Experience	.10	.04	.13*
IELTS	-.03	.04	-.05
Academic degree	-.02	.07	-.02

Note.  $R^2 = .47$ . adjusted  $R^2 = .44$  ( $N = 172$ ) Predictors: Academic self-efficacy, Academic Stress, Agreeableness, Openness Experience, Extraversion, Conscientiousness, Emotional Stability, Academic degree and IELTS. Academic self-efficacy, Academic Stress and Flourishing Scale were all composite variables of three time points T1, T2 and T3.

\*\* . Coefficients are significant at  $p < .001$ .

\* . Coefficients are significant at  $p < .05$ .

In order to measure the changes of students' academic self-efficacy, psychological flourishing and academic stress, three one-way repeated measures analysis of variance (ANOVA) were conducted separately. The sample size for this analysis adapted the number of participants at T3 ( $N = 172$ ). Table 5.10 displayed the overall means of Academic self-efficacy, Flourishing Scale and Academic Stress at all three time points for students who had participated in all three times data collection. The analysis of variance results for academic self-efficacy and time variables were reported from Table 5.11 to Table 5.13. A one-way repeated measured analysis of variance (ANOVA) (Table 5.11) was conducted to evaluate the null hypothesis that there is no change in participants' academic self-efficacy when measured at the beginning, in the middle and at the end of an academic year. The results of the ANOVA indicated a significant time effect, Wilks'  $\lambda = .72, F(2,167) = 32, p < .001$ .

Table 5. 10 Overall Means of Academic self-efficacy, Flourishing Scale and Academic Stress at all three time points.

Factors	T1			T2			T3		
	M	SD	Skewness	M	SD	Skewness	M	SD	Skewness
Academic Self-efficacy	4.75	1.11	-.08	4.79	1.03	.00	4.92	1.04	-.34
Flourishing Scale	5.30	0.81	-.03	5.43	0.87	-.36	5.40	0.83	-.1
Academic Stress	6.24	1.76	-.45	6.50	1.89	-.32	5.96	1.64	-.11

Note. N = N (T3) = 172 (female = 138, male = 34). T1 = Data collection time period 1; T2 = Data collection time period 2; T3 = Data collection time period 3; Academic self-efficacy was measured by using a 7-point scale with descriptors at “1” (“Not at all true of me”) and “7” (“Very true of me”); Flourishing Scale used a 1-7 Likert scale ranging from strongly disagree to strongly agree; Academic stress = Academic stress level. Academic stress level was measured by a 10 points Likert scale ranging from 1-10 (from no stress to extremely stressed).

Table 5. 11 Multivariate Tests

Effect	Value	F	df1	df2	Sig.
Wilks' Lambda	.72	32.43	2	167	.000

Note. Within Subjects Design: time.

\*. Coefficients are significant at  $p < .0005$ .

A repeated measures ANOVA with a Greenhouse-Geisser correction (Table 5.12) determined that mean Academic self-efficacy differed statistically significantly between time points ( $F(1.37, 230.45) = 12.14, P < 0.0005$ ).

Table 5. 12 Tests of Within-Subjects Effects of Academic Self-efficacy

Source		SS	df	MD	F
time	Greenhouse-Geisser	12.20	1.37	8.90	12.14
Error	Greenhouse-Geisser	168.91	230.45	.73	

Note. \*. Coefficients are significant at  $p < .0005$ .

Post hoc tests using the Bonferroni (Table 5.13) were conducted to follow up the comparisons of academic self-efficacy at different time points. It revealed that there was a slightly increase in students' academic self-efficacy from the beginning ( $M = 4.75, SD = 1.11$ ) and middle ( $M = 4.79, SD = 1.03$ ) respectively to the end ( $M = 5.11, SD = 0.9$ ) of an academic year, which was statistically significant ( $p < .001$ ). However, academic self-efficacy had increased slightly during the middle ( $M = 4.68, SD = 1.05$ ) of that

academic year compared with the beginning ( $M = 4.75$ ,  $SD = 1.11$ ), which was not statistically significantly ( $p > .05$ ).

Table 5. 13 Comparisons of Academic Self-efficacy at Three Time Points.

Academic self-efficacy	Academic self-efficacy	Mean Difference	SE
Time 1	Time 2	-.03	.10
	Time 3	-.34*	.08
Time 2	Time 1	.03	.10
	Time 3	-.31*	.05
Time 3	Time 1	.34*	.08
	Time 2	.31*	.05

Note. Based on estimated marginal means. Adjustment for multiple comparisons: Bonferroni. For the means and standard deviations for all variables see Table 5.12.

\*. The mean difference is significant at the .05.

The analysis of variance results for Psychological flourishing and time variables were reported from Table 5.14 to Table 5.16. Another one-way repeated measured analysis of variance (ANOVA) (Table 5.14) was conducted to evaluate the null hypothesis that there is no change in participants' Flourishing Scale when measured at the beginning, in the middle and at the end of an academic year. The results of the ANOVA indicated a significant time effect, Wilks' lambda = .90,  $F(2,167) = 9.34$ ,  $p < .001$ .

Table 5. 14 Multivariate Tests of Flourishing Scale

Effect	Value	F	df <sub>1</sub>	df <sub>2</sub>	Sig.
Wilks' Lambda	.90	9.35	2	167	.000

Note. Within Subjects Design: time.

\*. Coefficients are significant at  $p < .0005$ .

A repeated measures ANOVA with a Greenhouse-Geisser correction (Table 5.15) determined that mean score of Flourishing Scale differed statistically significantly between time points ( $F(1.49, 249.56) = 6.77$ ,  $P < 0.005$ ).

Table 5. 15 Tests of Within-Subjects Effects of Flourishing Scale.

Source		SS	df	MS	F
time	Greenhouse-Geisser	4.74	1.49	3.19	6.77
Error	Greenhouse-Geisser	117.51	249.56	.47	

Note. \*. Coefficients are significant at  $p < .005$ .

Post hoc tests using the Bonferroni (Table 5.16) were conducted to follow up the comparisons of psychological Flourishing ability at three different time points. It revealed that there was a slightly increase in students' psychological flourishing from the beginning T1 ( $M = 5.30, SD = 0.81$ ) to the end T3 ( $M = 5.43, SD = 0.87$ ) of an academic year, which was statistically significant ( $p = .001$ ). However, students' scores for Flourishing Scale had increased slightly during the middle ( $M = 5.43, SD = 0.87$ ) of that academic year compared with the beginning ( $M = 5.54, SD = 0.78$ ), which was not statistically significantly ( $p > .05$ ).

Table 5. 16 Comparisons of Psychological Flourishing Ability at Three Time Points.

Flourishing Scale	Flourishing Scale	Mean Difference	SE
Time 1	Time 2	-.13	.08
	Time 3	-.24*	.07
Time 2	Time 1	.13	.08
	Time 3	-.10	.05
Time 3	Time 1	.24*	.07
	Time 2	.10	.05

Note. Based on estimated marginal means. Adjustment for multiple comparisons: Bonferroni. For the means and standard deviations for all variables see Table 5.12.

\*. The mean difference is significant at the .05.

The analysis of variance results for academic stress and time variables were reported from Table 5.17 to Table 5.19. The last one-way repeated measured analysis of variance (Table 5.17) was conducted to evaluate the null hypothesis that there is no change in participants' Academic Stress Level when measured at the beginning, in the middle and at the end of an academic year. The results of the ANOVA indicated a significant time effect, Wilks' lambda = .83,  $F(2,167) = 17.21, p = .000$ .

Table 5. 17 Multivariate Tests of Academic Stress.

Effect	Value	F	df <sub>1</sub>	df <sub>2</sub>	Sig.
Wilks' Lambda	.829	17.21	2	167	.000

Note. Within Subjects Design: time.

\*. Coefficients are significant at  $p < .0005$ .

A repeated measures ANOVA with a Greenhouse-Geisser correction (Table 5.18) determined that mean score of Academic Stress Level differed statistically significantly between time points ( $F(1.51, 253.75) = 16.48, P < 0.005$ ).

Table 5. 18 Tests of Within-Subjects Effect.

Source		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
time	Greenhouse-Geisser	24.89	1.51	16.48	7.55
Error	Greenhouse-Geisser	553.90	253.75	2.18	

Note. \*. Coefficients are significant at  $p < .005$ .

Table 5. 19 Comparisons of Academic Stress Level at Three Time Points.

Flourishing Scale	Flourishing Scale	Mean Difference	<i>SE</i>
Time 1	Time 2	-.27	.17
	Time 3	.28	.15
Time 2	Time 1	.27	.17
	Time 3	.54*	.09
Time 3	Time 1	-.28	.15
	Time 2	-.54*	.09

Note. Based on estimated marginal means. Adjustment for multiple comparisons: Bonferroni. For the means and standard deviations for all variables see Table 5.12.

\*. The mean difference is significant at the .05.

Post hoc tests using the Bonferroni (Table 5.19) were conducted to follow up the comparisons of respondents' academic stress level at three different time points. It revealed that there was a reduction in students' academic stress level from the middle (T2:  $M = 6.5$ ,  $SD = 1.89$ ) to the end (T3:  $M = 5.96$ ,  $SD = 1.86$ ) of an academic year, which was statistically significant ( $p < .005$ ). However, students' scores for academic stress level had increased slightly during the middle (T2:  $M = 6.5$ ,  $SD = 1.89$ ) of that academic year compared with the beginning (T1:  $M = 6.24$ ,  $SD = 1.76$ ), which was not statistically significantly ( $p > .05$ ).

Overall, these three individual ANOVA analysis suggesting that students' level of academic self-efficacy increased at the end of an academic year after two terms of studying in the UK, so did their psychological flourishing. However, there was no significant increase in these two variables found from the beginning to the middle of an academic year. The results also implied that students experienced less academic stress during the last term of study comparing with the second term.

### 5.5 Frequency Analysis of Short Texts Answer Questions

For all three data collection times periods, at the end of the questionnaires in the short answer section, respondents were asked why their academic self-efficacy and

psychological well-being levels changed. Code frequency analysis of responses was applied to avoid bias on factors that affect respondents' academic self-efficacy and psychological well-being; and to keep the researcher "analytical[ly] honest" (Miles & Huberman, 1994, p.253). This also placed attention on the influential factors that were not covered in the in-depth interviews. In addition to exploring factors' frequency counts at different time periods, the Spearman rank order correlation was run to determine the relationship between these factors among different time periods, and explore international Chinese students' changes in academic self-efficacy and psychological well-being.

The codes for this frequency analysis were initially derived from the problem areas international students face in academic, social, and psychological adjustment. In order to adjust pre-sett codes to fit the data, a small portion of them emerged from the key words in the short text responses. To better organise the data, two code categories were broken into sub-codes after reading and analysing the text data collected from the questionnaire.

### **5.5.1 Academic Self-efficacy**

Table 5.20 presents the code frequencies of the factors that have affected participants' academic self-efficacy levels at the three time periods. It details how frequently these Chinese international students have reported each factor as the cause of their academic self-efficacy changes. Nearly all respondents, 93 percent at T1, 94 percent at T2, and 92 percent at T3, reported changes in their academic self-efficacy and specified the reasons for this. The responses were classified into 18 major categories. Throughout the entire academic year, academic performance, academic stress, course difficulty, academic support and English language proficiency were the top five most frequently mentioned categories. This reveals that these five factors are strongly tied to Chinese international students' academic self-efficacy. Meanwhile, a few codes were only mentioned at one or two time periods. For example, the career concerns factor was only brought up during the last data collection time period, indicating that students started to worry about finding jobs when it was closer to their graduation. Motivation and education system difference were only mentioned at T1 and T2, which shows that these issues tend to stop affecting students' academic self-efficacy these during the last third of one academic year.

Table 5. 20 Factors Affecting Students' Academic Self-efficacy. Codes and Frequencies in Descending Order of Total Frequencies of Mention at All Three Time Periods.

Codes	Codes frequency at		
	T1	T2	T3
<i>Academic performance</i>	54	62	80
Exams or essays' scores/feedbacks	27	37	44
Study skills	21	10	16
Efforts	5	13	19
Conference performance	1		1
<i>Academic stress</i>	33	36	24
<i>Course difficulty</i>	38	14	6
<i>Academic support/discouragement</i>	16	19	12
Supervisor	9	11	12
Peers/classmates	7	8	
<i>English Language proficiency</i>	21	12	11
<i>Psychological stress/Emotions</i>	6	8	11
<i>Self-regulation</i>	6	6	9
<i>Adaptation</i>	2	2	12
<i>Motivation</i>	13	3	
<i>Life satisfaction</i>	3	9	1
<i>Education system difference</i>	6	7	
<i>Time concept</i>	4	2	2
<i>Career concern</i>			4
<i>Family issues</i>	3		
<i>Personal relationships</i>	1	1	
<i>Homesick</i>		1	
<i>Health</i>		1	
<i>Weather</i>		1	

Note. N (T1) = 209 (female = 172, male = 37); N (T2) = 193 (female = 159, male = 34); N (T3) = 172 (female = 140, male = 32). T1, T2 and T3 = Data collection time period 1,2 and 3. The percentage of respondents who reported change in academic self-efficacy for T1 = 93, T2 = 94, T3 = 92. The codes are in italicized text; sub-codes categories are in non-italicized text.

Table 5.21 displays the rank order of the 10 factors that have affected Chinese international students' academic self-efficacy levels at all three time periods in the academic year. This rank order was calculated by the frequency of mention of each code at T1, T2 and T3, individually.

Table 5. 21 Rank Orders of The 10 Factors Affecting Students' Academic Self-efficacy Across All Three time periods.

Factors	Rank (T1)	Rank (T2)	Rank (T3)
Academic performance	1	1	1
Course difficulty	2	4	8
Academic stress	3	2	2
English language proficiency	4	5	5.5
Academic support/discouragement	5	3	3.5
Psychological stress/Emotions	6.5	7	5.5
Self-regulation	6.5	8	7
Time concept	8	9.5	9
Life satisfaction	9	6	10
Adaptation	10	9.5	3.5

*Note.* Rank order correlation coefficient (Spearman's  $\rho$ ) for T1 and T2 = .85  $p = .002$ . Rank order correlation for T1 and T3 = .47  $p = .17$ . Rank order correlation for T2 and T3 = .56  $p = .09$ . N (T1) = 209; N (T2) = 193; N (T3) = 172. T1 = Data collection time period 1; T2 = Data collection time period 2; T3 = Data collection time period 3.

### 5.5.1.1 Academic performance and stress

The frequency rank order of all codes varies at different time periods except for academic performance, which remains the most reported at all time periods. Academic performance including exam results, feedback from supervisor, essay scores and so on was the most frequently provided factor that has affected these Chinese international students' academic self-efficacy levels throughout the whole academic year. For example, one student described the reasons why his/her academic self-efficacy has changed as "it is mainly because of the changes in my exam scores; I have no confidence when I come across difficult study topics; and I am not confident enough to graduate with good scores". Mastery experience as the foremost source of self-efficacy provides an explanation for this (Bandura, 1977). In academic settings, students' previous academic performance contributes largely to their academic self-efficacy. Successful academic experience strengthens students' academic self-efficacy, whereas failures in exams, essays, negative feedback and lower grade undermine it. Meanwhile, as shown in Table 5.20, respondents reports had much greater frequency of academic performance at T3 than T1 and T2. The majority of the Chinese international students reported academic performance as the reason why their academic self-efficacy levels has changed at T3. The explanation for this could be that these respondents' academic performance at T1 and T2 allowed them to evaluate their academic abilities, which thus contributed to their academic self-efficacy at T3.



Academic stress is another factor with a frequency rank order that remains in the top three across all time periods. It is the second most frequently mentioned factor at both T2 and T3. Academic stress such as examination related stress, anxiety due to deadlines for paper submission and depression because the number of readings for assignments, or an excessive class workload, was constantly brought up by respondents as a factor that have resulted in the decrease of their academic self-efficacy levels. For example, respondents reported a “really busy schedule for term modules, no enough time for reading materials at all”, “too much reading materials, and encountered difficulties in course materials”, “feel pressure because exams happening soon”, and “feel[ing] huge pressure from writing essays and it is not going well”. This indicates that experiencing feelings of academic pressure leading to academic related negative emotions have weakened Chinese international students’ beliefs in their capabilities to achieve academic tasks. The continuously high ranking of academic stress also implies that it is common for Chinese international students confronting of academic difficulties and experiencing the stress for coping with the demands of academic study throughout the whole academic year at university.

#### **5.5.1.2 Course difficulty**

Another obvious and interesting finding as shown in Tables 5.20 and Table 5.21, is that the frequency counts and rank orders of course difficulty varied a lot at the different time periods. The course difficulty factor was illustrated in respondents’ answers such as “[the] course is difficult as it is related to a lot of psychological knowledge”, “the content of the course is really complicated” and “[the]course is getting more difficult, although I am getting more familiar with the present learning area, still feel nervous with the new coming study part”. Students reported much greater frequency of course difficulty as the factor that affected their academic self-efficacy levels at T1 than T2 and T3. The rank order dropped down from second at T1 to fourth at T2 and even eighth at T3. Comments such as, “the course is too difficult” and “the course difficulty level has increased/changed” were mentioned less and less mentioned by these Chinese international students with time. It is believed that the degree of course difficulty affected Chinese international students’ academic self-efficacy at the beginning of the semester very often, but not much afterwards; especially during the last term of the academic year when students seldom brought it up.

#### **5.5.1.3 English Language proficiency**

It is not surprising that English Language proficiency was frequently mentioned as a factor that has influenced Chinese international student respondents’ academic self-efficacy levels, especially at T1, since English is their second language. English language proficiency is a basic demand for successful adjustment in the UK as they need to use

English both in academic and social environment. A variety of language barriers issues, such as it being “hard to understand or follow the lecture content in English”, “they speak English too fast”, “accents is too strong”, and difficulties in reading or writing in English, finding it hard to communicate in English effectively, and so on were frequently reported to have weakened these Chinese international students’ confidence in their academic study. Respondents also reported potential dismay when their “English did not improve much”. This indicates that Chinese international students are highly concerned about English language proficiency potentially preventing them from reaching academic successes and having high level of academic self-efficacy. However, students whose English language proficiency improved reported being more confident in their academic study abilities. For example, one respondent claimed that at T3 “I am more confident than before, one reason is that my English ability has been improved after staying here (in the UK) for sometime”.

