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The experience of secondary students studying MOOCs

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The Experience of Secondary Students Studying MOOCs:

A Case Study of a Teacher-Student Mentoring Programme in Hong Kong

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Abstract

This thesis reports on a mixed-methods case study examining the experiences and support of secondary school students engaged in a school-based massive open online course (MOOC) mentorship programme in Hong Kong. It describes the students' perceived experiences regarding school-based mentoring support they received and how mentoring impacted their experience in studying MOOCs. While the benefits of different forms of mentoring support in the secondary school context have been established, few studies have focused on the specific factors that impact the perceived effectiveness of MOOC mentorship from the point of view of the mentees. Therefore, this study is one of the first to investigate students' perspectives on a MOOC mentorship programme and how it impacts their ways of studying MOOCs and plans for their future.

To investigate learners' experience in MOOCs and how the Hong Kong school-based mentorship programme impacted their MOOC experiences and future plans, Vygotsky's (1978) concept of the zone of proximal development (ZPD), the scaffolding theory of Jerome Bruner (Wood et al., 1976), and the self-determination theory of Deci and Ryan (2010) serve as the theoretical underpinnings in this study. This study reveals that self-determination theory is a viable theory for further understanding students' motivation to take MOOCs. A wide range of choices for MOOCs, scheduling autonomy, and flexibility of working on MOOCs on mobile phones are major factors contribute to participants' enjoyment of MOOCs, and these factors moderate the autonomy practices of self-determined learning. Mixed results were generated in this study regarding competence and relatedness of self-determination theory. Subject competence and time management skills were significant factors in motivating respondents' continued participation in MOOCs. The four-stage model (Tharp & Gallimore, 1988), with reference to Vygotsky's sociocultural theories, also provides a framework to illuminate how mentoring and other support offered by the school helped them reach the ZPD. The findings show problem-solving experiences encouraged learners to actively seek support, develop abilities, and adapt themselves to the learning process. The process of learning is not straightforward, because the MOOC students constantly moved back and forth, to and from the sources of scaffolding when they studied MOOCs, particularly when they faced new challenges.

The MOOC completion rate for the mentorship programme in this study (45%) is higher than the average completion of MOOCs (5%–15%). This signifies that under the supervision of mentors and the other academic support offered by the school, students might be better equipped to finish MOOCs. In terms of the impact of MOOC mentoring on students' future plans, students' interest in the MOOCs offered by the university have the most impact on participants' decisions regarding their tertiary education, followed by the recognition of MOOC verified certificates. Based on the results of the individual interviews, unexpected findings regarding the impact on students' careers and employability can also be highlighted. Some students also used extra credentials attained from MOOC to gain an edge in their university applications.

The dissertation concludes by highlighting the contributions arising from the research, followed by the limitations of the present study and proposals for future research. Recommendations for practitioners in the field of MOOC mentoring in the secondary school context are also provided.

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Declaration

I declare that the work in this thesis was carried out in accordance with the Regulations of the University of Bristol. The work is original except where indicated by special reference in the text and no part of the thesis has been submitted for any other degree.

Any views expressed in this thesis are those of the author and in no way represent those of the University of Bristol.

The thesis has not been presented to any other University for examination in the United Kingdom or overseas.

Signed _____

10th May 2021
Date _____

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List of Abbreviation Definitions

AP	Advanced Placement
CEO	Chief Executive Officer
COVID-19	Coronavirus Disease of 2019
C++	C Object-Oriented Programming Language
DSS	Direct Subsidy Scheme
HKD	Hong Kong Dollar
HKDSE	Hong Kong Diploma of Secondary Education
HKU	The University of Hong Kong
HKU TELI	Technology-Enriched Learning Initiative of The University of Hong Kong
IELTS	International English Language Testing System
JUPAS	Joint University Programmes Admissions System
K-12	Kindergarten through Twelfth Grade
MIT	Massachusetts Institute of Technology
MOOCs	Massive Open Online Courses
MSC	Modern Standard Chinese
OCW	Open CourseWare
OER	Open Educational Resources
OUHK	Open University of Hong Kong
PolyU	The Hong Kong Polytechnic University
SPOC	Small Private Online Courses.
SPSS	Statistical Package for Social Sciences
STEM	Science, Technology, Engineering and Math
US	United States
USA	United States of America
USD	United States Dollar
ZPD	Zone of Proximal Development

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Chapter 1

Introduction

1.1 Introduction and Purpose of the Chapter

This introduction will present an outline of the dissertation and the various steps involved in the research process. The first section provides a brief background to the study and discusses the need to research the areas of learner experience in studying massive open online courses (MOOCs) and how mentoring impacted their MOOC experience. The second section reveals the personal reflection of the educational context that leads to the research area of studying MOOCs and MOOC mentoring. The third section provides a description of the research focus and methods of the study, and a summary of the content of each chapter is provided in the final section.

1.2 Research Background

Global-minded young thinkers with critical thinking, lifelong learning, and self-directed learning abilities are in huge demand today. There needs to be help for students to develop these skills in a structured manner and eventually nurture them so that such students can become global-minded young thinkers. However, owing to the standardized public curriculum, there are limited opportunities to cultivate K-12 students' global-mindedness and promote their lifelong learning. Fortunately, the emergence of MOOCs

provides opportunities for all learners to access high-quality education on any topic. The MOOC model is a relatively new form of online education that offers a seemingly unlimited number of students the opportunity to enroll in high-quality courses delivered by professors at top universities. Unlike traditional degree courses taken at universities, most MOOCs lack accreditation or formal qualifications; however, they still attract a large number of students who participate in a variety of courses. In the era of global uncertainty, people have to thrive in a fast-paced world with diversified cultures and solve complex local and international issues. Extracurricular activities and liberal studies in the K-12 curriculum may facilitate students' learning of these skills. However, I believe that the Hong Kong secondary school curriculum offers students limited exposure in terms of opportunities to develop new and professional skills, especially those with certifications issued by tertiary institutes. In this regard, students who have diverse learning needs or are unable to pursue a more traditional path to a post-secondary education may not be exposed to potential future learning paths that can be pursued. Introducing MOOCs along with mentoring to K-12 students can provide cost-effective online learning programmes for young learners to explore their interests under the supervision of a teacher mentor.

1.3 Personal Reflection

1.3.1   The MOOC Context

As the coordinator of the Gifted Education Sub-Committee at my school, I partnered with

the Technology-Enriched Learning Initiative of the University of Hong Kong (HKU TELI) to launch the MOOC-Based Mentorship Programme, which was the first K-12 outreach campaign in the global MOOC community. As I had successful collaborations with HKU TELI in various e-learning outreach programmes, a partnership was established, as HKU TELI was interested in launching a MOOC secondary school learning campaign with a local school. Students' MOOC participation is facilitated by schoolteachers, assessed by online assignments, and accompanied by feedback from MOOC learners around the world. By studying MOOCs with teacher mentorship, students can gain exceptional learning experiences outside of their school curricula and develop skills that may impact their future studies.

With the recent outbreak of COVID-19, everybody had to resolve complex issues that have not been managed in the standardized school curriculum. I foresee that education will continue to evolve in the post-COVID-19 world, as the recent closure of school campuses has led to a sudden shift to online learning. MOOC learning will play a huge part in providing a platform for students to extend their learning outside of their classrooms. The leaders of my school see great value in the collaboration with HKU TELI for the MOOC mentoring programme. Not only can MOOC learning serve as enhancement or exploration courses outside the standardized school curriculum, but lifelong learning and self-directed learning can also be promoted through this programme.

1.3.2 The Mentoring Context

While attending a doctoral conference conducted by the University of Bristol in 2015, I recognized from the presentation of my fellow course mate that MOOC platforms, such as edX and Coursera, are self-directed learning online platforms that my students crave. Despite the recent rapid rise in MOOCs, their efficacy is debated. Bock and O'Dea (2013) suggest that the self-directed learning skills that MOOCs require may be lacking in average high school students. Upon discussing this with technologists from HKU TELI, I discovered that academic mentoring, affective support, school-based training workshop and reimbursement of certificates were considered the primary forms of support that my school could provide. Consequently, I proposed to my school leaders that they start a MOOC mentorship programme that provides teacher mentors with the necessary guidance that the students need to improve their learning experiences. This is because MOOCs do not generally have student–instructor interaction, and the participants may feel unsupported and isolated because MOOCs are mostly self-paced and do not fully engage learners in the same way that traditional classrooms do. The participants in this MOOC mentorship programme can pair up with teacher mentors who share the same interests or who are experts in their fields, as teacher mentors can support their mentees academically and affectively.

In reality, the introduction of MOOC learning and mentoring at my school was challenging for a number of reasons, the main one being that the teaching staff did not know how it could be implemented at a secondary school in Hong Kong. Some

researchers have described online education as self-paced academic classes conducted over the internet (Allen & Seaman, 2010; Noble, 2001). However, with the growing popularity of online learning or blended learning classes, the teachers at my school became increasingly concerned about the introduction of MOOC mentoring programmes because it might have led to overwhelming workloads that required their supervision. In response to this, a teacher-briefing session was offered to teachers in July 2016 to clarify their roles and duties. Another teacher-training workshop was also provided by HKU TELI in September 2016, when teacher mentors were informed about the latest updates and developments regarding the MOOC learning platforms.

1.3.3   The Context of the Case School

To understand teachers' and students' reception of the new mentoring programme, I conducted an e-survey asking for their comments regarding online education. The respondents were largely positive with regard to online education; half of the respondents found online lessons useful, reporting a high level of learning and engagement with the course materials. This result is in line with the findings of Keengwe and Kidd's (2010, p. 6) study: The students understood that the main advantages of online learning courses compared to traditional classroom courses were "saving of time, scheduling and the ability to take more courses". The new MOOC mentorship programme has since become a signature programme at my school, as it is promoted in my school prospectus, on parents' night, and even at graduation ceremonies.

The five-year development plan for the MOOC mentorship programme aims to nurture self-directed, independent, lifelong learners by supporting them as they complete at least one MOOC during their time at my school. The school also anticipates pedagogical development as another direction of growth. From the collected evidence, the school will learn to further develop a more mature mechanism to facilitate students' MOOC learning, generic skill and attitude development, and teacher–student mentoring. Besides enriched learning, the school is exploring the possibility of adopting MOOC learning as a self-directed learning module in the standardized public curriculum on specific subjects (e.g., literature in English). Self-directed learning modules will be developed for the streamlined adoption of this new learning mechanism.

1.4 The Problem and the Research Questions

According to Leon Urrutia et al. (2015, p. 13), even with the emergence of MOOCs, the main concern is how MOOC learners "can find effective academic advising resources to improve their learning outcome". Despite the student-centric approaches that dominate online education, the role of the mentor is crucial in the constructive alignment of effective learning (Siemens, 2012). I was interested in students' experiences of studying MOOC and how they perceived the impact of mentoring support on MOOC learning; these issues are relevant to Research Questions 1 and 2. I also explored the various forms of support offered by the school and how they impacted participants' future plans, which are relevant to Research Question 3. There is a knowledge gap between the existing forms of the experience of Hong Kong secondary students studying MOOCs; therefore,

the responses from the students in this study facilitate the exploration of a practical mode of a mentorship programme that can impact learners' MOOC experience and their decision for future plans.

The main purpose of this dissertation is to illuminate 40 students' experience of studying MOOCs with teacher mentoring at a Hong Kong secondary school and how the support from the school impacted their MOOC experience and future plans. The three research questions are as follows:

(1)   What are the experiences of the students in the MOOC mentorship programme?

(2)   How does the support that the students receive from the MOOC mentorship programme at the case school impact their experiences in studying MOOCs?

(3)   How do the student mentees' participation in the school-based MOOC mentorship programme impact their future plans?

1.5 Research Focus and Methods

The current research is a case study of a secondary school in Hong Kong. It is also a practitioner research because I run the MOOC mentoring programme at the school. As a practitioner myself, I am interested in illuminating students' experiences in studying MOOCs and how students perceived the impact of the support offered by the school on

their MOOC experience. Because this case study is geared towards an in-depth understanding of learners studying MOOCs and mentoring experiences, it is heavily descriptive but also looks at sub-groups of students from a comparative perspective.

The study aims to examine the specific needs and challenges that students experienced in studying MOOCs, how learners perceived the various forms of support offered by the school in the mentoring programme, and their impacts on learners' MOOC experiences and further studies. This study focuses mainly on students' perspectives, and the purpose is to give voices to their perspectives within the complex academic and motivational contexts that the students had to negotiate in MOOCs and the mentorship programme. Because my dissertation explores students' experiences in studying MOOCs and how the support offered by the school impacted their planning for their future studies, relevant research on MOOCs and online learning, mentoring in secondary schools, extra-credential learning, and the career and educational benefits of completing MOOCs are the foci of the literature review.

To understand the complexity of participants' MOOC experiences and the impact of mentoring on their MOOC experience, I adopted a mixed-methods research design, using both qualitative and quantitative methods for data collection and analysis. This research method also fosters a better understanding of the underlying processes, statistical analysis, and different perspectives. After studying the survey results of the quantitative analysis, the researcher used the qualitative interview techniques to track complex social phenomena in a way that "cannot be adequately researched in any of the other common

research methods" (van Lier, 2005, p. 195). The data collection methods encompassed three instruments: analysis of pre- and post-mentorship surveys conducted at the beginning and the end of the programme, semi-structured individual interviews, and a focus group interview with MOOC student mentees. The details of the methodology will be further discussed in Chapter 4. To investigate learners' experience in MOOCs and how the Hong Kong school-based mentorship programme impacted their MOOC experiences and future plans, Vygotsky's (1978) concept of the zone of proximal development (ZPD), the scaffolding theory of Jerome Bruner (Wood et al., 1976), and the self-determination theory of Deci and Ryan (2010) serve as the theoretical underpinnings in this study, and they will be further discussed in Chapters 2 and 4.

1.6 Significance of the Study

This study is important and useful for school leaders, teachers, and MOOC technologists. It will highlight how students' mentoring experiences play a part in their MOOC learning and will shed light on the impact of the various forms of support offered by the school on students' MOOC experiences and future studies. Specifically, the main contribution is that the practice of mentoring secondary school students enrolled in MOOCs can be shared with other secondary schools in Hong Kong and beyond. MOOCs provide flexible and powerful yet free education resources for self-directed learners to study at their own pace. If they are motivated and supervised by their teachers, even young learners in secondary schools can participate in courses offered by tertiary institutes outside the confines of an institution.

The dissertation has also been produced to inform those who are involved in teaching or designing MOOCs. The findings of this dissertation may provide useful information on the experiences of their target audience—secondary school students—regarding their MOOC participation under the supervision of a teacher mentor. Additionally, MOOC technologists can consider the ideas generated from this study to make useful changes to their MOOC platforms, and this can improve the online education of their students. Ultimately, I hope that the findings from this dissertation will spark further research about better ways to support the learning of online students on a massive scale.

1.7 Outline of the Dissertation

The dissertation consists of eight chapters. Chapter 1 of the dissertation introduces the problem and the background to the problem. The context, purposes, research questions, and significance of the study are also addressed. A review of the related literature in Chapter 2 includes topics such as the evolution of online learning and MOOCs, MOOC learner demographics, learner motivation and learner experiences, how mentoring programmes impact learner experience and the concepts of sociocultural theories and self-determination theory which set out the theoretical framework for the study. It also points out niches in the literature that the current dissertation aims to fill. Chapter 3 focuses on the details of the collaboration between HKU TELI and my school in the form of the MOOC Initiative—namely, the framework of the programme, the participation of the students, and the various forms of support offered. Chapter 4 concentrates on the

research methodology. The research design and framework of the methods used for data collection are discussed at the very beginning of the chapter. The objectives, design, procedure, and how the data were analysed for each instrument mentioned are detailed. The ethical and methodological issues that are central to the study are presented at the end of the chapter. The quantitative and qualitative findings are presented in Chapters 5 and 6, respectively. Chapter 7 establishes a discussion of the research findings in response to Research Questions 1–3, which present the contributions of the research regarding studying MOOC and MOOC mentoring. Finally, the contributions, limitations, recommendations, and opportunities for further research in the area of studying MOOC and MOOC mentoring are discussed in Chapter 8.

1.8 Summary

In this chapter, I have provided a description of the background for this study, which identifies the broad problem and states its importance. This establishes the need to undertake the present research. The contexts of my research—MOOC, mentoring, and the case school—are presented in an attempt to underline the significance of the current study. The research focus and methods are also previewed, followed by a discussion of the problem, research objectives, and research questions. The expected significance of the study for MOOC students, school leaders, teachers, and MOOC technologists is also presented. Finally, the chapter concludes with an outline of the dissertation.

Chapter 2

Literature Review

2.1 Introduction and Purpose of the Chapter

This literature review is comprised of three distinct areas: 1) MOOCs, 2) mentoring in secondary schools, and 3) the theoretical approaches of this study. The chapter begins with an overview of MOOCs: from distance learning to MOOCs; the mainstreaming of MOOCs; MOOCs in formal and informal learning; extra-credential learning with MOOCs; learner demographics, motivation, and experience in studying MOOCs; and online and peer mentoring in MOOCs. In the second section, the relevant literature regarding mentoring in secondary schools is explored to provide an overview of the factors that impact the mentoring experience of secondary students who study MOOCs. The third section reviews the concepts of sociocultural theories and self-determination theory, which provide the theoretical framework for the study. This chapter also helps identify the gaps in the existing literature to inform the research design of this study.

2.2 From Distance Learning and Online Learning to MOOCs

MOOCs are positioned within the broader traditions of distance education, online education, and open education in this study. By tracing the development of MOOCs from their precursors in open education movements to the mainstreaming of MOOCs in recent

years, this study describes the context of the rise of MOOCs, as well as their implications for informal and extra-credential learning in Hong Kong.

2.2.1 Distance Learning, Online Learning, and Open Education Resources

Distance Learning

Distance education was first introduced in mid-nineteenth century Europe and the United States through the introduction of correspondence courses, which found success due to the increased efficiency of the postal service (Moore & Kearsley, 2011). Originally, the objective of distance education was to provide learning for those who were somehow at a disadvantage in or excluded from the formal schooling system. Correspondence courses also prospered within vocational training. In the United States, The International Correspondence Schools, which had enrolled over 2.5 million students by 1923, were established to train miners and railroad workers (Casey, 2008). Therefore, the idea of providing extra credentials for a huge number of distance learners is not a new one.

According to Moore and Kearsley (2011), broadcast technologies such as television and radio are considered the second generation of distance education. Students in rural and remote parts of the world, namely the Australian Outback, benefitted from the use of radio stations to broadcast educational content (Fitzpatrick, 1982). Starting in the 1960s, the use of television stations to broadcast educational content was also deemed useful for students who had a television at home. By the 1970s, approximately 160 television stations were broadcasting educational programmes, from primary education to tertiary

education, in the United States (Casey, 2008). The formalisation of distance learning through the foundation of The Open University in the UK in 1969, coupled with other university-led distance learning programmes, was considered the third generation of distance learning (Moore & Kearsley, 2011). However, it was the model of a "mega-university" (Daniel, 1996, p. 21) that was dedicated to distance learning that led to the founding of Open Universities around the world, including the Open University of Hong Kong. Similar to the International Correspondence Schools for the miners, Open Universities admit non-traditional student cohorts, such as working adults or those who are not able to attend classes on campus (Tait, 2013). The admission of students with jobs or family responsibilities demanded a new, flexible student-centred practice that included ongoing mentoring support (Moore & Kearsley, 2011). The vision of Open Universities also impacts the development of online learning and MOOCs because it represents a move from an elite to a mass higher education system, with notions of openness and access. Moreover, Open Universities advocate for innovation in educational technology, which is based on innovative developments in instructional design, combined with radio and television and, today, with online teaching, peer learning, OERs, MOOCs, and other online courses (Tait, 2013).

Educational Technology and Online Learning

According to Januszewski and Molenda (2008, p. 1), educational technology is defined as "the study of and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources."

Various studies have indicated that the use of educational technology in distance learning began in the 1960s and 1970s (Bach, Haynes, & Smith, 2007; Sharma, 2000). E-learning is regarded as the key application of educational technology. By the 1990s, e-learning was defined as computer-based instruction or computer-assisted instruction (Gibbons & Fairweather, 1998). With the technological developments of the personal computer and the Internet in the late 1990s, the focus of distance learning and e-learning shifted to Internet-based and web-based learning (Campbell, 2004). According to Guri-Rosenblit and Gros (2011, p. 1), it is difficult to define the term 'e-learning' because

"there are currently multiple terms that describe the employment of the new technologies in learning / teaching settings, such as Internet-mediated teaching, web-based education, online education, computer-mediated communication, computer assisted learning, e-learning, virtual classrooms, information and communication technologies, open and distance learning, distributed learning, web-based learning, technology enhanced learning, instructional technologies and virtual learning."

