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The Influence of Mindset Among Hong Kong Postgraduate Students' Learning
Experience: An Exploratory Study

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Abstract

Mindset framework suggests that one's ability and academic performance highly depend on whether they believe their attributes (e.g., intelligence and talent) is malleable. Different mindset (i.e. growth and fixed mindset) could affect learners' learning beliefs, attitudes, and behaviors and eventually their learning outcomes. As such, mindset could possibly influence on a learner's quality of learning since quality of learning is determined by these beliefs, attitudes, and behaviors. Yet, little is known about how mindsets influence quality of learning. This study has adopted mixed-methods approach and invited seven Hong Kong postgraduate students (3 fixed and 4 growth mindset) in the United Kingdom (UK) to participate in two phases of the research (i.e. questionnaire and interview). Through understanding participants' learning experience, the research finds both FM and GM participants have shown growth and fixed mindset traits. This may be the end product of culture and prior academic experience. The results of this study have proposed that both mindsets did not show predominant effect on one's learning beliefs, attitudes and behaviors. Fixed mindset therefore may not negatively affect learners' quality of learning. Correspondingly, growth mindset may not positively affect learners' quality of learning. Through this work, learners and educators can have a better understanding of factors associated with quality of learning and mindset. It is identified that culture plays a role in the formulation of mindset. Chinese educators could therefore utilize the advantages of Chinese culture to enhance students' quality of learning. This research has also offered a new insight into cultural influence on mindset and the mixture of both mindsets. Future research could focus on these two topics.

Introduction

“Live as if you were to die tomorrow. Learn as if you were to live forever” said Mahatma Gandhi. At all times and in all lands, student’ quality of leaning always is the focus of teachers and educational practitioners. The definition of quality of learning as per study refers to effectiveness of learning opportunities (e.g., course structure and learning activities) offered to students help them to mastery the academic content (Kakogoro, 2018; Nightingale & O’Neil, 1994). Also, it describes how well the learners engage in and connect with the learning process (e.g., learning attitude) (Lawson & Kirby, 2012). In recent years, the notion of mindsets has taken root in educational settings as there is vast mindset research advocating mindsets’ profound influence in determining students’ academic performance, for example, Aronson et al, (2002) and Good et al (2003) have pointed out that mindset is a strong predictor of achievement and accomplishment. Mindset refers to whether people believe their attributes (e.g., intelligence and talent) is malleable or unchangeable.

Dweck (2006) suggests teacher’s mindset could shape pupil’s learning dispositions. Learning dispositions could affect one’s quality of learning (Lawson & Kirby, 2012). The present study will investigate Hong Kong postgraduate students’ learning experience, particularly the influence of mindsets on their quality of learning. Additionally, it will explore the potential effects of culture on mindset. It is noteworthy that identifying specific factors that contribute to Hong Kong learner’s quality of learning can support Chinese educators in developing effective teaching strategies or intervention that will facilitate

students to acquire positive educational outcomes. Hong Kong learners could have a thorough idea of what factors could affect their quality of learning and so it is easier for them to find a path to promote academic achievement.

Theoretical Framework

The following will elucidate the existing literature related to the quality of learning and the dichotomous conceptual framework of mindset and Chinese learning beliefs.

Quality of learning

According to Lawson and Kirby (2012), there are three broad factors including learning dispositions, learning environments, and learning process can determine the quality of learning. Firstly, learning dispositions refer to the way in which learners engage in and connect with the learning process. These dispositions consist of learner's emotions, level of motivation, effortful behavior, persistence, risk-taking attitudes, goals, approaches to learning, and willingness to engage in critical thinking (Lawson & Kirby, 2012; Salomon & Perkins, 1988; Sadler, 2002). Learning dispositions can be long lasting traits of a learner; however, they can also be affected by teaching, environmental or other relevant factors (Lawson & Kirby, 2012).

The second factor is learning environments, which describes the conditions under which learning takes place, for example, the classroom atmosphere, teacher's instructions, the learning tools, materials, and the activities that they are encouraged to participate in, and the assessment instrument (Lawson & Kirby, 2012; Acero et al., 2007). Based on Schwartz and Schmid (2012), educators tactically use processes and tools (e.g. technological tools) to establish meaningful and interactive learning environment can contribute student's quality of learning.

The third factor is learning process, which describes how learners monitor their understanding of knowledge and associated the prior knowledge to newly acquire knowledge. Then, they can identify and overcome potential comprehension problems (Entwistle, 2012). For example, educator provides students with guidance as to what type of learning and performance is expected, then students regard past learning experience and show readiness to follow the guidance (Entwistle, 2012; Nightingale & O'Neil, 1994). In accordance with Lawson and Kirby (2012), these three factors are interconnected and so strengths in one may compensate for weaknesses in the others. Conversely, weaknesses in one of the factors may offset the benefits of others (Lawson & Kirby, 2012). Overall, learners who are willing to take academic risks, have high motivation, persistence, effortful behavior, meaning learning environment and actively involved in learning process more likely to have high quality of learning (Nightingale & O'Neil, 1994).

Intelligence

One of the robust findings in psychological research of intelligence is that intelligence quotient (IQ) scores predict a wide range of life outcomes. Intelligence test has been developed to measure students' intelligence general abilities and to infer aptitude for future learning in relation to, particularly, students who are likely to have school-related problems and require supplementary academic assistance (Binet & Simon, 1905). Today, the Wechsler scales of intelligence and the Stanford-Binet intelligence test are the most commonly used intelligence tests (Kaufman, 2000). Both are individually administered tests which measure various skills (including quantitative reasoning, memory capacity, and problem solving) and make inferences about academic, professional, social life, achievement and capacities to learn (Lewis, 1976; Coon & Mitterer, 2010)

It has been repeatedly suggested by some researches that people who achieve high scores in IQ tests are more likely to do well in schools or workplaces (Mackintosh, 1998; Richardson & Norgate, 2015), earn more money (Gottfredson, 2003; Schmidt & Hunter, 2004), have higher social class (Tittle & Rotolo, 2000) and even have longer lifespan (Calvin et al, 2011). In brief, IQ scores seem to be able to predict one's achievement in life. People with high IQ are considered to be smarter and faster learners as they can gain new information rapidly whereas those with lower IQ are said to be slow learners and/or have learning difficulties (Watson & Skinner, 2004). Given this predisposition, it is no surprise that some people believe intelligence is equal to ability and even success. However, Duckworth and her colleagues (2011) found that the predictive validity of intelligence for

life outcomes, especially nonacademic outcomes may be overestimated. Meanwhile, their studies have shown that not only intelligence but also motivation affect IQ scores. They concluded that IQ is manifest variable that can be directly measured (e.g., age) while intelligence is latent variable which cannot be measured directly (e.g., confidence). In essence, a high IQ is no guarantee or prerequisite of success. People with high IQs who have outstanding achievement possibly has more to do with motivation and other relevant factors than with necessarily and solely the fact of having a high IQ (Duckworth et al., 2011). With this in mind, beliefs about the nature of intelligence (i.e. mindset) could be a significant factor to one's achievement as numerous studies claims different mindset leads to different outcomes. For instance, Yeager and Dweck (2012) suggested growth mindset promote student's resilience in face of challenges and contribute to academic success.

Intelligence belief and implicit theories of intelligence

The goals that students set for themselves and the attributions they make for their performance may be derived from the beliefs they hold about the nature of intelligence. The relationship between mindset and academic achievement has been a research focus of social psychologist Carol Dweck, a pioneer on the cutting edge of this field. Dweck and her associates have conducted a set of seminal research on intelligence and developed a highly influential theory, Implicit theory of intelligence (fixed mindset and growth mindset) (Dweck, 1999; Hong et al., 1999).

Implicit theories of intelligence refer to the beliefs that individuals hold about the nature of intelligence and abilities to learn. According to Dweck (2012), the Implicit theories of intelligence essentially comprise two distinct theories: entity theory (fixed mindset) and incremental theory (growth mindset). Adding to these works on mindsets, individuals who tend to see intelligence, talents, and ability as something that is a fixed, concrete, internal and immutable entity are labeled “entity theorist” (Yeager & Dweck, 2012; Hong et al., 1999). They are likely to believe that intelligence is a fixed and unchangeable quantity (Dweck, 2000). In contrast, for the incremental theorists, intelligence, talents, and ability can be changed or improved upon through their own effort, persistence, and hard work (Dweck, 2006). They also tend to believe intelligence is malleable and as a more dynamic quality that can be increased (Dweck, 2012). But, the incremental theorists can be triggered to into a fixed mindset trait as everyone have “own fixed-mindset triggers” (e.g., challenges, criticism and success of others) (Dweck, 2016, para. 7).

However, the Dweck’ mindset framework has received some critiques, for example, many mindset research highlighted having growth mindset can increased effort and leads to positive learning outcomes. Ericsson and Pool (2016) argued that if individuals repeatedly put effort on certain task without results may erode their beliefs about self-efficacy. Prior academic experiences may influence students’ mindset beliefs (Limeri et al., 2020). Crucially, growth mindset may follow experiencing academic success. Dweck (2006; 2016) acknowledged that students who constantly fail to achieve may be devastated by setbacks and fear of challenges; and mindset could be affected by experience. Besides,

Plomin argued that the growth mindset effect was exaggerated (as cited in Lee & Wiggins, 2015). As response to these criticisms, Dweck stressed that many people oversimplifying the growth mindset to be just about effort (as cited in Brock & Hundley, 2018). Dweck (2016) continues to correct these misconceptions and add new concepts into mindset framework. For example, she admits “Everyone is actually a mixture of fixed and growth mindsets, and that mixture continually evolves with experience ” and we should strive for latter growth mindset (Dweck, 2016, para. 4). Despite the criticisms, Dweck’s mindset framework remained to be one of the most established models of learning as numerous researches dedicated their effort to enrich the knowledge of this field.

Regarding goals, students with fixed mindset tend to possess performance goals, externally focusing on how others will judge their work and ability (Dweck 1986; Dweck & Leggett 1988). They have strong desire to look smart, get good grades and outperform others. However, they tend to be vulnerable to negative feedback and ignore them and more likely to give up from challenging learning opportunities (Dweck, 2006). As challenging situation is considered a potential source of embarrassment which is often knotted to feelings of self-worth and this could lead to a loss of self-confidence (Dweck, 2006). Additionally, those with a fixed mindset are thought to be related to self-handicapping behavior, underachievement, and student disengagement (Rhodewalt, 1994). They are unlikely to take academic risk and prefer to take safe option because those experiences undermine their sense of their intelligence (Augustyn & Zuckerman, 2018). They tend to feel threatened by other’s success and believe that exerting additional effort is futile as they

have reached the limits of their intelligence and abilities (Dweck, 2006; Saunders, 2013). VanDeWeghe (2009) demonstrated that fixed mindset has negative effect towards academic performance and thus become a constraint on one's sense of self and limiting choices and path of success.