#### **5.5.1.4 Academic support**

Another factor that has been mentioned frequently as affecting participants’ academic self-efficacy levels was academic support, especially the support received from their supervisors. Respondents pointed out that the academic support they had received from supervisors and classmates was the reason why their academic self-efficacy was enhanced. Students illustrated this factor as “[I am more confident] mainly because my supervisor is really nice and supportive”. Those who experienced a lack of guidance from their supervisor decreased in confidence. For example, “the direction of [my] study is [a] blur, it is not clear, [I have a] lack of guidance from [my]supervisor”. Indeed, the instructions from supervisor and supportive communication help with reducing students’ academic stress, subsequently building up their confidence for performing academic tasks. Especially for international students who are not familiar with the study and teaching in a new environment, the guidance and feedback from supervisor are critical for their academic self-efficacy and successful academic adjustment.

#### **5.5.1.5 Psychological stress**

Another noted finding is that students reported a greater frequency of psychological stress at T3 than T1 and T2 as a factor decreasing their academic self-efficacy. ‘Being Emotional’ and ‘emotionally unstable’ appeared in the short texts answers at T3 more frequently than the previous two time periods. The explanation for this could be that there were generally multiple-tasks due at term 3; especially for these students who were pursuing one year taught master’s degrees in the UK, for whom T3 was close to the end of their period of study in the UK and the adjustment stage of being excited and fascinated by new the culture and experiences had already past.

### **5.5.1.6 Adaptation to the UK**

Interestingly, adaptation to the UK study was suddenly more frequently brought up by participants at T3, and it appeared to have increased their academic self-efficacy levels. Particularly, adaptation to the UK in the short texts answers analysis refers to the reported factors such as “get[ing] used to the study and life styles here [in the UK]” and “get[ing] used to the environment here”. It was demonstrated by one student that “another reason [that why my academic self-efficacy is increased] is that I know more about UK, the environment of my university and the city where it is located. I already got adapted to the study life in the UK as time goes on”. This gave an indication that these Chinese international students were becoming more familiar with the host location for their academic study after two terms of that academic year at university. Respondents rarely mentioned adaptation as the reason of their academic self-efficacy changes at both T1 and T2. It is not surprising especially for these international students who were studying for their first or the only academic year in the UK; T1 and T2 were still the stages of being curious and getting familiar with the new environment; frustration of different study styles and cultures.

The remaining factors including time concept, self-regulation, family issues, personal relationships, homesickness, health and weather were identified as the least influential. They were seldom mentioned by the Chinese international students across all three data collection time periods.

All in all, academic performance, academic stress and academic support have always been the frequently reported factors affecting Chinese international students’ academic self-efficacy across all three terms at university. In addition, except for academic performance, these Chinese international students were more concerned about course difficulty level at T1, as it resulted in changes in academic self-efficacy for many of them. The influence of adaptation on international students’ academic self-efficacy has been noted at T3 only.

### **5.5.1.7 Spearman’s rank-order correlation**

In addition to exploring factors that resulted in a change of academic self-efficacy, a spearman’s rank-order correlation was run to assess the relationships between students’ academic self-efficacy among T1, T2 and T3. There was a strong positive correlation of the rank orders of students’ academic self-efficacy influential factors between T1 and T2, which was statistically significant ( $r_s = .85$ ,  $p = .002$ ). Those factors that have great frequency at T1 tend to be reported frequently at T2 as well. The rank order of factors at T3 was not significantly correlated with either T1 or T2 ( $r_s = .47$ ,  $p = .17$ ;  $r_s = .56$ ,  $p = .09$ ).

## **5.5.2 Psychological well-being**

The frequency of a variety of factors affecting Chinese international students' psychological well-being levels at three different time periods is reported in Table 5.22.

### **5.5.2.1 Sociocultural factors**

As shown in Table 5.22, sociocultural factors were the most frequently reported category affecting respondents' psychological well-being at all three time periods. The interrelated associations between international students' sociocultural adjustment and psychological adaptation in cross-cultural transitions has been discussed in many intercultural studies (e.g. Shupe, 2007; Ward & Kennedy, 1994; Ward & Kennedy, 1999; Ward & Kennedy, 2007; Zhang & Goodson, 2011). Among all the reported sociocultural issues, social support has the greatest frequency across the entire academic year. Reports such as “[I] made good friends, we have many things in common”, “[my] flat mates are really nice”, “[I] have more friends now [and participate in], a variety of social activities” and “family support” were constantly brought up as reasons why changes had occurred to their psychological well-being levels. There is no doubt that social support has always played an important role for these international students who are living alone in a new culture and requested to adjust to a new life style. Specifically, the received accompany, encouragement and help from family, friends, classmates and the local community, which allowed sojourners to overcome the difficulties in their sociocultural and psychological adaptation. Evidence suggests that positive social support experience is negatively associated with adaptation depression (Poyrazli et al. 2004). However, developing networks in a new culture is also a challenge for international students. Feeling of loneliness and isolation were reported as the factors that had decreased these students' psychological well-being levels. Chinese international students mentioned, for example, being “far away from family and friends, the loneliness of studying abroad”, “smaller and smaller social circle” and “no friends and family as “company” as negative impacts on their psychological well-being.

Table 5. 22 Factors Affecting Students' Psychological Well-being. Codes and Frequencies in Descending Order of Total Frequencies of Mention.

Code	Codes frequency at		
	T1	T2	T3
<i>Sociocultural factors</i>	58	52	56
Social support	26	24	24
Loneliness & isolation	11	10	8
Cultural difference	8	9	12
Experience with local community	7	4	8
Culture fatigue	4	3	4
Discrimination and prejudice	2	2	1
<i>Academics</i>	41	32	32
Academic performance	18	20	16
Academic stress	23	12	16
<i>Adaptation</i>	23	15	28
<i>Personal growth</i>	26	11	24
<i>Personal psychological issues</i>	21	16	16
Psychological stress/Emotions	14	6	8
Homesickness	7	10	8
<i>Personality</i>	8	5	1
<i>Nature environment</i>	5	8	
<i>Weather</i>	1	4	4
<i>English Language proficiency</i>	2	2	4
<i>Career concern</i>	1	2	5
<i>Financial stress</i>	2	3	1
<i>Relationship problems</i>		3	2
<i>Health concern</i>	3	2	
<i>Policy (Brexit) impact</i>	1		
<i>Safety concern</i>	1		

Note. N (T1) = 209 (female = 172, male = 37); N (T2) = 193 (female = 159, male = 34); N (T3) = 172 (female = 140, male = 32). T1 = Data collection time period 1; T2 = Data collection time period 2; T3 = Data collection time period 3. The percentage of respondents reported change in academic self-efficacy for T1 = 97, T2 = 95. T3 = 90. The codes are in italicized text; sub-codes categories are in non-italicized text.

Providing an example of the responses that reported three influential factors cultural difference, experience with the local community and culture fatigue, all together contributed to the changes in the participants' psychological well-being. For example, "my sense of psychological well-being was high when I first came here, but after some time, I realized that it is so difficult to blend into the local community, which quit upset me. But now I am finishing my study here it doesn't matter anymore, actually I am becoming positive and happy now since I don't need to be bother with the relationships with the local community anymore".

Students reported positive experiences with the local community as a reason they were had higher psychological well-being; whereas for others, dissatisfaction with the local community was mentioned as a factor that decreased their psychological well-being levels. It is suggested that the more different the cultural backgrounds that people are from, the more chances they have for interpersonal conflicts (Babiker, Cox, & Miller, 1980). Cultural difference is a common issue for international students that could often result in difficulties and misunderstandings in their social experience with the local community (Dubinskas, 1992; Adler, 2000) and this is especially true for Chinese international students whose home culture is very different from that of the UK. Moreover, intercultural conflict experiences due to cultural distance can be stressful for international students (Babier et al., 1980). Its association with psychological well-being, specifically negative effects on psychological well-being was proven in research related to international students (Shupe, 2007; Ward & Kennedy, 1993; Ward & Searle, 1991). Responses such as "I am not bothered with socialization with British anymore", "[I am] tired of the UK life" or "[I] just feel tired of socializing with the locals" imply that some students were experiencing cultural fatigue, and this contributed to the decreasing in their psychosocial well-being levels. International students constantly need to make efforts in order to cope with the unfamiliar lifestyle. They were feeling fatigued or emotionally exhausted because of the energy and time required for adjustment and adaptation in a foreign country" (Donahue & Parsons, 1982; Haghirian, 2011). Moreover, response such as "[I have] lost the curiosity about the UK life", "[I have] been in the UK for too long, dislike here more and more" and "[I] know more about the local community and noticed that it is different from what I thought" which expressed respondents' tiredness and disappointment with the UK were also classified as a portion of the cultural fatigue factor.

Discrimination and prejudice were reported as having a negative impact on respondents' psychological well-being. Students expressed their experience of prejudice in ways such as "some people here are not friendly to international students, for example, some teenagers". Considering the culture distance between China and the UK as the more different that

international students' culture backgrounds are from the host countries, the more likely that they will experience discrimination and prejudice (Pedersen, 1991). Discrimination and prejudice could have negative outcomes for international students including feelings of isolation and loneliness (Constantine et al., 2005; Klomegah, 2006; Mori, 2000). It thus has negative effects for international students' psychological health and cultural adjustments (Mori, 2000; Yoon & Portman, 2004).

#### **5.5.2.2 Academic issues**

As expected, the second most frequently noted category was academic issues cross all three time periods. Academic issues including academic performance and stress, expressed in excerpts such as “because of my study”, “essays’ scores”, “academic achievement”, “pressure from my dissertation”, “because my research is making progress”, “if I could finish writing my dissertation early, I would be very happy” and “[I have] no confidence on my study, [I am] worried for graduation” often appeared in the responses. Academic success or failure as the main concern of international students is greatly associated with their psychological well-being. Actually, other than social support, academic performance and stress were the most frequently reported factors affecting students' psychological well-being.

#### **5.5.2.3 Adaptation**

The third most frequently reported factor was adaptation. Students mentioned this factor in terms such as “get used to the study life here” or “with time goes by, I am more familiar with the weather in the UK, life style and academic environment, my psychological well-being is transferring to a positive direction”. Unsurprisingly, students reported greater frequency of adaptation at T3 then T1 and T2. This implies that more students felt adjusted to the environment at the end of their academic year. “I felt unhappy at the beginning, with time goes by, I feel a lot better now.” Internationals students indeed need some time to become familiar with or feel secure in a foreign environment. Adaptation helps with international students enhancing their sense of security in a new life style, thus contributing to the increase in their psychological well-being levels.

#### **5.5.2.4 Personal growth**

Another commonly mentioned factor was personal growth, which was reported as having positive effects on respondents' psychological well-being. These international students claimed that they became more independent and mature by studying and living alone in the UK. For example, “[my] psychological well-being level was increased because my horizon is broadened” and “friends and social circle have changed a bit, which made me not depend on others that much anymore”. Personal growth as an important purposeful aspect

of psychological well-being is an expected outcome for international students who are living in a foreign environment.

#### **5.5.2.5 Personal psychological issues**

Personal psychological issues which involve psychological stress and homesickness appeared to be the fifth most frequently reported factor in terms of total frequency counts. The psychological stress factor category in the present study is quite general because there are a large number of responses that can not be classified into a specific stress factor group, such as “because of my emotions”, “not in the mood”, “negative emotions”, “unstable mental status”, “pressure”, “lost, confused” and “feelings of worthlessness”. These respondents did not specify the reasons or sources of their stresses or emotions. The explanation for this could be that it was hard for them to describe their feelings or their internal perceptions that caused negative emotions, but it may also be that they did not feel comfortable sharing their anxiety or other pressures in detail. High rates of psychological stress, such as depression and anxiety among international students could be resulting from a demanding foreign circumstance. Students feel frustrated from the process of personal psychological adjustment in their daily lives, thus decreasing their psychological well-being levels.

#### **5.5.2.6 Personality**

Personality appeared to be the sixth most frequently noted factor in terms of total frequency counts. Some international students’ personal characteristics were reported in responses such as “happiness lies in contentment”, “self-requirement”, “I am positive for my future”, “positive life attitude” and so on. These personal characteristics influence individuals’ reactions to stress, and how they deal with the stresses and demands of adjusting to UK life.

#### **5.5.2.7 Weather**

Interestingly but not surprisingly, some Chinese international students pointed out that the weather in the UK has affected their psychological well-being. They claimed that the gloomy and unpredictable weather in the UK made them feel depressed easily. In spite of the fact that there are individual differences in weather sensitivity, evidence has been found suggesting that humidity and hours of sunshine indeed influence individuals’ moods; levels of humidity are negatively associated with emotions (Howarth & Hoffman, 1984). The findings support the study by Haghirian (2011) that examined how the weather in host countries’ influences people who work abroad and concluded that particularly cloudy and rainy countries, such as the United Kingdom or the Netherlands, are likely to make people feel drained.



### 5.5.2.8 General living adjustment

Other factors related to general living adjustment were also reported as affecting students' psychological well-being but less frequently, such as adaptation to living or housing environment, health care and career concerns, dealing with financial issues and British food. Career concerns were only mentioned at T3 in affecting students' academic self-efficacy; similarly, for psychological well-being, these international students reported a greater frequency of career concerns at T3 than T1 and T2.

### 5.5.2.9 Spearman's rank-order correlation

In addition to examine the frequency of factors affecting students' psychological well-being, Spearman correlation was run to determine the relationships of these factors among T1, T2 and T3. As shown in Table 5.23, the researcher rank ordered the 10 factors that have been reported to have an impact on Chinese international students' psychological well-being at all three time periods. This rank order was calculated by the frequency of mention of each code at T1, T2 and T3, respectively. There is no obvious change for the frequency rank order of the top five codes at different time periods.

Table 5. 23 Rank Orders of Top 10 Factors Affecting Students' Psychological Well-being.

Factors	Rank (T1)	Rank (T2)	Rank (T3)
<i>Sociocultural issues</i>	1	1	1
<i>Academics</i>	2	2	2
<i>Personal growth</i>	3	5	4
<i>Adaptation</i>	4	4	3
<i>Personal psychological issues</i>	5	3	5
<i>Personality</i>	6	6	9.5
<i>English Language proficiency</i>	7.5	9.5	7.5
<i>Financial stress</i>	7.5	8	9.5
<i>Weather</i>	9.5	7	7.5
<i>Career concern</i>	9.5	9.5	6

*Note.* Rank order correlation coefficient (Spearman's  $\rho$ ) for T1 and T2 = .89  $p = .001$ . Rank order correlation for T1 and T3 = .79  $p = .007$ . Rank order correlation for T2 and T3 = .77  $p = .009$ . N (T1) = 209; N (T2) = 193; N (T3) = 172. T1 = Data collection time period 1; T2 = Data collection time period 2; T3 = Data collection time period 3.

There were strong and positive correlations between the factors' rank orders among all three time periods. The rank order correlation between T1 and T2 was the strongest ( $r_s = .89, p = .001$ ). The rank order was also very highly correlated for T1 and T3, which was statistically significant ( $r_s = .79, p = .007$ ). The rank order of factors at T2 was significantly correlated with T3 ( $r_s = .77, p = .009$ ). This implies that these factors that had great

frequency at T1 tended to be reported frequently at T2 and T3 as well. The factors affecting many participants' psychological well-being at T1 were more likely continuing to have influence on many students at T2 and T3. Moreover, Table 5.23 shows that the top five most frequently reported factors remained the same across all three time periods, which were sociocultural issues, academic issues, personal growth, adaptation, and personal psychological issues. The explanation for this finding could be that these five factors are mostly associated with international students' psychological well-being in the process of adjusting to the host culture.

### **5.5.3 Summary**

This frequency analysis of the short text answers from questionnaires not only examined the frequency of factors affecting and causing changes in Chinese international students' academic self-efficacy and psychological well-being at various time periods, but also explored the rank order correlations of factors' frequency among T1, T2 and T3.

It was found that the key factors affecting most or many Chinese international students' academic self-efficacy include the following five major categories: academic performance, academic stress, course difficulty, English language proficiency, and academic support (see Table 20 for detail). Specifically, academic performance was the most frequently reported factor through out the entire academic year. Academic stress was the second most commonly mentioned issue when respondents were asked about the reasons for their changes in academic efficacy. However, other than for academic performance and academic stress, the frequency rank orders of the remaining factors vary largely at different time periods. The factors that caused changes in academic self-efficacy for the majority of the Chinese international students at T1 or T2 were not frequently mentioned again at T3. Chinese international students' academic self-efficacy tends to be influenced greatly by different factors at different times of studying in the UK. Consequently, different academic aspects need to be addressed at various time periods in terms of helping Chinese international students to achieve academic successes in the UK.

It was also noted that sociocultural adjustment, academics, personal growth, adaptation and personal psychological issues were the five main factors affecting most of these Chinese international students' psychological well-being. It appears that students' psychological adaptation is most likely affected by their sociocultural experience such as received social support, cultural fatigue, discrimination, or differences in social activities, and encountering conflicts. The findings of the current study support the study by Pedesen (1991) that showed that a lack of social support negatively affects international students' psychological well-being. The results also showed that academic performance and stress affected both students' academic self-efficacy and psychological well-being. Academic

study as the main task for students that is responsible for causing, stress has been common for university students (Yumba, 2008). To cope with the negative impact of academic stress on international students is critical in their psychological well-being as it is related to the amount of overall stress they experienced. There was no obvious change for the frequency rank orders of factors affecting students' psychological well-being at different time periods of their study in the UK

International students experience considerable difficulties in their adjustment to a new study environment. Academic and psychological adaptation maybe regarded as two major issues for Chinese international students in the UK This frequency analysis allows the researcher to know the factors that these Chinese international students perceived as threatening to their academic self-efficacy and psychological well-being. It should be noted that academic failure and a high degree of academic stress have negative consequences for most aspects of international students' adaptation. Socio cultural issues and psychological distress tend to result in low levels of well-being. Academic support and social support help with preventing or minimizing the negative impact of these factors on the individuals.