Even given the differences in the definitions of 'e-learning', Moore et al. (2011, p. 134) suggested both online learning and e-learning still "provide implications internationally for the referencing, sharing, and the collaboration of results detailed in varying research studies". Bates (2005) also indicated that, with the connection of e-learning to the Internet, the terms 'e-learning' and 'online learning' have begun to be used interchangeably. By the 2000s, online learning was connected to learning in the technological environment of Web 2.0, which Duffy (2008) defined as the new forms of interaction, application, aggregation, communities, and participation that emerged on the web. Zhang (2011) further suggested that online learning in Web 2.0 is learner-centred because it offers flexibility in terms of content access, collaborative learning, and

information dissemination to share learning solutions with students. Beginning in the 2000s, online learning has been increasingly used in tertiary institutes to supplement traditional face-to-face classroom learning (Tetiwat & Igbaria, 2000; Shilwant & Haggarty, 2005). Unlike other distance learning programmes in which no face-to-face interaction between students and teachers takes place, online learning requires face-to-face interaction between teachers and students on a regular basis (Zaharah & Kirilova, 2020). Online learning can also be used as a blended learning technique that is combined with other teaching strategies in an online platform. According to Macdonald (2006), one of the major benefits of online learning is that learners can access shared content freely and openly on the Internet, with few restrictions on learning location.

Open Education Resources (OER)

With the advancement of the Internet, academics also began exploring the potential of sharing educational content openly with the use of open-source software. Various frameworks, namely David Wiley's 'Open Content License' in 1998 and Larry Lessig's 'Creative Commons' in 2001 (Wiley & Gurrell, 2009), allowed users to upload and illegally license their shared content openly on the Internet.

For academia, the formation of the MIT Open Courseware (OCW) initiative in 2001 is considered an early sign of a shift toward openness (Brown & Adler, 2008). Because the MIT OCW initiative was funded by several private foundations, the public could assess the learning materials from over 2,000 courses at MIT online for free. The OCW initiative had a significant effect on mainstream academia, impacting tertiary institutes

around the world to share their learning materials online for free (Carson, 2009). Under a Creative Commons Open licence, formerly elitist and protective tertiary institutes not only began sharing their coursework for free on the web but also allowed other educators to remix, use, and adapt the materials. According to Butcher and Moore (2015), the Paris OER Declaration of 2012 and the Cape Town Declaration of 2009 further developed policies and guidelines regarding how to distribute educational resources on an open licence. The economic advantages and ease of use regarding time and places have made online courses increasingly popular in higher education environments (Pokrovskaia et al., 2019).

2.2.2   MOOCs in Formal Learning

Many studies indicate that students' participation in online platforms for formal learning, such as incorporating various elements of MOOCs within the formal structure of higher education, can be equally as effective as other forms of training (Lyke & Frank, 2012; Meder, 2013). MOOCs are web-based online courses that provide open opportunities to learn from tertiary institutions globally. Since 2008, universities around the world have made attempts to incorporate MOOCs into the formal structure of higher education (Wallace & Clariana, 2020). In higher education, MOOCs provide an interactive option for the flipped learning design because they can be integrated into an entire course or specific parts of it to complement traditional classroom teaching (Barak & Watted, 2017; Barak et al., 2016; Basilaia, 2020; Evans et al., 2016). Additionally, in the K–12 classroom, MOOCs can be utilised specifically to prepare students for higher education studies or national examinations (Breslow et al., 2013; Hew & Cheung, 2014). Because

the focus of the current study is on the experience of secondary students studying

MOOCs and the impact of mentoring on their MOOC experiences, illuminating every

aspect of MOOC application in formal higher education is beyond the scope of this study.

Two methods by which tertiary institutes have attempted to bring MOOCs into the formal

classroom will be outlined in this section.

Flipped MOOCs

The flipped model, in MOOCs, typically involves teachers using online platforms or

resources to deliver lessons that students can attend at their own pace, while they are also

mentored face-to-face by their teachers (Israel, 2015). According to data from Lowell

Bishop and Verleger (2013), the flipped model is the most commonly used method to

incorporate MOOCs into formal higher education. Pérez-Sanagustín et al. (2017)

discussed various ways in which a class can be 'flipped' through MOOCs, which are

known as Small Private Online Courses (SPOC) in this format. While some flipped

initiatives have been positively received by both teachers and students, Soffer and

Cohen's (2015) study on flipped MOOCs suggests that the full on-campus version of a

course had a higher satisfaction rate as compared to the flipped model because

participants appreciated on-campus support from their teachers (Soffer & Cohen, 2015).

These findings should be considered in the context of this study, which aims to show that

teacher mentoring support may positively impact the experiences of secondary students

studying in MOOCs.

MOOC Degrees

Universities in Europe and the United States have offered part of a degree or even complete degrees to learners via MOOCs. Such MOOC degrees, whether partial or full, have become increasingly popular. For example, Arizona State University collaborated with edX to offer the 'Global Freshman Academy' programme in 2015, in which students could obtain up to a full year of college credits by completing eight MOOCs (Lewin, 2015). By 2017, nine MOOC-based master's degrees were offered entirely through edX. The number of MOOC-based master's degrees had further risen to 36 by 2019 (Pickard, 2019).

2.2.3 The Mainstreaming of MOOCs in China and Hong Kong

The transition from classroom learning to online learning due to the COVID-19 pandemic has provided researchers new opportunities worldwide to study online education. The first articles published on this topic were intended to share the experience of using online platforms that facilitate communication between students and teachers, coupled with the practices of e-learning implementation at all levels of education (Basilaia, 2020; Daniel, 2020). During COVID, Chinese education experts were among the first to switch to online education in March 2020. At that time, Huang et al. (2020) released a guide to help educational institutions develop reliable communication infrastructures, adapt suitable digital learning resources, facilitate effective online teaching and learning, and implement flexible learning. Facing the challenges of the COVID-19 pandemic and the temporary closure of school campuses, universities worldwide, including the ones in China and

Hong Kong, have made significant efforts to ensure equal educational opportunities for all their learners by incorporating MOOCs within the formal structure of higher education or as a platform for informal learning and extra-credential learning (Chen et al., 2020). MOOCs, which earlier were considered to be lifelong learning instruments for filling gaps in knowledge upgrading and reskilling, became the paramount learning venues in various subject areas (Griffiths et al., 2014; Jaggars & Xu, 2013; Knox, 2016).

Currently, China has been actively adopting MOOCs and localising MOOC content for students (Ma et al., 2020). Top Chinese universities have enlisted famous MOOC platforms, such as Coursera and edX, and offer more than 150 English MOOCs from 20 universities (Shen et al., 2016). By introducing MOOCs to learners around the world, knowledge about Chinese culture, art, and history can be shared through MOOC content, and it can also increase the global reputation of these Chinese universities. Several Western MOOCs from Coursera and edX have been licensed and translated to meet the language needs of the Chinese learners. These courses are offered to students in the form of extra-credential learning courses because the course material is borrowed from MOOC providers such as Coursera and edX, while they are run on Chinese MOOC platforms with Chinese tutors and instructors (Cheng, 2014).

Significant investment and resources were dedicated by the Hong Kong Government in 2015 (The Chief Executive's Policy Address, 2015) to facilitating open education and MOOCs in Hong Kong. The Open University of Hong Kong (OUHK) has been at the forefront of the OER movement by providing OpenCourseWare (OCW) for students

using its website (http://freecourseware.ouhk.edu.hk) and an online platform, iTunesU (Li & Cheung, 2013). The University of Hong Kong, The Hong Kong University of Science and Technology, The Chinese University of Hong Kong, and The Hong Kong Polytechnic University are contributing charter members of edX and Coursera, two famous MOOC providers. Since 2012, Hong Kong universities have published 38 courses on edX, with five released in the 2020/21 academic year (Lei et al., 2020). While partial or full MOOC degrees have been offered in the West, similar MOOC degrees are not offered by Hong Kong universities as MOOCs are positioned merely as extra-credential learning instruments for filling gaps in knowledge upgrading and reskilling (Lei et al., 2020). In this case, MOOCs can be considered online courses for informal learning as secondary students can benefit from their experience of studying MOOCs and attaining extra credentials.

2.2.4 MOOCs in Informal and Extra-Credential Learning

With the emergence of extra credentials, such as micro-credentials and industry-recognised certificates offered by MOOC platforms, the education landscape is changing (Kato et al., 2020). There is a rising demand for the upskilling, reskilling, and sharp reduction in the unit cost of provision made possible by the introduction of MOOCs, as students of all educational levels can engage in them anytime and anywhere they want (Wallace & Clariana, 2020). MOOC platforms also offer secondary students informal learning experiences to acquire skills and knowledge outside of the formal classroom setting. These extra credentials attained through informal learning experiences in MOOCs

are also recognised by many universities and industries worldwide (Sanzgiri, 2020). Most of the European Union member countries have introduced policies to recognise informal learning, as it can be used to acquire credits or qualifications within national qualification frameworks (Cedefop, European Commission, ICF, 2017).

Informal learning in MOOCs

Informal learning is defined as learning that occurs incidentally and on an as-needed basis and is driven by a particular learner outside of a formal structured classroom setting (Callanan et al., 2011; Nisbet et al., 2013; Noe et al., 2013). Informal learning places can offer learners new insights into methods, materials, and objects that cannot be used or analysed in classrooms (Brade et al., 2015; Dannwolf et al., 2020). A study conducted by Noe et al. (2013, p. 248) emphasised that compared to formal learning experiences, informal learning has the "potential for more meaningful learning experiences than formal training". Callanan et al. (2011, p. 646) discussed the idea that the focus of informal learning should be on five specific dimensions, rather than its format (formal vs. informal) or location (in school vs. out of school): "1) non-didactic, 2) highly socially collaborative, 3) embedded in meaningful activity, 4) initiated by learner's interest or choice, and 5) removed from external assessment". Based on the five dimensions, MOOCs can be positioned as a platform through which to integrate traditional formal courses with informal learning experiences (Cha & So, 2020). Through studying MOOCs, secondary students are engaged in informal learning that happens outside their traditional classrooms, and they can acquire knowledge and skills based on their interests and availability.

Today, extra-credential programmes are often delivered online, benefiting from the flexibility and wide reach allowed by informal learning programmes such as MOOCs (Kato et al., 2020). Millions of people have consumed hundreds of MOOC courses offered by many prestigious universities throughout the world (Stevens, 2015). These offerings represent various educational opportunities vying for attention and enrolment in an increasingly complex post-secondary ecology (Kamenetz, 2010; Scott & Biag, 2016). Sanzgiri (2020) suggests that MOOCs have gone through three waves in the past decade. In the first wave, they were mainly used for marketing purposes to recruit more students or increase visibility of institutions. The second wave was their use in lifelong learning, propelled by large-scale MOOC projects at the national and cross-institutional levels. The current third wave is the use of MOOCs for obtaining credits and continuing professional development pathways. Brown (2018) concluded that MOOCs can be considered extra-credential learning programmes since the alternative credentials attained through them can supplement post-secondary studies.

Extra-credential learning in MOOCs

Initially, MOOCs were developed as learning instruments that could lead to alternative credentials (Kato et al., 2020). Most MOOCs provide verified certificates to completers, but new MOOCs have also been introduced to provide new types of extra credentials, such as digital badges and micro-credentials. In 2013, edX launched its first MOOC-based micro-credentials, which were named XSeries. Other major MOOC platforms, such as Udacity, FutureLearn, and Coursera, began providing MOOC-based micro-

credentials in 2014 (Pickard, 2018). By offering alternative credentials, universities can increase their reputation and visibility, experiment with new technologies and pedagogies, generate additional income or reduce costs, and increase their responsiveness to learners' and labour markets' demands (Jansen & Schuwer, 2015). As compared to formal higher education programmes, greater flexibility, shorter learning activity duration, and lower participation costs are the main reasons learners are attracted to extra-credential learning opportunities (Yuan & Powell, 2013).

Various studies indicate that educational benefits are one of the main motivational factors for MOOC participants (Breslow et al., 2013; Kizilcec & Schneider, 2015). Educational benefits can be defined as the impact of academic qualifications and certificates on learners' future studies (Watted & Barak, 2018). According to Breslow et al.'s (2013, p. 20) study examining the motivation of 6,381 participants to enrol in a "Circuits and Electronics" MOOC, half of the respondents stated that "gaining knowledge and skills" was their major reason for participating in the MOOC. Kizilcec and Schneider (2015) developed the Online Learning Enrollment Intentions Scale to systematically describe the motivations of MOOC learners. Their findings show that intrinsic motivation, namely "the course was relevant to their school", and extrinsic motivation, such as "getting a certificate", were the key to their enrolment (Kizilcec & Schneider, 2015, p. 8). These results are in line with research (Schmid et al., 2015; Zheng et al., 2015) showing that MOOCs can be used to supplement learners' current formal learning opportunities. More recently, based on the results of Watted and Barak's (2018) study on the motivating factors of MOOC completers, the majority of the learners took MOOCs in the hope of

acquiring certifications for the skills and knowledge acquired from these top universities. This is relevant in the context of this study also, which shows that secondary students who complete MOOCs can attain extra credentials, such as certificates, from prestigious universities, which supplement their post-secondary studies.

MOOC completion and employability

Researchers have reported that career benefits are dominant factors in MOOC engagement (Dillahunt et al., 2016; Liu et al., 2015; Zhenghao et al., 2015). Career benefits can be described as the way in which job-specific skills and knowledge impact learners' future employability (Milligan & Littlejohn, 2017). In Zhenghao et al.'s (2015) study of 50,000 undergraduate students who completed a MOOC provided by Coursera, over half of the respondents reported that career benefits were their main motivational factors; this was especially the case for those in the field of computer science. Similar findings are evident in Liu et al.'s (2015) study examining learners' perspectives on taking a MOOC. They reported that most of the participants in a MOOC on mobile journalism were professional journalists who intended to improve their skillsets through the course. In Dillahunt et al.'s (2016) study on how MOOCs facilitate career development, the findings showed that enhancing employability was a major reason why learners, particularly those who were financially unable to pursue a more traditional path to post-secondary education, pursued MOOCs. Four groups of MOOC learners were categorised in their study, namely learners who 1) intend to transition into a new field, 2) are looking for new positions in their current fields, 3) are seeking to be promoted in their current jobs, and 4) are looking for refresher courses to improve their skillsets in their

current fields. Littlejohn et al. (2016, p. 4) examined the motivation of 30 learners to complete an "Introduction to Data Science" MOOC. They reported that MOOC completers who had a professional background in computer science showed better motivation regarding professional development, particularly with respect to developing data science skills and knowledge that would impact their current practices. More recently, a Pearson VUE survey of over 10,000 individuals worldwide who earned an IT certificate reported three types of benefits from earning extra credentials from MOOCs. These are intrinsic (e.g., greater self-confidence in abilities), extrinsic (e.g., salary increase), and practical (e.g., knowledge is transferable to real work situations). The respondents were more likely to report intrinsic and practical benefits than extrinsic ones (Pearson VUE, 2019).

However, some researchers have found that MOOCs are not adequate substitutes for traditional credentials. In a survey of 103 human resources professionals, Radford et al. (2014) found that while most hiring managers would perceive a MOOC favourably on a resume (over 80% of those who had heard of MOOCs reported that they would perceive a MOOC "positively" or "very positively"), many of those surveyed concluded that they were less likely to consider that a MOOC demonstrated a specific ability or skill as compared to a traditional credential. In addition, MOOCs are open to everyone, charge modest and offer certificates rather than legally recognised degrees and credits. Therefore, the value of these academic offerings cannot match traditional credentials as markers of their owners' skills, employability or social status remains questionable (Olneck, 2018; Rosendale, 2016).

Overall, hiring managers stated that they preferred job candidates with traditional credentials over candidates with equivalent training certified by MOOC certificates. In addition, it is somehow difficult for employers to tell what these extra credentials signal about applicants' skills as compared to formal education programmes. In summary, alternative credentials, such as MOOCs, are not yet standardised as a currency in the labour market (Pickard, 2018). These findings are in line with those of Kizilcec et al. (2019), who found that survey respondents believe that online university programmes are less rigorous, less legitimate, and less well-respected than traditional face-to-face programmes. However, the aforementioned research mostly focused on students at the tertiary level; the career benefits of completing MOOCs in the secondary school context remain an under-researched area.

2.3 MOOC Learner Demographics, Motivation, and Experience

2.3.1   MOOC Learner Demographics

According to data from Kato et al. (2020), the average age of MOOC participants is 25 years old, and 70% of MOOC learners are male. Regarding the educational background of MOOC students, 33% have a master's degree, while 36% have a bachelor's degree. In addition, Coursera's co-founder, Daphne Koller, and edX's CEO, Anant Agarwal, both stated in their respective interviews that the target audience of MOOC platforms is working adults because over 75% of their users have college degrees (Alcorn et al., 2014;

Kanani, 2014; Koller, 2015). Based on the aforementioned information, it can be summarised that the main target participants for MOOCs are young male working adults with college degrees. According to the Vihavainen et al.'s (2013) study, contents of a live or an archived MOOC could be integrated into existing high school courses in a hybrid format because some high school students use MOOCs for university preparation in the absence of available face-to-face or online courses (Bruff et al., 2013).

Participation of secondary school students in MOOCs

Compared to the available research on adults' use of MOOCs, there is limited research on the participation of secondary school students in MOOCs. To understand whether MOOCs can be utilised to support traditional classroom learning in formal secondary school curricula, Najafi et al. (2014) analysed the behaviour of high school students in a university preparatory MOOC, in which 29 high school students in Florida were assigned to one of two groups. The students in the MOOC-only group had no teacher support, and the group with the blended mode had weekly tutorials in addition to the MOOC. The results indicated that the students in the blended-mode group, in which students were supported by teachers, showed more commitment based on the assessment of the MOOC, but the statistical difference between the groups' performance levels on the exit test was minimal. Kurhila and Vihavainen (2015) examined Finnish secondary students' participation in a computer science MOOC during its first 18 months of operation. Their findings showed that 2,109 students attended the MOOC, and some of them suggested that the flexible nature of the MOOC gave them an incentive to continue working on the coursework, even without traditional teaching. The Finnish university eventually granted

formal school credits to the successful completers of this MOOC.

Tomkins et al. (2016) stated that there is a demand for incorporating MOOCs into high school curricula, particularly computer science, due to the shortage of trained instructors. In this situation, it is important to understand the difference between high and low achievers so that measures can be introduced to cater to their needs in MOOCs. Tomkins et al. (2016) developed models of high school students who enrolled in a computer science MOOC, identifying high and low achievers based on their coursework performance, AP exam results, and forum behaviour, as well as the impact of teacher support. Their results show that coursework performance correlated with their scores on AP exams because students who thrived during the AP computer science exam also earned high scores in their MOOC coursework. The top students on the AP exams were also more likely to contribute to the peer-grading system and exchange ideas with their counterparts in the forum. In addition, students who received coaching were more likely to perform well on their AP exams and MOOC coursework and to spend more time in the forum. Tomkins et al. (2016) concluded that high school students can thrive in MOOCs.

Sampling of participants in MOOCs and academic enhancement programmes
By identifying participants in terms of groups based on their actions in the MOOCs they have attended, we can better understand these participants' needs, commitment, and motivation to join the programmes (Kizilcec et al., 2013). This can help to shed light on both sides of the spectrum because students with similar characteristics are analysed. A MOOC-related survey study of 71,475 people across 14 courses was conducted by

Stanford University's Learning Analytic Group (Kizilcec et al., 2013). The group categorised MOOC learners into four types: 1) completers, who watched the most lecture videos and took part in the most assessments; 2) auditors, who watched some videos but avoided taking tests; 3) sampling learners, who watched lecture videos at times; and 4) disengaged learners, who did not engage in any activities and quickly left the MOOCs.

The findings of Kizilcec et al.'s (2013) study showed that, as compared to auditors and completers, most of the sampling and disengaged learners reported lower levels of satisfaction with their MOOC learning experience. Kizilcec et al. (2013) further suggested three notable reasons for disengagement from MOOCs: 1) personal commitment, 2) course workload, and 3) work conflict. The personal constraints highlighted in the three reasons are highly relevant to time management, and this indicates that MOOCs that were entirely self-paced might have catered to the needs of these learners. Kizilcec et al. (2013) concluded that the five prominent psychological factors that impact participants' MOOC performance are 1) motivation, 2) tenacity, 3) attitudes towards the processes of learning, 4) self-regulation, and 5) feelings of confidence and acceptance. In addition to other unobserved latent variables, the aforementioned psychological factors are mostly connected with the learners' choices of activities and overall engagement patterns regarding MOOCs.