On the contrary, students with a growth mindset more likely to persist and work hard instead of giving up while facing obstacles or difficulties as they are internally driven by mastery goal (Dweck 1986; Dweck & Leggett 1988). Mastery goal refers to individuals engaging in self-monitoring and consistently focusing on building skills and increasing understanding on learning materials (Dweck, 1986; Dweck & Leggett, 1988). Building on these works, many subsequent studies (Ames, 1992; Pintrich & Schunk, 2002; Urdan, 1997) indicated that students who have mastery goals tend to attribute failure to lack of effort, use more self-regulating strategies and persist in failure, and have stronger intrinsic motivation than those with performance goal. Learner with growth mindset valued effort. They tend to try new strategies and seek input from others when they come across obstacles (Dweck, 2016). Particularly, they tend to embrace feedback as an opportunity to improve their performance (Mangels et al., 2006). Dweck (2012) also stated they feel inspired by others' success as it can be a source of inspiration and education. Mindset could affect learners' attitudes, motivations and response to challenge, obstacles, criticism and success of others and efforts and eventually affect their achievement (Huffman et al., 2018). Overall, mindset played an important role learning.

There are considerable studies showing how the malleability of intelligence have a significant impact upon different aspects of life (e.g., Zhang et al., 2017; Aronson, et al., 2002; Good et al., 2003). A large-scale study conducted by Claro et al. (2016) denoted that having a growth mindset may buffer students from low-income families from the effects of economic disadvantage on academic achievement. The results highlighted growth mindset may promote resilience to overcome adversity and results in enhanced academic performance. Another significant mindset study, Blackwell et al. (2007) explored the relationship between mindset and children's academic performance. They not only suggested mindset can predict academic achievement but also noted that teaching seventh grader in the USA about growth mindset can promote positive change in classroom motivation and further protect them from a decline in their grades.

In another study conducted by Aronson et al. (2002), it was found that African American college students who were encouraged to see intelligence as malleable as opposed to fixed, achieved better grades, higher academic engagement and greater enjoyment of the academic process than those in the control group. In the light of previous findings summarized above, having a growth mindset can contribute to positive educational outcomes. Dweck (2006) pointed out students with fixed mindset may lead them to develop "low-effort syndrome" which decreases their learning motivation and further leads to a decline in their academic performance (p. 58). All of the above findings reaffirmed that students with a growth mindset are more likely to be a better learner and ultimately lead them to have greater academic attainment than students who hold a fixed mindset.

Indeed, Dweck's research findings have received a great deal of attention and their framework has been extensively adopted in numerous studies. However, few recent studies challenge Dweck and colleagues' earlier findings (Blackwell et al., 2007; Mueller & Dweck, 1998), particularly, Li and Bates (2017) have failed to replicate these two studies. They claimed there is no support for the idea that mindset influences on educational attainment, development of cognitive ability or responses to challenge as they found null results. Therefore, the views expressed here would indicate some Dweck and colleagues' mindset research are difficult or even impossible to replicate. It is noticeable that a research study could not be replicated does not necessarily mean the results of that study were a false positive since there are a number of potential reasons why the original findings could not be replicated, say, methodological differences (Anderson et al., 2016). Notably, the scientific rigor of Li and Bates (2017) have been questioned by Dweck (as cited in Chivers, 2017). As a response, Dweck argued that her research team paid a lot of time and effort to "create a context in which the phenomenon could plausibly emerge". Dweck and Yeager (in press) emphasized that Li and Bates (2017) did not follow the best practices of research design and analysis to replicate a study. They also highlighted the rigorous standards for replication of a research.

Apart from this, some recent studies have reported a positive correlation between growth mindset and academic performance. For instance, a robust research which was carried out by OECD (2019) across 74 countries and economies, has identified that mindset plays a

critical role in student achievement. The results of this study revealed students with a growth mindset performed 17% better than those with a fixed mindset in the PISA reading test. Despite the controversy, Dweck and her team's research results stand firm as a variety of recent studies demonstrated consistent results with their finding (including Rhew et al., 2018; Yeager et al., 2019). Dweck and her collaborators (2019) constantly generated novel mindset research to adapt the recent change in the mindset field and explained more about the replication science.

Cultural influence

In the light of past research (e.g., Chen & Wong, 2015), culture seems to play a role in constructing one's mindsets. Mindsets are developed within a sociocultural context (Carr & Dweck, 2011; Dweck & Legget, 1988). It is noticeable that most of studies relating to mindset have been conducted in Western societies (Carr & Dweck, 2011; Dweck & Leggett, 1988). The research results of these studies may not be able to generalize to Eastern societies. As such, it is valuable to conduct mindset research in Asian contexts. Among a variety of cultural groups, Chinese students have received great attention due to their outstanding academic performance in diverse international competitions and assessments such as International Mathematical Olympiad and Programme for International Student Assessment (Shao, 2018). Therefore, it is worthy to investigate the Chinese cultural on Hong Kong learners' mindset.

Few attempts to explore whether the framework of Implicit theories of intelligence can be applied to Chinese societies. For example, Chen and Wong (2015) investigated the relationship between theories of intelligence and goal orientations, and their joint connections to academic achievement among college students in Hong Kong. Their results suggested that growth mindset promote students' endorsement of mastery goal and performance-approach goal and therefore contribute to their academic achievements. They also suggest the need for further investigation of regional differences in students' mindsets within Chinese society as different contextual and economic factors may influence one's motivation and goal orientation.

According to Leung (2010), Chinese are greatly influenced by Confucianism and Confucian's "emphasis on education regardless of social class and background reflects the basic belief that all individuals have the potential to be developed" (p.222). Confucianism stresses "the belief that all children regardless of innate ability can perform well through the exertion of effort" and individuals need to seek self-perfection through the learning process (Rao & Chan, 2009, p. 4). Besides, there is a set of Chinese learning virtues including diligence, endurance of hardship, steadfast perseverance, concentration and humility which deeply influence Chinese learner's beliefs (Li, 2006). Diligence refers to regular studying behavior and emphasizes much time devoted on learning (Li, 2004). Endurance of hardship involves "overcoming the difficulties and obstacles that one is bound to encounter in learning" (Li, 2009, p. 53). Perseverance affects Chinese's attitude toward learning and behavioral tendencies when they face challenges and adversities

(Brady & Kennedy, 2013). Perseverance leads Chinese learners to believe that there are no shortcuts to learning and knowledge can only be obtained through a long journey which is full of difficulties and distractions (Li, 2009). Concentration is a learning disposition that highlights studying require constant attention and dedication (Li, 2006). Humility is about being humble individuals who are willing to “self-examine, admit their inadequacies, and practice self-improvement” (Li, 2009, p.56). Humility could lead Chinese learners eager to learn from anyone respectfully.

In addition to this, Stevenson et al. (1990) reported that compared to Americans, Chinese highly believe that academic performance is linked to effort. Hau and Salili (1996) indicated Chinese students believe greater effort could compensate for the lack of ability and have strong emphasis on effort and endurance. They concluded that Chinese student generally consider ability to be malleable. Rogers (1998) also suggested that, middle school students in mainland China are less likely to attribute success to abilities but are more likely to attribute failure to effort in contrast to their peers in the UK. Thus, whilst attributing failure to ability would generate negative impacts on Western students’ motivation and self-esteem, the same impacts may not be as significant among Chinese students (Hau & Ho, 2010). All the above findings suggested that Chinese culture may foster Chinese learner to cultivate a growth mindset.

However, not all Chinese cultural beliefs have positive influence in cultivating a growth mindset. Chinese influenced by Confucianism generally put great emphasize on academic results (Li, 2009) and this could lead Chinese learner to become overcautious about correction in learning when uncertainty occurs (Wen & Clément, 2003). According to Chiu (2016), teacher who affected by Confucian doctrine often labeled students who do not know how to answer questions as dishonest and unconcentrated. In Chinese societies, teacher often deduct credit for wrong answer to deter students for guessing and so discourage students to take academic risk (Chiu, 2016). Apart from this, Chinese people do not perceive the pursuit of external rewards (e.g. socioeconomic success and status) as contradictory to their pursuit of internal rewards because a person needs all of these to lead a content life (Li, 2003). All these findings suggest that cultural influence on mindset is an interesting topic to be further investigated.

Objectives of the present study

The literature available on this research study of quality of learning, intelligence, mindsets, cultural influences have been reviewed. Based on the research reviewed, the conceptual framework offered by Dweck and her colleagues have helped to explain the influence of mindset on one's attitudes, behavior, goals, and motivation in academic settings. There is various quantitative research related to students' achievement and motivation, which has adopted Implicit theories of intelligence as a framework. Most of the participants in these past studies on mindsets were children and adolescents conducted in Western societies (e.g., Muller & Dweck, 1998; Blackwell et al., 2007). The research

results of these studies may not be able to generalize to other population. There has been little research focus on college student, especially with Chinese background. Therefore, one of the important focuses of the present research has been on students' mindset engendered from their Chinese cultural background. Numerous studies suggest mindset plays a key role in learning process. It is assumed that mindset may influence quality of learning since learning beliefs, attitudes, motivations, and goals are some important elements in determining quality of learning. Yet, little is known about how mindsets influence quality of learning. There are now calls for exploring learning experience due to the lack of empirical studies on adults' learning experience with different mindset.

The present study aims to explore how mindsets influence the quality of leaning among Hong Kong postgraduate students in the UK as Swaminathan (2012) advises that "intelligence is a big factor for grad school success" (para. 3). In general, postgraduate students have completed undergraduate degree and/or have equivalent work experience. As such, postgraduate students have relatively ample learning experience. Hong Kong postgraduate students in the UK are raised in Chinese families as well as immersed in Western education and culture, so the two cultures are intertwined. Given the result of previous findings (Carr & Dweck, 2011; Dweck & Legget, 1988), cultures inevitably can affect mindsets. Thus, this research would like to further explore any cultural implications of mindset by researching the experience of Hong Kong postgraduate students in the UK. In its current form, the existing literature cannot provide the information required to meet

the objectives of this research project. As such, this study is informed by the gap in the literature and intends to address the issues identified.

In view of previous findings, this study will explore the following questions.

RQ1: How do mindsets influence the quality of learning among Hong Kong postgraduate students in the UK?

RQ2: What are the potential effects of culture on Hong Kong postgraduate students' mindset?

It is expected that this research can contribute to extending earlier finding by adopted mixed-methods approach as it can provide not only great opportunities for participants to have a stronger voice and share their personal learning experience but also facilitate diverse avenues of investigation on mindset, thereby supplementing the evidence and allowing questions related to mindsets to be addressed more comprehensively and deeply (Shorten & Smith, 2017).