## **5.6 Chapter summary**

This chapter identified the predictors of Chinese international students' academic self-efficacy and psychological well-being, explored the interrelationships between their academic self-efficacy and psychological well-being, and how do they change over an academic year. The quantitative analysis of both quantitate and qualitative data collected form the questionnaire suggests that academic factors are of great importance for Chinese international students' psychological well-being in the UK Students' high or low levels of academic self-efficacy was significantly correlated with the status of their psychological well-being across the entire academic year. Moreover, results showed that factors including academic performance, language proficiency, psychological stress and adaptation to the life in the UK were associated with both students' academic self-efficacy and psychological well-being. It was also found that Chinese international students' academic self-efficacy and psychological flourishing increased slightly at the end of the academic year.

## **6 Findings: questionnaire survey of university students in China**

### **6.1 Introduction**

The purpose of this chapter is to analyse the data collected from university students in China, and compare it with the data collected from Chinese international students in the UK. SPSS was used to analyse and compare the data. There was not as much missing data as the UK, since the questionnaire conducted in China was paper based, and the researcher was able to remind respondents of answering all the questions while collecting the questionnaire. Only four of the participants provided too much non-ignorable missing data that could not be used for analysis.

### **6.2 Participants**

The second group of participants were 295 full-time Chinese students from a Science and Technology university located in the northeast of China. This university is renowned for electromechanical engineering science and integrates engineering, economy, management, humanities and law in study. The previous academic performance of students in this university varies according to their college entrance examination scores; however, this performance is slightly above the overall average in China in general. These Chinese students (aged between 18-22 years old) were in different years of undergraduate programmes and in various departments. None of them had prior experience studying abroad.

### **6.3 Quantitative results**

As shown in Table 6.1, the average age of the student sample in China ( $N=295$ ) was 20.47 years ( $SD = 1.20$ ); 72 were female and 223 were male. This is a relatively young sample comparing with the participants in the UK ( $M = 23.57$ ,  $SD = 2.62$ ). The majority (75.6%) of the respondents in China were male as this sample university is famous for electromechanical engineering science and it is worldwide phenomenon that fewer women choose to major in engineering, mathematics and computer science than men (Hango, 2013). However, the majority (about 80%) of the participants in the UK were female.

The results in Table 6.1 show that the average scores of academic self-efficacy and academic stress for participants in China were both around the determined middle point ( $M = 4.38$ ,  $SD = 1.23$ ;  $M = 5.39$ ,  $SD = 1.94$ ). However, they scored medium-high for Flourishing Scale on average ( $M = 5.10$ ,  $SD = 1.04$ ). Comparing with the overall means of Chinese international students in the UK, the students in China had slightly lower levels of academic self-efficacy (UK:  $M = 4.66$ ,  $SD = 1.23$ ; China:  $M = 4.38$ ,  $SD = 1.23$ ) and psychological flourishing (UK:  $M = 5.37$ ,  $SD = 0.66$ ; China:  $M = 5.10$ ,  $SD = 1.04$ ); however, they seemed to also experience lower levels of academic stress (UK:  $M = 5.39$ ,  $SD = 1.94$ ; China:  $M = 6.23$ ,  $SD = 1.42$ ). Regarding the five dimensions of personality,

including Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness Experience, Chinese international students in the UK scored quite similarly to university students in China. All in all, students in the UK scored higher than those in China on all variables except for Emotional Stability (UK:  $M = 4.18$ ,  $SD = 1.21$ ; China:  $M = 4.24$ ,  $SD = 1.24$ )

Table 6. 1 Overall Means and Standard Deviations for both students in China and the UK

Factors	China			UK		
	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>M</i>	<i>SD</i>	<i>Skewness</i>
Academic Self-efficacy	4.38	1.23	-.11	4.88	0.84	.01
Flourishing Scale	5.10	1.04	-.62	5.37	0.66	-.53
Academic Stress	5.39	1.94	.23	6.23	1.42	-.12
Extraversion	4.40	1.55	-.13	4.39	1.32	.17
Agreeableness	4.33	1.06	-.15	4.79	0.86	.06
Conscientiousness	4.49	1.18	.03	4.64	1.14	-.12
Emotional Stability	4.24	1.24	.08	4.18	1.21	-.08
Openness Experience	4.44	1.21	.00	4.63	0.97	.20
Age	20.4	1.20	.51	23.57	2.62	1.14

*Note.* N (China) = 295 (female = 72, male = 223); N (UK) = N (T3) = 172 (female = 138, male = 34). T3 = Data collection time period three. The overall means for students in the UK are the average scores of participants at all three data collection time points. Academic self-efficacy was measured by using a 7-point scale with descriptors at “1” (“Not at all true of me”) and “7” (“Very true of me”); Flourishing Scale was measured by using a 1-7 Likert scale ranging from strongly disagree to strongly agree; Academic stress = Academic stress level. Academic stress level was measured by a 10 points Likert scale ranging from 1-10 (from no stress to extremely stressed). Extraversion, Agreeableness, Conscientiousness, Emotional Stability, Openness Experience were rated on a 7-point scale from that ranges from 1 (disagree strongly) to 7 (agree strongly).

Table 6. 2 Frequency of Average Grades of Students in China

Average score	<i>F</i>	%	Cum%
Under 50	3	1.0	1.0
50-59	7	2.4	3.4
60-69	82	27.8	31.3
70-79	123	41.7	73.1
80-89	60	20.3	93.5
Over 90	19	6.4	100.0
Total	294	99.7	

*Note.* N = 295 (female = 73, male = 222).

Table 6.2 presents that almost 70% of the participants’ average academic grades were higher than 70 by the term of data collection, which indicates that the majority of these students in China achieved relatively strong scores on their exams.

Table 6. 3 Correlations for Academic Self-efficacy, Flourishing Scale, Academic Stress, Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness Experience.

	1	2	3	4	5	6	7
1. Academic self-efficacy							
2. Flourishing Scale	.24**						
3. Academic Stress	-.11	-.11					
4. Extraversion	.08	.31**	-.03				
5. Agreeableness	-.13*	.10	.02	-.25**			
6. Conscientiousness	.18**	.34**	-.05	.16**	.09		
7. Emotional Stability	.15*	.26**	-.14*	.02	.16**	.20**	
8. Openness Experience	.08	.31**	-.02	.07	.06	.29**	.61**

Note. N = 295

\*\* . Coefficients are significant at  $p < .01$ .

\* . Coefficients are significant at  $p < .05$ .

In order to examine the relationships between the academic self-efficacy flourishing scale, academic stress and five dimensions of personality of participants in China, correlational analyses (Table 6.3) was conducted. It was found that academic self-efficacy was highly correlated with Flourishing scale at  $r = 0.24$ ,  $p < .01$ ; significantly correlated with Conscientiousness ( $r = 0.18$ ,  $p < .01$ ) and Emotional Stability ( $r = 0.15$ ,  $p < .05$ ); however negatively correlated with Agreeableness at  $r = -0.13$ ,  $p < .05$ . This indicates that these university students in China who have higher levels of academic self-efficacy also scored higher on Flourishing Scale, Conscientiousness and Emotional Stability. Results also show that other than for Agreeableness, all the remaining four dimensions of personality were highly and positively correlated with Flourishing Scale; including Extraversion ( $r = 0.31$ ,  $p < .01$ ), Conscientiousness ( $r = 0.34$ ,  $p < .01$ ), Emotional Stability ( $r = 0.26$ ,  $p < .01$ ) and Openness Experience ( $r = 0.31$ ,  $p < .01$ ). This implies that students who scored high on one of these four dimensions of personality scale also had high scores on Flourishing Scale. Results also indicate an inverse relationship between the scores on Emotional Stability and the levels of academic stress for these participants in China,  $r = -.14$ ,  $p < .05$ .

In general, the results suggest that academic self-efficacy and Flourishing scale are intercorrelated with each other ( $r = 0.24$ ,  $p < .01$ ), and they are both correlated with three or even four dimensions of personality. However, neither of them has significant correlation with academic stress level. Similarly, Chines international students' academic self-efficacy and psychological well-being was intercorrelated at all three time points over

the academic year (see section 5.4 Table 3 &4). However, their academic stress was negatively correlated with academic self-efficacy at all time points (see section 5.4, Table 5).

Table 6. 4 Regression Analysis Summary for Academic Self-efficacy and Academic Stress Level, Personality Variables, and Average Score Predicting Students' Psychological Flourishing.

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Academic self-efficacy	.15	.04	.17**
Academic Stress	.02	.03	.04
Extraversion	.20	.04	.30**
Agreeableness	.14	.05	.14*
Conscientiousness	.14	.05	.15*
Emotional Stability	.14	.04	.16*
Openness Experience	.18	.05	.21**
Average Score	-.03	.06	-.03

Note.  $R^2 = .31$ . adjusted  $R^2 = .29$  (N = 294) Predictors: Academic self-efficacy, Academic Stress, Agreeableness, Openness Experience, Extraversion, Conscientiousness, Emotional Stability and average score.

\*\* . Coefficients are significant at  $p < .001$ .

\* . Coefficients are significant at  $p < .05$ .

A multiple linear regression was conducted to predict these students' Psychological Flourishing based on their academic self-efficacy, academic stress levels, personality variables, and average score. Table 6.4 demonstrated the possible predictors for participants' Psychological Flourishing. It was found that Academic Self-efficacy ( $\beta = 0.17$ ,  $p < .001$ ), and all the five dimensions of personality, including Extraversion ( $\beta = 0.30$ ,  $p < .001$ ), Agreeableness ( $\beta = 0.14$ ,  $p < .05$ ), Consciousness ( $\beta = 0.15$ ,  $p < .05$ ), Emotional stability ( $\beta = 0.16$ ,  $p < .05$ ), and Openness Experience ( $\beta = 0.21$ ,  $p < .001$ ) were significant and positive predictors. Only academic stress level and average score were not significant predictors.

Comparing with the data collected from Chinese international students, whose Psychological Flourishing's significant predictors were academic self-efficacy ( $\beta = 0.52$ ,  $p < .001$ ), and two personality variables only, extraversion ( $\beta = 0.27$ ,  $p < .001$ ) and openness experience ( $\beta = 0.13$ ,  $p < .05$ ) (see Table 5.9), the psychological well-being of University students in China was more greatly associated with the five aspects of personality. The regression results were the same in terms of academic stress level, which was not a significant predictor for the Psychological Flourishing of neither of the two participants' groups.

## 6.4 Qualitative results

Table 6. 5 Rank Orders of Top 10 Factors Affecting Students' Academic Self-efficacy and Psychological Well-being Respectively.

Academic self-efficacy	Examples	Psychological well-being	Examples
1. Academic performance	Scores; failed exams, For a better life;	1. Relationship	Being single
2. Motivation	interested in the subject Wasted too much	2. Academic stress	Efforts in studying was not paid off
3. Self-regulation	time on doing other things rather than studying	3. The pressure of life	Life is stressful
4. Course difficulty	The course is too difficult for me	4. Change of Personal values	The way I see things has changed Don't like talking to people; prefers to stay at home rather than go outside
5. Relationships	Found my soul mate	5. Personality	
6. Academic stress	exams; peer competition	6. Personal growth	More mature
7. Pressure of life	Stresses in life	7. Social relations	Betray of friends
8. Academic support	Teacher's guidance/attitude	8. Confusion about the future	Concerned for future
9. Learning ability	Learning ability is not high enough	9. Peer pressure	Have to go out with roommates although I don't have money
10. Family influence	Parents' encouragement	10. Homesickness	Didn't meet my family for long time

Note. N = 295

Same as the questionnaire for Chinese international students in the UK, respondents in China were also asked to answer why their academic self-efficacy and psychological well-being levels changed in the short answer section at the end of the questionnaires. These short text responses were coded, and these codes' categories were rank ordered according to their frequency of mention (Table 6.5). The codes were initially derived from the data and were patterned in combination with predicators of academic self-efficacy and psychological well-being after reading and analysing the text data collected from the questionnaire. Nearly one third of the codes were emerged from the key words in the short texts' responses, as most of the texts answers were very short phrases and some of them



were even just two or three words. Meanwhile, using the language of the respondents enable the codes present the data better.

The top 10 most frequently answered factors that affecting respondents' academic self-efficacy and psychological well-being respectively were presented in Table 6.5. Brief examples were listed for each code category. This code frequency analysis aims to examine the influential factors in respondents' academic self-efficacy and psychological well-being, and explore the similarities or differences with the texts results of Chinese international students in the UK

#### **6.4.1 Academic self-efficacy**

Academic performance including exam results, improvement of study skills, and rewards was the most frequently provided factor that has affected these students' academic self-efficacy levels. Students described the reasons why his/her academic self-efficacy has changed as, "failed exams", "won scholarship because of good grades", "scores went down" "came across difficulties in study and no improvement", and so on. Students' previous academic performance is a strong predictor of their academic self-efficacy. Previous academic achievement strengthens students' academic self-efficacy, whereas unsuccessful academic experience undermines it.

Motivation was the second most frequently mentioned response. Many respondents accused their lack of motivation of low confidence in their academic study. Not interested in studying or the subjects, and "study is boring" were reported often by these students in the short text answers as the reason of their low levels of academic self-efficacy. Only few students mentioned "interested in the subject" and "have new [studying] target" as the reasons why their academic self-efficacy levels have become higher. In deed, interest is the reasoning behind students study and achieve higher academic performance. Furthermore, some students expressed that "[I] feel like [study] is useless for life". In other words, they believed that the knowledge they learned through lectures or studying in their subjects would not be a useful skill in life or cannot help them to find a good job. On the contrary, some students claimed that "for [having a promising] future life" has been the reason why they have been studying hard and holding high academic self-efficacy. This implies that students who are motivated by the faith of education makes a difference tend to have higher academic self-efficacy than peers with lower motivation.

Self-regulation ranked the third position among all the reported factors that affecting participants' academic self-efficacy. Many students blamed themselves for not being self-disciplined thus resulted in their low level of academic self-efficacy. Some pointed out that they did not study hard, which was not responsible for their studies, and they "wasted time on things that should not be doing [instead of spending time on study]", "didn't

concentrate on the lectures, and did not finish homework”, “[were] distracted by others things, too many distractions”, “spent too much time on [playing] games”. This implies that from their values as a student, they were aware that their priority was to study, however, their low locus of control led to low academic self-efficacy.

Course difficulty was the fourth most frequently reported factor affecting respondents’ academic self-efficacy. Students expressed their concerns about fully understanding the lectures and achieving high scores due to the difficulty of the course they were taking.

Relationships ranked the fifth among all the reported influential factors. Relationships in these participants’ responses refers to romantic relationship. Students listed for example, “found my soul mate”, “love” and “relationship is not going well” as the reasons why their academic self-efficacy level has changed. They claimed that the satisfying status of relationships contributed to their academic self-efficacy positively. On the contrast, dissatisfying romantic relationships negatively influenced their academic self-efficacy levels. Indeed, romantic relationship functioning in strengthening individuals’ positiveness can not be ignored (Collins & Reads, 1990).

Academic stress, Pressure of life and Academic support ranked the sixth, seventh and eighth respectively. Participants claimed that academic stress from exams and assessments caused the decrease of their academic self-efficacy levels. Meanwhile, pressures from classmates, such as “classmates got higher scores than me”, “competition [among classmates]” and “others had better results than me” appeared in the responses as another aspect of academic stress. The effects of pressures from classmates on individuals’ academic self-efficacy tended to be negative according to the responses. “Efforts in studying was not paid off” was another type of academic stress these participants experienced. Students complained that there was still no obvious improvement in their academic performance although they had devoted more time on studying. Thus this resulted in a decrease in their academic self-efficacy. Pressure of life was not described by respondents in detail. There were only responses in short phrases including “life pressure” and “stresses in life” were mentioned by participants. This could be the pressure from daily life or a feeling of being pressured in general. Participants experiences of “life pressure” were found negatively associated with their academic self-efficacy. Academic support from teachers and teachers’ attitudes were reported had direct influence on participants’ academic self-efficacy. Students expressed that the guidance from their teachers increased their academic self-efficacy levels, while teachers’ negative attitudes decreased it.

Learning ability and Family influence ranked the second last and last respectively among all the top ten most frequently mentioned factors. Some students responded “[my learning] ability is not high enough” as the reason why changes have occurred to their

academic self-efficacy. In other words, these students' self-concept of academic ability was low, and believed that they could not achieve satisfying academic performance. This thus decreased their confidence for academic study. Learning ability as one of the individual differences is associated with students' academic performance, which could lead to changes in students' academic self-efficacy. Family influence coding category in this present study refers to reported family's positive effects on students' academic study, for example, parents' encouragement and guidance on. Students claimed that this "family influence" has increased their academic self-efficacy.

#### **6.4.2 Psychological well-being**

Relationships was the most frequently provided factor affecting students' psychological well-being. Relationships in this section was specified as romantic relationships. Participants frequently provided "being single" and "failed relationship" as the reasons why their psychological well-being levels became lower. Some reported that they felt happier because of "love". It seems like students generally considered romantic relationships as a significant part of their university experience, which greatly affected their psychological well-being. Kansky (2018) argued the importance of romantic relationships and relationship status for individuals' well-being and psychological adjustment. It was believed that healthy romantic relationships benefits on individuals psychological well-being, whereas failure ones tend to have a negatively intense impact (Kansky, 2018).

Academic stress was reported as the second most frequently factors affecting participants' psychological well-being. Students complained about their stresses for exams including failed modules, postgraduate entrance exams, and for their academic study was not improved. All these academic stresses contributed to the decrease of their psychological well-being. The pressure of life was reported as an influential factor for students' psychological well-being as well. Same as the texts responses for academic self-efficacy, participants did not describe what were the causes for this life stress, only short phrases such as "life is stressful" and "the pressure of life" appeared in the texts answers. The explanation could be that these students tended to conclude all types of stresses to be life pressure, and report it as a general cause of the decrease in their psychological well-being levels. The frequency counts of the factor change of personal values ranked the fourth position. Students described this change as "the way that I see things has changed" or "my perception towards happiness has changed", and this change was reported to have an impact on their psychological well-being. However, it was not specified whether the influence was positive or negative.

Another frequently reported factor was personality. Participants provided for example, “[I] don’t like talking”, “[I] prefer to stay at home than go outside” and “[because of] my personality” as the reasons why their psychological well-being decreased. They were concerned that it was their introversion personality resulted in the low level of psychological well-being. While other participants expressed their positive life attitude and gratitude personality, such as “being happy is the most important thing in life” and “be thankful”. They believed this led to increases in their psychological well-being.