In other small-scale studies focusing on academic enhancement programmes, it is common to see respondents categorised into various groups based on their abilities or motivations. For example, Rose and Harbon (2013) investigated how Japanese language

learners regulate the learning of kanji (Japanese written characters). The 12 students who participated in the qualitative interview were divided into three categories — "extreme" cases, "typical" cases, and "deviant" cases of low self-regulation — based on their kanji knowledge. To paint a clear picture of kanji learning, potentially extreme and deviant cases at each proficiency level were included in the sampling. In Stephen et al.'s (2018) study regarding the relationship between student performance and self-regulated learning in physics in public secondary schools, the respondents were also categorised according to their levels of use of motivational strategies in physics, with high, average, and low levels demonstrated. Susanti et al. (2018) examined creative thinking abilities based on the self-regulation model by focusing on activity learning with performance assessment, with purposive sampling applied. The students were categorised into three groups — namely high, moderate, and low — based on their mathematical creative thinking abilities, as shown on the pre-test, and their levels of self-regulation, as indicated in the questionnaire. The students in each category were eventually interviewed based on their experience in demonstrating creative mathematics thinking abilities. Based on the aforementioned studies focusing on MOOCs and academic enhancement programmes, categorising participants based on their abilities or motivation can be considered a common strategy used to examine their learning outcomes or experiences.

Self-directed learners in MOOCs

Regardless of their age, self-directed learners of all educational levels are expected to benefit from MOOCs because they allow for flexibility in organised learning, particularly regarding lecture videos and assessment modes (Milligan & Littlejohn, 2017). Knowles

(1975, p. 18) defined self-directed learners as

"individuals who take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating those learning outcomes."

In de Waard and Kukulska-Hulme's (2019) study examining learners' self-directed learning in FutureLearn MOOCs, they summarised five specific areas in which learners react with either the material or other learners to self-direct their MOOC learning: 1) context, 2) individual or social learning, 3) technology and media provided in the MOOCs, 4) learner characteristics, and 5) organising learning. De Waard and Kukulska-Hulme's (2019) study also summarised how intrinsic motivation and personal learning goals are the main inhibitors or enablers of self-directed learning in students' experience of studying MOOCs.

2.3.2   MOOC Learner Motivation

According to Kizilcec et al. (2019), motivations drive learners' engagement behaviours, initiation, and persistence in a course. Individuals' motivations for using MOOCs, such as intrinsic and extrinsic motivations, are the reasons for their participation in the courses (Fischer, 2014; Wigfield & Cambria, 2010). These motivational factors are key elements in self-directed learning (Pintrich, 1999; Schunk & Zimmerman, 1998). According to Chu et al. (2015), the true limitation on learners' participation in MOOC learning is neither the quality nor the accessibility of these learning resources but rather how learners maintain

their motivation in a self-paced online programme. Stevanović (2014) summarised five common motives for MOOC students in his study regarding the effects of motivation on students' performance in MOOCs: 1) to learn skills or knowledge from experts from recognised and reputable institutions, 2) to explore topics that are in their interest zones, 3) to gain certificates in certain areas in which they are interested, 4) to broaden their professional networks, and 5) to satisfy their curiosity about a new academic area. These motives echo Callanan et al.'s (2011) identification of five specific dimensions of informal learning (as discussed in Section 2.2.4) that motivate learners to engage in meaningful activities that are initiated by their personal interests. Xiong et al. (2015) further suggested that the retention of learning in MOOCs can be enhanced by promoting learner motivations in MOOC learning activities.

The personal interests and motivations of MOOC participants shape their overall engagement with the course materials (Halasek et al., 2014). In Halasek et al.'s (2014) study, less motivated learners only audited the recommended MOOCs, but they had no intention of completing the assignments. Conversely, the learners who showed high motivation for advancement completed both the coursework and the additional enrichment materials. Barak et al. (2016) suggested that the language of instruction may be a barrier to participants' MOOC learning but can be overcome when participants are driven by motivational constructs, such as intrinsic motivation, self-determination, and clear goal setting. In the same research project, they also identified five types of MOOC completers: 1) innovation seekers, 2) problem solvers, 3) complementary learners, 4) networkers, and 5) benefactors. Among the MOOC completers, Barak et al. (2016) also

found a positive correlation between the number of participants in online study groups, the number of messages posted in the MOOC forum, and motivation levels during MOOC learning experiences.

Belanger and Thornton (2013) conducted a study of 3,000 respondents who participated in a MOOC offered by Duke University to examine their enrolment motivations. Their findings showed that "fun and enjoyment" was mentioned by most of the respondents as the main reason for enrolment (Belanger & Thornton, 2013, p. 9). Kizilcec and Schneider (2015, p. 20) examined the enrolment intentions and behaviours of 71,475 learners across 14 MOOCs and reported that the majority of the learners indicated "general interest in the topic" and a "desire for growth and enrichment" as the key motivational factors for their MOOC participation. The personal benefits of MOOC enrolment are also highlighted in Zheng et al.'s (2015) study; almost all the respondents were drawn to MOOCs due to their curiosity about the new online platform. Zheng et al. (2015) further suggested that the main motivation for users is that MOOCs make quality online lessons accessible for all, and users can freely enrol in programmes in which they are interested. Similarly, in their meta-analysis of 20 articles that offer empirical evidence of learners' motivations for participating in MOOCs, Hew and Cheung (2014, p. 55) found that "personal challenge" and "curiosity about MOOCs" were the two most prominent motivations for enrolment in MOOCs.

In contrast, in Yang's (2014) study on students' motivation in asynchronous online discussions in the MOOC mode, the findings showed that, despite no relationship found

between students' inherent satisfaction and participation in the initial stage of the programme, the connection between participation and intrinsic motivation became more significant towards the end of the course. Barak et al. (2016) reported similar findings in that learners who actively participated in the discussion forum showed improved motivation. These results are in line with findings from other research (Hew & Cheung, 2014; Wang & Baker, 2015) showing that a lack of motivation in terms of learners' participation in MOOCs may lead to procrastination or even dropout.

Some research (Fearn, 2014; Ho et al., 2014) showed that participants used MOOCs to acquire professional skills and knowledge. Based on the results of a Qualtrics survey (Instructure, 2013) of 1,834 students regarding their motivation for MOOC enrolment, interest in the course topic was found to be the leading motivator (35%), followed by professional knowledge and skills (24%) and the fact that MOOCs are free of charge (16%). Bartholet (2013) conducted another MOOC-related survey study of 5,851 science students, examining their MOOC enrolment. His findings showed that the majority of the respondents took MOOCs out of curiosity and because they were free.

2.3.3 MOOC Learner Experience, Benefits, and Challenges

As discussed in the previous sections on MOOC learner demographics and motivation (Sections 2.3.1 and 2.3.2), successful MOOC learners are self-directed learners who define their learning goals, in terms of what they intend to achieve from a MOOC, and aim to finish these specific tasks. It is interesting to illuminate their experience in

studying MOOCs and the potential benefits and challenges regarding their MOOC participation, as follows.

2.3.3.1 Learner Experience in MOOCs

This research study focuses on the experiences of Hong Kong secondary school students studying MOOCs. Historically, within the research of online learning, researchers mostly focus on the evaluation of a specific program or application or on the practitioners' perspective on the use of such a new form of learning and teaching (Creanor et al., 2006). However, this emphasis on the evaluation of technology would sideline the perspective of learners. According to Conole (2008), with the introduction of new forms of technology-enhanced learning, it is necessary to adopt the learner's perspective during the design, development, and evaluation of appropriate strategies and policies surrounding these new technologies. Walker and Logan (2008, p. 5) further suggest that considering the learner's voice "is about empowering learners by providing appropriate ways of listening to their concerns, interests and needs in order to develop educational experiences better suited to those individuals." Therefore, the definition of 'learner experience' in the context of this study is the subjective perceptions of learners regarding their behaviours, concerns, attitudes, and evaluation of their learning process in a specific context. In this study, 'learner experience' refers to students' experience in studying MOOCs and how they perceive the impact of the mentorship programme on their MOOC experience and their future planning.

Given the data gathered from learners on MOOC platforms, some research findings

correlate learner engagement, behaviour, and success in a MOOC with the self-reported

characteristics or demographics of participants to pinpoint the features and characteristics

that can predict persistence or success in a MOOC (de Barba et al., 2016; Jung & Lee,

2018; Roy et al. 2014; Whitehill et al., 2017). However, this view could be considered

limited because Veletsianos and Shepherdson's (2016, p. 214) study on the various

methods used in empirical MOOC research suggested that

"very few studies were informed by methods traditionally associated with qualitative
research approaches (e.g., interviews, observations, and focus groups). Thus, even though
results suggest that research on MOOCs focuses on student-related topics, learners'
voices were largely absent in the literature."

Another review of research from Veletsianos et al. (2015) found that MOOC literature

from the perspective of learners is still lacking, with most studies identifying

commonalities and patterns across platforms or disciplines. Researchers, practitioners,

and other stakeholders would benefit from the inclusion of qualitative research

investigating the learner's perspective on studying in MOOCs because this would allow

them to develop a holistic understanding of the diverse nature of learners and their

MOOC experiences, something this research project also aimed to address.

2.3.3.2 Benefits and Challenges of Studying MOOCs

Like any learning platform, MOOCs have both strengths and weaknesses. Many

researchers have outlined learners' benefits and challenges when studying MOOCs, some

of which will be discussed below.

Wide range of courses

Since the first MOOC emerged in 2008, MOOCs have rapidly increased in number.
By 2019, according to Class Central, a MOOC search engine, around 900 tertiary
institutes and over 500 firms and institutions have offered more than 13,500 MOOCs
worldwide (Shah, 2019). These courses have often been developed in collaboration with
education technology firms via online learning platforms, with over 110 million learners
signed up for MOOCs (Shah & Pickard, 2019). EdX, Coursera, FutureLearn, and Udacity,
the major MOOC platforms, were founded in 2012. By 2019, over 30 MOOC learning
platforms had been developed around the world (Kato et al., 2020). According to Class
Central, in 2019, over 20% of MOOCs were categorized within business and technology.
Science, the humanities, and the social sciences accounted for around 10% of MOOC
provision (Figure 2.1).
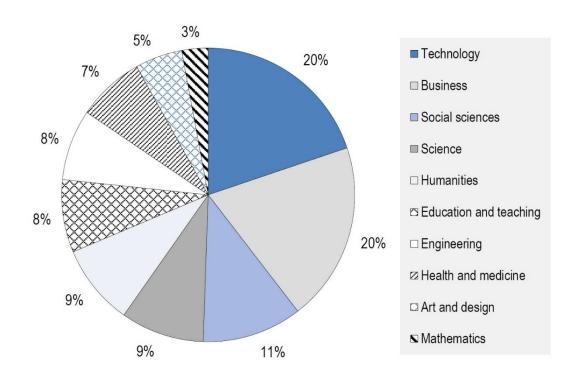
Figure 2.1 MOOC distribution by subject (2019)

Source: Shah (2019), By the Numbers: MOOCs in 2019,

www.classcentral.com/report/mooc-stats-2019/ (assessed on 12 August 2021).

Rao et al. (2015) suggested that MOOCs encourage lifelong learning and improve skills and knowledge. Sonwalkar and Maheshkar (2015) stated that, apart from acquiring professional skills and the certificates for these skills, learners are intrigued by the intellectual stimulation offered by MOOCs. They promote the idea of lifelong learning because of the unlimited access to a broad variety of subjects available on MOOC platforms. Kizilcec et al. (2013) indicated that the unlimited learning opportunities and knowledge shared by MOOCs may serve as a powerful tool in promoting "cognitive surplus" in the global community. Other qualitative studies have suggested that learners derive a variety of types of utility from MOOCs, including practising English-language skills (Uchidiuno et al., 2016) and connecting with other learners who have similar interests (Veletsianos et al., 2015).

Openness of MOOC platforms

Rao et al. (2015) suggested that the interactive features of MOOCs — namely, discussion forums and peer assessments — provide opportunities for learners who share the same interests to exchange their views, ideas, and knowledge. The openness of MOOCs provides chances for cross-cultural interaction outside the confines of an institution because learners from different parts of the world can communicate in this global classroom (Plangsorn et al., 2016; Sonwalkar & Maheshkar, 2015).

Free courses

Institutions essentially offer MOOCs through the Internet to unlimited numbers of

students (Jordan, 2013), often free of charge. Not only is registration on MOOC

platforms free, but these platforms also offer learners the opportunity to attend lectures

that are taught by professors at top-notch universities across the globe (Lopes et al., 2015;

Yu, 2015). The MOOC environment supports a community of learners who interact

within the course room and with one another, rather than work independently to access

information that is relevant to them (MacIsaac, 2012). However, some MOOCs have a

fee component that facilitates earning credits or credentials (Downes, 2008).

The flexible nature of MOOCs

The fundamental difference between traditional classrooms and MOOC environments is

the changing roles and responsibilities of learners and instructors, with learners taking

full control of their own learning (Bremer, 2012). Unlike traditional courses, there are no

prerequisites or entry requirements for MOOCs, and the constraints of time, place, and

cost are all removed (Baker et al., 2015; Yu, 2015). Indeed, the design of MOOCs

promotes self-paced learning because learners can revisit the scripted lecture videos

repeatedly anytime and anywhere they want. Moreover, because MOOCs do not

generally result in academic course credits, learners can freely access MOOC content

without the pressure to achieve good grades (Baker et al., 2015). This echoes Callanan et

al.'s (2011) five specific dimensions of informal learning (as discussed in Section 2.2.4)

in that learners' MOOC experience is initiated by their own choice of programmes, and

they can enjoy free access to MOOC content without the pressure of passing an assessment.

However, despite the various advantages of MOOCs in promoting self-paced learning, they also present a number of challenges, which are discussed below.

Authentication and recognition

There are issues with the recognition of learning and learner authentication in the MOOC assessment framework. The difficulty in verifying student identity, particularly during online tests, has always been a significant concern for MOOCs (Sonwalkar & Maheshkar, 2015; Yu, 2015). To verify student identity in online examinations, various MOOC platforms are introducing the technical verification of identity. Coursera launched a "Signature Track" for authentication in 2013 by matching students' photos and creating a biometric profile of each student's typing rhythm on the keyboard (Koller, 2015).

Concerns have also been raised about the acceptance of the verified certificates issued by MOOC platforms, due to the absence of quality assurance frameworks across MOOC platforms (Garrido et al., 2016). Garrido et al. (2016) further suggested that employers in Colombia, the Philippines, and South Africa question the credibility of MOOC certificates due to a lack of familiarity with MOOC content. Across these three countries, employers recognise candidates' commitment and self-motivation in regard to completing challenging online university courses but not the certification of the skills

they acquire from these courses. This indicates that the main barrier to MOOCs is the lack of formal accreditation in that the completion of a MOOC is not equivalent to the completion of a regular face-to-face course at a university (Banks & Meinert, 2016). In general, employers have reservations about recognising MOOC certificates because they may not understand MOOCs' content.

Cost of purchasing verified certificates

According to Bonk and Lee's (2018) study on the challenges of self-directed informal learners in MOOCs, the cost of signing up for a MOOC verified certificate may be prohibitive for some learners and prevent them from having a positive experience with MOOCs. As discussed in Section 2.2.6, some MOOC platforms initially offered free verified certificates of completion to participants, particularly those who had financial difficulties. Over the years, the number of free certifications has gradually declined as MOOC platforms attempt to make a profit or at least recoup their investments. The declining number of free offerings could play an important role in preventing participants from enrolling in MOOCs. Therefore, these MOOC certificates, despite being identified as an extrinsic motivator in attracting learners to enrol in the courses, may be alienating students who have financial difficulties.

Absence of face-to-face interaction

Anyone with curiosity and an Internet connection can access content from a variety of well-established sources. However, there are challenges and criticisms regarding MOOCs,

such as the lack of interaction with a knowledgeable instructor (Kop et al., 2011; Hill, 2015).

The absence of face-to-face communication in MOOC learning may also increase feelings of disconnection and isolation because students are mostly engaged in self-paced online activities (Baker et al., 2015; Lopes et al., 2015; Yu, 2015). The imbalanced student-teacher ratio, physical isolation, lack of interaction between students, and absence of real-time questioning and feedback from instructors are considered unfavourable outcomes of MOOCs (Atiaja & Proenza, 2016; Baker et al., 2015). The lack of monitoring and face-to-face interaction, low motivation regarding MOOC participation, and low course completion rates are other negative outcomes because motivation, self-monitoring, and self-management are crucial to self-directed learning in MOOCs (Ejreaw & Drus, 2017).

High dropout rates in MOOCs

Atiaja and Proenza (2016) suggested that the lack of face-to-face interaction in MOOCs contributes to the low completion rate, which hovers between 5 and 15%. For instance, the absence of face-to-face interaction may lead to inadequate monitoring (Vardi, 2012), and the common assessment methods are just simple knowledge tests (Zapata-Ros, 2013). Previous literature has also indicated the lack of technological ability, language skills, and time management skills may negatively impact student competency in studying online courses (Fini, 2009; Kop, 2011). In addition, the absence of established criteria in evaluating pedagogical quality (Bernal et al., 2013) and the lack of standards in

instructional design (Margaryan et al., 2014) are factors that negatively impact the completion rate of MOOCs.

Possessing insufficient knowledge about the subject

According to Belanger and Thronton's (2013) study on the development of Duke University's first MOOC, several participants have reported they found it difficult to understand some of the MOOC content without guidance from the tutors because they may possess insufficient knowledge about the course they studied. This may be even more significant for secondary school students, for whom the lack of relatability to the local secondary curriculum, the difficulty level of the content, the accent of the instructors, and language preference may hinder their ability to experience MOOCs fully.

Low motivation to complete course-related activities

One study found that, among the challenges encountered by the interviewed MOOC participants, 68% claimed low motivation to complete course-related activities to be a significant barrier to their MOOC completion because they lacked purpose or incentive (Fini, 2009). Participants in MOOCs may not have the same pressures or commitments as compared to participants in paid online courses, because MOOCs are free to access for the most part. Belanger and Thronton (2013) further suggest that a lack of motivation and time accounts for the major challenges that were cited by the participants in Duke University's first MOOC.

Time management

Another notable challenge encountered by MOOC learners is a lack of time because many participants underestimated the time needed to work in a university-level MOOC (Shapiro et al., 2017). According to Bonk and Lee's (2018, p. 46) study on the challenges faced by MOOC learners, they further suggested that "although both courses provided estimates that greater than six hours per week would be needed for success in the course (published on their landing pages), many students attempted to stay in the course while devoting substantially fewer hours." These findings indicate that possessing self-directed learning skills is central for learners to remain motivated in their MOOC learning.

Summary

In summary, this section has presented the learning opportunities and challenges of MOOCs. The question to be answered now is how tertiary and secondary schools can offer support to improve participants' experiences in MOOCs. Some of the challenges that lead to high dropout rates in MOOCs are 1) low motivation to complete course-related activities, 2) a lack of time, 3) the absence of face-to-face interaction, 4) learners possessing insufficient knowledge about the subject, and 5) the cost of purchasing verified certificates. At the same time, schools can introduce measures to address these concerns and enhance learning outcomes. Supportive measures, such as introducing mentors, school-based training, and the reimbursement of verified certificates, will be discussed in the next section and Chapter 3 in relation to the literature.

2.4 Mentoring Programmes that Impact Learner Experience

The introduction of face-to-face, school-based mentoring support may serve as a practical resource that can impact learner experiences because learners can seek academic and affective support from their mentors. Dhorne et al. (2017) investigated their institute's improvement of the completion rate for their MOOCs via mentoring to motivate learners not to quit before their final assessments. The researchers concluded that there was no significant relationship between the effects of tutoring on motivation and completion rates. Tomkins et al. (2016) developed models of high school students who enrolled in a computer science MOOC, and they found that students who received coaching were more likely to perform well in their MOOC coursework. Because MOOCs are a new form of online learning, particularly in the secondary school context, there is no relevant literature on MOOC mentoring in Hong Kong specifically. However, substantial studies have been conducted on school-based mentoring. I will, therefore, first define mentoring and then highlight the various types of mentoring programmes that have been studied, particularly those that relate to the Hong Kong context.

2.4.1   Definition of Mentoring

The process of mentoring has been defined as mature and experienced people offering information, advice, and affective support to novices over a designated period (Larson, 2009; Mullen, 2005, as cited in Barrera et al., 2010). Tovey (1999) explained that mentoring is learning facilitated by experts through identified learning activities, such as

the planning of lessons and teaching. Wright-Harp and Cole (2008, p. 8) defined

mentoring as "a process whereby one guides, leads, supports, teaches, and challenges

other individuals to facilitate their personal, educational, and professional growth and

development through mutual respect and trust". Wright-Harp and Cole (2008) further

distinguished mentoring from advising in that mentoring is more all-encompassing and

requires more commitment on the part of the mentor. In recent years, mentoring has been

conceived of as a reverse process whereby younger or more technologically

knowledgeable persons provide technologically oriented support to senior or experienced

persons with limited technological experience (Larson, 2009). In this context, the

expertise and professional knowledge of the participants count the most, and age and

experience are not the most important evidence of such traits (Greengard, 2002).

2.4.2   The Effectiveness of Mentoring Programmes

DuBois et al.'s (2002) study, a meta-analysis of 55 evaluations of the effects of youth-

mentoring programmes, indicated that the benefits of mentoring programmes are

generally small for the average youth, based on a fixed-effects model analysis. However,

DuBois et al. (2002) further stated that when strong relationships are formed between

mentors and mentees, coupled with the utilisation of both theory-based and empirically

based best practices in mentoring programmes, the programme effects are enhanced

significantly. DuBois et al. (2002) also recommended five key programme practices: 1)

ongoing training for mentors, 2) expectations regarding frequency of contact, 3)

structured activities for mentors and mentees, 4) monitoring of overall programme

implementation, and 5) mechanisms for the support and involvement of parents.