Methodology

Mixed-methods approach was used in the present study in which both elements of qualitative and quantitative approaches are combined. It is acknowledged that the complexity of using mixed-methods approach requires researcher to put great effort and have expertise to effectively combine two approaches. Despite these disadvantages, it was the most suitable approach for this study as there is a broad consensus that mixed-methods approach can strengthen a study (Greene & Caracelli, 1997). Uecke (2012, p. 104) stated that “qualitative data can offer insights that are not available through quantitative approach”. Yet, qualitative research cannot provide statistically robust results which could be generalized to a wide range of population compared to quantitative research (Johnson & Onwuegbuzie, 2004). This mixed-methods study has a sequential explanatory design with a quantitative approach in the first phase (i.e. online questionnaire) and qualitative approach in the second phase. The research participants, materials, data collection and analysis used in the present study were outlined in this chapter.

Participants

Purposive sampling was adopted to recruit participants for this study because all 12 participants were recruited by using the following inclusion criteria for the study: (1) aged 18 or above; (2) ‘Hongkongers’; (3) Chinese background; and (4) attended a postgraduate programme in the United Kingdom in academic year 2019-2020. All participants for this study were postgraduate students recruited by posting recruitment poster in a closed national Facebook group comprising Hongkongers living in the UK (See Appendix A for

recruitment poster). As postgraduate students have completed undergraduate degree and/or have equivalent work experience, they have ample learning experience which are suitable for this present study. First phase, 12 participants have filled out an online questionnaire which enabled to determine participants' demographics and mindset. Their ages ranged from 23 to 33, with a mean age of 26.5 years. After having comparable number of participants in the two categories (i.e. 4 growth mindset and 4 fixed mindset) in first phase, this was followed by second phase, online semi-structured interviews, that allowed an in-depth investigation of participants' learning experience and perspectives. Participants in first phase who were identified either growth mindset or fixed mindset, consented to being contacted for interview by email were invited to participate in interview. Afterwards, seven participants were successfully contacted and interviewed. Within the group of seven participants, four of the participants (3 females and 1 male) were classified to hold growth mindset; whilst the other 3 participants (2 females and 1 male) were identified to hold fixed mindset.

As proposed by Kuzel (1992), 6 to 8 sample units would be sufficient when homogeneous samples are selected in interview-based research. Notably, having a small sample size (up to 20) in a thematic analysis study not only can help in identifying meaningful themes but also facilitate the development of interviewer-respondent rapport and "enhance the validity of fine-grained, in-depth inquiry in naturalistic settings" (Braun & Clarke, 2013; Crouch & McKenzie, 2006, p.483).

Materials

In this study, participant's mindset was assessed by Dweck Mindset Instrument (DMI) (See Appendix B) (Dweck, 1999). DMI is a self-reported questionnaire which comprises sixteen items. Participants rated each item on a six-point Likert scale from 1 (*strongly agree*) to 6 (*strongly disagree*). DMI includes both growth mindset and fixed mindset items designed to examine respondents' views about whether they believe talent and intelligence are malleable or unchangeable. A classical item related to growth mindset was "You can always substantially change how intelligent you are". A typical item related to fixed mindset was "No matter how much intelligence you have, you can always change it quite a bit" (See Appendix B).

DMI has been found to be of high reliability and validity to assess individuals' mindset. Cronbach's alpha coefficient of DMI ranges from 0.94 to 0.98 (Dweck et al., 1995). Additionally, the validity of DMI to precisely assess mindset is supported by Dweck et al (1995). They also indicated that DMI has been validated over several studies and is not significantly influenced by respondents' age, sex, morality, academic result, religious preference, and social-political attitudes. DMI in both short and standard versions have been widely adopted in numerous studies (including Burn & Isbell, 2007; Jones et al., 2009). A high degree of reliability and validity of DMI gives researcher a measure of confidence that the instrument is of good quality (Planty & Carlson, 2010). The score is determined by calculating the average of all items. Respondents who received an average score between 1.0 and 3.0 were considered as holding fixed mindset. Respondents who

obtained an average score between 4.0 and 6.0 were counted as holding growth mindset (Dweck, 1999).

Due to the COVID-19 pandemic, Zoom, a videoconferencing platform was used to conduct semi-structured interview to protect both the researcher and participants. In accordance with Archibald et al. (2019), Zoom is an effective tool for the collection of qualitative data as it can securely record and store sessions without recourse to third-party software. Zoom have a real-time encryption of meetings as well. More importantly, Zoom has been compliant with GDPR and hence it can provide a good protection of data in conducting this research.

The semi-structured interviews using open-ended questioning are conducive to candid and spontaneous responses since they give participants more flexibility to answer the questions and influence the data (Yardley, 2008). These characteristics allow for the exploration of reflections, perceptions and feelings that can gain descriptive insights and elicit rich data. The interview schedule was developed based on Dweck's mindset works. There were 22 learning-related questions. These questions covered topics such as efforts, goals, setbacks, challenges, quality of learning and motivations (see Appendix C for all interview questions).

Ethics

The underlying principle of ethical research is that the research participants should not come to any harm (Oppenheim, 1992). Ethical consideration remains a top priority

throughout the study. Ethics approval was granted by the School of Education Ethics Committee at the University of Glasgow (see Appendix D). The approval form is where preliminary ethical assessment has indicated that full ethical review was completed prior to the study. The research aligned with BPS Guidelines for ethical practices in psychological research (British Psychological Society, 2019). All participants were informed that their participation will be completely voluntary, and they could decline to answer any specific questions without giving reasons and withdraw at any time during the project will be permitted. At the end of the interview, participants were reminded of the details of counselling services (i.e. Samaritans) available to them, should it be necessary for the participants to seek support following their research participation. Creswell (2003) indicated that in analyzing the data, the study must protect participants' identity and thus pseudonyms were used in present study. All collected data was securely stored in University of Glasgow's secure OneDrive facility.

Data Collection

Pilot Study

A pilot study aims to “identify potential problems that may affect the quality and validity of the results” by carrying out trials on the research approach (Blessing & Chakrabart, 2009, p.114). As such, before seven participants took part in the interview, a pilot study was conducted with a participant who shared characteristics and experience with target population (i.e. Chinese background and attended a postgraduate program in the UK). The participant was requested to give feedback to make the questionnaire and interview more effective. For example, estimate of how long the questionnaire will take to complete to

ensure the questionnaire is feasible (Tsang et al., 2017). Maxwell (2005, p.93) suggested that researchers should pilot-test their interview questions “to determine what questions need to be revised” as the clarity of questions is important. After a pilot study, necessary amendments were made and based upon the feedback as they help improve the clarity of concepts and ensure the procedures is applicable under the conditions given by the context in which the method is to be used. Some of the suggestions included, formulating less ambiguous questions during interviews and recommending the addition of some questions related to positive educational outcomes, for example, “Could you tell me a time when you get a high mark for an assignment and how did you respond? ”(see Appendix C for post-pilot interview questions and Appendix E for pre-pilot interview questions).

Main Study

The online questionnaire has included the Plain Language Statement to indicate a clear and concise description of the research study and the nature of participation so that the participants could decide to participate or not (See Appendix B). The online consent has been obtained by inviting the participants to click ‘consent’ on online questionnaire. After 12 participants had filled out the online questionnaire (first phase), those consented to being contacted for interview by email and having their average scores calculated for holding either growth or fixed mindset were invited to take part in the interviews (second phase).

Seven interviews were conducted from 14 June, 2020 to 12 July, 2020. Similar to the procedure of online questionnaire, participants were provided with sufficient information about the study (see Appendix F for Plain Language Statement) before interview.

Participants were asked to sign an informed consent form to indicate their willingness to participate interview and send back to researcher prior to interview (See Appendix G). At the start of the interview, a verbal explanation of procedures has been given to participants. Subsequently, researcher sought verbal consent from participant to ensure he/she was still willing to participate in interview after the explanation. At the end of the interview, a debriefing about collected data and counselling service was provided to participant (Jackson, 2014). The duration of interviews was about 20 to 30 minutes. The audio was recorded using QuickTime and Audacity and later transcribed verbatim with the assistance of Otter, a software which can generate transcripts from audio into a Microsoft Word. This study used compute software to facilitate accuracy and efficiency of data analysis (O'Sullivan, 2016).

Data Analysis

The data was analyzed using thematic analysis because this study aims to examine in-depth learning experience of Hong Kong international students in the context of postgraduate education. Given that this present study was grounded in a theoretical framework, the themes were driven by the mindset theory. Additionally, two interviews for two type of mindset (i.e. growth mindset and fixed mindset) were used to identify common patterns within data. This study followed a recursive six-phase process of thematic analysis proposed by Braun and Clarke (2006).

The first phase of familiarizing with data was done by reading the entire transcripts of 7 interviews and comparing them to the recordings. The audio-recorded interviews were then

carefully transcribed verbatim by the researcher with the assistance of a software, Otter. According to Mishler (1986, p.50), accurate transcripts “are necessary for valid analysis and interpretation of interview data”. Braun and Clarke (2006) also recommended making notes about any initial ideas during the reading and re-reading process. The second phase is to generate initial codes from the data obtained. All coding was done on the Microsoft Word with text (i.e excerpts) being manually highlighted. Also, notes were made on right side of transcripts in an early stage of data coding (See Appendix H for the example of data analysis). The transcripts were reviewed a number of times to search for recurring regularities in the data that later can be sorted into themes. Then, all data excerpts and relevant codes were collated.

In the third phase, all codes have been reviewed and collated so that groups of related codes can create potential themes or subthemes or were dropped if they are not relevant. The following phase was conducted by defining and naming themes to ensure all themes are informative, clear and distinctive. The data extracts were reviewed to make them fit it into each theme and vice versa so that all of data forms a coherent pattern in the study. As suggested by Braun and Clarke (2006, p.91), “Data within themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes.” Some broad themes were divided into sub-themes; whilst some themes were merged due to their similarity. For instance, “learning motivation” was divided into two sub-themes namely, extrinsic and intrinsic motivation. (See Appendix I).

After completing the said phrases, the sixth phase involved writing-up an academic report relating back to the research question and literature. This stage focused on analyzing data and writing an analytic narrative by using vivid and compelling extract examples of every themes (Braun & Clarke, 2006).

Reflexivity

I, as a researcher is the primary instrument in research, so bias is a major concern in present study as it can threaten the validity and trustworthiness of study (Creswell, 2003). Especially, I shared same characteristics with the research participants. As an insider researcher, I need to avoid the chance of causing innate biases (Bilecen, 2013). Consequently, reflexive approach was involved to reduce potential bias through every stage of this study (Hammersley & Atkinson, 1995). By using of a reflexive journal, I actively engaged in critical self-reflection on my social background, values, interests, experience and beliefs that can bias the research (Hesse-Biber, 2007; Pine, 2008)

Conclusion

The study has been carried out with mixed-methods approach within the thematic analysis framework. This section has provided an overview of every part of the methodology and allowed for the methods used to be justified and explained critically. All methodology behind the decisions made has been clearly explained.