Personal growth and social relations were the sixth and the seventh most frequently reported factor separately. Students described their personal growth as “growing awareness of the society with age”, “more mature” and “sense of achievement”, and claimed that this had a positive affect on their psychological well-being. Social relations especially the problems that participants experienced in socialization, for example, “betray of friends” and “cannot get along well with my roommate” was reported affecting participants’ psychological well-being negatively. Another factor that was mentioned has decreased respondents’ psychological well-being is confusion about the future. Students expressed their concerns for future career and life in the short texts answers.

Peer pressure and homesickness ranked the last two positions respectively in the top ten most frequently reported factors. Peer pressure in this frequency analysis regarding to participants’ classmates and roommates’ direct influence or pressure on them. Some participants felt like being pressured from a peer or peer group, and have to follow the influencing classmates or roommates. For example, students responded to the reasons why their psychological well-being levels decreased as “[I] have to go out with [my] roommates although I don’t want to spend money at all”, “[I] don’t have money to go to the restaurants that my friends chose or shopping with them, [I] cannot afford it” and “[I] just want to stay in the library, but have to accompany my roommate to do things”. It seems like these participants’ choices or decisions were greatly influenced by their classmates and roommates, and experienced the pressured feeling of following and socializing with their classmates and roommates. One explanation for this could be that university students in China normally share one bedroom with other three or five students, and they spend most of their university life including social and study with their roommates together. One of the potential disadvantage is that students could be easily influenced by their roommates who are together with them most of the time. At last, students mentioned that they “didn’t meet my family for long time”, “less communication with my family”, which resulted in changes in their psychological well-being.

## **6.5 Chapter summary**

This chapter provided an analysis of the data collected from university students in China, including an analysis of their academic self-efficacy and psychological well-being, as well as the relationships between these two variables. Short text answers were then analysed to explore the factors affecting and resulting in changes in the academic self-efficacy and psychological well-being of participants in China. These data analyses help with understanding the background of Chinese international students in the UK. The comparisons between these two groups of participants showed that, both among Chinese students studying in the UK and those studying in China, their academic self-efficacy and psychological well-being were strongly correlated with each other. It was found that students' academic self-efficacy has a positive predictive relationship with their psychological well-being. Meanwhile, the findings showed that they had common factors affecting both their academic self-efficacy and psychological well-being. Although both participant groups were Chinese university students, with the same cultural background, their study and living environments were quite different; together with their average age and individualities, all these factors contributed to their differences in academic self-efficacy and psychological well-being. Chinese international students in the UK had higher academic stress levels, and reported more varieties of academic difficulties than university students in China. Meeting their academic and social expectations, achieving their goals of studying abroad, affected the psychological well-being of Chinese international students in the UK more frequently.

## **7 Findings: Interviews**

### **7.1 Introduction**

In-depth semi-structured face-to-face individual interviews with 12 respondents were conducted 3 times during one academic year to investigate Chinese international students' individual development of academic self-efficacy and psychological well-being in the UK over an extended time period. The longitudinal qualitative data derived from interviews allows the researcher to gain a deeper sense of these Chinese international students' life experiences, attitudes, changes and causality.

### **7.2 Selecting Participants for Interview**

In order to choose participants for the interviews, specifically participants who could reflect the diversity and breadth of the sample population, extreme case sampling as one type of purposive sampling technique was employed for the qualitative data collection in this research. This means that the participants for the interview were chosen because they were considered special and more extreme. These extreme cases are useful because they can provide significant insight into the phenomenon being studied, and present the diversity of the whole sample, which helps with guiding future research and practice (Laird 2012).

It is therefore valuable to select participants who scored either extremely high or low on the psychological well-being measure scales for the interviews. Meanwhile, the researcher will need to know and understand the causes for selected participants scoring high while others scored low on the psychological well-being scales. By selecting the extreme cases for the interview, the research can explore more fully the reasons behind the more extreme high or low scores from an in-depth qualitative perspective.

### **7.3 Participants**

Twelve of the respondents who participated in the first round of the questionnaire survey and obtained extreme high or low scores were invited to participate in the semi-structured interviews. Among the interviewees were three men and nine women, of whom four were undergraduate students, four were master's degree students, and another four were PhD students. They were classified into three groups according to their study programme in this way. Within each group, there were two with relatively high scores and another two with lower scores from the previous scales in the questionnaire.

Each student was interviewed three times in total, individually, during each term. At the first round of qualitative data collection, each interview lasted around 15 minutes; and then about 5-10 minutes for the second and final rounds. All interviews were conducted in a private study room and all conversations were recorded for the purposes of translation,

transcription, and analysis after securing permission from the participants. The researcher's reflections and notes were prepared to compare with the interview transcripts.

#### 7.4 Contents

These semi-structured interviews consist of two parts that are closely related to international students' experiences in the UK. All interviews were conducted in Chinese, the native language of both the interviewees and interviewer. It begins with items as warm up questions to make the participants feel comfortable and ready to answer spontaneously and without concern. Part two consists of four open-ended questions which will be used to explore students' experiences, gain a detailed account of their views, and to find the context to which the factors of well-being mentioned in the questionnaire are experienced. The interviewees were asked about the issues probed in the questionnaire in order to develop a comprehensive understanding of their academic motivation and psychological well-being in the process of cross cultural adaptation (e.g. What has changed in the last few months? How does this influence your sense of psychological well-being in the UK?). Each round of interviews was conducted after the same round of the questionnaire to allow the respondents to elaborate on some of the data from the questionnaire, as they are encouraged to reflect on their experiences that were referenced. This interview data provided a richer picture of their psychological experiences in the process of intercultural adaptation.

Table 7. 1 The Interview: Participants and Time Frames

Type of Respondents	Number	Date	Location	Length (mins)
Undergraduate	4 (all females)	Dec/Mar	Private study	15-20
		June	room in library	5-10
Master	4 (2 males; 2 females)	Dec/Mar	Private study	15-20
		June	room in library	5-0
PhD	4 (1 male; 3 females)	Dec/Mar	Private study	15-20
		June	room in library	5-10

\* Total No. 12 (3 males and 9 females).

Table 7. 2 Overall Interview Questions

Time Points	Questions
Time 1	1, How's your study going? Are you confident with completing your study here? What has been the (most) academically challenging portion of your experience in the UK? Will this influence your sense of psychological well-being in the UK?
	2, How do you feel about your life in the UK so far in general? Are there any changes compared with the first 1 or 2 months or at the beginning when you had just come to the UK?
	3, Could you give me any examples of why you feel this way?
	4, What do you like the most/the least about the UK? What's the most challenging part of your life in the UK? How does this influence your sense of psychological well-being in the UK?
Time 2 and 3	1, How's your study? What has changed in the last few months? How does this influence your sense of psychological well-being in the UK?
	2, How do you feel about your life in the UK? Has anything changed since our last interview? Are there any changes that have happened in the last 2 months?
	3, Could you give me any examples of why you feel this way?
	4, What's the most challenging part of your life in the UK now? How does this influence your sense of psychological well-being in the UK?

## 7.5 Data Management and Analysis

### 7.5.1 Longitudinal Qualitative Data Management

Each round of interviews was transcribed, translated and coded descriptively and manually. Participants checked the researchers' interpretations verbally and through use of excel diagrams to ensure a high degree of agreement between the interview transcripts and the interviewees' actual accounts. The test-retest method was conducted to test the reliability of the coding. The researcher re-coded the transcripts to compare this second coding with the first, and achieved agreement between first and second coding after discussing the codes and category' definitions to improve their reliability. Codes and themes were reviewed and assessed over the three time periods of data collection.

The interview data collected from these twelve participants was kept in separate files during the collection period for the convenience of reading and searching for the possible individual changes. All interviewees' names used in this study are coded to show their programme of study, the number of the interview time period, and number order within the



same programme group. Thus B.A.2.2 indicates the second time of interview of interviewee No. 2 from the undergraduate student group. Profiles with each participant's basic information including their coding name, programme, IELTS score, length of stay in the UK and their questionnaire answers were created to offer the researcher an overall view of respondents' backgrounds for comprehensive analysis.

### **7.5.2 Analysis Approach: Longitudinal Qualitative Data Analysis**

This analysis of the present study highlights Chinese international students' experiences in the UK in terms of what changed over time and how those changes affected participants' academic self-efficacy and psychological well-being. Longitudinal qualitative methodologies enable researchers to explore and achieve an understanding of the dynamics of everyday life (Neale & Flowerdew, 2003). Length of the study, time, and change are considered the three fundamental principles of longitudinal qualitative research (Saldana, 2003). The criticalness of time is described as "mediated through a cultural turn that explores the detailed textures of social life – the subjective meanings and active crafting of social relationships, cultural practices and personal identities and pathways" (Neale & Flowerdew, 2003, p. 193.). Time as the medium for LQ research, was applied to explore and analyse the individuals' academic and psychological well-being changes or continuity in data from one time period through another, it is also used in this study to investigate how these two variables correlated with each other at different time periods through waves of data. Change in this study refers to the differences in participants' academic self-efficacy and psychological well-being at various time periods. Thus searching for the changes that occurred during their study in the UK from longitudinal interview data, especially these with respect to the factors that contribute to academic self-efficacy and psychological well-being, is the priority of this LQ study.

Saldaña (2003) proposed a few framing questions for longitudinal qualitative analysis, and three of them including,

“When do changes occur through time?

What contextual and intervening conditions appear to influence and affect participant changes through time?

What are the dynamic of participant changes through time?” (p. 67)

were included as the framing questions for analysing the qualitative data collected in this current study. Form this prospective, analysis of and reflection on the differences in participants' answers in relation to academic self-efficacy and psychological well-being from one time period to another was performed. Meanwhile the main research questions, “How do Chinese international students' academic self-efficacy and psychological well-being change during their adjustment to studying in UK higher education over an

academic year? Are these changes correlated with each other? What are the causes?” are applied as the questions to guide the analysis of the qualitative longitudinal data in this study. With both the longitudinal framing questions and guiding questions in mind, coding, analysing and reporting of the data were performed.

### **7.5.3 Coding Process**

Coding is described as “the summative labeling of formative processes” by Saldaña (2003, p.48). It is the starting process of interpreting the data, exploring and concluding the participants’ perspectives. This study employed combinations of the phases of thematic analysis (Braun & Clarke, 2006) and two cycles coding methods (Saldaña, 2009) to develop codes and themes. The primary goal during first cycle coding is to generate codes through multiple readings; for the second cycle of coding data, the goal is to develop categories and themes from the codes (Saldaña, 2009). Magnitude coding and descriptive coding methods (Saldaña, 2009) were combined to develop codes for this longitudinal qualitative study. Magnitude coding is “a way of ‘quantitizing’ a phenomenon’s intensity frequency, direction or evaluative content” (Saldaña, 2013, p. 72-73). The codes that suggest directions including positive, negative, neutral or mixed through symbols plus (+), minus (–), 0 or cross (x) individually were employed to enhance the description of the data in this study, especially for the participants’ academic and psychological well-being changes across extended periods of time. The codes were employed to note whether the participant reported a +positive or -negative change, or 0 no change. In addition, to address the changes in data, these coding methods also enable the researcher to compare the individuals’ changes at different time periods. Descriptive coding, which summarizes the basic topic of a passage in a word or short phrase (Saldaña, 2009), was performed as the main coding method for this LQ data. Analytic memos (Saldaña, 2009), were written to document and reflect on coding process, and for the purpose of offering considered sources for the test-retest, which was conducted to test the reliability of coding afterwards. They were also used to note and address the individuals’ changes from the data during the coding process for further investigation of the present study.

### **7.5.4 Theming the data**

A sense of thematic organization was developed after the first cycle of coding through connecting codes to discover patterns. Themes emerged from the data during the second cycle of coding with consideration of the main research questions of this study about ‘academic self-efficacy’, ‘psychological well-being’ and ‘change’. After the themes were identified, the researcher fitted codes into the themes, compared them against the data collected, and reviewed research questions to ensure that they could present the raw data, and be relevant to the research questions.

### 7.5.5 Thematic Analysis

Thematic analysis as one of the most common analysis methods in qualitative research (Guest, MacQueen, & Namey, 2012) is applied in this current research. The flexibility of thematic analysis allows the researcher to provide a detailed description and interpretation of the data (Braun & Clarke, 2006). Braun and Clarke (2006) summarized six phases of performing thematic analysis. The first step to explore qualitative data is to familiarize oneself with the data through transcribing, reading, and rereading. Then, this is followed by displaying and grouping data into patterns to identify discrete codes and themes that can be labelled and clearly identified. Discerning and interrogating patterns by contrasting data in a sample after each wave are important for the description of a phenomenon (Ritchie & Lewis, 2013). By searching for the connections, similarities, differences, repetitions, and changes over time in data to generate codes and themes, and then reviewing themes to make sure they represent the raw data; a thematic framework, which is used to organize data according to key themes was structured for the present study (Ritchie & Lewis, 2013). The qualitative method of thematic analysis chosen for this study was a data-driven inductive approach through which themes emerge from the data directly (Fereday & Muir-Cochrane, 2016). The inductive coding procedures went through various waves of data collection over the three time periods in this study.

A data matrix that displayed all the themes and codes with their description examples from each participant at different collection time periods was constructed to help with describing, visually presenting, and analysing the coded qualitative data. This data matrix was also organized according to the three programme groups of these twelve interview students, PhD, M.A., and B.A. respectively. Thus, it allows the researcher to compare data for different units of analysis in the data. It is also convenient for reviewing codes and themes at any time, and searching for vivid examples to demonstrate the themes or support analysis.

A thematic map (Figure 1) which shows the relationships among codes and themes that was generated for the analysis of the interrelationships among key concepts and themes, including how the patterns and themes in the data come together to influence processes and outcomes of changes. Connecting lines were used to present the connections in the thematic map. Codes/factors are displayed in the three oval shapes and grouped according to their contributions to respondents' academic self-efficacy, psychological well-being, and the relevant changes. This provides a visual presentation of an overall conceptualization of the themes and their relationships for interpreting and analysing the data in depth (Braun & Clarke, 2006). It is also a guide for presenting the qualitative results of this study.

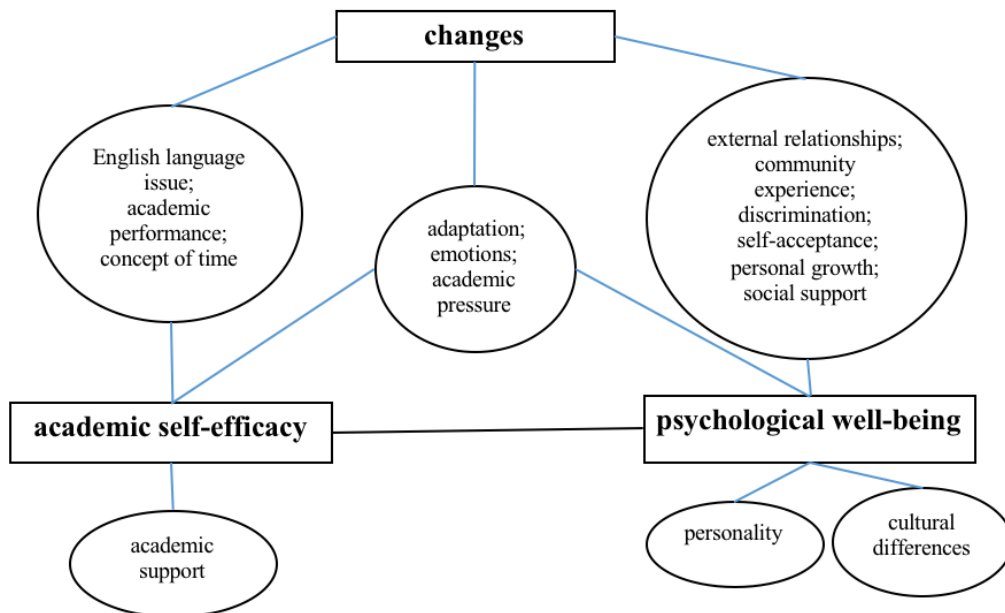


Figure 4 Map of the relationships between codes and themes

## 7.6 Results

A longitudinal comparison was conducted to find the patterns of change including specific turning points for each of the participants. All interviewees reported how something had changed by comparing it with how it was before. They made it clear that there was something related to either academic self-efficacy or psychological well-being that had changed compared with the beginning of their life in the UK. By the second round of interviews, most of the Chinese international students reported that there were changes that occurred mainly to their academic performance and pressures, adaptation to the UK, and psychological well-being status. It was found that students with major academic pressures at time period two even expressed more academic concerns by the last round of interviews. The academic changes that occurred within these Chinese international students were normally reported as the reasons their psychological well-being changed throughout the study.

Another comparison was built based on the study programme differences between respondents. It was compared how these interview questions were answered by interviewees who were undergraduate, master's, and PhD students. This shows that the students in the same programme did not have similar answers patterns. This could be due to the extreme case sampling for the interview participants, which means that two of the four students within the same study programme group had very different academic self-efficacy and psychological well-being levels from the remaining two participants. However, it was found that PhD students were more sensitive to racism than the other two groups. Three of the four PhD students illustrated their feelings about not being accepted by host-nationals in detail in more than one round of interview, indicating a belief in being

victims of discrimination. Moreover, Chinese international master's students expressed feeling slightly less academic pressure compared with the other two groups of students over the three time points.

### 7.6.1 The Dynamics of Participants' Changes

Table 7.3 shows the dynamics of all interview participants' academic self-efficacy and psychological well-being changes. These students were divided into three groups according to their academic degree programme, which provides a general structure for analysing individual changes in their academic self-efficacy and psychological well-being. According to Table 7.3, except for respondent P1, whose academic self-efficacy was stable across three time points of data collection, all students had experienced ups or downs in their academic self-efficacy and psychological well-being. The reasons behind these changes can be found thorough analysing interviews texts that were presented in the following sections. The dynamics of students' changes were varied. Furthermore, within the same group, participant changes in either academic self-efficacy or psychological well-being were different from one another.