DuBois et al.'s (2002) study evaluated the overall effects on youth-mentoring programmes by assessing various factors associated with potential variations in programme impact, namely youth characteristics, the assessment of outcomes, programme design, and mentor-mentee relationships. The researchers found that pre-mentoring training was not a significant moderator of effect size but that ongoing training during mentoring did give rise to a significant difference. Conversely, supervision and support groups for mentors were not significantly related to effect size. DuBois et al. (2002) also found that providing structured activities for mentors and their mentees did help, as did the introduction of parent support groups.

Karcher et al.'s (2006) study on a framework to inform programme development presented a brief summary based on various approaches to mentoring. The framework in their study highlights both specific and common elements among various youth-mentoring approaches. They suggested that conducting an in-depth examination of the contexts, objectives, and structure of programmes, rather than focusing solely on the contexts and participants of mentoring programmes, facilitates more fruitful programme development and research. Karcher et al. (2006) further summarised that content, infrastructure, and dosage are the critical elements of programme development. To investigate the conditions under which mentoring works, Karcher et al. (2006, p. 720) suggested that researchers and programme developers test hypotheses regarding the impacts of these programme elements "based on theory-driven expectations about the

interrelationships among proximal, enabling, and distal outcomes of mentoring programmes".

In their study, Karcher et al. (2006, p. 710) explained that the "diversity of mentoring programmes is both a strength and a liability for the establishment of a well-defined research base on the effectiveness of mentoring". To develop a better-defined research base, they proposed a framework for conceptualising the elements of mentoring programmes, with programme contexts, objectives, and structure as the focal points. In Karcher et al.'s (2006) framework, programme contexts refer to the sites of the meetings, which can be described as site-based or field-based. For site-based mentoring programmes, mentors and mentees communicate and collaborate at a specific mentoring site — namely, a church, a community centre, or a school. Conversely, field-based refers to mentoring programmes in which a sponsoring agency organises and assists the matching of mentors and mentees, but the mentors and mentees schedule meetings based on mutually convenient locations and time slots. Structure indicates the nature of the mentor–mentee relationship — namely, one-to-one mentoring, compared to group mentoring, or cross-age peer mentoring, compared to adult-with-youth mentoring. The objectives of a programme shape the tasks that take place in the mentoring, and these tasks fall along a continuum from relational and developmental in nature to task or skill focused (Karcher et al., 2006).

2.4.3　Mentee and Mentor Characteristics

Some research findings suggest that personal factors related to students and their relationships with their mentors can impact the effects of mentoring (Darling, 2005; DuBois et al., 2002; Soucy & Larose, 2000). Mentees' ages and genders may moderate the outcomes of school-based mentoring. Cavell and Smith (2005) suggested that adolescents may find it harder than children to develop mentoring relationships, especially with regard to relationships that are not goal oriented or are highly instrumental. Some studies have also investigated the impact of mentor characteristics (e.g., profession and marital status), among other potential moderators, on mentoring relationships and outcomes. DuBois et al. (2002, p. 190) found that mentors who have "prior experience and success in helping roles could lead to more significant outcomes". Spencer (2007) identified deficiencies in mentor relational skills — namely, 1) unrealistic or developmentally inappropriate expectations of young people, 2) a lack of youth focus, and 3) low awareness of personal biases and how cultural differences shape relationships — as the reasons for relationship failures. Consequently, such mentor deficiencies must be addressed. Because the focus of the study is to illuminate students' experiences in the MOOC mentorship programme, students' perspectives are the focus, and the relationship between mentor and mentee supplement the findings of the study.

Relationship between mentee and mentor

A number of studies have investigated the relationship between mentoring and attachment (Rhodes, 2005; Soucy & Larose, 2000). Zimmerman et al. (2002) suggested

that children who lack strong emotional bonds with their parents can find emotional security in their mentoring relationships. Thus, mentors become "parent surrogates" because they provide an alternative attachment figure in school (Ainsworth, 1989, p. 714). Rhodes et al.'s (2000) study of how mentoring positively impacts children's relationships with their parents indicated that the improved academic achievement of mentored children is a key factor that leads to the improvement of their relationships. Soucy and Larose (2000) also suggested that mentees demonstrate greater academic and emotional adjustment after they establish secure relationships with their mentors at school.

Georgiou et al. (2008) stated that adolescents who are more secure in their attachments are more likely to enter mentoring relationships and have stronger mentoring bonds and a higher perceived impact of mentoring. In contrast, teenagers with avoidance relationships with their parents are more likely to reject the assistance offered by a mentor because they may feel insecure when mentoring relationships become intimate. In this regard, Hamilton and Hamilton (1990) stated that adolescents with fearful, avoidant relationships with their parents may become too demanding in mentoring relationships. Mentors are likely to feel discouraged by such mentees and may eventually end their relationships prematurely because their mentees are hard to please. Perhaps, when mentors struggle to accommodate their mentees' emotional and social desires in their meetings, they are more likely to terminate the relationships.

Length of relationship

Some studies indicate that negative outcomes may be associated with programmes in which only short-term mentors (six months or shorter) are provided or mentors quit prematurely (Grossman & Rhodes, 2002; Karcher, 2005, 2008; Rhodes et al., 2000). Some other studies argue that the main reason for mentees quitting mentorships is these relationships' failure to meet their expectations upon joining the programme; namely, the mentees failed to improve their English, had poor time management, and had no mutual interests with their mentors (Karcher, 2008; King, 2012). In their study, DuBois et al. (2002) found no significant relationship between length of relationship and the outcome but noted that the number of studies that captured the length of the relationship as a variable was limited.

Frequency of contact and quality and intensity of relationship

DuBois et al. (2002) noted that the expectations set by the programme regarding frequency of contact were related significantly to effect size. Karcher (2005) also found a relationship between mentors' involvement with their mentees and outcomes. In particular, he indicated that mentees' decline in self-esteem and behavioural competence are associated with mentors' inconsistent attendance in common programme activities. This suggests that the absence of mentors "may do more harm than good" (Karcher, 2005, p. 65).

A Hong Kong study showed the positive impact of the frequency of weekly contact on mentoring effectiveness (Chan & Ho, 2008). Chan and Ho (2008, p. 852) term this

"relationship asymmetry"; this refers to a relationship of unequal commitment and one-sided initiative because it produces a main effect on the part of the frequency of weekly contact. DuBois et al. (2002, p. 188) suggested that "multiple features of a relationship, such as longevity, emotional closeness, and frequency of contact, each may make distinctive and important contributions to positive youth outcomes".

2.4.4   Models of Academic Mentoring

Preconditions for successful academic mentoring programmes

In Smith's (2014) study of how academic mentoring programmes in two English secondary schools impacted personalised learning, the programmes focused on the academic mentoring of Year 11 students and how this supported personalised learning. In that study, Smith recommended 1) removing social and financial barriers to learning, 2) agreeing on personal learning targets, 3) supporting learning strategies, 4) tracking academic progress, 5) providing a limited level of career advice, and 6) discussing personal issues as preconditions for successful mentoring and target setting.

The work of a range of professionals, from mentors to social workers, namely tutoring and mentoring pupils so as to cater to their individual needs, can be seen as an attempt to remove the barriers to learning (Johnson, 2004). In tracking academic progress, Smith (2014) further summarised that the rich application-oriented experiences provided by active mentors can foster high levels of interaction. Enthusiastic mentors can also offer positive feedback in supporting learning strategies (West-Burnham, 2010; Younger et al.,

2005) and clear goal-setting strategies that emphasise learning over grades (DfES, 2005; Littkey & Allen, 1999; Younger et al., 2005). These strategies can increase students' intrinsic motivation in academic mentoring. Providing a limited level of career advice is another boost for successful mentoring because students' increased involvement in their own career planning process can better prepare them for careers that demand lifelong learning skills. Mentees also enjoy discussing personal issues with their mentors, which strengthens their bonding with them (Herrera, 2004).

Hong Kong school-wide, one-on-one teacher-student mentoring programmes
Chen (2010) conducted a study of school-wide, one-on-one teacher-student mentoring programmes in Hong Kong. This study included schools in Hong Kong that have provided guidance and counselling through a variety of programmes. Because one-on-one teacher-student mentoring programmes remain an under-researched and equivocal area, Chen's (2010) study is an important reference for my study because it seeks, first, to clarify what the actual implementation of mentoring programmes in schools looks like. It also considers how programmes can be made more effective by identifying the factors that affect the outcomes of such mentoring and uncovering the points of leverage that are specific to the case school.

The research context of Chen's (2010) study is in the domain of the literature on mentoring, and it focuses on guidance in schools. It is a mixed-methods case study using in-depth interviews with students and teachers and a survey of the student population of the school at large. The results show that although actual implementation may not be as

smooth as theorised, the programme has been reaping benefits. The programme is also likely to reap even greater benefits if certain steps are taken, which include ensuring the clarity of objectives; the commitment of staff; and, whether or not this incorporates certain features of other well-run mentoring programmes, the provision of ongoing training and programme activities to support the development of the mentoring relationship.

In another Hong Kong study, Chan and Ho (2008) explored a community-based mentoring programme that draws its students from three schools. They found that students from one school experienced greater benefits than those from the other schools. The former school runs its own school-based mentoring programme, with senior secondary students mentoring junior secondary students for a designated period before they join the community-based programme. Chan and Ho (2008) suggested that students placed at a school where the importance of mentoring is recognised benefit more from mentoring.

2.4.5   Online and Peer Mentoring in MOOCs

Because there is limited research on face-to-face, school-based MOOC mentoring programmes, it is relevant to review interventions regarding other forms of mentoring in MOOCs, such as online and peer mentoring.

Online mentoring in MOOCs

The role of mentors in supporting learning activities has been explored since online learning began. The roles of online mentors can be categorised as social, pedagogical, managerial, and technical (Berge, 1995). More recently, Akin and Hilbun (2007, p.12) defined online mentoring as "the merger of mentoring with electronic communications to develop and sustain mentoring relationships, linking a senior individual and a less skilled or experienced individual, independent of geography or scheduling conflicts". Salmon (2013) proposed a five-stage mentoring model for online learning: 1) online socialisation, 2) access and motivation, 3) information exchange, 4) knowledge construction, and 5) knowledge development, in which mentors can motivate their mentees and encourage them to reflect on their online learning experiences.

Regarding mentor interventions in MOOC discussion forums, Anderson (2008) stated that communication and interaction are the key elements of online support, but not information delivery. According to Ferguson and Sharples (2014, p. 4), "learning as conversation" is the focus of the FutureLearn platform, and it has a huge influence on course design and content. However, the notable absence of social interaction in MOOCs can negatively impact the effectiveness of online education (Gašević et al., 2014). To form closer ties among learners and promote social learning, it is crucial to foster "presence" in MOOCs, namely teaching presence, cognitive presence, and social presence (Kop, 2011, p. 22). Kop further suggested that these features are "the three core elements for an educational experience" that foster MOOC learning, with reference to Garrison et al.'s (2000, p. 103) model. Leon Urrutia et al. (2015, p. 15) concluded that the

five types of mentoring support in MOOC forums are 1) connecting the learning community, 2) providing links to suitable content, 3) fostering learning as a conversation, 4) encouraging the development of external networks, and 5) producing weekly reviews and suggestions for further study. Leon Urrutia et al.'s (2015) findings echo Salmon's (2013) five-stage mentoring model for online learning in that information exchange via emails to their mentors, as well as knowledge construction through interacting with other MOOC learners in the forum, may positively impact learners' experiences of studying MOOCs.

Peer mentoring in MOOCs

Topping (2005, p. 638) defined peer mentoring as "the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions". There is an essential contrast here with traditional mentoring, which also appears in the form of "e-mentoring" or online mentoring in which the interaction is expert-novice. Peer mentoring occurs between virtual learning environment or students in a classroom and can positively impact particular parts of the individual learning process. Mcloughlin et al. (2007) suggested that peer mentoring enhances the sense of community via the exchange of ideas and sharing experiences in MOOC discussion forums. Another key factor in peer mentoring is its effect on the metacognitive processes of the individual. Having evaluated others' practices and works, students develop new criteria on which to improve their learning activities (Akin & Hilbun, 2007). O'Toole (2013) also argued that students should review their evaluations after the evaluation process is completed to enhance their skills as peer mentors.

Garreta et al. (2015) suggested that it is important to develop peer mentors in MOOC settings because many MOOCs are attempting to involve peers through several strategies to increase student satisfaction. Recently, interacting with online students in MOOC forums has become a common way for course facilitators to post messages, propose learning activities, and engage students to assist one another. There are also different approaches to engaging students with peer mentoring. Towndrow et al. (2013) explored the "quad blogging" experience, in which students formed groups of four persons. Each week, one of the participants wrote a post about the weekly assignments, and the others commented on it and tried to involve the remainder of their groupmates. Purser et al. (2013) also suggested that, with the intensive use of social media, facilitators proposed that students introduce themselves to several social networks a week before the course began, creating a sense of community and encouraging students to mentor their peers during the course. Along with the aforementioned tools, newer systems, based on algorithms and artificial intelligence, are being built to make a difference, as intelligent components and recommendation systems have demonstrated in the field of collaborative e-assessment (Tardy & Moccozet, 2013).

In summary, mentoring can assist young people's participation in online learning programmes. To illuminate secondary students' experience in studying MOOCs and how they acquire knowledge through social interaction with their mentor or peers in the mentorship programme, a look at the theoretical underpinnings of sociocultural theories can help to further specify the mechanisms through which mentoring functions.

2.5 Theoretical Approaches

To investigate learners' experience in MOOCs and how the Hong Kong school-based mentorship programme impacted their MOOC experiences and future plans, I refer back to the link between MOOC experience and mentoring support by asking the following two questions: how do we best look closely at secondary students' experience of studying a MOOC, and how do we best strive to understand the impact of school-based mentorship programmes on MOOC experience and future plans? The field of educational psychology — in particular, sociocultural theories and self-determination theory — serves as the theoretical underpinnings in this study. Vygotsky's (1978) concept of the zone of proximal development (ZPD), the scaffolding theory of Jerome Bruner (Wood et al., 1976), and the self-determination theory of Deci and Ryan (2010) have informed my thinking about these questions and provided a framework in which to examine the experiences and support of secondary school students engaged in a school-based MOOC mentorship programme in Hong Kong.

2.5.1   Sociocultural Theories

Sociocultural theory was introduced by Vygotsky (1978). There are two major themes of sociocultural theory that are significant for this research: first, experience should be understood by examining the sociocultural contexts in which learners interact with their teacher, course instructor or peers. Second, human action is brought about by social

involvement when individuals are assisted by more capable peers. The concept of scaffolding created by Jerome Bruner (Wood et al., 1976) suggests that the modelling of the more capable peer promotes the transfer of knowledge from the external social world to the internal world of a learner's thinking and remembering.

Zone of proximal development (ZPD)

The first theme originated from Vygotsky (1978), who proposed that children learn in two stages: first, through social interactions with peers, parents, teachers, and the community, and then, by integrating this new knowledge into their mental structures individually. He argued that "every function in the child's cultural development appears twice: first, on the social level, followed by the individual level; first, between people (inter-psychological) and then inside the child (intra-psychological)" (Vygotsky 1978, p. 57). Sociocultural theories describe the knowledge development that results from social interaction, which first appears on an intermental plane and is then transformed and internalised on an intramental plane (Sakamoto & Tamanyu, 2014).

Vygotsky's (1978) concept of the ZPD also describes the assistance provided by more capable peers in a learning setting until learners master the learning and become independent of support. There are two parts of the learner's developmental level in Vygotsky's (1978, p. 86) idea of the ZPD, namely "the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers". In essence, Vygotsky (1978) argues that the learner's capability to master

tasks independently determines the actual developmental level. The potential developmental level is determined by the learner's ability to perform tasks independently after collaboration with peers who are more capable or knowledgeable than them. Vygotsky posits that learning takes place when students are working in their ZPD. For instance, he argues that "language is learned more naturally and retained better when learners are helped by teachers who are more capable than themselves" (Vygotsky, 1978, p. 86).

The conception of ZPD in Vygotsky's framework does refer to more traditional perspectives with respect to a social relationship of teaching, such as a "one-to-one relationship between one adult and one child" (Forman & Cazden, 1985, p. 28) and the fact that the "more capable ones who have higher consciousness share it with those who are less developed in consciousness intellectual control" (Bruner, 1984, p. 94). However, this notion of teaching should not be limited to the teacher's role. There should be non-hierarchical conditions in the online learning environment of MOOCs so that students have the opportunity and responsibility to take control of their own learning (Jie et al., 2020). Therefore, we should also acknowledge the impact of peers' actions in teaching on students' learning in MOOCs.

Scaffolding theory

Bruner, a cognitive psychologist who was primarily influenced by Lev Vygotsky's sociocultural theory, introduced scaffolding theory in the 1950s (Bruner, 1960). The term "scaffolding" was used to illustrate how parents facilitate their children's oral language

acquisition when they first begin to speak. The concept of scaffolding was further proposed by Wood et al., (1976) in that the model helps to explain how children's development is facilitated by certain types of social interaction. According to Wood et al. (1976), scaffolding is a form of tutoring in which teachers demonstrate how to complete a task and then assist students in attaining mastery of the task, which is impossible for them to achieve without assistance. In addition, the ZPD and scaffolding were considered conducive to understanding the four key forms of mentoring support that impact students' success in an academic mentoring programme: emotional and psychological support, academic support, role modelling, and career guidance (Ku et al., 2008).

Tharp and Gallimore's (1988) four-stage model of scaffolding procedures

In addition to the scaffolding theory mentioned above, Tharp and Gallimore (1988) proposed a four-stage model of scaffolding procedures in school classrooms, with reference to Vygotsky and Bruner. These constructs, which may positively impact mentoring with the teacher mentor, MOOC technologists, or more capable peers, are as follows.

Tharp and Gallimore (1988) stated that, in stage one, a more capable peer offers modelling or direction to a learner and that this modelling may regulate the behaviours of the learner. In the beginning, the learners may have little understanding of the situations or purposes at hand, but they steadily learn how the tasks are arranged and become aware of the connection between the various parts of each task. In this regard, it is important to facilitate the learning process with questioning, conversation, explanation, and feedback

throughout the task so that learners can take control of their own learning. In stage two, learners become mature because they have more self-control and regulation, so they begin to self-direct. By engaging in self-talk, learners can provide themselves with guidance regarding what they must do to reach the ZPD for specific skills or knowledge. For instance, learners provide written or verbal instructions, namely writing down their own schedule in managing their time or presenting their plan verbally to their peers, step by step when they are engaging in specific learning tasks. In stage three, with more experience under their belts, learners' task performance is 'optimized', 'automatic,' and 'internalized' as they no longer require a great deal of assistance from the more capable other. In fact, the assistance learners receive at this stage can be disruptive. The three stages display the common process involved when learning new knowledge or skills. In stage four, learners can complete the task independently, but they may require the earlier form of assistance when they intend to improve or maintain their performance. According to Tharp and Gallimore (1988), Vygotsky labelled such a process as "de-automatisation and recursiveness", through the ZPD. In summary, the concepts of Tharp and Gallimore's (1988) four-stage model describe the sequence, process, and changes learners may experience in reaching the ZPD. More importantly, Tharp and Gallimore (1988) assert that learning and teaching can be redefined when teachers, who are considered as mediators, provide "just enough support to support learners to make the most of their own ZPD."

Summary

Both Bruner and Vygotsky believed that adults should help children maximise their

learning through scaffolding (Vygotsky, 1978; Wood et al., 1976). Scaffolding can be achieved by breaking up the learning into blocks and then providing a tool or structure to use with each block. The teacher or mentor should provide sufficient help to the child to bring the problem within the child's ZPD but refrain from solving the problem for the child. This requires the mentor to have a good knowledge of the specific child's intellectual and moral development. As the child develops, the mentor should guide the child towards new areas for growth, always challenging the child within his or her ZPD. This means that the mentor must repeatedly consider the child's developmental stage, rather than attempting to give advice based on the mentor's own agenda.

2.5.2   Self-determination Theory

The third learning theory, which complements the above sociocultural theories, is self-determination theory. Self-determination theorists, such as Deci and Ryan (2010) and Cook and Artino (2016), proposed that much of the learning process is controlled by the learners and their individual interests in learning. Deci and Ryan (1991, p. 327-328) stated that "motivation, performance, and development will be maximized within social contexts that provide people the opportunity to satisfy their basic psychological needs for competence, relatedness, and autonomy". Deci and Ryan (1991) defined competence as learner's perceptions of ability and feelings about their potential to overcome limitations. Ragan (2012) further suggested that simple practices such as goal setting or offering feedback based on learner's performance have important impacts on learner motivation and engagement behaviors. Relatedness is the second core component of self-

determination theory. Relatedness refers to learner's feelings and connectedness to individuals, content or community (Reeve, 2002). The three core theoretical models that are built on the perceived importance of relatedness are communities of inquiry (Kop, 2011), pedagogical caring theory (Wentzel, 1997), and positing theory (Yoon, 2008; Harrre, 1998). The third core element of self-determined theory is autonomy. According to Deci and Ryan's (2010, p. 57) review, autonomy is defined as "how much one views themselves as causal agents in their own life". Multiple studies have demonstrated this proposed relationship between student motivation patterns and autonomy support practices (Vallerand, 1997; Grolnick and Ryan, 1989; Ryan & Deci, 2017). Autonomy support practices, such as providing learners with a wide range of choices for course selection or offering flexibility in learner's engagement of the course, are often connected to student engagement patterns and addressed in educational best practice guides (Reeve, 2002; Ragan, 2012).