Findings

The results of the thematic analysis of the collected data will be discussed to address the following research questions:

RQ1: How do mindsets influence the quality of learning among Hong Kong postgraduate students in the UK?

RQ2: What are the potential effects of culture on Hong Kong postgraduate students' mindset?

Twelve participants were successfully recruited from a closed national Facebook group comprising Hongkongers living in the UK. All of them fulfilled all the study inclusion criteria mentioned earlier. After twelve participants (see Table 1) had filled out the online questionnaire (first phase), those consented to being contacted for interview by email and having their average scores calculated for holding either growth or fixed mindset were invited to take part in the interviews (second phase). For the second phase, seven participants with different mindset (i.e. growth mindset and fixed mindset) were successfully invited and interviewed. In this group of seven participants, three participants were identified with fixed mindset whilst four participants were identified with growth mindset (See Table 2 for phase 2 participants' profile).

Table 1. *Phase 1 Participants' profile* (n=12)

Pseudonym	Gender	Age	Level of study	DMI Score	Mindset inclination
Alex	M	33	Master	2.31	Fixed
Luna	F	23	Master	2.94	Fixed
Olivia	F	26	Master	2.88	Fixed
Celeste	F	23	Master	2.81	Fixed
Matt	M	27	Master	4.94	Growth
Chole	F	27	Master	5.69	Growth
Clara	F	25	Master	4.06	Growth
Daisy	F	31	Master	4.00	Growth
Carl	M	27	Master	4.19	Growth
Amy	F	24	Master	4.31	Growth
Katy	F	28	Master	3.81	Mixed
Jane	F	24	Master	3.19	Mixed

Table 2. *Phase 2 Participants' profile* (n=7)

Pseudonym	Gender	Age	Mindset inclination
Alex	M	33	Fixed
Luna	F	23	Fixed
Olivia	F	26	Fixed
Matt	M	27	Growth
Chole	F	27	Growth
Clara	F	25	Growth
Daisy	F	31	Growth

All seven participants shared about their educational trajectories and personal learning experience. They talked about the different ways to improve quality of learning. Moreover, results have shown that participants' cultural background played an important role in affecting their learning beliefs, attitude, and behaviors. There were three main themes: (1) student approaches to learning (2) challenge and failure, and (3) learning motivations (See table 3). All of these themes have covered the elements that could determine quality of learning. The summary of these main themes and subthemes with supporting excerpts from interview transcripts can be found in Appendix F.

Table 3. *Summary of themes and subthemes*

Main themes	Subthemes
1. Student approaches to learning	(A) Learn from feedback (B) Inspiration to learn from others (C) Effort
2. Challenge and failure	(A) Risk-taking attitude (B) Rebound from failure
3. Learning motivations	(A) Intrinsic motivation (B) Extrinsic motivation

1. Student approaches to learning

All seven participants spoke about various approaches to learning. They discussed about how the feedback which were received from educational practitioners (such as tutors and lecturers) have positive influence on their quality of learning. Moreover, they talked about how they learn from others including peers and people who are successful. The analysis of “student approaches to learning” led to three subthemes: (A) learn from feedback, (B) learn from others and (C) effort.

(A) Learn from feedback

All seven participants recognized the importance of feedback on learning and most of them described the feedback provided by someone who is professional and senior, i.e. tutors, lecturers, experts, and scholars, can enhance learning and improve quality of

learning, and further enhance assessment performance. For example, as mentioned by Olivia (26_Fix Mindset_ inclination) “feedback is quite useful to help me improve my future work”. All participants discussed about how to use feedback to facilitate learning:

“I can know what I did bad or what I did good.” (Luna_23_ Fix_Mindset_inclination)

They [someone who is professional] could give your feedback to how to improve or they could let you know whether you have learned it [new skills] wrongly, so you can make it correct.” (Daisy_31_Growth_Mindset_inclination)

Both FM and GM participants talked about the necessity of feedback to identify the strengths and weaknesses of their works. However, two thirds of FM participants expressed that not all feedback would be useful to improve their learning as stated by one of the FM participants, Luna (23_Fix_Mindset_inclination) “feedback is very depend[ent] on the people who give feedback to me...a lecturer doesn’t give a very good feedback” and “people [lecturer]...not always say how you can improve...I’m very confused about how to make improvement”. Luna (23_Fix_Mindset_inclination) shared her unpleasant experience of receiving inconsistent and unconstructive feedback on poster presentation from her lecturer. Another FM participant, Alex (33_Fix_Mindset_inclination) stressed that feedback would need to be “honest and professional”.

These quotes suggest that the quality of feedback may affect learner' attitude towards feedback and unconstructive feedback is considered as an ineffective tool to improve learning. Three GM participants shown strong willingness to accept feedback. This finding is compatible with Mangels et al. (2006) that suggested learner with growth mindset tend to embrace feedback as an opportunity to improve their performance. People with fixed mindset tend to ignore constructive feedback (Dweck, 2006). As such, it is surprising to find all FM participants did not demonstrate reluctance to receive feedback or ignore useful feedback. Conversely, most of the FM participants strove to have constructive feedback to improve their learning. Alex (33_Fixed_Mindset_inclination) talked about those feedback from his previous assignments were "very helpful" for his dissertation as he could "avoid the same mistake". FM participants were proactive about feedback could possibly be attributed to their positive experience of using feedback to improve academic performance. This is similar to Limeri et al. (2020), proposed that academic success lead to develop growth mindset.

On the other hand, three GM participants have shown their willingness to receive feedback and learn from feedback. This finding echoes with Mangels et al. (2006) suggested that learner with growth mindset tend to embrace feedback as an opportunity to improve their performance. However, one GM participants, Clara (25_Growth_Mindset_inclination) demonstrated reluctance to receive feedback and expressed her "anger" about a recent constructive criticism on a presentation which was received from a tutor. As said by Clara, "Sometimes I may not...take everything[feedback],

but I will just think about what they comment on my project...I think I agree or not agree with them.”. As noted by Dweck (2016, para. 4) mentioned “we all have our own fixed-mindset triggers”, (including challenge, criticism, and success of others). Clara may be fairly sensitive to criticism and so criticism can trigger her into a fixed mindset trait.

The majority of participants valued feedback from authority figure maybe because of Chinese cultural influence. As mentioned earlier, Chinese culture could shape Chinese learners’ beliefs, attitudes and behaviors. In Chinese culture, there is a set of learning virtues including diligence, endurance of hardship, steadfast perseverance, and concentration and humility” which profoundly influence Chinese learner’s beliefs (Li, 2009). In accordance with Li (2009), Asian learners generally show deference to teachers due to their deep sense of humility and respect for knowledge. In other words, Asian learner tend to be more willing to “self-examine, admit their inadequacies, and practice self-improvement” (Li, 2009). The results proposed that the general experience of using feedback to improve learning among Hong Kong postgraduate students was predominantly positive. It is observed that participants who have positive experience of using feedback to improve learning are more likely to recognize the effectiveness of feedback and have feedback-seeking behavior regardless of what mindset inclination they have. These findings are in line with the results of Limeri et al. (2020), that proposed prior academic experience may affect one’s mindset beliefs. Academic success therefore could lead students show more growth mindset traits. In addition, having a fixed mindset did not seem to interfere with FM participants’ decision to seek critical feedback. Similarly, a growth

mindset did not appear to have predominant effect on GM participants' attitudes towards feedback. In sum, results indicate cultural beliefs and learning experience may lead an individual to have diverse attitude towards feedback.

(B) Inspiration to learn from others

The second subthemes under student approaches to learning is inspiration to learn from others. As noted by Dweck (2007; 2012), mindset affect learner's attitude about others' success. Dweck (2006) stated that people with growth mindset tend to be inspired by other's success. On the contrary, people with fixed mindset are more likely to feel threatened by others' success (Dweck, 2011). However, results suggested all seven participants had been inspired by others and try other people's "ways to learn" (Chloe_27_Growth_Mindset_inclination). All seven participants shared similar view in this theme. They learnt from either peers or people who are successful and did not show they perceived threat from these people's success:

"Everyone has their own learning style; they always have their own method to learn".

Alex (33_Fixed_Mindset_inclination)

"I have discovered how I could learn in the fastest way, which is to...see a role model to see how they do it themselves and then I could replicate and then do it myself...most of the time I was successful." (Daisy_31_Growth_Mindset_inclination)

These perspectives is supported by Luna's (23_Fix_Mindset_inclination) statement: "I asked my friends [who are doing very well on programming] to teach me about the use of R and then I submit the assignment and... pass". Three FM and three GM participants described learning from peers or successful people has led them to have a satisfied learning outcome. The results of GM participants endorsed Dweck (2012) which stated people with growth mindset feel inspired by others' success as it can be a source of inspiration and education. It is noticeable that both FM and GM participants were often inspired by others' success and learn from them probably due to positive academic experience. This notion is supported by Limeri (2020) who has suggested that prior academic experience can affect learner' mindset beliefs. The academic success could lead students show stronger growth mindset traits (Limeri, 2020).

Next, Alex (33_Fixed_Mindset_inclination) shared a Confucius quote and explained the reason to actively learn from counterparts. As said by Alex, "learning without interact with others leads people become ignorant...without...your friends...your classmate or uni[versity] mate...you will know nothing". These findings are compatible with past research (Li, 2009) that humility is an important element in Chinese learning beliefs and humility "leads one to want to learn from anyone" (p.56). Because of humility, Chinese learners believe that individuals can always self-improve as long as they learn humbly and respectfully from others (Li & Wang, 2004). Chinese culture possible influence their attitude to learn from others. Therefore, culture and prior learning experience are both

likely to play a role in shaping one's mindset. Again, mindset may not have a dominant effect on one's attitude to learn from others.

(C) Effort

Dweck (2015) stated effort is about try new strategies and seek input from others when students come across difficulties or seek for improvement. In accordance with Dweck (2006), learners with a growth mindset are more likely to value effort in learning. In contrast, learners with a fixed mindset tend to believe effort is fruitless as they think making an effort will mean that they are not intelligent (Dweck, 2010). All seven participants talked about how their use different strategies to enhance their learning. More specifically, they have demonstrated high willingness to invest time and energy to seek for new strategies in order to improve their learning.

Two FM and three GM participants discussed how they sought for extra learning resources to improve learning. For example, one GM participants, Matt (27_Growth_Mindset_inclination) shared his prior learning experience, as he said "I seek to improve my study...I read a lot like different materials, different book...I just searched the internet to look up...YouTube videos in terms of like court hearings". Particularly, Two FM and three GM participants talked about when they did not understand the academic content, they will "read more information on the internet" (Luna_23_Fix_Mindset_inclination) and "more articles or textbook by some expert of

specific field of knowledge” (Olivia_26_Fix_Mindset_inclination). They mentioned the more learning materials they read the more they can learn. Moreover, most of the participants showed that they seek for different learning strategies or style in order to improve their academic performance. The result of GM participants affirms the findings in the existing literature (Dweck, 2015) regarding learner with growth mindset try different learning tactics to solve problem. At the same time, it is noteworthy to find that FM participants also sought for different learning strategies to deal with difficulties.