Table 7. 3 Magnitude Coding of Individuals' Change

Participant type	ID	Academic self-efficacy Change			Psychological well-being Change			Dynamics of academic changes	Dynamics of psychological changes
		T1	T2	T3	T1	T2	T3		
PhD	P1	0	0	0	+	0	+	STable	Increasing
	P2	+	+	-	-	+	-	Fluctuate	Fluctuate
	P3	+	+	-	+	0	-	Fluctuate	Fluctuate
	P4	-	-	-	-	0	0	Decreasing	Decreasing
M.A.	M1	+	+	-	+	-	-	Fluctuate	Fluctuate
	M2	+	+	+	+	+	+	Increasing	Increasing
	M3	-	-	-	-	0	-	Decreasing	Decreasing
	M4	+	+	-	-	+	-	Fluctuate	Fluctuate
B.A.	B1	+	-	-	+	-	-	Decreasing	Decreasing
	B2	-	+	0	-	+	0	Fluctuate	Fluctuate
	B3	+	+	+	+	+	+	Increasing	Increasing
	B4	+	+	+	+	+	0	Increasing	Increasing
Total	12								

\*Note. T1 = Time One period of data collection; T2 = Time Two period of data collection; T3 = Time Three period of data collection; + POS = positive; - NEG = negative; 0 NEU = neutral; MIX = mixed.

### 7.6.1.1 Academic Self-efficacy

Issues including academic performance, academic support, study skills, academic difficulties and pressures were often reported as critical factors that affect Chinese international students' academic self-efficacy in the previous short text answers. Similar results were found in these interviews. Three frequently mentioned factors including academic support, English language issues, and academic pressure are presented in this section.

#### *Academic Support*

The majority of these participants pointed out that the support from teachers/supervisors had played an important role in enhancing their academic self-efficacy. Two participants, PhD 1.3 and PhD 1.1, acknowledged that

My supervisor and tap member are both important.

(PhD 1.3)

I think it is because of my supervisor, I always can complete the assignments that she arranged for me.

(PhD 1.1)

This indicated that those students who had received academic support from supervisors or classmates tended to have less academic pressure and more confidence in their academic study. However, as expressed by PhD 1.4, a lack of professional support contributed to her low level of academic self-efficacy.

I have to make a research plan myself without any advices from my supervisor since she wouldn't offer any clear comments. I am not confident with my research.

(PhD 1.4)

#### *English language issue*

English language proficiency has been shown to be a critical academic challenge for many Chinese international students. In these interviews, most of them emphasized English language issues as the biggest challenge for their study affecting their academic performance and confidence, thus impacting their academic self-efficacy. Two students stated that

I think it (my problem) is reading ability. Another problem for me is about writing papers. I do not know how to be creative in thinking.

(M.A. 1.3)

I think it is still about understanding the lecture content. English-as my second language, I cannot understand the teaching content like other classmates (English native speakers).

(B.A. 1.1)

Aside from competence in English, participant B.A. 1.3 clarified her English, especially accent and vocabulary, still is not as good as her British classmates although she has been studying English and in the UK for many years. She admitted that this fact had decreased her confidence in academic study.

#### *Academic pressure*

The responses related to academic pressure were varied. Academic pressure mainly came from the respondents' exams, essays, time pressure, course difficulty, and unsatisfactory supervisor-supervisee relationship. PhD 3.2 student expressed that

I feel really big academic pressure at that time, and I know that I have to fight because there is the pressure from deadlines.

(PhD 3.2)

In addition to time pressure, respondent B.A. 2.1 complained that there were too many presentations in her course, which were challenges for her, and she always felt nervous and exhausted because of them. All participants who had experienced academic pressure commented that it decreased their academic self-efficacy.

#### **7.6.2 Academic Changes Over Time**

The interviewees were aware of changes in their academic study, especially the improvement of their English language skills during time period one of interviews. By the second round of interviews Chinese international students were much more familiar with the educational system in the UK. Consequently, most of them became more confident with their study in the UK. Participant B.A. 2.1 responded that

Yes, it has changed a lot! When I first came to the UK, well, compared with my first year as an undergraduate, I cannot follow the lecture at all although I have already got 7 in IELTS. Then I feel big pressure...the understanding of the lecture has improved a lot. It is a lot better now.

(B.A. 2.1)

However, undergraduate student B.A. 2.2 expressed her lack of motivation to study at time period one compared with the beginning of her time in UK because of the competitive academic pressure.

However, actually, a lot of competitive pressure exists in academic study or anything else, this is a very contradictory point (in contrast with the slow pace of life in York). All this made me become more and more tired of the life here. Now I feel like nothing matters.

(B.A. 2.2)

Indeed, although with the improvement of language ability, Chinese international students still felt the increase of their academic pressures during the third time of interview. There were seven students who responded that their academic self-efficacy had been decreased. More than half of them reported bigger academic pressure as a change in their study by the third round of interviews. Their concerns were primarily about writing essays or dissertations, graduation, and all varieties of academic deadlines. This was especially evident amongst PhD degree students.

I think I still have big pressure from academic study because I am worried for whether I can write that many words for my thesis. I mean the pressure is still here.

(PhD 3.3)

### **7.6.3 Psychological Well-being**

A variety of factors contributing to respondents' psychological well-being and the changes in it were illustrated over the three times of interviews in this study. It was found that academic pressure, social support, emotions, personality, discrimination, cultural differences, community experience, personal growth, adaptation and weather had been affected Chinese international students' psychological well-being.

#### **7.6.3.1 Academic Pressure**

All respondents reported that their frustrations and anxiety were mainly derived from academic study, especially academic pressures. Nearly all respondents expressed how their psychological well-being was affected by their academic performance. Academic study as the priority of Chinese international students, plays an important role in their journey of studying in the UK. When asked about their psychological well-being, not surprisingly, participant M.A. 3.1 admitted that

“The only challenge which worries me is whether my score is high enough for applying for master study in London (UCL)” (M.A. 3.1). Another master's respondent also expressed her concerns,

The other reason [that why my psychological well-being has changed] is that I realize that I don't know how to write essays according to the feedback from my supervisor. I'm also not good at the study style here.



(M.A. 2.3)

On the other hand, responses show that satisfactory academic performance enhances students' psychological well-being. A second year PhD student claimed that his progress on his thesis and successful confirmation of his PhD enrolment "influenced [my psychological well-being] positively. I feel more confidence with my study now, and I was discussing with my supervisor about publishing a paper this year" (PhD 2.2).

#### **7.6.3.2 Emotions**

Emotional stability has been found to have a strong association with these students' psychological well-being over time. Various emotions have been frequently mentioned when these Chinese students were talking about their status of psychological well-being. Loneliness due to homesickness or being far away from friends, isolation, and depression caused by weather were often brought up by the respondents as the major factors that influence their psychological well-being. Participant PhD 2.2 admitted "Loneliness, this feeling is even stronger when I am living alone" (PhD 2.2). Student M.A. 1.2 expressed

I used to think that weather shouldn't be a problem, but after I came here for a long time, I realized that it is a big problem. And it gets dark so early, and then of course, you will feel depressed and lonely and start to doubt yourself.

(M.A. 1.2)

International students are vulnerable. They often feel lonely and isolated. Their emotions tended to be affected by a variety of adjustment problems during the journey of studying in the UK

#### **7.6.3.3 Personality**

Personality factors, including extraversion, have been found to play a critical role in Chinese international students' adaptation to studying in a new environment over time. Students who are more extraverted and accepting of new things are more likely to adapt to UK life better compared with the students with anxious personalities. However, students with introverted personalities who prefer to stay by themselves reported that they enjoy their life status. There was one PhD and one master's student who each attributed their increasing psychological well-being to their personality. They commented

I think except language problems, basically there is not really any problems for me because I like making friends and talking with people. And people are willing to help when I have problems.

(B.A. 1. 4)

It could be because of my character, I prefer quiet. I live life on my own with little social space and, just focus on myself, my own things, because I have only my own things to do.

(PhD 1.1)

On the contrary, participant B.A. 1.2 believed that it is her personality that caused her low level of psychological well-being. She explained

Sometimes I take unnecessary pains to focus on thinking about an insignificant problem, and tend to think about the problem in a very complex way, negatively.

(B.A. 1.2)

#### **7.6.3.4 Discrimination**

Discrimination was addressed by interviewees as an aspect of their dislike about living and studying in the UK. Nearly half of the respondents expressed their feelings of not being welcomed and accepted by host-nationals, including three of the PhD students, one master's student, and one undergraduate student. Perceived discrimination has impacted these international students' relationships with host-nationals and their perceptions toward the local community, thus affecting their psychological well-being. Two participants, PhD 1.3 and M.A. 1.4 illustrated

They think that there is no need to have a harmonious relationship with you anyway, so just let it be. Sometimes I feel that they are not warm, I feel that they are very cold.

(PhD 1.3)

We really have one classmate who really looks down on Chinese students a lot, he is British. He really discriminates against Chinese students.

(M.A. 1.4)

Although the coldness might not actually be a manifestation of their racism, participant PhD 1.3 interpreted her experience, and reacted accordingly. Another participant PhD 1.4 described that, she felt some lecturers seem like not willing to explain or answer questions patiently when Chinese students ask questions during or at the end of the lecture, while if it is other students (host nationals/non-Chinese) who have questions, the situation will be totally different. She insisted that one lecture just answered her question very briefly with unhappy face, and she heard of similar stories from other Chinese students. While it is not within the scope of this thesis to determine whether this student was in fact experiencing discrimination, they seem to have perceived it as such,

which influencing their further willingness, and ability to build relationships with host country.

#### **7.6.3.5 Cultural Difference and Community Experience**

Cultural difference has been a challenge for Chinese international students' adaptation to the UK. International students being confronted with different cultural conventions could lead to miss understandings and difficulty in negotiation of relationships (Edward, & Ran, 2006). Not surprisingly, all respondents reported that they had experienced cultural differences, and a majority of them mentioned the related difficulties, particularly in socialization with the local community. Participants B.A. 1.4 and M.A. 2.3 described the difficulty in communicating with host nationals respectively, "...because their (British) way of thinking is different from us, which made it hard for us to understand them" (B.A. 2.4); and "[we] should still be [focusing on] communication, how to communicate with foreigners" (M.A. 2.3).

Furthermore, social experience with the local community influenced deeply how the respondents perceived their lives in the UK, especially their attitudes towards the British. participant PhD 2.2 claimed that she had stopped socializing with host nationals after realizing that they had never been sincere. This was mentioned in her third interview again after she taught for a while in her department. "Most of my colleagues are British, and they are the same as what I know about the British, very conservative and stereotyped although they have many years of teaching experience with international students" (PhD 3.2). This interviewee continued "sometimes I might feel depressed for unable to get involved in the local social society or socializing with local people. But I don't care anymore" (PhD 3.2). Another participant, PhD 1.1 detailed her confusion that

You (I) thought that after you (I) had a few meals with them (host nationals), and we are their friends. But actually no. They have their own codes of social conduct. Having a few dinners with you doesn't make them consider you as a friend at all. I started to realize that I was living in the illusion of my master's life (in the UK) It (one-year master's study in the UK) was too short to have an in-depth understanding (of the UK).

(PhD 1.1)

For Chinese international students, whose culture is quite different from their host country, establishing friendships beyond co-nationals for achieving socio-cultural adaptation has been difficult.

#### **7.6.4 Changes in Psychological Well-being**

A variety of factors affecting participants' psychological well-being were presented in the last section. However, there were still some other changes related to Chinese international

students' psychological well-being found in the longitudinal interviews. Personal growth was the most obvious. More than half of the respondents addressed that they became independent since beginning their study in the UK. For example, "It is a big change for me. I think I have become more independent" (B.A. 1.4). This did improve over time and thus benefited their adaptation to UK life. Another reported a turning point for Chinese international students psychological well-being was their perceptions of the local community. Three of the four PhD participants noted in their comments that host nationals were different from what they thought before, and reflected their dissatisfaction with host-nationals. PhD 1.2 acknowledged that

Since I started to do my PhD till now, one of the biggest changes is my feelings towards foreigners (non-Chinese nationals). Because when I was doing my master's, nearly all students were Chinese, very few were foreigners (non-Chinese nationals), I really want to get to know about other foreign countries, and to make friends with host nationals. However, At the end of the year of living together (sharing a house with them), I really feel that there is a huge cultural difference.

(PhD 1.2)

In general, comparing the dynamics of psychological changes across the interview time scale (Table 7.3), around half the participants revealed increasing levels of psychological well-being. By interview Time Two, only two participants showed decreasing psychological well-being. However, by Time Three, there were only three participants with levels of psychological well-being that had increased. Most of participants admitted during the third round interview that the increasing academic pressure at the end of the academic year (e.g. dissertation, thesis, and exams), cultural fatigue, or unsatisfactory community experience had caused the decrease in their psychological well-being levels.

#### **7.6.5 Academic Self-efficacy and Psychological Well-being**

All participants highlighted that the centre of their life in the UK was academic study, thus their psychological well-being mainly depended on their academics. However, it should be noted that academic study has not always been the determining factor in all cases, or at all three time periods of interviews. Participants mentioned various other factors that contributed to, and even decided their psychological well-being. According to Table 3, it was found that there were three participants, PhD 2 and M.A. 4 at T1, and M.A. 1 at T2, whose academic self-efficacy had increased, however, their psychological well-being was shown to have decreased. This occurred for a number of reasons uncovered after reviewing their answers from the interviews. Although the academic self-efficacy of respondent PhD

2 had increased, she reported that her psychological well-being level had decreased compared with her time beginning in the UK, due to loneliness. Similarly, the academic self-efficacy of respondent M.A.4 was enhanced, however her psychological well-being level became lower due to the experiencing discrimination.

Another finding about the relationship between academic self-efficacy and psychological well-being from Table 7.3 was that when participants' academic self-efficacy decreased, consequently their psychological well-being levels were also reported to be lower in the same time period. This implies that when students are confronted with academic issues, their psychological well-being levels tended to become lower; however, on the contrary, when their academic self-efficacy levels became higher, there could be other factors affect their psychological well-being negatively.

### **7.7 Chapter Summary**

This chapter presented the longitudinal interview design and findings. It described the factors affecting Chinese international students' academic self-efficacy and psychological well-being, and the patterns of changes in these two aspects over time. The results showed that English language proficiency, academic performance, academic support, and academic pressure were critical to the academic self-efficacy of Chinese international students in the UK. In general, their academic self-efficacy tended to increase during the first two time points, however, by Time Three, at the end of the academic year, academic tasks became heavier, and thus, resulted in the increasing academic pressure and decreasing academic self-efficacy.

Except academic factors, which were the determining factors in most cases, participants emphasized that emotions, personality, discrimination, cultural differences, community experience, personal growth, and weather also affected their psychological well-being.

## **8 Discussion**

### **8.1 Introduction**

This section examines to what extent the research questions of this current thesis have been answered. Important findings will be discussed, and linked to the past studies and theoretical frameworks. The last part illustrates the comparisons between Chinese international students in the UK and Chinese university students in China, followed by a brief interpretation.

### **8.2 Academic Self-efficacy**

Findings from both quantitative and qualitative data analyses are discussed to answer the following research questions:

What is the level of Chinese international students' academic self-efficacy in UK higher education?

How does the academic self-efficacy of Chinese international students change during their adjustment to studying in UK higher education over an academic year? What are the causes?

Results showed that, on average, students tended to rate their academic self-efficacy beliefs between point 4 and point 5 (see section 5.4 for more details) on the 7 point Likert academic self-efficacy scale, which indicated that as a whole, the sample of Chinese international students had a relatively high level of academic self-efficacy. It is also apparent, according to the post hoc comparisons, that PhD students rated themselves the highest for academic self-efficacy level ( $M = 5.38$ ,  $SD = 1.06$ ) among all the three groups of participants, including undergraduate ( $M = 4.37$ ,  $SD = 1.35$ ) and master's students ( $M = 4.56$ ,  $SD = 1.17$ ). In specifically answering the first research question, it is acceptable to conclude that Chinese international students' academic self-efficacy level is relatively high, in particular, Chinese PhD students had higher levels of academic self-efficacy than both Chinese undergraduate and master's students in UK higher education. The explanation for this could be that the majority of these participants, approximately 80 percent total (65 percent on master's and 15 percent on PhD programmes), were pursuing a postgraduate degree, which is the later phase of the university studies. These students are more experienced with understanding how to get along with the academic requirements, and potentially hold at least medium or high academic self-efficacy levels after earning their undergraduate degrees successfully. This would be especially true for PhD students, who had experienced significant academic successes in their previous education to be motivated to pursue further higher education abroad.

### 8.2.1 Changes in Students' Academic Self-efficacy

As previous research has noted, individuals' self-efficacy levels could change from time to time due to the impact of environmental changes, as self-efficacy is context-specific (Bandura, 1997). Regarding academic self-efficacy beliefs specifically, it has been confirmed that students' self-efficacy levels increase or decrease during their transition to a higher level of education (Le Blanc et al., 2013). As expected, nearly all respondents, more than 92 percent at all three time periods of quantitative data collection, reported changes in their academic self-efficacy and specified the reasons for this. In ANOVA analysis it became clear that, in general, students' levels of academic self-efficacy increased slightly at the end of the academic year after two terms of studying in the UK. An interesting point to note was that the correlation analysis indicated that Chinese international students who stayed longer in the UK tended to have higher levels of academic self-efficacy ( $r = 0.19, p < .01$ ). Furthermore, in the interviews, most of the Chinese student sojourners claimed to be more confident with their study in the UK than they were in previous terms. Although it is difficult to specify any literature focusing on the relationship between time in the host country and level of academic self-efficacy among international students, international students facing the challenges of studying within a totally different education system and cultural environment indeed need time to adjustment to the changes in their study lives. Any incidents in the process of adjustment could result in increases or decreases in students' academic self-efficacy (Barker et al., 2006), although their academic self-efficacy levels might increase after two terms spent dealing with difficulties and adjusting to studying in the UK.

Another view to illustrate individual student's academic self-efficacy changes relates to the findings that revealed students who hold relatively high levels of academic self-efficacy during their first term continued having a strong sense of academic self-efficacy during the remaining two terms of an academic year. Bandura (2006) believed that academic self-efficacy beliefs predict college students' academic outcomes and college success. A number of studies (e.g. Pajares & Schunk, 2002; Ahmad, Azeem, & Hussain, 2012; Komarraju & Nadler, 2013) have addressed the critical role self-efficacy beliefs have in predicting students' varied academic performance. Thus these international students with strong sense of self-efficacy beliefs during term one were more likely to achieve sustained academic success. This successful academic experience in return had a positive effect on their academic self-efficacy, as academic performance is one of the important factors responsible for students' academic self-efficacy (Misra, McKean, West, & Russo, 2000; Holmes, 2004).