Self-determination theory is used by researchers as a theoretical framework for studies examining online learning motivation (Chen & Jang, 2011; Hartnett, et al., 2011). These studies utilised self-determination theory and applied several survey instruments based on self-determination theory to online learning (Hartnett, 2010). Some studies adopted the qualitative method (Shroff et al., 2008; Shroff et al., 2007) and others were quantitative (Chen & Jang, 2010; Hartnett et al., 2011). The results of these studies reported that self-determination theory offers a viable model for further understanding motivation in studying online programmes (Hartnett, et al., 2011) and MOOCs (Zhou, 2016). If a learner is motivated to learn by exploring any potential communication medium or

available resources, then the learning process has a good chance of succeeding. Self-determination, particularly in open and self-controlled learning environments such as MOOCs, is an important factor that lies at the basis of this study.

Self-determination theory has been explored qualitatively as a theoretical framework for studying MOOC completion motivation. Morris (2014) investigated student engagement behaviors and motivation in MOOCs through a combination of a literature review and a series of semi-structured interviews with past and present MOOC participants. A two-tier approach was applied in the data analysis. Morris (2014) focused specifically on the general experiences and perceptions of 15 MOOC participants in his first-tier approach. In the second-tier approach, he examined the similarities and differences between participants' experiences in his study and those of other research findings in the field. Morris's (2014) study indicated that self-determination theory is a viable theory for further understanding MOOC motivation. Morris's (2014) study also supported the hypothesis that intrinsic motivation, such as completing a challenging MOOC in areas learners are interested in from recognised and reputable institutions, may positively impact learners' experience in studying MOOCs, as indicated by the self-determination theory.

Beavin et al. (2014) also utilised self-determination theory as a starting point for a MOOC investigation. They studied the moderating effects of participatory literacy skills on engagement with a language learning curriculum in a MOOC offered by the Open University in the United Kingdom. Pre- and post-course surveys were used to examine

enrolment goals and motivations. The findings of Beavin et al.'s (2014) study summarised that a standardised pre-course goal or inventory instrument is essential to help MOOC researchers understand the self-determined reasons motivating students to participate in MOOCs. Beavin et al. (2014) further suggested that the ability to connect with others in MOOCs and a better understanding of the participatory skills necessary to succeed in MOOCs might moderate self-determined learning.

Whereas Beavin et al. (2014) argued that successfully completing a MOOC requires a high level of self-determined learning, Durksen et al., (2016) studied the actual experience of MOOC learners who participated in a MOOC offered a Canadian comprehensive university. Over 1,000 MOOC learners responded to surveys based on the self-determination theory, such as the Basic Student Needs Scale (Ilardi et al., 1993) and the Work-related Basic Needs Satisfaction Scale (Van den Broeck et al., 2010). Durksen et al.'s (2016) study provided some support that competence and autonomy are closely linked since when a learner freely chooses when to access learning materials, autonomy may increase. The increase of autonomy may also lead to more engaged learning that contributes to competency satisfaction. Durksen et al. (2016) also concluded that meeting the need of relatedness through computer mediated interactions can be more difficult than meeting the combined needs of autonomy and competence within the MOOC they studied.

In summary, all three studies supported the application of self-determination theory to MOOCs as they reported a high correlational and conceptual fit in their discussions or

findings. Based on a review of the literature, self-determination theory helps explain students' motivation to enrol in and learn in MOOCs. Additionally, Wheeler (2012) reported that intrinsic and extrinsic motivations do encourage learners to be self-determined in their online learning approach. Such a view is echoed by Hase and Kenyon (2007, p. 12), who further argued, with reference to self-determination theory, that the impetus to learn in online courses lies in "learning to learn" and learners' self-determination in knowledge sharing.

2.5.3   Theoretical Framework of this Research

The three established theories that were expanded upon in detail in Sections 2.5.1 and 2.5.2 were embodied within the theoretical framework of this research. Figure 2.2 illustrates the theoretical framework for the study.
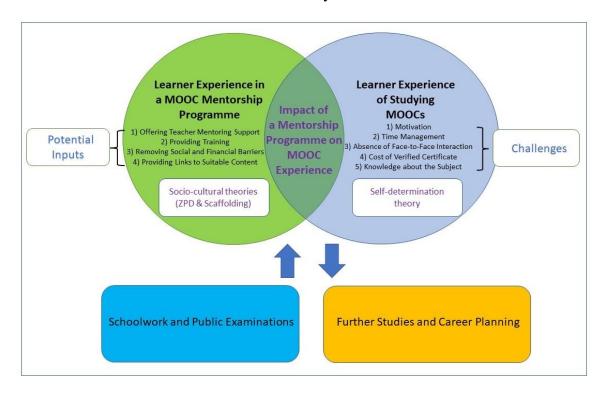
Figure 2.2   Theoretical Framework of Learner Experience of Studying MOOCs in a

School-based MOOC Mentorship Programme

Some of the challenges encountered by learners that lead to high dropout rates in MOOCs were discussed in Section 2.3.3.2. These include low motivation; lack of time; absence of face-to-face interaction; learners possessing insufficient knowledge about the subject; and the cost of purchasing verified certificates. In response to these concerns, potential inputs proposed by the MOOC and mentoring literature (Chen, 2010; Salmon, 2013; Smith, 2014; Leon Urrutia et al., 2015), such as teacher mentoring, training workshops, removing social and financial barriers, and providing links to suitable content, may better support learners in school-based MOOC mentorship programmes. To study learners' experiences in studying MOOCs and how a school-based MOOC mentorship programme impacted their MOOC experiences and future plans, ZPD and scaffolding theory may help explain how MOOC students participate in MOOCs through appropriate guidance or the scaffolding provided by the "more experienced other", such as their mentor, MOOC workshop instructor or peers, and then appropriate the skills introduced through guided participation. Personal insights and attitudes regarding online learning influence the system, as well as the content delivered. In this respect, the self-determination theory is proposed to address the "motivation" issue. The self-determination learning theory is positioned to capture learners' needs, interests, and engagement in the learning process. The three theories introduced and discussed above characterise the educational aspects of this research study as they come together towards one goal, which is to illuminate learners' experiences in a MOOC mentorship programme and how these impact their

experience in studying MOOCs as well as their future plans. There is an overlap between the learner experiences in studying MOOCs and in the mentorship programme in the framework. This is bringing together MOOCs experience in a mentorship programme and different theoretical frameworks to examine the impact of a school-based mentorship programme on secondary students' experience of studying MOOCs.

While the MOOC students in this study were newly introduced to a wide range of MOOCs, they had not participated in MOOCs before joining the programme. Likewise, the self-directed learning skills that MOOCs require were assumed to be acquired naturally when they worked on their MOOCs (Bock & O'Dea, 2013). However, this sink-or-swim approach places students at risk of facing unduly overwhelming and arduous tasks without proper subject knowledge and generic skills, such as time management and priority setting. By providing them with guidance via their participation in a school-based mentorship programme, learners can first learn from the guidance offered by their experienced mentor, MOOC technologists, or even the experience of their peers. This is significant because "instruction is good only when it proceeds ahead of development. Then it awakens and rouses to life an entire set of functions which are in the stage of maturing, which lie in the zone of proximal development" (Vygotsky, 1934, p. 222, as cited in Wertsch, 1985, p. 71). Guided practice through mentorship and interaction with other more capable peers "would awaken and rouse to life the maturing functions needed in becoming a self-directed learner who can achieve their academic goals" (Sakamoto & Tamanyu, 2014, p. 34). Furthermore, while studying MOOCs and being supervised by their mentor or MOOC technologist, students are included in the decision-making

process, such as deciding how they utilise the time management skills shared by their mentor, participate in MOOCs recommended by the HKU technologists, and learn from the successful MOOC experiences of their peers. This includes exploratory talks and other social mediations to help students control or appropriate their learning (Moll, 1990). This mentoring process leads to autonomy (Aoki, 1999; Nedelsky, 1989), and eventually, students are equipped to become self-directed learners. Because motivation, self-monitoring, and self-management are crucial to self-directed learning in studying MOOCs (Ejreaw & Drus, 2017), the impact of the emotional and psychological support, academic support, role modelling, and career guidance offered by their mentor, HKU technologists, or peers was examined regarding their development of self-directed learning skills. This study also intended to investigate whether the input from the mentorship programme was able to keep the learner motivated as much as possible throughout their experience of studying MOOCs. The self-determination learning theory addresses these concerns.

2.6   The Gaps in the Literature

The need for research into Hong Kong MOOC learners became more evident when, in 2015, the Hong Kong government announced a framework (The Chief Executive's Policy Address, 2015) for supporting the Education Bureau's initiatives to enhance teaching and learning by sponsoring local universities' theme-based projects regarding blended learning and the development of MOOCs. This framework was introduced to help learners in Hong Kong gain access to high-quality learning resources. However, there

was a paucity of research into the benefits these participants accrue through studying these MOOCs and the potential issues that may arise through the extensive use of such a framework. The COVID-19 pandemic prompted this rapid push to incorporate MOOCs or blended learning within Hong Kong secondary and tertiary education, and this study provides a more cautious, yet optimistic, view of the realities of the learner experience of studying in MOOCs. This study enables the key stakeholders in Hong Kong tertiary and secondary education to understand the benefits and drawbacks of these MOOC learner experiences and the mentoring support that learners themselves perceive as important.

Furthermore, research into MOOC learner experiences tends to focus on identifying commonalities and patterns across platforms or disciplines, with learners' voices being largely absent from the literature (Zhu et al., 2017), or on a meta-level analysis of learners on a single MOOC platform, which only identifies the characteristics that can predict learner success or persistence in a course (Christensen et al., 2013; Ho et al., 2015). This study, by investigating learners' experiences in studying MOOCs while they were supported by a school-based MOOC mentorship programme, can provide a unique insight into the impact of various forms of support on learners' experiences, motivation to study MOOCs, and future plans. While various studies show that the bond that forms between the mentor and mentee is the key to a successful mentoring process (DuBois et al., 2002; Karcher et al., 2006), there is little understanding of the quality, nature, and development of mentoring's effect on learners' experiences of studying in MOOCs, particularly in the secondary school context. To promote positive outcomes, the present research on students' MOOC experiences, particularly with regard to Research Question

1, is promising because it is designed to illuminate the impact of mentoring on students'

MOOC experiences.

Finally, only around 20% of the empirical studies on MOOCs adopt a qualitative method

(Zhu et al., 2017), and the limited research on the diverse nature of learner experiences in

studying MOOCs has also been a significant problem in MOOC research (Veletsianos et

al., 2015; Veletsianos & Shepherdson, 2015). The theoretical basis of face-to-face MOOC

mentoring remains weak because very limited research has been conducted examining

the contexts, objectives, and structures of school-based MOOC mentoring programmes.

Thus, I still have little understanding of "what constitutes the building blocks for

successful [mentoring]" (Andersen & Ponti, 2014, p. 15) in MOOC participation. To fill

this knowledge gap, Research Question 2 is introduced to examine how the support the

students received from the MOOC mentorship programme impacted their experiences in

studying MOOCs. In addition, because the extra credentials and educational benefits

derived from studying MOOCs in the secondary school context remain an under-

researched area, the aim of Research Question 3 is to fill the research gap regarding

MOOC mentoring and its impact on students' plans for future studies and career

advancement.

2.7 Summary

MOOCs can be a rich learning resource for learners around the globe since they are

positioned as a powerful platform for informal learning and extra-credential learning

(Chen et al., 2020). Rapidly evolving MOOC innovation takes advantage of the growing support for online learning (Carr, 2012) but challenges institutions to reassess their online practices (Ng, 2013). Studying MOOCs can lead to career and educational benefits because successful self-directed learners can convert their virtual MOOC learning experiences into actual verified MOOC certificates. This chapter highlighted some of the challenges learners face in their experience of studying MOOCs, such as the absence of face-to-face interaction with the instructor, low motivation to complete course-related activities, a lack of time, the high cost of certification, and possessing insufficient knowledge, as reported in the literature. In response to these concerns, the literature on MOOC experience and school-based mentorship programmes was discussed in this chapter. Mentoring support, coupled with motivation, self-monitoring, and self-management that assists students in completing a MOOC, are crucial to self-directed learning in MOOCs (Ejreaw & Drus, 2017). Because there is no existing literature focusing on the impact of a school-based mentorship programme on secondary students' experiences in studying MOOCs, the current study can shed some light on the impact of mentoring on students' MOOC experiences and plans for the future. This chapter also reviews the field of educational psychology — in particular, sociocultural theories and self-determination theory — that serves as the theoretical underpinnings in this study. The following chapter will show the inputs introduced in the MOOC mentoring project at the school and how they impacted students' experience in studying MOOCs.

Chapter 3

Collaboration Between HKU TELI and the Case School in the MOOC Initiative

3.1 Introduction and Purpose of the Chapter

In collaboration with the HKU TELI, I launched a MOOC-based mentorship programme in 2016 to support students' access to MOOCs from world-renowned providers. Students' learning is facilitated by schoolteachers, who act as mentors; assessed by online assignments; and accompanied by feedback from MOOC learners around the world. It is hoped that through studying MOOCs with teacher mentorship, students can 1) gain exceptional learning experiences outside their standardized curricula and 2) develop generic skills and attitudes for self-directed learning.

3.2 Engagement with the Programme

3.2.1 Participants

In 2015, the Pilot MOOCs Mentoring Programme organized by the Gifted Education Sub-Committee was introduced at my school as one of the school-based gifted education programmes. Eight academically advanced students were nominated (two in Secondary 3, three in Secondary 4, and three in Secondary 5) to match with mentors from the Gifted

Education Sub-Committee to participate in MOOCs.

In this pilot stage, I allowed mostly senior form students with good academic performance to join the initiative through teacher nomination. The rationale for this selection focused on maturity and fundamental knowledge of English, as MOOCs are mostly designed in English and for working adults. Having generated successful results with one Secondary 3 student and two Secondary 5 students completing five different MOOCs in the pilot scheme, it became evident that even junior form students can thrive in MOOCs. The MOOC mentoring programme has gradually expanded to all secondary students and has become a school-based enhancement mentoring programme.

Starting in 2016, in order to invite more motivated self-directed learners to participate in the programme, teacher nomination and self-nomination were introduced to the selection mechanism. In 2016, 45 applications and nominations (30 teacher nominations and 15 self-nominations) were received, with all 45 students from Secondary 1 to Secondary 5 being invited to participate in the programme after the interview procedure.

3.2.2 Engagement of Participants in the Programme

Table 3.1 – MOOC participants and MOOC completion (2015–2017)

Year	MOOC completion rate for all students	Total number of MOOCs completed
2015–2016 (Pilot Scheme)	3/8 (38%)	5
2016–2017	14/45 (31%)	28
Total	17/53 (32%)	33

Based on Table 3.1, as of June 2017, over 17 out of 53 participants (32%) from my school had successfully completed 33 MOOCs produced by prestigious universities, such as MIT, Harvard University, Johns Hopkins University, and Stanford University. Pre- and post-mentorship surveys were conducted to collect feedback from students in 2016. The results show that 77.5% (35 out of 45) of students agreed or strongly agreed that the training and mentoring support they received had a positive impact on their MOOC participation. In addition, 89% (40 out of 45) of the survey respondents agreed that MOOCs had a positive impact on their studies, and 47% (21 out of 45) of students wanted to join the programme the following year.

3.2.3 Matching, Training Workshop, Conference, and Reimbursement

Mentoring selection and matching process

Teacher nomination and self-nomination start in early September after the commencement of the school year. In mid-September, all applicants are invited to an interview, in which they are asked about their preferred teacher mentors and the fields in which they are interested. We assign one teacher mentor to pair up with one or two student mentees based on the students' preferences stated in the e-surveys or the interviews. In 2016–2017, 27 teachers were invited to be MOOC mentors. After pairing up with teacher mentors who share the same interests in certain fields, the mentees can be supervised systematically starting in October. An online Google mentorship (see Appendix 1) was designed to be filled out by both mentor and mentee, and the main foci of the mentorship form were goal setting and reviewing the mentoring process on a monthly basis.

HKU MOOC preparation workshop for students

In October 2016, technologists from HKU TELI arranged an outreach training workshop at my school. All 45 MOOC students in the 2016–2017 cohort participated in the workshop. The workshop concentrated on equipping students with the basics of MOOCs—namely, registration of their accounts, selection of MOOCs that fit their levels, the gist of assessment items in MOOCs, and tips on overcoming procrastination regarding the completion of their MOOCs. In the 2-hour training workshop, technologists from HKU also shared their personal experiences with completing MOOCs and

explained the potential benefits of acquiring MOOC certificates for their further studies and career advancement. The MOOC students were given an iPad to explore different MOOC platforms and they also got to interact with the technologists face to face.

Teacher-training workshop

In late September 2016, the selected teacher mentors were invited to participate in a 1-hour workshop focusing on the use of MOOC platforms, such as Coursera and edX. The technologists from HKU TELI provided them with the latest updates and developments regarding the MOOC platforms. The teacher mentors also learned the basic functions of MOOC platforms—namely, the registration of MOOC accounts, the mode of assessment in MOOCs, tips on exploring the fields they liked, and other new updates—before they met their mentees. Our teachers were also able to find out the interests of the nominated students, who might pursue further studies in their fields before their elective selections in Secondary 3. By arranging meetings and holding discussions with their mentees, learning can take place outside the traditional classroom. With regard to the evaluation of the training workshop, a post-mentorship survey was given to both mentors and mentees in July to gather their comments regarding the programme.

MOOC Starters' Guide and MOOC sharing in assemblies

A *MOOC Starters' Guide* (Appendix 2) is provided to teacher mentors and student mentees once the mentoring process starts. Having consulted the technologists from HKU TELI regarding the content of the guide, features of MOOCs—namely, account registration, teaching and assessment methods, discussion forums, and details of the

reimbursement policy—are clearly stated for their reference. Successful experiences of former MOOC student mentees are also shared in the guide, and a recommended list of MOOCs—mainly the ones completed in the previous cohorts—is also given in the guide. It is hoped that the information provided in the guide can assist both teacher mentors and student mentees in choosing MOOCs that fit their levels, interests, and needs.

Apart from the *MOOC Starters' Guide*, MOOC presentation sessions in the morning assemblies are arranged on a monthly basis. Student mentees who completed MOOCs or prestigious speakers from HKU will be invited to share their experiences and tips for completing MOOCs; they will share these in front of their schoolmates. It is hoped that by providing a platform for MOOC student mentees, their achievement in completing MOOCs will be recognized and their message will penetrate the rest of the school.

HKU MOOC Forum and Prize-Presentation Ceremony

At the end of the year, a MOOC Forum and Prize-Presentation Ceremony is held at HKU lecture theatres. Students who have successfully completed MOOCs are invited to share their experiences in the forum, and verified certificates are presented during the ceremony. In July 2017, six MOOC student mentees were given the chance to share their MOOC experiences at the Rayson Huang Theatre at HKU, and 14 students were presented their verified MOOC certificates in the prize-presentation ceremony.

Reimbursement of verified certificates

Students can explore any MOOCs in the free audit track. Once the student is confident

enough to complete the course, he or she has to pay for the verified certificate, which is subsidized by the school. Because students are taking MOOCs directly, the programme does not violate any copyright laws or intellectual property rights. Once they have received their completion certificates, the school will reimburse the fees to the students. Since 2016-2017, the school has subsidized students, with the total being 2K to 3K USD per year. Compared with traditional gifted education and exchange programmes, this MOOC-based mentorship programme is more flexible and cost-effective for cultivating young global-minded thinkers.

3.3 Summary

Chapter 3 has concentrated on the key constructs of the MOOC Initiative, which are the approach to the programme, engagement of students and teachers, and execution of the programme. The focus of this study is primarily on this MOOC mentorship programme, and it aims to illuminate the mentoring experiences of the student mentees. The objective of the programme is to provide my students with opportunities to participate in high-quality university courses, which have traditionally been made available solely to undergraduate students and for hefty fees. Nominated students are matched with teacher mentors who share the same interests or are subject experts in certain fields, and the former can be supported academically and affectively throughout the academic year. Upon completing their courses, the students will receive verified certificates issued by the respective institutes. Chapter 4, the following chapter of the dissertation, highlights the research methodology in response to the three research questions posed in Chapter 1.