Apart from this, the results of the previous two subthemes, learn from feedback and inspiration to learn from others evidently shown all seven participants regardless of what mindset inclination they sought input from other when they come across difficulties. These results may due to cultural influence as well. All these findings are corresponding to past research (Li, 2006; 2009), suggested that Chinese learner valued humility, which lead them more willing to learn from others, engage in the self-examine progress, acknowledge their inadequacies, and practice self-improvement. In sum, both fixed and growth mindset may not determine an individual’s attitude to seek for new strategies to improve and input from others.

2. Challenge and failure

The second main theme is “challenge and failure” since all seven participants discussed about their learning-related challenges and failures. All participants shared diversity and commonality regarding challenges. They mentioned how they dealt with learning-related

failure as well. Therefore, the analysis of “challenge and failure” led to two subthemes: (A) risk-taking attitude and (B) rebound from failure.

(A) Risk-taking attitude

According to Dweck (2010), students with a fixed mindset are less likely to take academic risk and prefer less challenging tasks as they may feel intimidated by learning tasks that require them to step out of their comfort zones or take risks. In contrast, having a growth mindset encourages academic risk-taking behavior. Most participants expressed they were receptive to take risk while facing learning-related challenge. Particularly, two GM participants and one FM participant demonstrated high risk tolerance in learning as one of them stated “I would do anything just to make it [learning] work” (Chloe_27_Growth_Mindset_inclination).

On the other hand, two FM and two GM participants described their risk-taking attitude was mainly depended on “how much risk” they need to take (Clara_25_Growth_Mindset_inclination). They tended to rationally evaluate the opportunity cost of taking risk in learning. As Alex (33_Fix_Mindset_inclination) noted, he was eager to take risk to learn new knowledge but in certain area that is relatively significant to his academic achievement, he preferred a safe and practical option rather than taking risk: “I tend to pick the easier one [optional modules]...the ones that I had previous experience or the ones that I had a confidence.”

This finding echoes with Dweck's (201) research, denoted that learners with fixed mindset tend to prefer some less challenging tasks and unlikely to step out of their comfort zone. On the other hand, a GM participant, Matt (27_Growth_Mindset_inclination) showed "risk averse" attitude when he faces challenge as he did not like to fail. As Matt (27_Growth_Mindset_inclination) said, "if you get risky, it is more likely than not that you will fail" and so he favored direct and practical approach in terms of studying as well. This finding is similar to Dweck (2016), which demonstrated people with a growth mindset can be triggered into a fixed mindset trait while facing challenges. Challenge is one of the fixed mindset triggers (Dweck, 2016). Additionally, Chinese culture possibly affect Chinese learner's risk-taking attitude in learning. As noted previously, Chinese teacher often "deduct credit for wrong answer to deter students for guessing" (Chiu, 2016). Chinese students therefore tend to afraid of failure and uncertainty. Overall, either fixed or growth mindset did not seem to have a predominant effect on one's risk-taking attitude in learning. These findings have shown that an individual with diverse mindset may take appropriate academic risk in some area.

(B) Rebound from failure

All seven participants talked about they have "encountered a lot of obstacles" in their learning and how they have bounced back from failure (Olivia_26_Fix Mindset_inclination). All of them expressed nearly the same view while facing failure that they "will not give up" (Luna _23_Fix_Mindset_inclination). They learnt from failure and reflected

on the factors that could be attributed to such failure. For example, Clara (25_Growth_Mindset_inclination) who failed to join the group discussion at the beginning of postgraduate programme stated: “I try to improve...my ability to have conversation with people...I think one or two months later, it’s getting better and I feel more confident to talk to people”. One GM participant, discussed about his failure to get satisfactory results in the exam:

“What I’ve learned is that in order to do well, in any kind of study or exam, one needs to be... down to earth...doing all the practice or studying all the books that you need to study.” (Matt_27_Growth_Mindset_inclination)

The majority of participants believed “persistence” is the only way while facing failure (Daisy_31_Growth_Mindset_inclination). These results are aligned with Li (2009) which indicated persistence as one of the characteristics of the Chinese learners. Additionally, one FM participant shared an ancient Chinese proverb “failure is the mother of success” which has influenced him on how to deal with failure (Alex_33_Fixed_Minset_inclination).

The GM participants have shown their ability to cope with failures and never give up easily. This finding is aligned with Dweck (), mentioned that people with growth mindset persist in failure. Meanwhile, it is noticed that FM participant also shown their ability to cope with failures and never give up easily. It is observed that FM participants’ ability to cope with failure was not constrained by their mindset. Also, they did not attribute their

failures to intelligence or ability. Although, Dweck (2006) suggested that people with fixed mindset tend to give up easily when obstacles arise. Perhaps, Chinese culture plays a role in shaping Chinese learner's beliefs, attitude and behavior while facing failure. As noted by Li (2009) endurance of hardship and perseverance are two crucial learning virtues among Chinese learners. The belief of endurance of hardship leads Chinese learner to believe that one would encounter and obstacles in learning, and one need to overcome them. Perseverance leads Chinese learners to believe that knowledge can only be obtained through a long journey, which is full of difficulties and obstacles (Li, 2009). All these culture beliefs seem to have encouraged Chinese learners' continuous striving and persistence even in the face of failure. Consequently, all these findings seem to suggest that cultural learning belief that fixed mindset learners value may counteract the negative effects of having a fixed mindset.

(C) Learning motivations

Motivation is a vital component to determine quality of learning (Lawson & Kirby, 2012). All seven participants discussed about their learning motivations. The analysis of learning motivations leads to two subthemes, namely, intrinsic motivation and extrinsic motivation (Ryan & Deci, 2000). As Dweck (2006) has proposed, learners with a growth mindset tend to be intrinsically motivated to learn as they more likely to have mastery goals which means they engage in self-monitoring and consistently focusing on building skills and increasing understanding on learning materials. Learners with a fixed mindset tend to have performance goals as they are more externally focusing on how others will judge their work and ability (Dweck 1986; Dweck & Leggett 1988) and focus on external rewards.

(A) Intrinsic motivation

Intrinsic motivation refers to the behavior that is driven by internal reward. Learners who were intrinsically motivated to learn were fascinated and inquired about the learning process, and focused on the task itself, rather than the final results (Clinkenbeard, 2012). Seven participants mentioned that they have an interest in their learning area or knowledge and this would motivate them to learn. Additionally, the exploration of unknown or new area facilitates and leads participants to enjoy the learning process. FM participants talked about how they were motivated to learn as they want to “deepen the knowledge” they had (Alex_33_Fix_Mindset_inclination). GM participants noted how the lack of “enough knowledge” (Clara_25_Growth_Mindset_inclination) and the desire to have “refreshing ideas everyday” (Chloe_27_Growth_Mindset_inclination) provided huge motivation for them to learn. Both group of participants have shown they were intrinsically motivated to learn could be imputed to Chinese learning belief. As discussed by Leung (1996) and Rao and Chan (2009), Chinese students are greatly influenced by Chinese value and one of the essential learning beliefs in Confucian ideology is constantly learning for self-perfection. Also, intrinsic motivation is seen as desirable and a prerequisite to deep learning. These beliefs may facilitate intrinsic motivation among the Chinese learners.

(B) Extrinsic motivation

Learners who were extrinsically motivated were concerned more with the results (e.g., money, grades, prizes, and approval) than the task-completion process (Clinkenbeard, 2012; Pritscher, 2011). Five participants stated their motivation were associated with grades. They were concerned about grades and stated good grades may facilitate their academic performance. Conversely, bad grades may lead to “self-doubt” of their own abilities and negative influence their motivation to learn (Olivia_ Fix Mindset_ inclination). This finding could be seen as a result of the Chinese learners being characterized as highly performance-oriented (Li, 2009) and all participants have been studying in a highly competitive educational system in Hong Kong. In addition, most participants were driven by external rewards to learn as well:

“I can earn a living in the future and get a better life and maybe buy a better car and live in a better house...continuously studying...have a professional job.”
(Matt_27_Growth_Mindset_inclination)

“Obviously money and power...you know all the superficial stuff.”
(Chloe_27_Growth_Mindset_inclination)

This perspective is supported by many other participants in both groups since most participants considered the competitive situation in Hong Kong and suggested how career prospect has strongly motivated them to learn. They mentioned that they wanted to be “equipped to enter the workforce in the future” (Olivia_26_Fix Mindset_ inclination) and

“differentiate” from counterparts through studying a postgraduate programme (Daisy_31_Growth_Mindset_inclination). It can be seen that studying a postgraduate programme is a means to get better career for most of the participants.

It is observed that intrinsic and extrinsic motivation co-existed among both FM and GM participants. Regarding intrinsic motivation, all seven participants have mentioned of how they focus on skill-building. Both FM and GM participants talked about acquiring essential skills and “deepen knowledge” were their major goal of studying a postgraduate programme (Alex_33_Fixed_Mindset_inclination). Besides, both FM and GM participants mentioned how they monitored their behavior and performance. For example, Clara (25_Growth_Mindset_inclination) shared her negative experience of doing group discussion and she stated she was unable to “join conversation” due to “language barrier”. Subsequently, she examined her ability of having conversation with others and so she tried to find online learning materials to learn conversation skill.

It is also interesting to find some participants with a growth mindset demonstrated they were strongly motivated by grades and rewards while compared with some FM participants. It seems mindset may not have a dominant effect in determining one’s learning motivation. As a result, learners with a growth mindset may not necessarily tend to possess mastery goals. Likewise, learners with a fixed mindset may not necessarily incline to have performance goals. A majority of participants were driven by external

rewards may be due to extrinsic motivators (e.g. expectations and social status) are deeply rooted in the Chinese culture (Li, 2003). Meanwhile, they were driven by intrinsic motivation as well. Take Matt (27_Growth_Mindset_inclination) as an example, who genuinely interested in the knowledge of postgraduate programme but he was strongly motivated by the external rewards (e.g., money) as well. He possessed both intrinsic and extrinsic motivation and therefore he had high motivation to learn. These findings echo well with Li (2003), suggesting Chinese students believe that extrinsic motivations facilitate learning, in addition to intrinsic motivation. Biggs and Watkins (1996) highlighted that distinction between the two motivations (i.e. intrinsic and extrinsic motivation) is not clear cut among Chinese learner. In addition to intrinsic motivation, Chinese learners may utilize various strategies that reflect extrinsic motivation to attain meaningful and important learning outcomes. (Biggs & Watkins, 1996).