However, in both the analysis of short text answers in the questionnaire survey and the three rounds of interviews differences in individual international students' academic self-efficacy were found, involving factors that had predominantly influenced the participants' academic self-efficacy.

### **8.2.2 Factors Affecting International Students' Academic Self-efficacy**

The last part of the second research question aims to examine factors that contributed to the changes in Chinese international students in academic self-efficacy throughout the entire academic year. In the frequency analysis of students' short text and interview answers academic performance, academic stress, academic support, and English language proficiency were critical factors influencing them throughout the academic year. This finding is consistent with several other studies that found the prediction of international students' variance in academic self-efficacy is greatly based on factors including expected difficulty such as language difficulty (Barker et al., 2006; Berry, 2006), academic performance (LeBlanc et al., 2013), and lack of academic support (Misra, McKean, West, & Russo, 2000; Holmes, 2004; Von Ah, Ebert, Ngamvitroj, Park, & Kang, 2004; Zhang & Brunton, 2007; Kwon, 2013).

#### **8.2.2.1 Academic Performance**

Previous research has confirmed that student increases or decreases in self-efficacy were associated with the variance in their study task performance over time (LeBlanc et al., 2013). The literature generally seems to suggest that successful academic experience strengthens students' academic self-efficacy, whereas failures in exams, essays, negative feedback, and lower grades undermine it. Bandura's (1977) self-efficacy theory provides an explanation for this, claiming the Mastery experience as the foremost source of self-efficacy. As expected, the findings of this current study also support that one of the key determinants of academic self-efficacy was students' previous academic performance. In both interviews and short text answers in questionnaires academic performance was reported as the factor that has affected academic self-efficacy levels the most frequently throughout the whole academic year by these Chinese international students, citing a cyclical process when they have poor exam results and then feel demotivated to tackle difficult study topics, losing their confidence in graduating with a high degree.

Another finding related to students' academic self-efficacy that can be interpreted through academic performance is that academic self-efficacy was positively correlated with two personality traits, conscientiousness and openness, at all three time periods. More specifically, Chinese international students with a level of academic self-efficacy also tended to hold a good sense of conscientiousness and openness to experience.



As has been found in previous research, the results of the meta-analysis of the personality–academic performance relationship showed that academic performance was correlated significantly with agreeableness, conscientiousness, and openness to experience (Poropat, 2009). The underlying theory is that of Poropat (2009), who applied the Big Five framework of personality traits model to understand the relationship between personality and various academic behaviours, and argued that personality plays a significant role in individuals’ academic achievement. Meera et al. (2011) also confirm that personality traits make certain contributions to an individual’s academic performance. It can be argued that conscientiousness and openness in one’s personality are predictors of Chinese international students’ academic performance and self-efficacy.

#### **8.2.2.2 Academic Stress**

The variable academic stress level was measured at all three time points in the questionnaire. It was expected that international students’ exposure to a new learning environment and the efforts required for adjusting to a new education system may bring academic stress. It was found that the majority of these Chinese international students had experienced high levels of academic stress (level 7, see section 5.4 for more details), higher than the midpoint level (level 5), throughout the whole academic year. The negative influence of academic stress on students’ academic self-efficacy was reflected in the correlation analysis, frequency and rank order analysis, and interview findings of this current study. Academic stress was found strongly negatively correlated with academic self-efficacy ( $r = -0.20$ ,  $p < .01$ ), students with lower levels of academic stress tended to have a better sense of academic self-efficacy. Moreover, in the frequency and rank order analysis of short text answers academic stress continuously ranked top three among all the factors that contributed to changes in students’ academic self-efficacy.

All this data imply that Chinese international students generally experience the stress of coping with the demands of academic study throughout the whole academic year, and these constantly feelings of academic pressure had weakened their beliefs in their capabilities to achieve academic success. This finding is consistent with the literature which suggests that too much academic stress would contribute to depression and anxiety, which in turn can negatively affect academic performance (MacGeorge, Samter, & Gillihan, 2005). Similarly, Andrews and Wilding (2004), as well as Stanley and Manthorpe (2001), supported that an overload of academic stress may lead to mental health problems in universities students, thus resulting in academic failures, which then in return decrease their academic stress continuously (Wilks, 2008).

At last, the evidence from interviews also suggested that academic stress was negatively associated with academic self-efficacy, and that international students’

academic stress sources mainly included examination related stress, anxiety due to deadlines for paper submission, and depression because of excessive class workload. This finding is supported by Akhtar (2012) and Abouserie (1994), who both confirmed that meeting deadlines in submitting papers, taking and studying for exams, and difficulty earning good grades were the main sources of academic stress among international students. Overall, higher levels of academic stress are negatively associated with students' academic performance and academic self-efficacy.

### **8.2.2.3 Language Barrier**

The issue of language barrier has always been a concern for international students as they must adjust to a foreign language (Sherry, Thomas, & Chui, 2010). As expected, in both the frequency analysis and qualitative interview data analysis, the English language barrier has emerged as a major issue among Chinese international students, which weakened their confidence in academic study, affecting their academic self-efficacy. Students frequently reported a variety of language barriers issues, such as finding it "hard to understand or follow the lecture content in English", experiencing unfamiliar "strong accents", and difficulties in English reading, writing, and communicating effectively. Similarly, most interviewees emphasized English language issues as the biggest challenge for their study. Previous studies related to international students' experience in English speaking countries generally all supported that a lack of adequate English ability leads to anxiety and decrease in confidence in their study during their academic sojourn (e.g. Aydinol, 2013; Barker et al., 2006; Brown, 2008; Gu & Maley, 2008; Spencer-Oatey, 2010; Wan, 1996).

In addition, it was found in this present study that these international students' academic self-efficacy was statistically positively correlated and with their IELTS (International English Language Testing System) scores. An interesting point to note was that these participants' average IELTS score was 6.5 (SD = 1.05), which is classified as being an advanced level, however, they still experienced various language obstacles during their study in the UK. It is worth considering that although the IELTS is designed to assess students' English language ability, it does not necessarily reveal students' English language level for real-world usage in the UK.

### **8.2.2.4 Academic Support**

Receiving adequate academic support, especially support from supervisors, was regarded as a major factor affecting an increase or decrease in academic self-efficacy by many participants in the short text answer section of the questionnaires used in this study. Two students specified in the interviews that the support from their supervisors had enhanced their academic self-efficacy. In the contrast, the majority of the participants expressed their negative experience of being unable to get academic advice or support from their

supervisors, which led to depression and anxiety in their academic sojourns. As has been found in previous research by Schweisfurth and Gu (2009), which explored the experiences of international students in UK higher education, international students were concerned about their relationships with their supervisors, and felt specifically anxious when their supervisors were not supportive. In addition, Aydinol (2013) addressed international students' desires and needs for support from their supervisors and also identified the disadvantages that a lack of academic support can create, including a lack of confidence in their academic studies.

### **8.3 Psychological Well-being**

This section focuses on detailing the response to the following research question by discussing the findings from both the quantitative and qualitative data analyses:

How does the psychological well-being of Chinese international students change during their adjustment to studying in UK higher education over an academic year? What are the causes?

Gu and Maley (2008) proved that the most overwhelming experience of studying in UK universities for Chinese international students is the psychological struggle to live in a totally different environment. More specifically, changing environments leads to loneliness, discrimination, isolation, and other psychological problems (Berry, 1992). International students are vulnerable and their psychological well-being status has emerged as a main concern of their overall sojourning experience. The data collected in this study contributes to this knowledge base.

#### **8.3.1 Changes in Students' Psychological Well-being**

The ANOVA analysis revealed that there was a slight increase in students' psychological well-being level from the beginning ( $M = 5.30$ ,  $SD = 0.81$ ) to the end ( $M = 5.43$ ,  $SD = 0.87$ ) of the academic year. Other than that, there was no obvious change found in the psychological well-being levels of these students as a whole sample according to the quantitative data analysis. In the ranking correlation analysis of factors that affect most Chinese international students' psychological well-being there was also almost no change in the factors ranking orders across the three academic terms. However, individually, in the short texts answers, the majority of Chinese students emphasized either a decrease or increase in their psychological well-being caused by a variety of factors. The same was found in the interviews where most of the respondents described changes in their psychological well-being. In general, the changes in Chinese international students' psychological well-being cannot be predicted by the time periods or term of the academic year, nor the length of their study in the UK, which implies the complication of sojourners psychological well-being. However, the results in this current study have revealed the

factors that contribute to the changes in these Chinese international students' psychological well-being, and they will be discussed in the following section.

### **8.3.2 Factors Affecting International Students' Psychological Well-being**

The literature generally seems to suggest that variables including life changes (Brown & Holloway, 2008), satisfaction with relationships with host nationals (Russell et al., 2008), personality (Gu & Maley, 2008), social difficulty (Sawir et al, 2008), academic stress (Akhtar, 2012), and homesickness (Poyrazli & Lopez, 2007) are mainly responsible for the variance in psychological adjustment (Searle & Ward, 1990). The connection between these variables and the data from this study will be discussed below.

#### **8.3.2.1 Academic Study**

In both the frequency analysis of short text answers and three rounds of interviews, factors related to academic study were frequently identified causes of a decrease or increase in Chinese international students' psychological well-being. Responses such as referring to things such as "failure in exam", "ma[king] progress on research", and other factors associated with academic performance, academic stress, and even academic support were stated as the predominant causes for variance in psychological well-being by most Chinese international students. This finding is supported by the previous results from the literature that suggest that academic stress is significantly positively correlated with distress symptoms (i.e. anxiety and depression) (Akhtar, 2012). This means that international students who experienced poor academic performance, or who suffer from an overload of academic stress tend to have a high level of psychological distress and a low status of well-being. Academic study life as the most important part for most Chinese international students plays an important role in their psychological well-being. However, academic study has not always been the determining factor in all cases of interviews as participants identified various other factors that decided their psychological well-being, as will be seen below.

#### **8.3.2.2 Discrimination**

Discrimination has also been noted as another concern for Chinese international students and is believed to be a common source of stress for international students in general (Ward & Masgoret, 2004). A study of international students in US universities claimed that students from Asia, Africa, India, Latin America, and the Middle East perceived discrimination more often than European international students (Lee & Rice, 2007). In this present study discrimination was not a very often reported issue compared with other sociocultural factors in the short text answers, however, in the interviews four of the twelve participants complained that they endured discrimination on campus. Accordingly, international students also reported encountering off-campus discrimination (Poyrazli &

Grahame, 2007). It is believed that discrimination could cause international students multiple psychological problems (Akhtar, 2012) including feelings of isolation and loneliness (Constantine et al., 2005; Klomegah, 2006; Mori, 2000), and such feelings have been linked with poor psychological well-being and depression (Mori, 2000; Wei et al., 2007).

Though discrimination was not mentioned often, students in this study did expressed their decision that there was “no need to socialize with British” due to their experience with discrimination. This is supported by Chen (1999) and Mori (2000) who found that discrimination experience could discourage international students from making friends with locals. In sum, discrimination negatively influences international students’ psychological health and cultural adjustment (Mori, 2000; Yoon & Portman, 2004).

### **8.3.2.3 Social Support**

Social support has been found to affect these Chinese international students’ psychological well-being across the entire academic year. They made statements such as “[I] made good friends, we have many things in common”, and “[I] have more friends now [and participate in], a variety of social activities” as the reasons why changes had occurred to their psychological well-being levels. As previous research noted that adequate social support contributes greatly to international students’ survival in a foreign cultural environment (Ramsay et al., 2007) those international students with adequate social support tended to experience less adjustment stress than those who lacked or lost their social support (Yeh & Inose, 2003). Most importantly, loss and lack of social support lead to psychological stresses, such as tension, confusion, and depression, thus affecting students’ psychological well-being negatively (Pedersen, 1991).

### **8.3.2.4 Interaction with Host Nationals**

Although most of the social support that these Chinese international students perceived was from their Chinese peers or family, there were a few students in the interview who reported positive experiences with the local community as a reason for their higher psychological well-being; though more participants expressed that a dissatisfaction with the local community had decreased their psychological well-being levels. In describing their contact with British people one student expressed “they think that there is no need to have a harmonious relationship with you anyway, so just let it be. Sometimes I feel that they are not warm, I feel that they are very cold.” Furthermore, social experience with the local community influenced deeply how the respondents perceived their lives in the UK, especially their attitudes toward the British. Participant PhD 2.2 sharply claimed that she had stopped socializing with host nationals after realizing that they had never been sincere.

In common with findings from previous research on Chinese international students in the UK (Yu & Moskal, 2018), students experienced difficulties in establishing a relationship with British culture, British people, and local students, which led to feelings of alienation and loneliness, as well as homesickness. Consequently, participants in the interviews tended to avoid establishing further relationships with host nationals. This is consistent with the findings in Sawir et al. (2008) and Russell et al.'s (2008) studies, responding to a failure in establishing relationships with host nationals and avoiding the discomfort associated with cultural conflict international students tended to maintain minimal relationships with host nationals.

It is indeed complex and difficult for international students to interact with and establish social relations with host nationals due to differences in cultural and social norms (Brown, 2009), and has been consistently identified as factors highly correlated with students' psychological stress (Spencer-Oatey, 2008), however, the significant effect of social support from local friends on international students' sociocultural and psychological adaptation cannot be ignored (Ramsay et al., 2007)

#### **8.3.2.5 Personality**

The last major factor affecting Chinese international students' psychological well-being was identified as personality. In the regression analysis, the personality traits of extraversion, agreeableness, and openness to experience were found to be positive predictors of levels of students' psychological well-being. Notably, extraversion and openness were found positively correlated with students' psychological well-being level at all three time points. Indeed, the personality of the student is believed to be an important factor in sojourn adjustment (Gu & Maley, 2008). The correlations between personality traits and psychological well-being, in particular the strong association high extraversion and openness have with high psychological well-being, have been proven in other studies as well (e.g., DeNeve & Cooper, 1998; Kokko, Tolvanen & Pulkkinen, 2013; Steel, Schmidt & Shultz, 2008).

It is interesting to note that some international students made statements such as "happiness lies in contentment", "I am positive for my future", and "because of my personal characteristics" to explain what they attributed their happier and high psychological well-being to, indicating that personal characteristics influence individuals' reactions to stress and how they deal with the stresses and demands of adjusting to UK life.

### **8.4 Academic Self-efficacy and Psychological Well-being**

This section focuses on discussing the findings to answering the following research question:

Are Chinese international students' academic self-efficacy correlated with their psychological well-being during their adjustment to studying in UK higher education over an academic year?

Considering self-efficacy theory in predicting behaviour and guiding individuals' psychological adjustment in a changing society (Bandura, 1977; Lewis & Maddux, 1995), the relationships between international students' academic self-efficacy and psychological well-being were expected. In the correlation analysis the variables academic self-efficacy and psychological well-being were strongly correlated with each other ( $r = 0.58, p < .01$ ). Furthermore, academic self-efficacy at Time One was positively correlated with psychological well-being at Time Two and three; this was the same for academic self-efficacy at Time Two, which was positively correlated with psychological well-being at Time Three. This indicates that students' academic self-efficacy in previous time periods has a positive predictive relationship with their psychological well-being in future adjustment periods. Moreover, in the regression analysis, academic self-efficacy was proven as the significant and positive predictor of psychological well-being. Actually, in the interview and short text answers the factors contributing to the changes in these international students' academic self-efficacy were also found in the academic factors that affect their psychological well-being. All these findings indicated that for Chinese international students, the changes in academic self-efficacy are strongly associated with their psychological well-being during the whole sojourning experience. This has been supported by Ahmad et al. (2012) and Pajares and Schunk (2002), who have reported that international students' self-efficacy beliefs in overcoming challenges could be critical for their psychological adjustment. Academic self-efficacy, as a significant predictor of a student's academic performance and academic stress, is also predictive of their psychological well-being.

### **8.5 Comparisons between Chinese International Students in the UK and Chinese University Students in China**

This section focus discussing the last research question,

Among Chinese nationals, are there any differences in the academic self-efficacy and psychological well-being between those studying in UK higher education and those in Chinese higher education?

This research question was designed to provide a general understanding of the academic and psychological status of university students in China, and to briefly compare it with Chinese international student in the UK.

It was found that there are some similarities and differences between participants in the UK and China in terms of the quantitative and qualitative results collected via the

questionnaire, including means, correlations, influential factors frequency ranking, and short text answers. For both students in the UK and China, academic self-efficacy and flourishing ability were strongly correlated with each other (UK:  $r = 0.58$ ,  $p < .01$ ; China:  $r = 0.24$ ,  $p < .01$ ), and were also significantly correlated with consciousness (UK:  $r = 0.16$ ,  $p < .05$ ; China:  $r = 0.18$ ,  $p < .01$ ). Both groups' flourishing ability was positively correlated with openness to experience (UK:  $r = 0.3$ ,  $p < .01$ ; China:  $r = 0.31$ ,  $p < .01$ ). Meanwhile, they share half of the top ten most frequently mentioned factors affecting students' academic self-efficacy, including academic performance, course difficulty, academic stress, academic support, and self-regulation. When it comes to the factors that affect respondents' psychological well-being, both students in the UK and in China were affected by academic stress, personal growth, personality, and career concerns. It seems that, despite the difference in terms of living environment, Chinese international students in the UK and university students in China have commonalities in the interrelationships between academic self-efficacy and psychological well-being, and in the factors that contributed to the changes in their academic self-efficacy and psychological well-being.

An interesting finding is that romantic relationships were a critical factor for both the psychological well-being and academic self-efficacy of university students in China. Specifically, in reference to psychological well-being, romantic relationships were the most frequently reported factor that resulted in changes. However, their influence on Chinese international students in the UK was not mentioned as frequently as with university students in China. Another finding for Chinese university students in China that differs from Chinese international students in the UK is that the psychological well-being of those studying in China tended to be greatly influenced by their classmates and roommates, decreasing due to the pressures from comparison with them. They tended to adjust their behaviour, reluctantly, to satisfy expectations they felt from their roommates or classmates; they felt forced to make their choices in relation to the activity preferences of their roommates or classmates. However, this was not reported in the short text answers from Chinese international students in the UK. This pressure from roommates or classmates was obviously affecting the psychological well-being of university students in China more greatly than those in the UK. The explanation for this could be that university students in China are generally required to live on campus and normally share a room with another 3 to 5 students, who are also their classmates; meaning they spend most of their university time with their roommates. They live, eat, and attend lectures together. This group living style could potentially create disadvantages, making students feel greater influence from their roommates and leading to comparisons. International students in the



UK typically either share a flat or house, or live in a studio apartment, meaning they have more of their own space and live more independently.