Chapter 4

Methodology

The purpose of this chapter is to present the research methodology and methods. I will present the theoretical framework of this longitudinal study, first, by applying the general principles of research designs. Second, I will employ a mix of quantitative and qualitative methods and provide a discussion of the objectives and design of each instrument used. This will be followed by a discussion of the piloting procedures for each instrument, how they impacted the main study, and how the data for each method will be analysed. Finally, I will discuss ethical issues concerned and how they were put into practice in this study.

4.1 Research Questions and Overview of the Research Design

The research project addresses three research questions:

(1) What are the experiences of students in the MOOC mentorship programme?

(2) How does the support that the students receive from the MOOC mentorship programme impact their experiences in studying MOOCs?

(3) How do student mentees' participation in the school-based MOOC mentorship programme impact their future plans?

A mixed method case study was chosen for the research in which quantitative and qualitative data collection, results, and integration were used to provide in-depth evidence

of the students' experience in studying MOOCs with mentoring support (Creswell and Clark, 2018). Creswell and Clark (2018, p.122) state that a case is "an individual, and organization, or an activity that is bounded by certain criteria," and mixed-methods design can be applied as it "focuses on developing a detailed understanding of a case through gathering diverse sources of data" from multiple sources of quantitative and qualitative data. Additionally, a case study design was chosen for the research process of this study because it "is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin, 2014, p. 16). This study involves the case of a school-based MOOC mentorship programme where the emergent phenomena of knowledge construction were experienced by students studying MOOCs online and how MOOC students were connecting and interacting with their mentor, MOOC technologists, and peers in the MOOC mentorship programme.

According to Gray (2009, p. 169), a case study design provides "a way of investigating connections, patterns and context, and reflecting on the bigger picture as well as on the detail" and it allows for the "generation of multiple perspectives". Adopting a case study design was deemed appropriate to gain some insights into how 40 secondary students studied MOOCs and how they perceived the impact of the mentorship programme on their experience of studying MOOCs. The study investigated 40 MOOC participants in one Hong Kong secondary school as a sample. Therefore, it was limited by the small number of study participants (Lu et al., 2018) within a single institutional context.

For the study, I used a mixed-methods explanatory design with two distinct phases: quantitative followed by qualitative (Creswell et al., 2003; Creswell & Clark, 2018). The qualitative data have an important role in helping us to explore the subjective meanings and interpretations underlying the quantitative findings. Most studies involving mentoring programmes tend to be surveys (Mitchell, 1999), case studies (Gibb, 1999; Stewart, 2006), or quantitative studies based on attainment (Hylan & Postlethwaite, 1998). The use of both quantitative and qualitative methods allows us to triangulate the data and increase the credibility of the findings. Altrichter et al. (2008, p. 147) state that the triangulation of data "gives a more detailed and balanced picture of the situation".

There are three rationales for using a mixed-methods approach. First, I want to hear the voices of 40 selected students and discuss any anomalous survey questionnaire results with these students if contradictions are uncovered in their responses. These results of the pre-mentoring survey questionnaire and post-mentoring survey questionnaire were utilized for planning the interview questions. In the second phase of data collection, which is the interviews, I prioritized more specific questions based on the prominent themes or topics that emerged in the results of the questionnaires. The questionnaire data can provide baseline information, whereas interviews provide confirmation, convergence, and validation of the survey questionnaire data. This facilitates the assessment of the generalizability of the quantitative data and can shed new light on the quantitative findings. Finally, I must prepare for the contradictory and divergent findings from the methods chosen (Creswell, 2012). Contradictory data also offer the opportunity for new explanations to become apparent in the process of reconciling the data. The reconciliation

of divergent data is also a core part of the mixed-methods analysis, as it strengthens the validity and identifies the limitations of the methods being adopted (Jick, 1979).

This mixed-methods design makes the current findings on students' mentoring and learning experiences potentially more detailed, persuasive, and convincing (Ream & Dale, 2009; Tashakkori & Teddlie, 1998). It is also useful and effective to provide an understanding of the different dimensions of a study. McLafferty and Onwuegbuzie (2006) also suggest that a mixed-methods design can be methodologically legitimated by acknowledging the purpose (why?), dimensionality of a study's research question (what?), process (how?), and potential (scope of results).

4.2 Framework of Methods for Data Collection – A Mixed-Methods Approach

The theoretical framework discussed in Section 2.5 attributed the three established theories—ZPD, scaffolding, and self-determination theory—to the combination of approaches adopted in this research study. The way that each of these learning theories form part of my underlying epistemological reasoning determines the design and implementation of the research. Figure 4.1 illustrates the updated theoretical framework of the MOOC Mentorship Programme for the study.
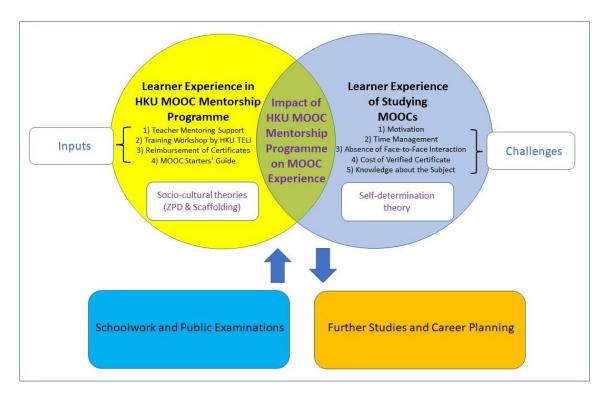
Figure 4.1   Theoretical Framework of Learner Experience of Studying MOOCs in a
MOOC Mentorship Programme in Collaboration with HKU TELI

The major differences between Figure 2.2 in Section 2.5.3 and Figure 4.1 are all the

inputs introduced by the case school and HKU TELI discussed in Chapter 3. These inputs

are embedded in this updated theoretical framework. They include teacher mentoring

support, training workshop provided by HKU TELI, reimbursement of MOOC verified

certificates and *MOOC Starters' Guide*. These inputs were introduced in the MOOC

mentorship programme in the case school aimed to match the potential inputs proposed

by MOOC and mentoring literature as discussed in Section 2.5.3 (Chen, 2010; Salmon,

2013; Smith, 2014; Leon Urrutia et al., 2015). Programme inputs such as teacher

mentoring, training workshops, removing social and financial barriers, and providing

links to suitable content, in which address the challenges encountered by learners

studying MOOCs, are included in the new theoretical framework.

To answer the research questions and examine the impacts of various inputs of the MOOC mentorship programme on students' experience in studying MOOCs, a detailed programme model for the study would be needed. It helps introduce the inputs in the mentorship programme, illuminate learner experience in the scheduled activities, describe the challenges encountered by the students when they were studying MOOCs, and examine how students perceived these supporting measures. Answering the first and second research questions requires a description of the mentoring programme shown in the programme model adapted from Chen (2010; see Figure 4.2).

Challenges
Quality of teacher–student relationships
Absence of face-to-face instruction
Students' prior knowledge of the subject/field
Time management of the students
Cost of the verified MOOC certificates
Motivation of students

Inputs

Possible Experience

Teachers (Mentors)

Time for Mentoring

Reimbursement

HKU TELI Training

Starters' Guide

Activities for research
1. The school allocates students to teachers as their mentees
2. HKU TELI provides training
3. The school provides *MOOC Starters' Guide*
4. The school gives guidelines to teachers for mentoring
5. Teachers schedule and initiate mentoring with students
6. Teachers meet students for mentoring sessions
7. Teachers and students set and review goals
8. Teachers and students share their experiences in studying MOOCs
9. Teachers provide academic mentoring to their mentees

Students have access to greater support from adults

Impact of mentors on their plans for further studies

Enhancement of students' subject knowledge in the fields related to MOOCs

Students have better relationships with mentors

Students complete MOOCs and get recognition

Students learn to set goals and plan their studies

Students' time management skills improve through their MOOC experiences and their mentoring experiences

Students get achievement motivation and engage in learning

Students explore subjects at universities worldwide through MOOCs

Figure 4.2 Possible Programme Model for the Research showing inputs, activities, experiences, and challenges to be studied further. Note that the experience and their relationships and orders (proximal, enabling, and distal) are merely possibilities gleaned from the literature review and prior descriptions (Adapted from Chen, 2010).

As stated in Section 2.4.4, Chen's model (2010) in mentorship can be adapted to this study because it clarifies what the actual implementation of a mentoring programmes in Hong Kong schools looks like. Despite the difference in the mentoring context, the adapted model demonstrates how the mentorship programme can be made effective by identifying the inputs of the school, challenges encountered by the students, the outcomes of such mentoring and uncovering the points of leverage that are specific to the school. Based on Figure 4.2, I have used Chen's model to illuminate the possible experiences of students studying MOOCs in a Hong Kong school-based mentorship programme. I describe the mentoring programme in Hong Kong, taking care to include the consideration of the various inputs, activities, experiences, and challenges (i.e., the processes or resources that facilitate or inhibit the effectiveness of programme activities and the possible experiences of the learners).

4.3 Characteristics of the Research Population and Site

4.3.1 Case School

All empirical data were collected from a Hong Kong English-medium school under the Direct Subsidized Scheme. The reason for choosing this school is that I am the teacher-in-charge of the MOOC mentoring programme. The school provided full technical support for written questionnaire surveys, focus group interviews, and in-depth individual interviews regarding the mentoring scheme.

4.3.2 Research Population and Sampling

All 40 students participating in the MOOC mentorship programme in 2017–2018 were invited to take part in the research, and they all accepted the invitation.

Therefore, there is no need to implement a sampling frame, as I have the population. To form groups, I assessed the quantitative data from the pre-mentorship survey, and three groups—enthusiasts, lukewarm students, and newbies—were categorized from the data based on 1) their prior experience (first-year participant or second-year participant), 2) their achievement (MOOCs completed), and 3) their commitment (the frequency of their work on MOOCs in the previous month) based on the pre-mentorship survey.

To select the students for the individual and semi-structured focus group interviews, I used a criterion sampling technique, which involves "selecting cases that meet some predetermined criterion of importance" (Patton, 2001, p. 238). To ensure the quality of the interview data, sufficiently mature and reflective interviewees were preferable. Therefore, four out of six selected interviewees in the individual interviews were chosen because they stayed in the programme for a second year. I gave some consideration to picking based on students with whom I had some prior rapport or at least knew beforehand and who were confident and communicative by nature. This way, the possibility that the students would feel inhibited with regard to expressing themselves honestly and freely due to any teacher–student power differentials would be reduced. Dörnyei (2007) argues that the sampling technique used to select the students is a convenience type, which entails selecting subjects based on accessibility, ease, speed, and low cost. However, I prefer to use the criterion sampling technique. This is simply because the participants chosen for the interviews were not selected as mere volunteers. Two participants from the enthusiast group, lukewarm group, and newbie group were pinpointed to give voices to selected students from all points along the spectrum. Basic information, including the name (pseudonym), form, their prior experience, their achievement, their commitment, age and gender of each interviewee

appears in Tables 4.1 and 4.2.

Selected students	Form	First year or second year of participation	MOOCs completed in the previous 12 months	The frequency with which they worked on the MOOCs in the previous month	Age	Gender
Christy	S.5	2nd year	8	Every day	17	Female
Kelly	S.5		6	Two to three times a week	17	Female
Greg	S.5		1	At least once every month	17	Male
Shane	S.2		1	At least once every month	14	Male
Ben	S.4	1st year	None	Never	15	Male
Elly	S.2		None	Never	13	Female

Table 4.1 Participants in individual interviews

Table 4.2 Participants in focus group interview

Selected students	Form	First year or second year of participation	MOOCs completed in the previous 12 months	The frequency with which they worked on the MOOCs in the previous month	Age	Gender
Chris	S.5	2nd year	2	Once a week	16	Male
Wesley	S.5		2	Once a week	16	Male
Bowen	S.4		0	Less than once a month	15	Male
Nancy	S.5		0	At least once every month	16	Female
Venus	S.2	1st year	None	Never	14	Female
Ellen	S.4		None	Never	15	Female

You may also refer to Appendix 3 for the list of 40 MOOC students and the MOOCs

they completed.

4.4 Research Timetable and Data Collection Methods

Table 4.3 shows the schedule for the pilot study and quantitative and qualitative data collection, including the phase, event, time, and number of research participants. Timing is important, as the mentoring programme usually lasts about nine months, between October and June, and until the lead-up to the final exams in the second term.

Table 4.3 Schedule for data collection

Phase	Event	Date	Number of participants
Pilot	Student group interview	February 2017	10 students
Pilot	Individual student interviews	June 2017	3 students and 2 teachers
Pilot	Student survey questionnaire	June 2017	3 students and 2 teachers
(1) Research (Survey questionnaire)	Training session for MOOCs and pre-mentoring survey questionnaire	Late October 2017	40 (all participants)
(2) Research (Individual interview)	Pre-mentoring: Individual interviews	November 2017	6 students
(3) Research (Survey questionnaire)	Post-mentoring survey questionnaire	June 2018	40 (all participants)
(4) Research (Individual interview)	Post-mentoring: Individual interviews)	July 2018	6 students
(5) Research (Focus group interview)	Post-mentoring: Focus group interviews	July 2018	6 students

The research began with a pilot study that focused on piloting the quantitative and qualitative instruments in February and June 2017. I spent the summer analysing and

preparing research instruments for the main study, In October, I distributed a pre-mentorship survey to collect the initial feedback regarding their MOOC mentoring experiences. It took around one month to analyse the pre-mentoring survey questionnaire data to formulate the interview questions. After the questionnaire survey, I invited students from the target population to attend the individual interviews. Student mentees from the MOOC mentorship programme were asked to indicate at the bottom of the administered questionnaires whether they were happy to be interviewed. The quantitative data were analysed, and the questions for the pre-mentorship interviews were prepared. In July, post-mentorship surveys, individual post-mentorship interviews, and semi-structured focus group interviews were conducted.

4.5 Instruments

To attain the goals and answer the research questions, a written questionnaire on MOOC mentorship programmes was used to gather the quantitative data for the study. I collected the qualitative data mainly through in-depth individual and focus group interviews. Sections 4.5.1 and 4.5.2 show the detailed descriptions of each instrument.

4.5.1   Survey Questionnaire

4.5.1.1 Justification for Using the Questionnaire

The student survey is conducted to present an overview of various core elements of the mentoring process. It is used to gather quantitative data about features which the literature (Brown, 2001; Nunan, 1992) and my initial years of running the programme at my school indicate are important. Questionnaires are an appropriate instrument for

the current study because research findings (Bialystok, 1981; Sudman & Bradburn, 1989) suggest that they are easy to manage and allow quick access to a large number of respondents using limited resources and time. Such quantitative data identify the number of students who benefitted from mentoring, while the interviews allow for investigation into the details—namely, the specific ways in which the students benefitted and which intermediate processes could improve these benefits.

4.5.1.2 Construction of the Questionnaire

The survey instrument (Appendix 4) was developed based on the literature review, with 12 out of 23 questions in the questionnaire related to those used by other researchers. For example, Question 8, "How much do you think the following factors motivate you to engage in MOOCs?", is adapted from de Barba et al.'s (2016) research on motivation being the key factor that leads to high performance in achievement situations, such as MOOCs, and Wigfield and Cambria's research (2010) on the three constructs of achievement motivation. In order to measure the constructs, 1) individual and situational interests; 2) mastery and performance approaches; and 3) attainment, utility, and cost values are all embedded in Questions 8 (i) to 8 (vii), respectively. Question 17, "How do you describe your relationship with your mentor?", is adapted from Leon Urrutia et al.'s (2015) research on the challenges for MOOC mentors. This question helps to address three major challenges in MOOC mentoring: maintaining good communication with the mentee, identifying key issues for the mentee, and maintaining confidence in the mentor's own content knowledge. See Appendix 5 for the survey items related to the previous literature.

4.5.1.3 Design of the Questionnaire

In the present study, the set of survey questions (see Appendix 4) consists of closed-ended questions (McKernan, 1996; Nunan, 1989). I formulated all the questions in a multiple-choice format; these questions require the respondents to select an answer from a given number of options. Closed-ended questions can be specific to what the researchers are asking, but the information obtained can be minimal (Kaplan & Saccuzzo, 2009). Because the respondents may not find a category that fits their situation, I thought of having an "open" answer category of "☐Others _____" for particular questions after a list of possible answers to further collect their viewpoints. There were considerations regarding whether the questionnaire would be answered hastily and whether the required tick would be put in the wrong space (Sudman & Bradburn, 1989). Therefore, I chose to arrange the majority of the closed questions based on a vertical format, although this arrangement required more space.

The questionnaire has five parts. The details of each part are described as follows:

Part A of the written questionnaire collects biographical data and background information about the respondents, such as their names, ages, genders, educational achievements, and native languages.

Part B of the questionnaire involves five questions to explore the respondents' experiences in their MOOCs. These questions contribute evidence to help answer Research Question 1—in particular, to illuminate their experiences vis-à-vis their participation in MOOCs.

Part C also relates to Research Question 1. It explores students' mentoring experiences and their relationships with their mentors.

Part D investigates the range of support students received in the programme and assesses whether they perceive them as effective measures for assisting them to complete the MOOCs. These findings are connected to Research Question 2.

Part E includes three questions focusing on the impact of MOOC mentorship programmes on students' decisions about their future careers. The findings in this section attempt to answer Research Question 3.

4.5.2   Interviews

In the present study, the main purpose of the interview was to elicit the interviewees' experiences in the MOOC mentorship programme, including their interactions with mentors, the knowledge they gained from the MOOCs, their motivation to complete the MOOCs, the support they received from the school, and how their MOOC mentoring experiences impacted their choices regarding further studies. A few key considerations influenced the choice of six students for the individual and focus group interviews.

The first criterion to determine the number of participants to be interviewed was that the number of interviews was sufficient to provide the information I was looking for. Ritchie & Lewis (2003, p. 80) defined saturation of data as "it is an end point when no new insights can be obtained from collecting more data". However, some researchers

argue that the notion of "saturation" can be problematic as "it can be ill-conceived by novice researchers who may guide participants towards "saturation" through their own biases and views" (Fusch & Ness, 2015, p. 1411). Sample size is mostly determined by the theory the study intends to formulate and the level of claims the study wishes to make. Charmaz (2006, p. 114) suggested that

"researchers who make hefty claims should be circumspect about the thoroughness of their data and the rigor of their analyses. A study of 25 interviews may suffice for certain small projects but invites skepticism when the author's claims are about, say, human nature or contradict established research".

Mason (2010) further argued that any arbitrary number can be the sample size if saturation is the guiding principle behind qualitative data collection. However, based on Mason's (2010, p. 157) analysis of 560 PhD theses, his finding indicated that "more often than not, a round number was chosen as the sample size". With the six students in the individual interviews and six additional students in the focus group interview, 12 out of 40 students were involved in the individual and focus group interviews. Together, these represented approximately 30% of the research population. The sample size of interviewed participants is sufficient to provide the information I was looking for.

Apart from the notion of data saturation, Bell (1999, p. 126) suggests that the number of subjects in an investigation "will necessarily depend on the amount of time researchers have". Time constraints were a major concern in this study. It became clear, early on, that it was very difficult to arrange interviews considering the students' and my schedules. Hence, while the limitations and usefulness of strict notions of saturation are recognised, given the scale of the study, and the time constraints of

conducting and transcribing interviews, a pragmatic decision was made to recruit six

participants for individual interviews and six students for a focus group interview, for

a total of 13 interviews.

4.5.2.1 Individual Interviews

Individual semi-structured interviews were adopted in the second phase of data

collection. Nunan (1992) suggests that semi-structured interviews are commonly used

in qualitative designs because of their flexibility. The semi-structured interview also

gives the interviewer a degree of power and control over the course of the interview

(Bernard, Killworth, Evans, McCarty, & Shelley, 1988). It allows the interviewer to

respond to the situation at hand. The interviewer can clarify his or her questions

immediately in case the interviewees do not understand them. Additionally, if the

interviewees provide ambiguous answers, the interviewer can seek clarification so that

more information can be obtained on a particular topic. The six selected interviewees

were invited to attend the pre-mentorship individual interview in November 2017 and

the post-mentorship interview in July 2018. Details of the interviews will be further

discussed in Section 4.7.2.

4.5.2.2 Focus Group Interview

There was one focus group interview in July 2018. Six participants who were not

involved in the individual interviews were engaged in an informal discussion focusing

on their MOOC and mentoring experiences. Dörnyei (2007, p. 144) suggests that this

"collective experience of group brainstorming" can "yield high-quality data as it can

create a synergistic environment that results in a deep and insightful discussion". In

this situation, the focus group served two functions: 1) The interaction among the student mentees looking back on their experiences in MOOC mentoring as a source of data helps us better understand and assemble bits and pieces that were collected at different times of the year, and 2) the data serve as a means of triangulation, particularly when the cases are compared. The same interview questions were used for both the individual and focus group interviews. Table 4.4 contains a list of questions that was used in the interviews based on ideas from the literature review.