Summary

The qualitative data provided a rich and in-depth insight into the Hong Kong postgraduate students' learning experience in the UK. The participants detailed divergent, personal accounts but some commonalities became clear and apparent. The findings are similar with most of the contemporary literature related to mindset and Chinese culture whilst simultaneously general novel insight, such as learners seems to have both fixed and growth mindset traits. The following section will include discussion, conclusions, indicating the strengths and limitations of the present research, implications for practice and suggestions for future research.

Discussion

The results of this study have suggested that both fixed or growth mindset may not necessarily impact upon an individual's attitude towards constructive feedback, willingness to learn from other and try new learning strategies, risk-taking attitude, ability to recover from failure and learning motivation and goals. In the light of previous studies, all these learning beliefs, attitude and behaviors could determine the quality of learning. The results have suggested neither fixed mindset nor growth mindset could have predominant effect on one's learning beliefs, attitudes and behaviors. As such, it is possible to conclude that fixed mindset and growth mindset may not decisively affect one's quality of learning.

Participants with a growth mindset could demonstrate fixed mindset traits while receiving criticism or facing challenge. These findings are consistent with Dweck (2016), which speculated an individual who endorses growth mindset could have fixed mindset triggers (e.g. challenge, criticism or someone who has better performance than you) and "nobody has a growth mindset in everything all the time". That said, the findings are not completely consistent with some previous studies (Augustyn & Zuckerman, 2018; Dweck, 2006; Saunders, 2013) which have suggested learners with a fixed mindset tend to ignore useful feedback, deem effort futile and feel threatened by other's success, have performance goal, unwilling to take academic risk, easily give up while facing failure. The findings are also at odds with previous research (Dweck 1986; Dweck & Leggett 1988;

Mangels et al., 2006) which noted that learners with a growth mindset tend to value feedback, prefer challenging tasks, have mastery goals.

A possible reason for such discrepancy in the findings might be that the Chinese culture plays a role in shaping participants' mindset as most participants disclosed how their prior educational and cultural background have significant influence on their learning belief and behavior. Participants in this study were born and raised in Hong Kong and so they were significantly affected by the Confucian-heritage culture. Notably, the findings suggested that culture could shape one's mindset and lead Chinese learner to develop both growth and fixed mindset traits. The Confucian values, which are rooted in Chinese culture and transmitted during the socialization process, could influence Chinese learners' beliefs, attitudes and behaviors. As noted by past research (Li, 2009, p. 56), Asian learners more likely to "self-examine, admit their inadequacies, and practice self-improvement" as they have a deep sense of humility and respect for knowledge (Li, 2006). It might be that for Chinese learners their Chinese cultural background already enables them to develop some growth mindset traits.

Some participants (especially those who place high emphasis on academic achievement) tended to be a low risk-taker in learning and were more unwilling to accept high levels of risk in learning. This may be due to Chinese students usually put great emphasize on academic results (Li, 2009) and this could lead them to become overcautious about

correction when uncertainty occurs. Also, Chinese teachers usually label students who do not know the answer of a question posed as dishonest and unconcentrated. Teachers often deduct credit for wrong answer to deter students from guessing, and thus discouraging students to take appropriate academic risk (Chiu, 2016). This could result in Chinese learner developing some fixed mindset traits.

Apart from this, it is proposed that participants who acquired prior positive learning experience are more likely to develop growth mindset traits. For example, participants who have been benefited from effective feedback tend to be more open-minded to feedback and those who have gained positive learning outcomes through learning from others tend to be more receptive to learn from others as well. These findings are aligned with Limeri et al. (2020), which proposed prior academic experience could affect learner' mindset beliefs. It is concluded that learners who experienced academic success are more likely to develop growth mindset traits.

It is observed that all participants have possessed both fixed mindset and growth mindset traits no matter which mindset they have been classified into. Although the findings are not completely consistent with previous mindset research, this study does provide support for Dweck (2016) that proposed “we all have mixture of both mindsets” rather than a pure one type of mindset in reality and “mixture continually evolves based on experience” (para. 4).

In this present study, participants with fixed mindset have shown growth mindset traits in some area. This provides a stimulus and foundation for future research.

Strengths and limitations of the present study

This study has adopted the mixed-methods approach to investigate the topic of mindset. Since mindset has long been studied through quantitative approach, this study has combined both qualitative and quantitative elements to gain rich and in-depth research data. In accordance with Creswell (2009), when qualitative research approach is combined with quantitative research approach, it helps us to “interpret and better understand the complex reality of any given situation, along with the implications of quantitative data” (p.2). Another strength of this research is its ability to provide complex textual description of participants’ learning experience. Also, the study utilized DMI, which is reliable and valid and so it helped increase the reliability and validity of the research (Planty & Carlson, 2010

However, there is no perfect research study. The present study does have limitations that need to be acknowledged. First, it has adopted mixed-methods design which is relatively time-intensive, and complex compared to other research approaches (Tariq & Woodman, 2013). Secondly, the gender imbalance of participants might have potential influence on results (Coon et al., 2018). Thirdly, it is unavoidable that the researcher’s preconceptions may impact upon the research process (Yardley, 2008). In order to increase the validity of the present research and counteract subjective nature of analysis qualitative research data,

I actively engaged in critical self-reflection on my position, social background, values, interests, experience and beliefs that could prejudice the research (Hesse-Biber, 2007; Pine, 2008). Besides, I have followed Yardley's (2008) core principles to manage data. I adhered to Yardley's (2008) guideline and the semi-interview questions in this research were formulated through existing literature. Also, they were open-ended, and participants were given the chance to present their own line of inquiry. In gist, the strengths of this study mostly outweighed the limitations thereof.

Implications for practice and suggestions for future research

This research has offered insight into the learning experience among Hong Kong postgraduate students in the UK. Furthermore, the research provided a new perspective about how mindset affects quality of learning. This study holds significant practical implications for the public especially parents and teachers in Chinese societies. This study also identified how culture and prior academic experience could be the significant factors to affect the quality of learning. It follows that educators in Chinese societies should develop more useful teaching strategies that could offset the negative effect of culture towards quality of learning. Meanwhile, Chinese teacher should reflect on their teaching approach. As said previously, Chinese teachers often deduct credit for wrong answer to deter students from guessing. Chinese students therefore tend to be afraid of failure and uncertainty. Thus, Chinese educators should try to create a relaxing learning environment to encourage student to guess without fear of the aftermath of giving a wrong answer. Also, since extrinsic motivation is work equally well as intrinsic motivation among Chinese

learners, Chinese educators could use appropriate rewards to promote student to take appropriate academic risk.

The results of this research generated novel insight that learners with a fixed mindset also demonstrated some growth mindset traits in certain aspects in learning since prior research had only concentrated on fixed mindset versus growth mindset. Additionally, most of them were culture-free. It is recommended that future researcher should take into account of cultural influence. A further important direction for future research could focus more on the mixture of mindset as Dweck (2016) acknowledged there is no pure growth mindset. It is possible to assume that there is no pure fixed mindset as well. Besides, more research needs to be conducted in natural settings and researchers need to invite more adult learners to take part in as a majority of previous findings (e.g., Blackwell et al., 2007) were conducted with children and adolescent in experimental research design. Moreover, since the present study have gender imbalance within participants group, future study should consider involving an equal number of male and female students in order to get a holistic picture. Furthermore, it is more ideal to have equal number of growth and fixed mindset participants in future research. Hence, the extensions of mindset research onto adult learner will contribute considerably to the knowledge of enhancing quality of learning.

Conclusion

The study employed mixed-methods approach to collect quantitative and qualitative data from seven Hong Kong postgraduate students in the UK. This study has helped to boost the understanding towards Hong Kong postgraduate students' learning experience due to the lack of empirical studies on adults' learning experience with different mindset. Through this study, participants shared their personal learning experience but also promoted varied avenues of investigation on mindset, thus supplemented the evidence and allowing questions related to mindsets to be addressed more comprehensively (Shorten & Smith, 2017). This research has undoubtedly produced important knowledge about how mindset could influence the quality of learning. Moreover, it has identified that culture plays a role in shaping one's mindset and explored their influences on one's learning beliefs, attitudes, and behaviors. Besides, it provides important insights that learners could have both fixed mindset and growth mindset traits regardless of which mindset inclination they have, and such results could possibly be imputed to culture, and prior academic experience. Thus, fixed growth mindset may not negatively affect one's quality of learning. Corresponding, growth mindset may not positive affect one's quality of learning.

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Appendix A: Recruitment Poster



PARTICIPANTS NEEDED

Factors affecting Hong Kong Postgraduate Students' Learning Experience: An Exploratory Study

Investigating the influence of mindset on learning quality

- Take part in this study will involve completing a questionnaire and Zoom interview.
- All participants will have the opportunity to win a £30 Amazon voucher for their involvement.

Study location and Time

- The online questionnaire will take 8 mins and the interview will take no longer than 30 mins.
- The study will be conducted at a convenient time and place for participants.

Eligible participants

- Hong Kong Postgraduate Student
- Aged 18 or above

If you are interested to take part this research or have any questions about it, please feel free to contact me!

Thank you!

Contact information

Sze Yin Celine Leung
25075051@student.gla.ac.uk



<https://unsplash.com/photos/cckf4TsHAuw>

Appendix B: Online Questionnaire (consent form, plain language statement and Dweck Mindset Instrument)

English (United Kingd... ▼

Factors affecting HK Postgraduate Students' Learning Experience: An Exploratory Study

You are being invited to participate in a research study titled "The Influence of Mindset Among Hong Kong Postgraduate Students' Learning Experience: An Exploratory Study". This study is being done by Sze Yin Celine Leung from the MSc Psychological Studies at the University of Glasgow.

The purpose of this study is to find out how mindsets influence learning quality. Little is known about personal experience from people with different mindsets. Most of the participants in previous mindsets studies were children and adolescents. Thus, this research is expected to contribute to extending earlier findings. In the first phase of the study, the procedure involves filling an online questionnaire that will take approximately 8 minutes. You will have the opportunity to win a £30 Amazon voucher for your involvement. For more details about this research, including information about data protection, are available in the Plain Language Statement. Please click on the Plain Language Statement (<https://forms.office.com/Pages/ResponsePage.aspx?id=KVxybjp2UE-B8i4ITwEzyMS4X7R637FLmW6mTFZ5wjZUNEQzOFIzNTB3VDIMVdQVxkEUUVIV01BUy4u>)

If you are interested in taking part, please read the Plain Language Statement before starting the questionnaire. If you have any questions, please email me at 25075051@student.gla.ac.uk.

Your participation is entirely voluntary, and you can withdraw at any time.

This study has been reviewed and agreed by the School of Education Ethics Committee, University of Glasgow.

If you would like to participate in this research, please complete and return this questionnaire by 20 June 2020.

*** Required**

Consent for Participation in this Study

The researcher requests your consent for participation in a study about factors affecting your learning experience.

I confirm that I have read and understood the Plain Language Statement for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

I consent to undertaking the interview using Zoom and interviews being audio-recorded.