One obvious difference between these two groups of participants is that the average age of Chinese international university students in the UK is approximately four years older than the students in China (UK:  $M = 24.21$   $SD = 2.62$ ; China:  $M = 20.47$ ,  $SD = 1.20$ ). However, the clear reason for this is that all respondents in China were undergraduates while participants in the UK were a mix of undergraduate, master's and PhD students. This implies that the participant group in the UK was potentially more mature than those in China. The mean scores of students in the UK were slightly higher than those of university students in China in academic self-efficacy, academic stress, and psychological well-being. Compared with the short text answers of Chinese international students in the UK, university students in China were more likely to attribute their dissatisfaction with their academic performance to internal instead of external factors. For example, motivation and self-regulation were the second and the third most frequently reported factors affecting the academic self-efficacy of university students in China, respectively. They expressed guilty feelings about not studying hard enough, not being self-regulated in focusing on their academic study, and having a lack of motivation for studying. They tended to blame themselves for academic failures that resulted in changes or decreases in their academic self-efficacy. Chinese international students in the UK noted external factors, including course difficulty and academic stress due to overloaded academic study, in their top three most frequently mentioned causes of changes in their academic self-efficacy. The explanation for this could be that Chinese international students in the UK indeed were more likely to come across difficulties in their academic studies due to the new education system and environment they were faced with.

Another explanation for the differences between these two participant groups, both in relation to romantic relationships and roommate pressures, could be age. Because the average age of the sample of Chinese international students in the UK was almost four years older than the sample of university students in China those Chinese students in the UK had more years of university life experience and were potentially more mature and independent than university students in China. Moreover, these Chinese students in the UK tended to focus more on their academic achievement and personal growth. Their goals for studying at university were clearer than the goals of students in China. This could be because most of respondents in the UK were master's students, and their primary task for studying abroad in the UK was to achieve an academic diploma in a relatively limited time.

## **8.6 Chapter summary**

This chapter answered the research questions stated for the present research and provided a more profound understanding of the research questions through a discussion of the relevant existing literature. A number of findings in this study are parallel to various previous studies related to international students' academic self-efficacy and psychological well-being. Specifically, factors that contributed greatly to the changes in students' academic self-efficacy and psychological well-being, including academic stress, language barriers, academic support, loneliness, discrimination, social support, relationships with host nationals, and individual personality, were discussed to explore Chinese international students' academic self-efficacy and psychological well-being development in UK higher education.

## **9 Conclusion**

### **9.1 Introduction**

This chapter serves to highlight the key findings of this longitudinal study. Chinese international students' changes in academic self-efficacy and psychological well-being over an academic year while studying in the UK were evaluated. Furthermore, factors contributing to these changes have been revealed, as well as the relationships between these two variables. A discussion of implications for international students, the host community, higher education institutions, and faculty will be presented in this section. Then, the limitations of the study, including methodological limitations and researcher subjectivity, will be illustrated. Finally, several suggestions for further study will be included, offering ways in which this research may be used as a foundation for continued exploration of international student sojourning experiences, especially regarding psychological adjustment.

### **9.2 Summary of Study**

Through review of the relevant literature it is clear that international students face a variety of challenges, academically and psychologically, during their sojourns. There are several previous studies that have explored the increasing Chinese sojourners group during overseas study experience. Ward and Searle's (1991) model of cross-cultural adaptation, which incorporates psychological and sociocultural dimensions, has been widely applied to explore the nature of the difficulties experienced by international students. However, there is still limited research that focuses on their academic and psychological changes. Specifically, longitudinal studies tracking the development of Chinese international students' academic self-efficacy and psychological well-being are quite rare.

This study set out to examine how Chinese international students' academic self-efficacy and psychological well-being change during degree study in UK universities, and to identify what factors have contributed to these changes over an academic year, and to explore the relationships between Chinese international students' academic self-efficacy and psychological well-being, including how these two aspects are correlated with each other across time. Additionally, a comparison between Chinese students in UK higher education and Chinese university students in China was made, aiming to understand the academic and psychological status of university students in China as a base point, and to analyse the differences between these two groups of students to enhance our understanding of Chinese students' backgrounds in higher education.

The specific research questions addressed were,

- 1) What is the level of academic self-efficacy in Chinese international students studying in the UK?
- 2) How do the academic self-efficacy and psychological well-being of Chinese

international students change during their adjustment to studying in UK higher education over one academic year?

- a) Are these changes correlated with each other?
  - b) What are the causes of these changes?
- 3) Among Chinese nationals, are there any differences in the academic self-efficacy and psychological well-being between those studying in UK higher education and those in Chinese higher education?

A mixed methods longitudinal study design with an emphasis on quantitative data was adopted through the use of questionnaires and one-to-one interviews with Chinese international students in the UK at three time points, once each academic term. This questionnaire, but not the interviews, was also administered to collect cross sectional data in the sample of Chinese students studying in Chinese higher education. There were two open-ended questions included in the questionnaire, which allow participants to reflect and detail the changes in their academic self-efficacy and psychological well-being through short text answers. The questionnaire instrument was adapted from the Motivated Strategies for Learning Questionnaire (MSLQ): Self-efficacy for learning and performance focusing on measuring students' academic self-efficacy; the Ten-Item Personality Inventory (TIPI), a brief measure of the Big-Five personality dimensions, including extraversion, agreeableness, conscientiousness, emotional stability, and openness to experiences (Gosling, Rentfrow & Swann, 2003); and the Psychological Flourishing Scale (PFS) (Diener et al., 2009), which generally measures the respondent's self-perceived success in essential areas of well-being, including social relationships, self-esteem, and purpose.

### **9.3 Key Findings**

This section offers a summary of the key findings of this research. There were three components to this study: closed ended questionnaires, short text answers, and semi-structured interviews. In terms of the quantitative data obtained from the questionnaire administered to Chinese international students in the UK, it examined the levels of their academic stress, academic self-efficacy, and psychological well-being; the patterns of changes in academic self-efficacy and psychological well-being over time; and the correlation and prediction relationships between these two aspects at all three time points. It was found that compared with the beginning of their academic year, Chinese international students had slightly higher levels of academic self-efficacy and psychological well-being at the end of their one year sojourn (for detail, see section 4.4). Although their academic stress levels decreased at the end of the academic year, these

Chinese international students still experienced medium high levels of academic stress throughout the whole academic year.

More importantly, academic self-efficacy and the personality traits of extraversion and openness were proven as the significant and positive predictors of international students' psychological well-being. Particularly, Chinese international students' academic self-efficacy in previous time periods has a positive predictive relationship with their psychological well-being in future adjustment periods (for detail, see section 4.4).

All the above findings linked to the results of the short text answers and one to one interviews, which aimed to explore the factors contributing to Chinese international students' academic self-efficacy and psychological well-being. Nearly all participants reported increases or decreases in these two variables and described the reasons for these changes. It was suggested that English language proficiency, academic performance, academic support, and academic stress were critical to the academic self-efficacy of Chinese international students in the UK.

Aside from academic factors, which were the determining factors in most cases, personality, discrimination, social support, and relationships with host nationals also affected these students' psychological well-being. Many of these factors are overlapped in terms of making contribution to both students' academic self-efficacy and psychological well-being. For instance, academic stress and social support were reported as having an impact on academic self-efficacy by some students, whereas others expressed them as factors influencing their psychological well-being.

Actually, in the interview and short text answers the factors contributing to the changes in these international students' academic self-efficacy were also found in the academic factors that affect their psychological well-being. All these findings indicated that for Chinese international students, the changes in academic self-efficacy are strongly associated with their psychological well-being during the whole sojourning experience. This has been supported by Ahmad et al. (2012) and Pajares and Schunk (2002) who have reported that international students' self-efficacy beliefs in their own ability to overcome challenges could be critical for their psychological adjustment.

#### **9.4 Implications**

This section illustrates implications for international students, the host community, universities, and faculty. As stated previously, with the globalization of higher education, there has been a rapid increase in the number of international students, and it is essential to address their needs. This study suggests that international students, host nationals, and university faculty all need to be aware of the differences in the cultures, which may lead to

misunderstandings, stresses, and failures in many aspects of life, thus resulting in unsatisfying experience for both sides.

First, students need to develop a conscious awareness of the expected obstacles brought by living in a new cultural environment before arrival for their academic sojourn. For instance, as stated previously in the context (see section 2.2), the Chinese education system and learning culture are very different from that of the UK and the majority of Chinese students will have never had experience of a different teaching or learning style (Wright & Schartner, 2013). Mentally prepared for studying abroad is necessary. International students are expected to do independent learning and research, structure their study sessions themselves. To know the expectations of teachers and university allows international students study more efficiently. Being aware of this issue in advance can allow these students to prepare themselves for the cultural shock and, therefore, reduce the related negative effects, thus helping them to adjust better to academic study abroad. Meanwhile, as stated previously in the findings, language competence has always been a factor affecting international students' academic achievement and ability to establish a network with host nationals. Besides, this study revealed that IELTS does not necessarily present students' English language ability in real-world situations. This study urges students to undertake training and practice their English skills academically and socially, and to find opportunities to interact with host nationals before their arrival abroad.

Second, higher education institutions and faculty need to be prepared to meet international students academically and socioculturally. They should appreciate the benefits that international students bring to diversify the universities and society as a whole. It is necessary for higher education institutions to provide international students with a special orientation to explain UK study and the social culture, and to address potential issues that they are expected to handle upon their arrival. Pre-arrival support such as welcome pack which allows international students to know what to expect when they arrive. Especially, students mentoring schemes organized by departments in the university will be meaningful for international students. Matching up international students before their arrival with current students in the same department helps with their preparation for studying in a new environment and feeling welcomed by the community. The timing of this is important, as stated previously; students here expressed that they only realized the social norms in British culture after their failed attempts to establish relationships with the host nationals, and their impressions of the host nationals became completely different from what they thought prior coming to UK. Students came to UK with expectations that could not be met, which would result in feelings of frustration and disappointment towards the new environment. Consequently, they tended to avoid interactions with the host

nationals, thus leading to misunderstanding from both sides. Ongoing support from universities is also important for international students' study abroad experience. As demonstrated in this thesis, international students face various challenges academically and psychologically, a survey during the term about their learning and living experience after arrival will be a critical chance to hear these students' voice, thus support them more efficiently. This helps with improving international students' support network, such as international student advisory service, English language support, academic support. Meanwhile, organizing specific events for international students throughout the academic year, including social events, city tour, culture trips about football, literature and architecture enable them to get involved in social activities and balance their study life.

Other than support for students, it is also important for universities to provide training and support for their teachers to recognize international students' academic needs to be able to teach them effectively. As demonstrated in this study, it is important to have a better understanding of the academic and psychological challenges these students face, to effectively offer support to offer the equal learning opportunities for all students. Moreover, it was claimed that a number of British lecturers have had little or no training on how to effectively teach international students in the great numbers they are now seeing (Wright & Schartner, 2013). Most importantly, support and guidance from teachers are expected by students to help them to succeed in their academic learning; as stated in this study, these students emphasized the importance of receiving adequate academic support from teachers, which has been a determinant of students' academic self-efficacy during their sojourn.

At last, with respect to the host community, there also seemed to be misunderstanding between students and host nationals as the negative impact of discrimination on international students' psychological well-being was identified in this study. The issue of discrimination against international students should be addressed with the host community, including local students. For instance, it was demonstrated in this study that these Chinese international students experienced discrimination from their classmates who were host students, from their lecturers, and from colleagues with whom PhD students were working together. It seems like they label international students due to their different perspectives toward learning styles and social norms. It is important for host nationals, especially students, to accept international students as this actually helps in developing their own intercultural competence in this global market. All in all, these efforts detailed above have potential to benefit both international students and the host society as a whole.

## 9.5 Limitations

The first methodological limitation of this study focused on the sample used. The majority (approximately 80 percent) of the questionnaire and interview participants were Chinese females, and in the interviews participation was solicited from mainly Education Department students and the distribution of gender groups in this department is quite imbalanced. Gender differences in international student adjustment have been studied recently, with the number of women pursuing higher education rapidly increasing world wide, especially in Asian countries (Lee, Park, & Kim, 2009). More of these female students are choosing to study abroad to fulfil their desire for education (Ying & Han, 2006). It was suggested that Asian female students' adjustments to western cultures are typically more smooth than the adjustments of their male peers (Ying & Han, 2006). However, in this study the gender imbalance led to the lack of balance in the resulting sample; the sample size of men in this present study is too small to test the gender differences. This is why the differences between female and male students have not been compared and analysed for this thesis.

The methodological limitations in this study related to missing data and have already been partly addressed in chapter five. Missing data commonly occur in longitudinal studies, as this data collection process normally lasts over a series of time points. During Time One data collection, of the total 221 respondents in the study, 12 of them provided too much non-ignorable missing data that could not be used for analysis. Considering this is a small part of the sample, Complete Case Analysis was applied by discarding these 12 cases with missing values at all measurement occasions. In data collection, 21 and 16 individuals dropped out of this longitudinal study at Time Two and Time Three, respectively. These respondents were not able to continue to participate in this research for various reasons. For example, during T2 data collection, one respondent informed the researcher via email that she/he was suffering from serious psychological issues and felt uncomfortable answering the remaining survey questions. Hence, the data record for all of these students was terminated prematurely. One of the important implications of missing data for longitudinal data analysis is that the data set is unbalanced over time, as participants would not have the same number of repeated measurements (Nakai & Ke, 2011). The data from these dropped participants were removed for the composite variables, correlation analysis across different time periods and the regression analysis across times in this study in order to reduce the biased estimates. In addition, multiple imputation of the missing data as a widely used method to enable analysis and attempt to alleviate bias (Nakai & Ke, 2011) is straightforward and was conducted for the remaining missing values in the the appropriate cases.



The last recognized methodology implication is that this study potentially allows for the measuring the actual effects of Time One on Time Two variables, and Time Two on Time Three variables. However, this was not conducted by the researcher, as the lantern variables and effects not being the main focus of this study, and the qualitative data set is large and focused on the factors affecting students' academic self-efficacy and psychological well-being variables.

Beyond the methodology, there is an additional limitation of the study. The initial reason the researcher conducted this study focusing on Chinese international students' academic self-efficacy and psychological well-being was her personal interest. There were a few cases of students the researcher knew personally where academic pressure deeply influenced international students' psychological well-being; the worst of which were students who tried to commit suicide. This could result in personal biases in the areas of qualitative findings. Although it is impossible to completely eliminate researcher bias, the potential impact of bias on qualitative findings can be minimized (Finlay, 2002). For instance, the researcher of this study reassured the participants about their answers and avoided summarizing their responses in her own words.

#### **9.6 Suggestions for further study**

The present thesis demonstrated the academic and psychological aspects adjustment of Chinese international students in UK higher education. It is important and useful to understanding international students' academic self-efficacy and psychological well-being through descriptive research to follow up the findings and continue the development of this research. Case study research is a recommended option for future researchers, as case studies are different from survey research in that they can obtain in-depth information about international students. It may also be appropriate to begin longitudinal studies of international students before their arrival and during their study abroad to identify which aspects of studying abroad are different from their expectations prior to studying overseas, and explore the changes during their sojourn. This would allow researchers to confirm which areas to work on to enable students to prepare themselves fully for their overseas studies. Overall, this thesis calls for further research to address overseas students' psychological and sociocultural adjustment needs, thus supporting international students to achieve a high quality study abroad experience.

## Appendices

## **Appendix A: Informed Consent Form for Questionnaire**

### **Chinese students' adjustment to studying in UK Higher Education: Academic self-efficacy and psychological well-being Information Letter**

Dear Participant,

I am a PhD student in the Department of Education at the University of York. I am requesting your consent to participate in my study which is entitled “Chinese students’ adjustment to studying in UK Higher Education: Motivation and well being”.

If you choose to take part in the study, you will complete a brief questionnaire lasting up to 15 minutes. The questionnaire will ask you about a variety of academic motivation beliefs and about psychological well-being. The data that you provide will be sorted by code number and only the researcher will have access to it. Your name, or any information that identifies you, will not appear in any reports of this research.

Your participation in this project is completely voluntary. You have the right to withdraw from the study during data collection and up to the point when the data are anonymised (expected to be four weeks after data collection). The data collected will be stored in an anonymised file on a password protected computer for a minimum of 5 years after the study is completed.

The results from this study will help researchers and educators to better understand international students’ academic motivation beliefs and their psychological well-being. The results from this study are likely to be presented at academic conferences and published in research journals. Data obtained will only be published in an anonymous and aggregated way. I hope that you will agree to take part.

If you have any questions or concerns about the project that you would like to ask before giving consent or after data collection, please feel free to contact Man Jiang via email at [mj710@york.ac.uk](mailto:mj710@york.ac.uk) or the Chair of the Education Ethics Committee via email [education-research-admisintrator@york.ac.uk](mailto:education-research-admisintrator@york.ac.uk). Please read this page carefully – your completion of the survey will be considered to reflect your consent.

Feel free to detach this top sheet for your own information.

Thanks for taking time to read this information.

Sincerely,

Man Jiang

PhD candidate in Education

## Consent Form

**Please initial each box if you are happy to take part in this research.**

I confirm that I have read and understood the information given to me about the above named research project and I understand that this will involve me taking part as described above.

I understand that the purpose of the research is to better understand international students' academic motivation beliefs and their psychological well-being.

I understand that data will be stored securely on a password protected computer and only Man Jiang, the researcher, will have access to any identifiable data. I understand that my identity will be protected by use of an anonymising code.

I understand that data will be kept for a minimum of five years.

I understand that data could be used for future analysis or other purposes.

I understand that data could be used for publications, may be shared and may be archived, and will not be identifiable.

I understand that I can withdraw my data at any point during data collection and up to 4 weeks after the data is collected through emailing the researcher at [mj710@york.ac.uk](mailto:mj710@york.ac.uk).

Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

## **Appendix B: Informed Consent Form for Interviewees**

### **Chinese students' adjustment to studying in UK Higher Education: Academic self-efficacy and psychological well-being Information Letter**

Dear Participant,

I am a PhD student in the Department of Education at the University of York. I am requesting your consent to participate in the interview of my study which is entitled "Chinese students' adjustment to studying in UK Higher Education: Motivation and well being".

First of all, thank you for participated in my questionnaire survey. If you choose to take part in the interviews, you will have a conversation with the researcher lasting up to 25 minutes. I will ask you five open-ended questions about a variety of issues affecting academic self-efficacy beliefs and about psychological well-being which were mentioned in the previous questionnaire. The data that you provide will be sorted by code number and only the researcher will have access to it. Your name, or any information that identifies you, will not appear in any reports of this research.

Your participation in this project is completely voluntary. You have the right to withdraw from the study during data collection and up to the point when the data are anonymised (expected to be four weeks after data collection). The data collected will be stored in an anonymised file on a password protected computer for a minimum of 5 years after the study is completed.

The results from this study will help researchers and educators to better understand international students' academic motivation beliefs and their psychological well-being. The results from this study are likely to be presented at academic conferences and published in research journals. Data obtained will only be published in an anonymous and aggregated way. I hope that you will agree to take part.

If you have any questions or concerns about the project that you would like to ask before giving consent or after data collection, please feel free to contact Man Jiang via

email at [mj710@york.ac.uk](mailto:mj710@york.ac.uk) or the Chair of the Education Ethics Committee via email [education-research-administrator@york.ac.uk](mailto:education-research-administrator@york.ac.uk). Please read this page carefully – your completion of the survey will be considered to reflect your consent.

Feel free to detach this top sheet for your own information.

Thanks for taking time to read this information.

Sincerely,

Man Jiang

PhD candidate in Education

## Appendix C: Pilot Questionnaire

### Chinese international students' academic self-efficacy and psychological well-being during study in UK universities.

#### Section A Personal Information

Please read carefully and mark on the line that best represents your response.

ID Number \_\_\_\_\_ Age \_\_\_\_\_ Gender \_\_\_\_\_

1. IELTS score:

5.5     6     6.5     7     7.5     8     8.5

2. What programme are you in? (Please select from A, B, & C first, and then answer the appropriate sub-questions)

*PhD*

What was the score of your final dissertation for your master's degree?

Pass     Merit     Distinction

*Master's*

What was your GPA?

Less than 60     60-70     71-80     81-85     more than 90

*Undergrad*

Did you take A-level courses?

Yes

What were your results? \_

No



Did you take a foundations course in the UK?

Yes

What were your results? \_

No

Did you take a HND course in China?

Yes

What were your results? \_

No

Did you have an average score in senior high score?

Yes

What were your results? \_

No

3. Did you have overseas study experience before you started your current programme?

Yes     No

4. What year of your course are you in?

1     2     3     Other \_\_\_\_\_

5. How long have you been in the UK all together, in months?

0-3     3-6     6-9     9-12  
 12-18     18-24     more than 24

## Section B Self-efficacy and Academic Information

### 10 MSLQ Self-efficacy for learning and performance scale

Please place an "X" in the box that best describes you

1	2	3	4	5	6	7
Not at all true of me					Very true of me	

	1	2	3	4	5	6	7
1. I am confident I can understand the most difficult material presented in the readings in most of my classes.							
2. I am confident I can understand the basic concepts taught in most of my classes.							
3. I am confident I can understand the most complex material presented by my instructors.							
4. I am confident I can do an excellent job on the assignments and tests in my classes.							
5. I am confident I can master the skills being taught in my classes.							

Please use a few sentences to answer the following question.

Has your "confidence" in learning has changed? If so, why has it changed?

Please place an "X" in the box that best describes you.

How stressful was your academic life this term (tick one)?

No stress	moderate stress				extreme stress
Stress level					

## Section C Psychological Information

Please indicate your degree of agreement to the following questions using a score ranging from 1-6, as described below.

1	2	3	4	5	6
Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree

*11 Berlin Social Support Scale (BSSS)*

1	Whenever I am sad, there are people who cheer me up.	1	2	3	4	5	6
2	There are people who offer me help when I need it.	1	2	3	4	5	6
3	It is important for me always to have someone who listens to me	1	2	3	4	5	6

*12 Eysenck (1975) Extraversion Scale*

1	I generally do and say things quickly without stopping to think.	1	2	3	4	5	6
2	I suddenly feel shy when I want to talk to a stranger.	1	2	3	4	5	6
3	I like going out a lot.	1	2	3	4	5	6

*13 Rotter Internal-External Locus of control Scale*

1	Many of the unhappy things in people's lives are partly due to bad luck.	1	2	3	4	5	6
2	In the case of the well-prepared student there is rarely, if ever, such a thing as an unfair test.	1	2	3	4	5	6
3	It is one's experience in life which determine what they're like.	1	2	3	4	5	6

4. Ryff's (1995) Scales of psychological well-being (SPWB) (short version used in MIDUS & NSFH II)

1	I like most parts of my personality.	1	2	3	4	5	6
2	I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
3	The demands of everyday life often get me down.	1	2	3	4	5	6
4	Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
5	I tend to be influenced by people with strong opinions	1	2	3	4	5	6
6	I have confidence in my own opinions	1	2	3	4	5	6
7	I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
8	I have not experienced many warm and trusting relationships with others	1	2	3	4	5	6
9	When I look at the history of my life, I am pleased about how things have turned out.	1	2	3	4	5	6
10	In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
11	People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
12	I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6
13	In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
14	I sometimes feel as if I have done all there is to do in life.	1	2	3	4	5	6
15	I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6
16	Some people wander aimless through life but I am not one of them.	1	2	3	4	5	6
17	For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6

18	I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6
----	---	---	---	---	---	---	---

### Section D

*Please use a few sentences to answer the following question.*

Has the status of your psychological well-being changed overtime? If so, why has it changed?

### Appendix D: Questionnaire for Students in UK higher Education (English Version)

#### Chinese international students' academic self-efficacy and psychological well-being while studying in UK universities.

### Section A Personal Information

ID Number \_\_\_\_\_ Age \_\_\_\_\_ Gender \_\_\_\_\_

1. IELTS score:

- 5.5     6     6.5     7     7.5     8     8.5

2. What programme are you in? (Please select from A, B, & C first, and then answer the appropriate sub-questions)

#### *PhD*

What was the score of your final dissertation for your master's degree?

- Pass     Merit     Distinction

#### *Master's*

'What was your GPA?

- Less than 60     60-70     71-80     81-85     more than 90

#### *Undergrad*

Did you take A-level courses?

Yes

What were your results? \_

No

Did you take a foundations course in the UK?

Yes

What were your results? \_

No

Did you take a HND course in China?

Yes

What were your results? \_

No

Did you have an average score in senior high score?

Yes

What were your results? \_

No

3. Did you have overseas study experience before you started your current programme?

Yes     No

4. What year of your course are you in?

1     2     3     Other \_\_\_\_\_

5. How long have you been in the UK all together, in months?

- o 0-3
- o 3-6
- o 6-9
- o 9-12
- o 12-18
- o 18-24
- o more than 24

**Section B**

14 MSLQ Self-efficacy for learning and performance scale

*Please place an "X" in the box that best describes you*

1	2	3	4	5	6	7
Not at all true of me			Very true of me			

	1	2	3	4	5	6	7
1. I am confident I can understand the most difficult material presented in the readings in most of my classes.							
2. I am confident I can understand the basic concepts taught in most of my classes.							
3. I am confident I can understand the most complex material presented by my instructors.							
4. I am confident I can do an excellent job on the assignments and tests in my classes.							
5. I am confident I can master the skills being taught in my classes.							

How stressful was your academic life this term (tick one)?

No stress
  moderate stress
  
 extreme stress

Stress level									
--------------	--	--	--	--	--	--	--	--	--

*Please use a few sentences to answer the following question.*

If your "confidence" about learning has changed, why has it changed?

## Section C

### Ten-Item Personality Inventory (TIPI)

*The following are a number of personality traits that may or may not apply to you. Please write the number that indicates the extent to which these traits apply to you next to each statement, even if one of these characteristics applies more strongly than the other.*

Disagree strongly 1	Disagree moderately 2	Disagree a little 3	Neither agree nor disagree 4	Agree a little 5	Agree moderately 6	Agree strongly 7
---------------------------	-----------------------------	---------------------------	---------------------------------------	------------------------	--------------------------	------------------------

I see myself as:

\_\_\_\_\_ Extraverted, enthusiastic.

\_\_\_\_\_ Critical, quarrelsome.

\_\_\_\_\_ Dependable, self-disciplined.

\_\_\_\_\_ Anxious, easily upset.

\_\_\_\_\_ Open to new experiences, complex.

\_\_\_\_\_ Reserved, quiet.

\_\_\_\_\_ Sympathetic, warm.

\_\_\_\_\_ Disorganized, careless.

\_\_\_\_\_ Calm, emotionally stable.

\_\_\_\_\_ Conventional, uncreative.



## Section D

### 1. Flourishing Scale

*The following statements may or may not reflect your views. Please write the number that indicates your agreement, according to the scale below.*

Disagree strongly 1	Disagree moderately 2	Disagree a little 3	Neither agree nor disagree 4	Agree a little 5	Agree moderately 6	Agree strongly 7
---------------------------	-----------------------------	---------------------------	---------------------------------------	------------------------	--------------------------	------------------------

\_\_\_ I lead a purposeful and meaningful life

\_\_\_ My social relationships are supportive and rewarding

\_\_\_ I am engaged and interested in my daily activities

\_\_\_ I actively contribute to the happiness and well-being of others

\_\_\_ I am competent and capable in the activities that are important to me

\_\_\_ I am a good person and live a good life

\_\_\_ I am optimistic about my future

\_\_\_ People respect me

### 2. Psychological Well-being Status

*Please use a few sentences to answer the following question.*

If the status of your psychological well-being has changed overtime, why has it changed?

## Appendix E: Questionnaire for Students in UK higher Education (Chinese Version)

问卷调查目的:了解英国高校在读中国留学生的学业自我效能和心理幸福感。

请仔细阅读下面的题目。根据自己目前的情况，在符合自己的相应选项上画 x。

### 一，基本情况

英国手机号后四位_____ 年龄_____ 性别_____	
1.您的雅思总成绩是?	5.5_ 6_ 6.5_ 7_ 7.5_ 8_ 8.5_
2.您目前在攻读什么学位? (从 ABC 选项中三选一，再根据选择回答相对应的具体问题)	A,博士__ 你的硕士论文毕业成绩是 及格__ 良好__ 优秀__
	B, 硕士__ 你的本科的平均分数是: 低于 60__ 60-70__
	71-80__
	81-85__ 90 以上__
	C, 本科__
	你有读 A-level(英国高中)课程吗?
	有
	__ 成绩是__
	没
	有__
	你有读 foundation (预科)课程吗?
	有__ 成绩是__
	没有__
	你有在中国读过 HND 课程吗?
	有__ 成绩是__

	没有__ 你有高中平均成绩吗? 成绩是__ 有__ 没有__ __
3. 您在开始现在所学的课程之前有海外学习经历吗?	有__ 没有__
4. 您正在读几年级?	1__ 2__ 3__ 4__
5. 您累计已经在英国生活多久了?	( )年 ( )月

## 二，学习的自我效能感测评

请在最准确描述你的一栏画“X”

1	2	3	4	5	6	7
描述与我完全不符				描述符合非常真实的我		

	1	2	3	4	5	6	7
1. 我相信我能理解我的大部分呈现在阅读中最困难的材料。							
2. 我相信我能理解大多数课程的基本概念。							
3. 我有信心我能理解我的导师提出的最复杂的材料。							
4. 我相信我可以出色的完成我的作业和考试。							
5. 我相信我能掌握所有课堂上教的知识技能。							

请回答以下问题，并解释（请用一句或简短几句话回答）。

如果你的“信心”对学习发生了变化，它为什么会改变？

--

三,学业压力            请放在最能描述你的箱子一个“X”。

请问本学年你感觉到的学业压力是 (选择一项) ?

无    压    力    适    度    的    紧    张

极度紧张

压力水平										
------	--	--	--	--	--	--	--	--	--	--

四,性格自测 以下是一些性格特质。请在每个陈述的边上写一个数字，来代表您多大程度上同意或者不同意那个陈述。

完全不同 意	大致上不同 意	有点不同意	不清楚	有点同意	大致上同意	完全同意
1	2	3	4	5	6	7

我认为我是 .....

外向的, 有热情的 \_\_\_

善批判的, 好争论的\_\_\_

可靠的, 自律的\_\_\_

焦虑的, 容易烦乱的\_\_\_

接受新经验的, 复杂型的\_\_\_

内向的, 安静的\_\_\_

有同情心的, 温暖的\_\_\_

缺乏组织的, 粗心大意的\_\_\_

平静的, 情绪稳定的\_\_\_

行为典型的, 缺乏创造性的\_\_\_

五,丰盛人生量表 请仔细阅读以下八项, 根据下列一至七的指标, 选择适当的数字.

完全不同意	大致上不同意	有点不同意	不清楚	有点同意	大致上同意	完全同意
1	2	3	4	5	6	7

我的生活有目标和意义\_\_\_\_

我的社交关系富有支持性并有所回报\_\_\_\_

我对日常活动既投入又感兴趣\_\_\_\_

我积极为其他人的快乐和福祉作出贡献\_\_\_\_

我能胜任并能够做到对我重要的事情\_\_\_\_

我是一个好人, 并过着好的生活\_\_\_\_

我对我的未来乐观\_\_\_\_

别人尊重我\_\_\_\_

六, 请回答以下问题, 并解释。(请用一句或简短几句话回答)

如果随着时间的变化你在英国的心理幸福感发生了变化, 它为什么会改变?

## Appendix F: Questionnaire for University Students in China

问卷调查目的：了解中国在校大学生的学业自我效能感和心理幸福感。调查结果将会被与在英国的中国留学生的学业自我效能感和心理幸福感进行对比。

### 一，基本情况

编号_____ 年龄_____ 性别_____ 家乡_____	
1.您的英语等级是?	英语四级__ 英语六级__ 其他__
2.您目前在读几年级?	
3.您的高考成绩是多少?	600 以上__ 550-600__ 500-550__ 500 以下__
4.您目前专业平均成绩是多少?	90 以上__ 80-90__ 70-79__ 60-69__ 50-59__ 50 以下__

### 二，学习的自我效能感测评

请在最准确描述你的一栏画“X”

1	2	3	4	5	6	7
描述与我完全不符				描述符合非常真实的我		

	1	2	3	4	5	6	7
1.我相信我能理解我的大部分呈现在阅读中最困难的材料。							
2.我相信我能理解大多数课程的基本概念。							
3.我有信心我能理解我的导师提出的最复杂的材料。							
4.我相信我可以出色的完成我的作业和考试。							
5.我相信我能掌握所有课堂上教的知识技能。							

请回答以下问题，并解释（请用一句或简短几句话回答）。

如果你的“信心”对学习发生了变化，它为什么会改变？

### 三，学业压力

请放在最能描述你的箱子一个“X”。

请问本学年你感觉到的学业压力是（选择一项）？

极度紧张

压力水平										
------	--	--	--	--	--	--	--	--	--	--

**四， 性格自测**

以下是一些性格特质。请在每个陈述的边上写一个数字，来代表您多大程度上同意或者不同意那个陈述。您应该选择每一对性格描述在何种程度上适用于您，即使那一对中的一个描述比另一个更贴切。

完全不同 意	大致上不同 意	有点不同意	不清楚	有点同意	大致上同意	完全同意
1	2	3	4	5	6	7

我认为我是 .....

外向的，有热情的 \_\_\_\_

善批判的，好争论的\_\_\_\_

可靠的，自律的\_\_\_\_

焦虑的，容易烦乱的\_\_\_\_

接受新经验的，复杂型的\_\_\_\_

内向的， 安静的\_\_\_\_

有同情心的，温暖的\_\_\_\_

缺乏组织的，粗心大意的\_\_\_\_

平静的，情绪稳定的\_\_\_\_

行为典型的， 缺乏创造性的\_\_\_\_

**五， 丰盛人生量表**

请仔细阅读以下八项，并根据下列一至七的指标，选择适当的数字，表达你对各项的同意程度。

完全不同意	大致上不同意	有点不同意	不清楚	有点同意	大致上同意	完全同意
1	2	3	4	5	6	7

我的生活有目标和意义\_\_\_\_

我的社交关系富有支持性并有所回报\_\_\_\_

我对日常活动既投入又感兴趣\_\_\_\_

我积极为其他人的快乐和福祉作出贡献\_\_\_\_

我能胜任并能够做到对我重要的事情\_\_\_\_

我是一个好人，并过着好的生活\_\_\_\_

我对我的未来乐观\_\_\_\_

别人尊重我\_\_\_\_

六，请回答以下问题，并解释。（请用一句或简短几句话回答）

如果随着时间的变化你在大学的心理幸福感发生了变化，它为什么会改变？



## **Appendix G: Interview schedule for time point one data collection**

15 How is your academic study going so far?

15.1 Are you confident you will be able to complete your study here?

16 What has been the (most) academically challenging portion of your experience in the UK?

16.1 Will this influence your sense of psychological well-being in the UK?

17 How do you feel about your life in the UK so far, in general?

17.1 Are there any changes from when you first arrived in the UK?

17.2 Are there any changes compared with the first 1 or 2 months of your time here?

17.3 Could you give me any examples of why you feel this way?

18 What do you like the most/the least about the UK?

18.1 What is the most challenging part of your life in the UK?

18.2 How does this influence your sense of psychological well-being in the UK?

**Appendix H: Interview schedule for time points two and three data collection:**

19 How is your academic study going so far?

19.1 What has changed in the last few months?

19.2 How does this influence your sense of psychological well-being while in the UK?

20 How do you feel about your life in the UK?

20.1 Has anything changed since our last interview?

20.2 Are there any other changes that have happened in the last 2 months?

20.3 Could you give me any examples of why you feel in this way?

21 What is the most challenging part of your life in the UK now?

21.1 How does this influence your sense of psychological well-being in the UK?

## **Appendix I: Ethical Approval:**

This present research project has obtained ethical approval from The School Research Committee (SREC) on 22 January 2016.

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