Table 4.4 – Interview questions

Research Question 1. What are the experiences of the students in the MOOC mentorship programme?
1. How would you describe your relationship with your mentor?
2. To what extent does your mentor impact your MOOC experience?
3. How has mentoring helped your participation in MOOCs?
4. What is the most challenging part of your communication with your mentor?
5. How does the Google mentoring record influence your communication with your mentor?
6. What do you need to prepare in order to complete MOOCs?
7. What keeps you motivated to complete MOOCs?
8. What would be your major challenge in completing MOOCs? How would you overcome it?
Research Question 2. How does the support that the students received from the MOOC mentorship programme at the case school impact their experiences in studying MOOCs?
9. Please describe the support you received from the MOOC mentorship programme.
10. Where can you find support when you face difficulties participating in MOOCs?
11. How much do you think the training from HKU TELI helped you understand more about assessments and learning activities in MOOCs?
12. To what extent do you think the training from HKU TELI identifies your needs and pinpoints the potential challenges in taking MOOCs?
13. How does being given the guidebook *MOOC Starters' Guide* impact your initial experience of taking MOOCs?
14. What is the most helpful form of support the MOOC mentorship programme offered you? Why?
15. What further support do you need in order to complete more MOOCs?
Research Question 3. How do the student mentees' participation in the school-based MOOC mentorship programme impact their future plans?
16. How do the suggestions given by your MOOC mentor influence your choices regarding the universities you will apply to?
17. How do your interactions with other MOOC students and MOOC instructors on the online platform influence your choices regarding the universities you will apply to?
18. How do the teaching methods you experienced in the MOOCs influence your choice regarding the universities you will apply to?
19. To what extent is your MOOC experience related to the universities you are interested in applying to?
20. To what extent is your MOOC experience related to the programmes you are interested in applying to?
21. How does completing MOOCs give you an advantage regarding applying to tertiary institutes?

4.5.2.3 Key Features of the Interviews

1. Flexibility Regarding the Interview Topics

All individual and focus group interviews were semi-structured and face to face. The structured elements—namely, using the same set of interview questions and having a similar interview duration—enable me to cover the same topics with the interviewees. These elements ensure the same coverage if the participants have not addressed some areas of interest immediately (Gillham, 2005). The structured elements are crucial, as the case study is multiple and instrumental. Johnson and Weller (2001) suggest that owing to the lack of uniformity in the data, it is difficult to analyse and compare the results from interviews that are totally open-ended. In order to enhance our understanding of MOOC participants' mentoring experiences, it is crucial to examine the group as a whole, and each interviewee should be guided to make a similar contribution to the study.

Conversely, the less structured features are also vital because they enabled me to judge whether to probe for more details regarding some open-ended questions (Gillham, 2005). I preferred a narrative type of interview instead of a question-and-answer format. The less structured elements of a narrative type of interview format allowed space for interviewees to pinpoint what they thought was important and to illustrate the complexities of their experiences based on their own understanding. At the same time, the less structured elements also allowed me to respond freely to opportunities as the interviews progressed. Flexibility is crucial, as Richard (2003) states that qualitative interviews are for deepening understanding rather than accumulating information. In summary, I chose a semi-structured interview because it "facilitates a strong element of discovery, while its structured focus allows an analysis

in terms of commonalities" (Gillham, 2005, p. 72).

2. Interactivity Between Researcher and Participants

To gain a better understanding of the participants' backgrounds, the pre-mentorship interviews were more structured. However, the post-mentorship interviews were less structured because the experiences of the participants were more or less affected by their unique backgrounds, and it was more natural to probe topics which were considered important from the participants' viewpoints. The topics in the post-mentorship interviews were more relevant to the research questions than those in the pre-mentorship interviews because of my development as an experienced researcher, coupled with the trust and knowledge that had been established between the interviewees and me. The conversations were more natural in the post-mentorship interview, as the interviewees and I could get into the details of their experiences rather than spending time on their background information.

This longitudinal study aimed to investigate the possible changes in the participants' perceptions and practices throughout the entire mentoring period. For the individual interviews, some of the questions for the post-mentorship interview were designed based on answers given in the pre-mentorship interview. For the focus group interview, I intended to elicit the students' experiences throughout the year. Two examples are shown below:

```
0111    INTERVIEWER: Bowen you completed a MOOC based on the form, is
0112                 it true?

0113    Bowen:       Yes, I completed one. But I did not attain the

0114                 certificate because I didn't pass the assessments.

0115    INTERVIEWER: Okay. So how do you pick your MOOCs? If you only
0116                 have two hours of free time a day, how do you choose
0117                 to work on one of them since there are so many?

0118    Bowen:        I will just choose ones that I am interested in.

                                      (Appendix 12: Focus group interview)


0046    INTERVIEWER: So. Last time, last time that you talk to him, what do
0047                 you talk about in regard to MOOC?

0048    Greg:        Regarding the MOOC, actually I don't think we… I
0049                 think we're more focused towards the university more
0050                 than the MOOC.

0051    INTERVIEWER: So the topic changed.

0052    Greg:        Yeah. it's a… it went from "hey how's it going" and
0053                 then after that like…a quick section end and…  to
0054                 university.
                                      (Appendix 10: Individual interview 1)
```

3. The Use of Probes

In order to achieve both depth and breadth of coverage across key issues, different types of questions were used (Kvale, 1996; Rubin & Rubin, 1995; Spradley, 1979). Good in-depth interviewing involves a series of open questions, and the researcher has to ask a range of questions to elicit more responses (Patton, 2002). Patton (2002) further explains that these are contrasted with close-ended questions—namely, dichotomous yes/no questions—which call for affirmation rather than description. I often started a new topic with content-mapping questions, which are widely framed questions designed to open up the research area and to identify the topics that are relevant to the interviewees. However, the initial responses of the interviewees were usually at a fairly surface level. At this stage, interventions were often needed to

structure the discussion. I adopted a range of follow-up probes, called content-mining questions, to achieve depth of answers in terms of penetration, exploration, and explanation. Not only did the use of probes permit me to investigate the key factors that constructed the participants' answers—namely, reasons, feelings, opinions, and beliefs—but it also furnished the explanatory evidence that was the main source of information in this study. Four broad groups of probes commonly used in the interview were explanation probes, clarification probes, amplification probes, and exploratory probes (Iegard, Keegan, & Ward, 2003).

4.5.2.4 Design of Interview Questions

Gillham (2005) suggests that in order to avoid overlapping redundancy, it is crucial to develop interview questions that are relatively distinct from one another. The interview questions were developed based on the relevant literature. For example, in order to explore the mentoring experience and relationship between the mentor and mentee, eight questions were adapted from Chen's (2000) study on a teacher–student guidance mentoring programme in Hong Kong, Smith's (2014) study on academic mentoring, and Leon Urrutia et al.'s (2015) research on challenges for MOOC mentors. Please see Appendix 6 for the interview questions related to the previous literature.

4.6 The Pilot Studies

All instruments used were piloted and discussed with my supervisor in order to improve the validity and reliability of the research. The criterion sampling technique was applied as three students were selected in the piloting studies based on 1) their

experiences in the MOOC mentorship programme the previous year, 2) their MOOC

achievements (two Secondary 5 students completed at least one MOOC, whereas the

Secondary 2 students did not), and 3) their absence from the research the following

year (the Secondary 2 students would transfer to another school, while the two

Secondary 5 students would no longer be in the programme). The same criterion

sampling was also applied in the pilot study for the focus group interviews, as 10

MOOC students who would not join the mentorship programme in the following year

accepted my invitation to participate in the pilot study. A Chinese teacher and a native

English-speaking teacher were recruited to participate in the pilot studies, as they

provided me with support regarding the languages used in the questionnaire and

interview questions. The pilot studies took place in February and June just as the

students completed their school examinations. Table 4.5 below provides a summary

of the pilot studies in this research; it includes the piloting, date, and participants'

information. See Appendix 7 for the pilot survey questionnaire and Appendix 8 for

the major adjustments made.

Table 4.5 Pilot studies

Piloting	Date	Participants
Student focus group interview	February 2017	Three Secondary 4 students, three Secondary 5 students, and four Secondary 6 students
Student survey questionnaire	June 2017	One Secondary 2 student, two Secondary 5 students, one Chinese teacher, and one native English-speaking teacher
Individual student interview	June 2017	One Secondary 2 student, two Secondary 5 students, one Chinese teacher, and one native English-speaking teacher

4.7 Procedure of the Main Study

4.7.1   Collection of the Pre-and Post-Questionnaires

The main survey was administered in a classroom at the school in late October 2017 and late June 2018. Consent forms were given to the principal, parents, and research participants before the survey was conducted. I explained the instructions in Cantonese, guiding the students to complete the questionnaires to ensure that they understood what to do next. They were assured that the information they provided would be kept strictly confidential and used for academic research purposes only. The same conditions were provided to all the respondents to guarantee the validity and reliability of the data collected:

1) All the respondents were given the same amount of time (approximately 30 minutes) to complete their surveys.

2) No discussion among the respondents was allowed during the completion of the questionnaires so that they could reflect on their own experiences without interruption.

3) To maintain the confidentiality of the data, all the questionnaires were collected by me immediately after completion.

All the questionnaires were entered into a computer for later analysis.

4.7.2   Procedures for the Individual and Focus Group Interviews

4.7.2.1 Interview Schedule

Two rounds of interviews scheduled in late November 2017 and early July 2018 took

place with each of the six participating MOOC student mentees. The focus group interview was conducted in mid-July 2018 with another six MOOC student mentees.

4.7.2.2 Interview Settings

All the interviews were conducted in a designated room at the school. In order to avoid any difficulties caused by the language barrier, the interview was conducted based on the first language (mother tongue) of the students, and they could choose the language that they were comfortable with. For the interviews that were conducted in Chinese, the students sometimes code-switched with English. All interviews were audio-recorded or tape-recorded, and all were transcribed. Issues regarding transcriptions will be discussed in Section 4.8.2.1.

1. Individual interviews

The procedures for the pre- and post-interviews were identical. The pre-interviews were carried out in October, and the post-interviews were completed in July. The six semi-structured individual interviews were conducted according to the following steps:

1) I met the interviewee in a classroom at the school based on our appointment. The interview started at 5:00 p.m. Each interview took around 30 to 40 minutes to complete.

2) The interviewee was informed about the purposes of the research and interview process. Each interviewee was asked for permission to audio-record the interview. The use of recordings ensured that any important information in the interviews would not be missed.

3) The interviewee was informed of the following talking points:

i)   There were no right or wrong answers, as most of the interview questions were open-ended.

ii)   Pseudonyms would be used in place of their actual names because student privacy and anonymity would be protected at all times.

iii)   Students could decline to participate at any time because participation was entirely voluntary.

iv)   No harmful effects or negative repercussions were to be expected as a result of answering the questions. The participants would be able to quit or skip any question they felt uncomfortable answering.

4) I interviewed them based on prepared questions (see Appendix 9).

5) As soon as the interview was finished, I transcribed the data.

2. Focus group interview

The focus group interview was conducted according to the following steps:

1) I met the six interviewees in a classroom at the school based on our appointment. The interview started at 5:00 p.m. The interview took 60 minutes to complete.

2) The interviewees were informed about the purposes of the research and interview process. Each interviewee was asked for permission to tape-record the interview. The use of video recording ensured that the voice of each respondent could be clearly identified.

3) The interviewees were informed about the same talking points stated in the individual interviews.

4) I interviewed them using prepared questions (see Appendix 9).

5) As soon as the interview was finished, I transcribed the data.

4.8 Analysis of the Data

4.8.1 Analysis of Survey Data

The questionnaire data were entered into SPSS. Descriptive statistics—namely, frequencies of all the questions—were generated. The number of responses to each question was calculated and represented in statistical tables. A higher percentage of responses by respondents implies a favourable attitude, and vice versa. In addition to the descriptive statistics, Fisher's exact test was used for the comparisons of participants' responses in the pre-mentorship stage and the post-mentorship stage; a probability value of .05 was considered significant for this analysis. Fisher's exact test is an inferential statistical procedure used to compare the number of people or things falling into different categories (Frey, 2018).

4.8.2 Analysis of Individual Interview Data and Focus Group Interview Data

The decisions made when transcribing the interview data and coding procedure will be discussed in this section. This section will begin with a discussion of the decisions made when transcribing the interview data, followed by the coding procedure. The steps taken in regard to the approach and analysis of a sample of each core data type will also be shown.

4.8.2.1 Transcription Features, Procedures, and Issues

1. Transcription and translation

Patton (2001) suggests that full transcription allows researchers to capture features of interaction and how meanings are co-constructed, thus enabling the discourse to be

studied closely. Therefore, my decision was to transcribe all the interviews. Because the interviews were mostly conducted in Cantonese, they were transcribed and translated. Instead of transcribing the interviews using Cantonese first and then translating the transcripts into English, I translated the interviews into English as I transcribed them. According to Bruche-Schulz (1997), there is no written norm for Cantonese, as it is a spoken dialect rather than a written language. In Hong Kong, Chinese is mostly taught and spoken in Cantonese in mainstream schools, but Putonghua (known as Modern Standard Chinese [MSC]) is taught as the norm for the written code. In sum, I decided not to transcribe the interviews using Cantonese because "Cantonese is not taught at any level of linguistic sophistication" (Bruche-Schulz, 1997, p. 308), and writing it is not recommended.

I also considered transcribing the interviews by putting the conversations in MSC. The idea was later dismissed because Bruche-Schulz (1997) suggests that the lexical differences between Cantonese and Putonghua (ranging from 40%–70%) can change the original meaning of conversations. In addition, a significant amount of slang in Cantonese does not have corresponding characters in MSC (Leung & Wong, 1996). In this regard, the most practical way is to approach the transcription by translating the interviews into English instead. A professional translator was recruited as a second translator to check my translation, and recommendations were made to ensure the overall accuracy of my transcription.

One of the major challenges with translating from Cantonese into English is that the ways in which the speakers talk and present themselves can sometimes be lost in the translation. As Barrett (1992, p. 203) points out, researchers "have accepted to varying degrees the view that meaning is constructed in rather than expressed by

language". In this regard, understanding both cultures and digging into language specifics are paramount for a translator to deliver the original meaning of the conversation (Temple & Young, 2004). The variations manifesting between these two languages, the pattern of thought of the speaker, and cultural understanding play a key role in transposing the meaning of the languages.

Apart from making changes in sentence structure and lexical nuance, I have also included interactional features in the transcript. A long pause that signals an obvious hesitation is one of the few interactional features that are included because they suggest an attitude and help to deliver the original meaning of the translated messages. In spite of this, because the study follows thematic analysis, content is still the main focus. See Appendix 11 for a transcript example.

2. Code-switching

I mentioned that the majority of the interviews (9 out of 13) were conducted in Cantonese. Code-switching, "a phenomenon of switching from one language to another in the same discourse" (Nunan & Carter, 2001, p. 275), or code-mixing, the term used by Kamwangamalu (1992), are common among Hong Kong people. When I studied the transcripts, two main categories of code-switching were identified. One of them included ideas that are commonly expressed more in English than in Cantonese among Hong Kong people—namely, MOOCs and the Hong Kong Diploma of Secondary Education (HKDSE). The other category contained academic terms that have no equivalents in Cantonese—namely MOOC platforms, such as edX and Coursera.

4.8.2.2 Analysis of the Interview Data – Thematic Analysis

I used thematic analysis to analyse the individual and focus group interviews.

Thematic analysis is one of the most common forms of analysis in qualitative research

(Guest, 2012); it emphasizes pinpointing, examining, and recording patterns or

themes within the data (Braun & Clarke, 2006). Themes are patterns across data sets

that are crucial to the description of a phenomenon (Daly, Kellehear, & Gliksman,

1997). According to Braun and Clark (2006, p. 90), themes need to provide an

accurate understanding of the "big picture". Thematic analysis is performed through

the process of coding through six interconnected phases: 1) familiarizing oneself with

the data, 2) generating initial codes, 3) searching for themes among codes, 4)

reviewing themes, 5) defining and naming themes, and 6) producing the final report

(Braun & Clark, 2006). The ultimate goals of thematic analysis are to examine and

develop themes within data associated with specific research questions (Daly,

Kellehear, & Gliksman, 1997).

1. **Becoming familiar with the data**

The transcribed text (see Appendix 10) emerging from the semi-structured focus

group interview was analysed using thematic analysis. The transcribed data were

already in English. The initial phase of thematic analysis was for me to familiarize

myself with the interview transcripts by reading and rereading them. I gained a

general idea of the overt patterns and repeating issues within the data set in this phase.

2. Generating initial codes and labelling phenomena

Generating initial codes

The second step in thematic analysis is called the coding process. According to

Maykut and Morehouse (1994), data analysis is the centre of qualitative research and

the factor that most distinguishes qualitative from quantitative research. Coding refers

to the process of analysing data, and it represents the primary process of searching for

and generating codes from the data set. According to Strauss and Corbin (1990),

coding gives two basic advantages to the research. First, it gives the research process

rigour and persistence. Second, coding helps researchers to break through the biases

and assumptions that are brought to and that can develop during the research process.

Coding involves a close examination of the data, as well as identifying, naming,

categorizing, and describing phenomena that are implicit or explicit in the data set

(Strauss & Corbin, 1990). Braun and Clark (2006) suggest that researchers should

produce as many codes as possible at this stage so that as many ideas and concepts as

possible are identified, marked, and labelled. This sets the stage for the development

of themes, which is explained in Phase 3.

Labelling phenomena

Coding involves the main step of labelling the phenomena in the data set. Labelling

phenomena, as the term itself implies, means putting labels on pieces of data.

Particular phenomena in the data can be identified. Two major techniques are used to

do this. The first pertains to the asking of questions and the other to the making of

comparisons (Glaser & Strauss, 1967). In the present study, labelling the phenomena

in the data set became the first step of the analysis. It was important to find out and

focus on what was central in the data. I read the whole transcribed text several times.

I preferred to break long respondents' utterances into phrases or clauses to do the labelling. There is no fixed way to do labelling; the names of the labels are all defined by me as the researcher. Researchers usually assign labels to the items related to the research questions (Boyatzis, 1998) or the goals of their studies. I used a short phrase as a label to try to capture what the respondents were discussing in that part of the interview. I labelled some of the data according to the terminology used by the interviewees during the interview—for instance,

(quest for knowledge)

"*G: Well I would say it's just so I can learn a lot more because in some ways I'm obsessed with knowledge, in some ways…*"

A sample of the code notes for the labelling can be found in Appendix 10.

3. Searching for themes

Once the coded pieces of texts were labelled, the process of labelling was done. Then I went deeper and did a more detailed analysis with a view to developing themes. Searching for themes is the main objective of the third phase. This was achieved via a thorough examination of the preliminary codes in order to identify connections or patterns to form themes in the data. The deeper analysis of the data set was conducted line by line. This involved a close examination that entailed going through the data set word by word and phrase by phrase.

Themes differ from codes in that themes are the phrases or sentences that I used to

identify the meaning of the data. Themes consist of ideas and descriptions that can be used to explain the events and phenomena related to the subjects. They describe an outcome of coding. I developed themes in terms of their properties, which are the characteristics or attributes of a category, and this dimension refers to the location of a property along a continuum (Strauss & Corbin, 1990). I also explored the properties and dimensions of the codes. I created codes consisting of properties and dimensions that were related to one theme or category. According to Strauss and Corbin (1990), this is perhaps not only the most detailed type of analysis but also the most generative. As a result, I brought together the pieces of data on the same topic (similar codes), and a theme or a sub-theme was formed. I avoided discarding themes, as Braun and Clark (2006) point out that themes that are initially insignificant should not be discarded because they may be important later in the process of analysis. Once all the themes were established, I was able to identify and focus on broader patterns in the data. I also considered the relationships between the codes and proposed themes. Braun and Clark (2006) further suggest that visual models are helpful with regard to showing the relationships between codes and themes and between different levels of existing themes.

4. Reviewing the themes

The themes generated in the previous phase were reviewed and refined to ensure that they were appropriate. I needed to determine whether the current themes related back to and reflected the meanings in the data set. I did this by reading and rereading the data with a view to making sure that the current themes actually provided an accurate representation of the subjects' experiences so that they could answer the research questions. If not, then I needed to go back and rework the themes. Some existing themes may collapse into each other; other themes may need to be condensed into

smaller units (Braun & Clark, 2006).

I also used different coloured highlights to distinguish each major theme. For example, if the interviewees were consistently talking about the quest for knowledge, each time an interviewee mentioned knowledge gained or something related to the intrinsic motivation to gain knowledge, I used the same colour highlight. "Intrinsic motivation" would become a theme, and other things related (e.g. quest for knowledge) would be the sub-themes as bracketed. All were highlighted with the same colour—for instance,

"I: Oh, so you do MOOC because you're interested in knowledge, it doesn't really mean that you want to use it as a tool for university application.
Intrinsic Motivation (quest for knowledge)
G: I use it as knowledge. It can be used as something like support your resume, or…"

"I: What is the most significant change that you believe you've got from this programme?
　Intrinsic Motivation (quest for knowledge)
G: Knowledge that's… that's simply, it …"

"I: Are you driven by the number of MOOCs completed? Are you driven by…
Intrinsic Motivation (quest for knowledge)
G: The knowledge."