I acknowledge that participants will be referred to by pseudonym.

I acknowledge that there will be no effect on my grades arising from my participation or non participation in this research.

I opt to be entered in the draw to win an Amazon voucher valued at £30.

I understand that I can contact the researcher for this project; by e-mail to receive more information.

Data usage and storage:

All names and other material likely to identify individuals will be anonymised.

The material will be treated as confidential and kept in secure storage at all times.

The personal data will be destroyed once the project is complete.

The anonymised research data will be kept for five years as they may be used in future publications, both in print and online.

I waive my copyright to any data collected as part of this project.

I acknowledge the provision of a Privacy Notice in relation to this research project (i.e. the Plain Language Statement).

If you have any questions, please contact me at 25075051@student.gla.ac.uk.

Thank you in advance for your participation!

1. I consent to participate in this questionnaire. *

Yes

No

2. I agree to take part in the second phase of the research (i.e. follow-up interview) and researcher can contact me by email. *

Yes

No

Next

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Plain Language Statement

You are being invited to take part in a research project into mindsets and learning quality.

Before you decide if you want to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the information on this page carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether you wish to take part or not. I hope that this sheet will answer any questions you have about the study.

1. What is the purpose of the study?

The purpose of this study is to find out how mindsets influence learning quality. Little is known about personal experience from people with different mindsets. Furthermore, most of the participants in previous studies were children and adolescents. Thus, this research is expected to contribute to extending earlier findings by combining both qualitative and quantitative components.

2. Why have I been chosen?

You are being asked to take part because you are Hong Kong Postgraduate student. In the light of past findings, cultural factors seems to play important roles in constructing one's mindsets. HK Postgraduate students in UK are raised in Chinese families as well immersed in Western education and culture and so the two cultures are intertwined inevitably and can affect mindsets.

3. Do I have to take part?

You do not have to take part in this study. If you decide not to take part, you will still be exactly the same as just now. If, after you have started to take part, you change your mind, just let me know and I will not use any information you have given me in my writing.

4. What will happen to me if I take part?

If you take part, you will be asked to fill in a questionnaire. The questionnaire will take about 8 minutes. Afterwards, if you consent to be contacted in participating the follow-up interview, I may contact you to take part in an interview using Zoom to ask you some questions about your learning experience and thought on mindsets. The interview will take no longer than 30 minutes. The data will be collected within 30.06.2020. You will have the opportunity to win a £30 Amazon voucher for your involvement. The winner will be randomly selected at the end of data collection and the voucher code will be sent via email by 30.09.2020.

5. Will the information that I give you in this study be kept confidential?

All information obtained from you throughout the research will be carefully safeguarded and stored securely on University of Glasgow's secure OneDrive facility to prevent identification of participants arising from any aspect of the research. I will do as much as possible to remove detailed and specific references in the write up of the dissertation that may reveal your identity. You may choose a pseudonym which I will use when writing up the dissertation. All personal data will be destroyed once the project is completed (December 2020). Anonymised research data will be securely stored for up to five years and only made accessible to future researchers or used in future publications in a form which protects personal information.

6. What will happen to the results of this study

I will analyse the data I collect from participants, and present this in the dissertation which I am writing for my qualification, Master degree. All participants will receive a written summary of the findings if requested.

7. Who has reviewed the study?

This study has been reviewed and agreed by the School of Education Ethics Committee, University of Glasgow.

8. Who can I contact for further information?

If you have any questions about this study, you can ask me, Miss Sze Yin Celine Leung (25075051@student.gla.ac.uk) or my supervisor, Dr Dely Elliot (Dely.Elliot@glasgow.ac.uk) or the Ethics officer for the School of Education, Dr Barbara Read (Barbara.Read@glasgow.ac.uk).

9. Other supports

If you feel you need support following the research, please contact Samaritans to get professional help (jo@samaritans.org or call on 116 123).

Thank you for reading this.

End _____

Submit

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Factors affecting HK Postgraduate Students' Learning Experience: An Exploratory Study

* Required

Section 1: Information about yourself.

3. Please indicate your name. *

4. Please provide your email address. *

5. How old are you? *

6. Please indicate your gender. *

- Female
- Male
- Non-binary
- Prefer not to say

7. Please indicate your discipline. *

8. Please indicate your level of study. *

- PhD
- Master

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Factors affecting HK Postgraduate Students' Learning Experience: An Exploratory Study

* Required

Section 2: Dweck Mindset Instrument (DMI) (Dweck, 2006)

Read each sentence below and then make the corresponding box that shows how much you agree with each sentence. There is no right or wrong answer.

9. You have a certain amount of intelligence and you really can't do much to change it. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

10. Your intelligence is something about you that you can't change very much. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

11. No matter who you are, you can significantly change your intelligence level. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

12. To be honest, you can't really change how intelligent you are. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

13. You can always substantially change how intelligent you are. *

- Strongly Agree
- Agree
- Mostly Agree

- Mostly Disagree
- Disagree
- Strongly Disagree

14. You can learn new things, but you can't really change your basic intelligence. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

15. No matter how much intelligence you have, you can always change it quite a bit. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

16. You can change even your basic intelligence level considerably. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

17. You have a certain amount of talent, and you can't really do much to change it. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

18. Your talent in an area is something about you that you can't change very much. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree

Strongly Disagree

19. No matter who you are, you can significantly change your level of talent. *

Strongly Agree

Agree

Mostly Agree

Mostly Disagree

Disagree

Strongly Disagree

20. To be honest, you can't really change how much talent you have. *

Strongly Agree

Agree

Mostly Agree

Mostly Disagree

Disagree

Strongly Disagree

21. You can always substantially change how much talent you have. *

Strongly Agree

Agree

Mostly Agree

Mostly Disagree

Disagree

Strongly Disagree

22. You can learn new things, but you can't really change your basic level of talent. *

Strongly Agree

Agree

Mostly Agree

Mostly Disagree

Disagree

Strongly Disagree

23. No matter how much talent you have, you can always change it quite a bit. *

Strongly Agree

Agree

Mostly Agree

Mostly Disagree

Disagree

Strongly Disagree

24. You can change even your basic level of talent considerably. *

- Strongly Agree
- Agree
- Mostly Agree
- Mostly Disagree
- Disagree
- Strongly Disagree

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Appendix C : Post-pilot Interview Questions

Broad themes	Questions
<p>Ideas and thoughts about learning</p>	<ol style="list-style-type: none"> 1. Do you think some people are better at learning than others? Please explain your answer. 2. Do you feel that there is something that you can do to make you better at learning? Please explain your answer. 3. Are you often inspired by others' success and learn from them? Please explain your answer.
<p>Improving the quality of learning</p>	<ol style="list-style-type: none"> 4. How do you improve your quality of learning? 5. Do you think feedback (constructive criticism) is helpful to improve your quality of learning? Please explain your answer. 6. Please give an example of a piece of feedback you received recently. What was it and what did you do about it?

<p>Thoughts on learning goals</p>	<p>7. Could you tell me why you study a postgraduate programme?</p> <p>8. Do you often set learning goals but not reaching them? Please explain your answer.</p> <p>9. What are your ultimate learning goals and how are you going to reach these goals?</p>
<p>Thoughts on learning motivation</p>	<p>10. What motivates you keep learning?</p> <p>11. Do grades affect your motivation? Please explain your answer.</p> <p>12. Could you tell me a time when you get a high mark for an assignment? How did you respond?</p>
<p>Making an effort to learn new ideas</p>	<p>13. How do feel about learning new ideas?</p> <p>14. What if the new ideas are difficult for you?</p> <p>15. Are you willing to take academic risks?</p>

<p>Dealing with learning-related failures</p>	<p>16. Could you describe a learning-related failure you have experienced recently?</p> <p>17. How did you handle this failure and what did you learn from it?</p>
<p>Dealing with learning-related challenges</p>	<p>18. Could you tell me about a time when you face with an academic challenge recently?</p> <p>19. How did you handle this challenge and what did you learn from it?</p>
<p>Learning expectations for the future</p>	<p>20. What are your learning expectations for the future?</p> <p>21. Have you thought about being a lifelong learner? Please explain your answer.</p>

Clearinghouse question: The interviewee's turn

22. Is there anything I haven't asked that you would like to share with me?

Appendix D: Ethics Approval Form



Ethics Committee for Non-Clinical Research Involving Human Subjects

Notification of Ethics Application Outcome – UG and PGT Student Applications

Application Details

Undergraduate Research Ethics Application
 Postgraduate Research Ethics Application

Application Number: 402190259

Applicant's Name: Sze Yin Celine Leung

Project Title: The influence of mindset among Hong Kong Postgraduate students' learning experience: An exploratory study

Requested start date: 02/06/2020

Requested end date: 03/12/2020

Application Status (tick one)

- Approved
 Minor recommendations
 Major recommendations
 Rejected (new submission required)

Permissions

Please find below the list of permissions that you **MUST** obtain and submit to the Ethics Administrator before commencing with data collection. You can provide a scanned or electronic copy of the permission letters to: education-ethics@glasgow.ac.uk.

Permission required from:

Administrator of closed Facebook groups or other social media groups as appropriate

Recommendations (where changes are required)

University of Glasgow
 College of Social Sciences
 School of Education: St Andrew's Building, 11 Eldon Street, G3 6NH
 The University of Glasgow, charity number SC004401
education-ethics@glasgow.ac.uk

- **Where changes are required by reviewers all applicants must respond** in the relevant boxes to the recommendations of the Committee and provide this as the Resubmission Document to explain the changes you have made to the application as well as amending the documents.
 - **All resubmitted application documents** should then be provided.
- **If your application is rejected** a new application must be submitted to the ethics administrator. Where recommendations are provided, they should be responded to and this document provided as part of the new application. A new reference number will be generated.

MAJOR RECOMMENDATIONS OF THE COMMITTEE	APPLICANT RESPONSE

MINOR RECOMMENDATIONS OF THE COMMITTEE	APPLICANT RESPONSE

ADDITIONAL REVIEWER COMMENTS	APPLICANT RESPONSE TO REVIEWER COMMENTS
<p>Thanks for your revisions. In relation to contacting participants who are not being invited to interview – please do stress to them that this is only because you have already received the planned number of participants.</p> <p>Good luck with the research!</p>	<p>I have revised 5.2. Additionally, I have clarified how I will match online surveys with the interviews and provide more information about what I would do with participants that will not be invited to the interview.</p>

Please retain this notification for future reference.

If you have any queries please do not hesitate to contact the School of Education ethics administrative contact for UG and PGT Applications: education-ethics@glasgow.ac.uk

University of Glasgow
 College of Social Sciences
 School of Education: St Andrew's Building, 11 Eldon Street, G3 6NH
 The University of Glasgow, charity number SC004401
education-ethics@glasgow.ac.uk

Appendix E : Pre-pilot Interview Questions

Broad themes	Questions
<p>Ideas and thoughts about learning</p>	<ol style="list-style-type: none"> 1. Do you think some people are better at learning than others? Please explain your answer. 2. Do you feel that there is something that you can do to make you better at learning? Please explain your answer. 3. Are you often inspired by others' success and learn from them? Please explain your answer.
<p>Improving the quality of learning</p>	<ol style="list-style-type: none"> 4. How do you improve your quality of learning? 5. Do you think feedback (constructive criticism) is helpful to improve your quality of learning? Please explain your answer. 6. Please give an example of a piece of feedback you received recently. What was it and what did you do about it?

<p>Thoughts on learning goals</p>	<p>7. Could you tell me why you study a postgraduate programme?</p> <p>8. Do you often set learning goals but not reaching them? Please explain your answer.</p> <p>9. What are your ultimate learning goals and how are you going to reach these goals?</p>
<p>Thoughts on learning motivation</p>	<p>10. What motivates you keep learning?</p> <p>11. Do grades affect your motivation? Please explain your answer.</p>
<p>Making an effort to learn new ideas</p>	<p>12. How do feel about learning new ideas?</p> <p>13. What if the new ideas are difficult for you?</p>
<p>Dealing with learning-related failures</p>	<p>14. Could you describe a learning-related failure you have experienced recently?</p> <p>15. How did you handle this failure and what did you learn from it?</p>

Dealing with learning-related challenges	<p>16. Could you tell me about a time when you face with an academic challenge recently?</p> <p>17. How did you handle this challenge and what did you learn from it?</p>
Learning expectations for the future	<p>18. What are your learning expectations for the future?</p> <p>19. Have you thought about being a lifelong learner? Please explain your answer.</p>

Appendix F : Plain Language Statement



Plain Language Statement

(Interview)

Title of project and researcher details:

The Influence of Mindset Among Hong Kong Postgraduate Students' Learning Experience:
An Exploratory Study

Researcher: Miss Sze Yin Celine Leung

Supervisor: Dr Dely Elliot

Course: MSc Psychological Studies - Dissertation

You are being invited to take part in a research project into mindsets and learning quality.

Before you decide if you want to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the information on this page carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

I hope that this sheet will answer any questions you have about the study.

1. What is the purpose of the study?

The purpose of this study is to find out how mindsets influence learning quality. Numerous researchers dedicated a lot of effort to study mindset. However, little is known about personal experience from people with different mindsets. Furthermore, most of the participants in previous studies were children and adolescents. Thus, this research is expected to contribute to extending earlier findings by combining both qualitative and quantitative components.

2. Why have I been chosen?

You are being asked to take part because you have completed the questionnaire in this research. Also, you have consented to be contacted in participating a follow-up interview.

3. Do I have to take part?

You do not have to take part in this study. If you decide not to take part, you will still be exactly the same as just now. If, after you have started to take part, you change your mind, just let me know and I will not use any information you have given me in my writing.

4. What will happen to me if I take part?

If you take part, I will conduct an Interview using Zoom to ask you some questions about what you think about the influence of mindsets and your learning experience. You do not have to answer any question that you do not want to. The research will take no longer than 30 minutes. I will use QuickTime Programme to record the answers so that I can transcribe it later. In addition, the data will be collected within 30.06.2020.

5. Will the information that I give you in this study be kept confidential?

All information which is collected about you throughout the research will be kept strictly confidential. I will keep all the collected data in a locked cabinet and in a locked file on my computer. I will do as much as possible to remove detailed and specific references in the write up of the dissertation that may reveal your identity. When I write about what I have found, your name will not be mentioned. You may choose a pseudonym which I will use when writing up the final assignment. Also, the names of other people, places and any organizations you mention during in the interviews will be changed. Your personal information will not be disclosed. However, if during our conversation I hear anything which makes me worried that you might be in danger of harm, I might have to inform relevant agencies of this. Please note that confidentiality may not be guaranteed, due to the limited size of the participant sample.

Importantly, all collected data will be stored securely on University of Glasgow's secure OneDrive facility. All personal data will be destroyed once the project is completed (December 2020). All anonymised research data will be securely stored for up to five years and only made accessible to future researchers or used in future publications in a form which protects personal information.

Please note that if evidence of wrongdoing or potential harm is uncovered, this information may need to be passed on to the relevant authority.

6. What will happen to the results of this study

I will analyse the data I collect from participants, and present this in the dissertation which I am writing for my qualification, Master degree. All participants will receive a written summary of the findings if requested.

7. Who has reviewed the study?

This study has been reviewed and agreed by the School of Education Ethics Committee, University of Glasgow.

8. Who can I contact for further Information?

If you have any questions about this study, you can ask me, Miss Sze Yin Celine Leung(25075051@student.gla.ac.uk) or my supervisor, Dr Dely Elliot (Dely.Elliot@glasgow.ac.uk) or the Ethics officer for the School of Education, Dr Barbara Read (Barbara.Read@glasgow.ac.uk).

9. Other supports

If you feel you need support following the research, please contact Samaritans to get professional help (jo@samaritans.org or call on 116 123).

Thank you for reading this.

End _____

Appendix G: Consent Form



Consent Form (Interview)

Title of Project: The Influence of Mindset Among Hong Kong Postgraduate Students' Learning Experience: An Exploratory Study

Name of Researcher: Miss Sze Yin Celine Leung

Name of Supervisor: Dr Dely Elliot

I confirm that I have read and understood the Plain Language Statement for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

I consent to undertaking the interview using Zoom and interviews being audio-recorded.

I acknowledge that participants will be referred to by pseudonym.

I acknowledge that there will be no effect on my grades arising from my participation or non participation in this research.

I understand that I can contact the researcher for this project; by e-mail to receive more information.

Data usage and storage:

All names and other material likely to identify individuals will be anonymised.

The material will be treated as confidential and kept in secure storage at all times.

The personal data will be destroyed once the project is complete.

The anonymised research data will be kept for five years as they may be used in future publications, both in print and online.

I waive my copyright to any data collected as part of this project.

I acknowledge the provision of a Privacy Notice in relation to this research project (i.e. the Plain Language Statement).

I agree to take part in this research study

I do not agree to take part in this research study

Name of Researcher Signature

Date

Name of Participant Signature

Date

Appendix H : Example of Data Analysis

Bolded – Interesting points or use of language

Yellow Highlight – Key words

Pink Highlight – Emotive language

Green highlight – Important contextual information (e.g., consequences of lockdown)

Teal Highlight – Other Important information or noteworthy use of language

Excerpt from interview transcript	Coding
<p><i>All right, so, yeah, that's great. Um, you mentioned that you are studying a management program. So can you tell me why you study this program?</i></p> <p>Why chose management as a master? And I...yeah, so basically, it's because my degree, my degree education in politics with criminology. So it's completely not related. And actually, why the reason I chose business is because I feel like if I want to walk back in Hong Kong, or like, if I want to move forward and I don't have a profession, like for example, not interested in certain areas, then business will be safe option.</p> <p><i>Okay, nice. Yeah, it seems you have a very clear career plan. Yeah. Okay. Do you often set learning goals but not reaching them?</i></p>	<p>Postgraduate education; change discipline Business Hong Kong Profession Move forward Safe option Not interested</p>

<p>When you say learning goal, what kind of learning goal? Like I have to learn this? Or like...?</p> <p><i>Yeah, you may have a target like I'm going to learn these chapters or finish some tasks before a deadline.</i></p> <p>Yes. I used to do it, but not anymore. And again, like throughout the years, there is a lot of trial and error. Yeah. So now, for example, at the moment, I'm picking a qualification and project management. And so every day at least, even though I was just like, I was set a target like, you have to finish two chapters or like you need to finish this session. And I'll do it. I'm not I'm not sure that that necessarily helpful because maybe you're just doing it like just to power you through it doesn't mean that you actually learn it. So the quality of learning not necessarily like best. Does that make sense? Cause you're just hitting the target.</p> <p><i>What are your ultimate learning goals? And how are you going to reach these goals?</i></p>	<p>Future career prospects</p> <p>Extrinsic motivation</p> <p>Past vs now</p> <p>Learning goals</p> <p>Trial and error</p> <p>Now- Specific learning goals</p> <p>Everyday</p> <p>Quality of learning</p> <p>Effectiveness of setting learning goal</p> <p>Ultimate goal</p> <p>Keep learning</p>
---	---

<p>How am I going to reach these goals? I think my ultimate goal is just keep learning.</p> <p><i>Do you have any specific goals, maybe you want to pursue a little bit more?</i></p> <p>I am definitely thinking to take another degree. I'm not sure about master or like PhD or something like that. But I think that's just one of the means. But I think back in when I was kid or like, even when I was in uni, I feel like you just you can never stop learning. So I don't really like set on the target of like a degree but more like, I have to...I need to keep pushing myself. Does it make sense?</p>	<p>Another degree -</p> <p>Master/PhD</p> <p>Never stop learning</p> <p>Degree as a learning goal?</p> <p>Pushing</p>
---	---

Appendix I: Summary of Main Themes and Subthemes

Main themes	Subthemes	Excerpt from interview transcript
1. Students approach to learning	A. Learning from feedback	<p>Luna: I do agree with feedback is very good to improve learning because I can know what I did bad or what I did good</p> <p>Matt: You need to learn from your mistakes in order to you know, avoid repeating the same old mistakes that you will have committed, like in the past for many, many times.</p>
	B. Inspiration to learn from others	<p>Alex: :Everyone has their own learning style; they always have their own method to learn</p> <p>Daisy: I have discovered how I could learn in the fastest way, which is to...see a role model to see how they do it themselves and then I could replicate and then do it myself...most of the time I was successful.</p>

	C. Effort	<p>Matt: I seek to improve my study...I read a lot like different materials, different book...I just searched the internet to look up...YouTube videos in terms of like court hearings</p> <p>Olivia: I will say...hmm...to read more, to read more articles or textbook by some expert of specific field of knowledge.</p>
2. Challenge and failure	A. Risk-taking attitude	<p>Alex: I tend to pick the easier one [optional modules]...the ones that I had previous experience or the ones that I had a confidence.</p> <p>Chloe: I would do anything just to make it[learning] work.</p> <p>Clara: It's really depends on how much risk you're going to take.</p>
	B. Rebound from failure	<p>Daisy: If you don't have the persistence to do it every day, you will finally give it up.</p>

		Alex: Failure is the mother of success.
C. Learning motivations	A. Intrinsic motivation	<p>Clara: First one is I genuinely like architecture, and I want to just know more about architecture.</p> <p>Alex: Well, first of all, I would like to deepen the knowledge that I had...secondly, you know it's just to make new friends you know, meet new people.</p>
	B. Extrinsic motivation	<p>Chloe: I think is, obviously money and power instead is everything, you know all the superficial stuff</p> <p>Matt: I can earn a living in the future and get a better life and maybe buy a better car and live in a better house...continuously studying...have a professional job.</p>