A sample of thematized code notes can be found in Appendix 11. The final concepts and major themes were transferred into a data table and then explained.

5. **Defining and naming themes**

Braun and Clark (2006) suggest that researchers should 1) give names for themes, 2) define what current themes consist of, and 3) describe each theme in a few sentences and its significance to the entire picture of the data. A comprehensive analysis of what

the themes contribute to the ability to understand the data can be provided (Braun & Clark, 2006).

6. Producing the report

The final themes were established, reviewed, and named. An example of each theme was identified to illustrate what the analysis achieved, serve as answers to the research questions, and form the basis for writing up the data.

4.9   A Synthesis of Qualitative and Quantitative Data

The challenge in a convergent mixed-methods design is "how to actually converge or to merge the data" (Creswell, 2006, p. 222). Having obtained the results from questionnaires and interviews, the two databases were analysed separately and then combined. I compared and analysed the databases using a side-by-side comparison. This involved merging the two forms of data in a table with key questions on the vertical axis and then two columns on the horizontal axis indicating the qualitative responses to and quantitative results of the target research questions (Li, Marquart, & Zercher, 2000). The fundamental idea was for me to jointly display both forms of data and effectively merge them in a single visual condition. In presenting the findings, I will first report the quantitative statistical results and then discuss the emerging interview themes that confirm or disconfirm the statistical results.

4.10   Ethical Considerations

The present research involved gathering information, analysing responses, and interviewing respondents directly. Taking ethical considerations into account and

developing methods to mitigate the impact of an ethical issue are important for ensuring that the research is undertaken with consideration of safety, protection, and rights (Lee, 1993). This research was carried out in accordance with the ethical procedures of the University of Bristol, School of Education. In the procedure, I completed the GSoE Research Ethics Form online and had an ethical discussion with another Bristol EdD student as part of completing the ethical process before proceeding with the data collection. Appendix 13 presents the GSoE Research Ethics Form with the ethical issues discussed and decisions taken.

4.10.1 Participant Consent and Informed Consent

Because the present study is a long piece of research which involved students selected from the MOOC mentorship programme, I had to seek formal approval from the school before conducting the research. The principal of the school, parents of the MOOC student mentees, and MOOC student mentees were each asked for their permission before I carried out the research (please refer to Appendix 14).

It is suggested that research relationships should be characterized by integrity and trust (British Sociological Association, 2002). At the very beginning of the study, I delivered a participant consent form to each of the participants in person. I verbally informed each participant about the purposes of the research and how the data would be used. Having explained the details indicated in the participant information sheet, I gave each participant a consent form containing the terms and conditions for participating in the research. All the participants needed to give their consent to participate by signing a consent form. I also reassured them that the data would be stored securely and confidentially. Pseudonyms would be used in place of their actual

names because student privacy and anonymity would be fully protected. The participants could also state their availability to attend the qualitative research sessions—namely, semi-structured individual interviews and focus group interviews—on the consent form and questionnaire. The participants were informed both verbally and on the consent form that they could withdraw from the study at any time with no repercussions.

4.10.2 The Student–Researcher Relationship and Students' Rights in the Research

As the administrator of the MOOC programme and a senior teacher at the school, I understood that power relations would be an issue when conducting the study at my school. Seale (2004) states that obvious power differentials will impact the way in which data are gathered, as respondents may feel uncomfortable with the researcher owing to social differences. In order to build a rapport and to make sure that they were comfortable participating in the study, I maintained contact with the participants regularly through email and by phone throughout the whole academic year. While I was conducting the interviews, I reassured the participants about my role as a researcher and that their stories regarding their MOOC mentoring experience would be kept strictly confidential. Contact is still maintained beyond the year of data collection, so the whole process was a co-constructed experience. The participants could withdraw from the research at any time, and this was clearly stated on the consent form that they signed. The steps of the complaint procedure—namely, how the participants could launch a complaint or enquire about the research procedure—were attached to the consent form.

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4.10.3 Participants' Access to Data and Involvement in Data Interpretation

The interviewees all have access to the transcripts and the final report, and their rights to delete any information in the transcripts that they do not wish to remain have been respected. Offering participants access to data can create a more equal research relationship between the researcher and the researched (Maynard & Purvis, 1994).

4.10.4 Confidentiality

Confidentiality is essential to maintaining trust between the public and the researchers (Data Protection Act, 1998). Seale (2004) further suggests that it is a challenge to maintain confidentiality when studying topics related to populations that are small or easily distinguishable. In consideration of confidentiality in the present research, all the details of the individuals within the small population and what they provided as evidence were kept confidential. First, the purposes for which the personal data were collected and processed were made clear to the respondents. Second, all personal data held were clear in meaning, and sufficient and relevant but not excessive information was conveyed for the subjects to understand them. In the present research, these two conditions were met through both written forms—namely, the participant information sheet and participant consent form—as well as in our verbal agreement. Therefore, the subjects were not deceived or misled regarding the purposes for which their personal data were held or used. Third, the personal data were being used exclusively for the intended purposes of the research. This was to ensure that the information that the respondents gave to the researcher was safeguarded and that they were treated with respect (Israel, 2006). In addition, the results of the research activity or any resulting statistics were not available in a form that identified the data subjects. Finally, the

locations where sensitive data were stored—coupled with appropriate security measures necessary to prevent the unauthorized or unlawful processing of personal data and protect against the accidental loss of, destruction of, or damage to personal data (Data Protection Act, 1998)—were considered thoroughly.

4.10.5 Information Security

Information security was strongly emphasized throughout the course of the research. Strict measures were taken to combat security threats and to best protect the researcher, sensitive subject data, and school data. In the present study, a personal local computer was the main tool for analysing, saving, and storing data which could not be easily replaced. To minimize the chances of the loss of stored data, some preventive measures were taken seriously. First, the latest anti-virus, firewall, anti-spyware software, patches, and updates were installed on the computer, and they were updated from time to time. Second, not only was the password kept secret, but a strong password was also set to protect the computer, and any sensitive or personal data were encrypted. Third, the data were backed up using two USB memory sticks. Finally, any other data in paper form—such as personal documents, students' questionnaires, transcripts, and drafts of dissertations—was stored and retrieved in a safe manner. Written data with my information or the school's or students' personal details used in this study were shredded. Then, all of these data, together with the two aforementioned external storage devices, were kept in a safe case and labelled. No one except me could access the information unless this was agreed.

4.11 Summary

In this chapter, the research methodology, which included the research design and framework of methods for data collection, was first introduced. This was followed by the rationale for selecting the participants and the site. The chapter examined the various methods used for data collection, including the questionnaire survey and semi-structured individual and focus group interviews. Employing a multi-method approach to gathering information can increase the validity of the research findings. It also provides a great deal of information on the topic. A thorough discussion and explanation of the data analysis were provided. Ethical issues that were anticipated and how they were dealt with are central to the current research, and these were discussed at the end of the chapter.

Chapter 5, the next chapter of the dissertation, discusses the quantitative findings in response to the three research questions posed in Chapter 1.

Chapter 5

Survey Results

5.1 Introduction and Purpose of the Chapter

Chapter 4, Methodology, concentrated on the data collection methods: how different qualitative and quantitative data were obtained in the present study. Chapter 5 presents the results gathered from the questionnaire survey, and I organize the results according to the research questions listed in Section 4.1. The chapter is based on the actual number of responses made by the students, which is equal to the actual number of participants.

5.2 Data Collected from the Questionnaires

The results of the pre-mentorship survey were collected one month after the start of the mentorship programme in late October. I distributed the post-mentorship survey in July near the end of the mentorship programme. Timing is important, as the mentorship programme usually lasts about nine months, between October and June, which is the lead-up to the final exams in the second term.

The biographical information pertaining to the 40 students included the distribution of gender, native language, and how long they had been participating in MOOCs. There were 40 participants (N = 40) and a balance in terms of gender: 19 boys and 21 girls. Of the 40 participants, 19 were first-year students who had no prior experience with regard to MOOC learning, whereas 21 second-year students had spent the previous

year working on MOOCs and had opted to remain in the programme. Even among the second-year participants, there was learner diversity within the group. Some second-year students completed multiple MOOCs and spent a lot of time on their MOOC learning, while some spent less time on MOOCs and enjoyed less success. As discussed in Section 2.3.1, the sampling of participants in academic enhancement programmes is essential because it helps with understanding their prior experiences, needs, and motivations to participate in the programme.

In order to shed some light on both sides of the spectrum and analyse the students with similar characteristics, I categorized all 40 respondents based on three elements generated from the pre-mentorship survey and Google mentorship forms—namely, 1) their prior experiences (first-year participant or second-year participant), 2) their achievements (MOOCs completed and MOOC completion rate in the previous 12 months), and 3) their commitment (the frequency with which they worked on MOOCs in the previous month). You may also refer to Appendix 3 for the MOOCs they completed before and after the mentorship programme and Table 5.3 for the frequency with which they worked on MOOCs in the previous month. Table 5.1 below shows how I categorized the 40 respondents into three groups to illuminate the MOOC experiences of newbie, lukewarm, and enthusiast mentees:

Table 5.1 Categorization of enthusiasts, lukewarm students, and newbies based on the results of the pre-mentorship survey and Google mentorship form (Appendix 3)

	Results from Question 7: "What MOOCs have you completed?" (Pre-mentorship survey) and Google mentorship form				
Categories	No. of students (Quantitative)	First year or second year of participating in the MOOC mentorship programme	No. of students who completed one or more MOOCs in the previous 12 months	Total no. of MOOCs completed within the group in the previous 12 months	The frequency with which they worked on MOOCs in the previous month
Enthusiasts	11	2nd year	11	24	More than once every two weeks
Lukewarm	10		3	3	Less than once a month
Newbies	19	1st year	0	None	Never

I classified over half of the respondents (21 out of 40) as lukewarm students and enthusiasts, as they had participated in the mentorship programme in the previous year, whereas the other 19 students were classified as newbies. I also categorized second-year students who spent more time on MOOC learning and completed more MOOCs as enthusiasts, whereas the ones who spent less time on MOOCs and completed one or fewer MOOCs were classified as lukewarm students. Nineteen newbies, 10 lukewarm students, and 11 enthusiasts were pinpointed. Please refer to Appendix 15 for the results of the pre- and post-mentorship surveys.

5.3 Research Question 1: What Are the Experiences of the Students in the MOOC Mentorship Programme?

5.3.1 MOOC Completion and Time Committed to MOOCs

Table 5.2 highlights that the MOOC completion rate for the study is 45% (18/40) and

that the total number of MOOCs completed for the year is 65. In terms of MOOC

completion rate and number of MOOCs completed, all enthusiasts completed MOOCs

that year, and the MOOCs they completed contributed to 86% of the total MOOCs

completed in the study (56 out of 65). The MOOC completion rate is significantly

lower in the lukewarm group, with 40% of lukewarm students successfully earning at

least a verified MOOC certificate (4 out of 10), and six MOOCs were completed. The

completion rate of newbies ranks last, with 16% of the students completing at least

one MOOC (3 out of 19) and a total of three MOOCs completed.

Table 5.2 Results of MOOCs completed based on the results of the post-mentorship
survey and Google mentorship form (Appendix 3)

	Results from Question 7: "What MOOCs have you completed?" (Post-mentorship survey) and Google mentorship form			
Categories	No. of students (Quantitative)	First year or second year of participating in the MOOC mentorship programme	No. of students who completed one or more MOOCs in the previous 12 months	Total no. of MOOCs completed within the group in the previous 12 months
Total	40	-	18	65
Enthusiasts	11	2nd year	11	56
Lukewarm	10		4	6
Newbies	19	1st year	3	3

The data from Table 5.3 are expressed by the frequency with which the students

worked on MOOCs in the previous month. In the pre-mentorship survey, over 16

students declared that they had never worked on MOOCs, and over 26 students stated

that they worked on MOOCs less than once every month. I was able to identify the

enthusiasts in the pre-mentorship survey; one student stated that she had worked on

MOOCs every day, and more than 11 respondents revealed that they had worked on

MOOCs at least once every two weeks.

Table 5.3 – Question 2: In the previous month, how long did you normally work on MOOCs?

	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Total	Newbie	Lukewarm	Enthusiast	Total	Newbie	Lukewarm	Enthusiast
Never	16	16			3	3		
Less than once a month	6		6		26	16	10	
At least once every month	4		4		0			
Once every two weeks	1			1	7			7
Once a week	5			5	4			4
Two to three times a week	4			4	0			
Every day	1			1	0			
Total	37	16	10	11	40	19	10	11
Missing	3	3			0	0		
Fisher's exact test found Total: Two-tailed p value: 0.000 Newbies: Two-tailed p value = 0.000 Lukewarm: Two-tailed p value = 1.000 Enthusiast: Two-tailed p value = 0.013 2nd year overall: Two-tailed p value = 0.033								

There is a significant difference in how often students worked on MOOCs in the

previous month between the start and the end of the programme, particularly in the

total population, newbie group, enthusiast group, and overall Year 2 group. The post-

mentorship survey was conducted in July, after the final exams. Compared to the

results in the pre-mentorship survey, the students were less committed to MOOCs in

the post-mentorship survey owing to their exam preparations. Not surprisingly, there

was an obvious decline in the number of students who stated that they had never

worked on MOOCs, with 16 students indicating in the pre-mentorship survey that

they never worked on MOOCs, and only three students in the post-mentorship survey

indicating the same. This trend indicates that after completing the mentorship

programme, most of the students were encouraged to work on MOOCs and were supervised while doing so. The students' academic schedules and availability also factored into the time they committed to MOOCs. The students were more active at the beginning of the year because they were less committed to their schoolwork, whereas during the final exam period, the students were less committed to MOOCs because they needed to focus on their school assessment.

5.3.2 Student's Interest in a Particular Topic

I asked the student mentees to rate the factors that motivated them to engage in MOOCs. Based on Table 5.4, "student's interest in a particular topic" received the highest ratings in both the pre-mentorship and post-mentorship surveys, with an overwhelming number of students (21 and 28 students, respectively) declaring that it had a great deal of impact on their participation; of these, 11 respondents were enthusiasts. Fisher's exact test was used to examine the significance of the association between the start and end of the mentorship programmes in the three designated groups. There is a significant difference between the start and the end of the programme in the enthusiast group.

Table 5.4 – Question 8: How much do you think the following factors motivate you to engage in MOOCs? Option 1: You are interested in a particular topic

	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	0	1	18	21			12	28
Newbie			10	9			8	11
Lukewarm		1	3	6			4	6
Enthusiast			5	6				11
Fisher's exact test found Total: Two-tailed p value: 0.168 Newbies: Two-tailed p value = 0.746 Lukewarm: Two-tailed p value = 1.000 Enthusiasts: Two-tailed p value = 0.035								

The case school offered only 13 elective subjects in its current local school curriculum, and they were mostly exam-oriented subjects. It is understandable that students, especially motivated enthusiasts, would be intrigued by the wide range of choices offered by MOOC platforms, such as edX and Coursera.

5.3.3 MOOC Certificate as a Source of Motivation in Students' Lives

The case school reimbursed student mentees for their MOOC certificates. Student mentees may also be interested in the verified MOOC certificates because they are issued by top universities, such as MIT, and they may be accredited by the respective institutes. Based on Table 5.5, the respondents were largely positive regarding the notion that "the certificate you acquired in MOOC will be useful in your life".

Table 5.5 – Question 8: How much do you think the following factors motivate you to engage in MOOCs? Option 7: You believe that the MOOC certificate you acquired will be useful in your life

	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	0	6	13	21	0	2	16	22
Newbie		4	5	10		2	11	6
Lukewarm		1	4	5			5	5
Enthusiast		1	4	6				11
Fisher's exact test found Total: Two-tailed p value: 0.350 Newbies: Two-tailed p value = 0.193 Lukewarm: Two-tailed p value = 1.000 Enthusiasts: Two-tailed p value = 0.035								

Regarding MOOC certificates as a factor motivating MOOC students between the start and the end of the programme, there is a significant difference within the enthusiast group but not the newbie and lukewarm groups. This suggests that students benefitted from the reimbursement of the verified MOOC certificates; this is particularly the case for the enthusiast group, as these students were supported by the school academically and financially in their pursuit of their interests in the MOOC platforms. At the end of the year, the MOOC completers—mostly enthusiasts—were also rewarded with a chance to share their experiences, and they received their verified certificates in the exquisite HKU theatre hall at the MOOC conference. The recognition they received served as a confidence boost.

5.3.4 Motivation for MOOC Certificate Reimbursement

Table 5.6 reveals that not only did respondents consider MOOC certificates useful in their lives but also that by the end of the programme, they stated that the reimbursement of the fee for purchasing the verified certificate remained the most

popular form of support.

Table 5.6 – Question 20: How effective are the forms of support that the school offered you during your participation in MOOCs? Option 6: Reimbursement of the fee for purchasing the verified certificate

	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Really ineffective	Ineffective	Effective	Really effective	Really ineffective	Ineffective	Effective	Really effective
Total	0	3	19	18		2	17	21
Newbie		2	10	7		2	11	6
Lukewarm		1	4	5			1	9
Enthusiast			5	6			5	6
Fisher's exact test found Total: Two-tailed *p* value: 0.864 Newbies: Two-tailed *p* value = 1.000 Lukewarm: Two-tailed *p* value = 0.141 Enthusiasts: Two-tailed *p* value = 1.000								

Of the respondents, 37 and 38 indicated that reimbursement was effective or really effective, respectively, in regard to supporting their MOOC experiences. These results support the notion that reimbursement was a popular form of support for MOOC students, and these findings align with the number of MOOCs completed by the lukewarm students and enthusiasts, as they were rewarded with reimbursement for purchasing MOOC certificates. Two of the MOOC completers in the enthusiast group received reimbursement of over USD 1,500 each as they completed over 16 MOOCs in that academic year. Without the reimbursement policy, it would be a huge burden for the members of middle-class families to pursue multiple MOOC certificates. It was indeed a significant type of support, as the results were consistent in both surveys. Between the start and completion of the programme, no significant relationships existed based on the results of Fisher's exact test.

5.4 Research Question 2: How Does the Support Students Received from the MOOC Mentorship Programme at the Case School Impact Their Experiences in Studying MOOCs?

5.4.1 Impact of Support Offered by the Case School

Table 5.7 below describes what students reported about the overall support provided by the school—namely, mentoring support, the *MOOC Starters' Guide*, a training workshop, the reimbursement policy, and sharing sessions—which had a positive impact on them during their participation in MOOCs.

Table 5.7 – Question 18: Do you think the support of the school had a positive impact on your participation in MOOCs?

Q. 18	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Total	Newbie	Lukewarm	Enthusiast	Total	Newbie	Lukewarm	Enthusiast
Strongly disagree	0				0			
Disagree	1		1		0			
Neutral	4	2	1	1	7	5		2
Agree	29	14	6	9	23	14	4	5
Strongly agree	6	3	2	1	8		4	4
Total	40	19	10	11	38	19	8	11
Missing	0				2		2	
Fisher's exact test found Total: Two-tailed *p* value = 0.439 Newbies: Two-tailed *p* value = 0.163 Lukewarm: Two-tailed *p* value = 0.520 Enthusiasts: Two-tailed *p* value = 0.325								

Based on the numbers in the pre-mentorship and post-mentorship surveys, the results are consistent and largely positive, especially in the post-mentorship survey, with none of the students stating that they disagreed or strongly disagreed with the positive impact brought about by the support from the school. In terms of the relationship

between the start of the programme and completion of the programme regarding the

impact of the support offered, no significant relationships exist based on the results of

Fisher's exact test.

5.4.2 Impact of Mentoring on MOOC Experience

Most respondents stated that they communicated well with the mentors, and this is

consistent in both the pre-mentorship and post-mentorship surveys. The results are

listed in Table 5.8.

Table 5.8 – Question 17: How would you describe your relationship with your
mentor? Option 1: We communicate well

	Pre-mentorship survey (Nov.)					Post-mentorship survey (Jul.)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	0	0	6	25	8	0	0	6	23	11
Newbie			4	12	2			2	17	
Lukewarm			1	8	1			1	4	5
Enthusiast			1	5	5			3	2	6
Missing	1 (Newbie)					0				
Fisher's exact test found Total: Two-tailed p value = 0.771 Newbies: Two-tailed p value = 0.178 Lukewarm: Two-tailed p value = 0.141 Enthusiasts: Two-tailed p value = 0.293										

Having worked with their mentors throughout the mentorship programme, 11

respondents from the lukewarm and enthusiast groups in the post-survey stated that

they strongly agreed that they communicated well with their mentors, which is an

increase compared to the figures in the pre-survey. In terms of the relationship

between the start of the programme and completion of the programme regarding the

impact of mentoring, no significant relationships exist based on the results of Fisher's

exact test. Because the mentors were all teachers at the school, and most of them were even the mentees' class teachers or subject teachers, communication between the mentors and mentees might have been easier because they already knew each other. The mentors and mentees met at least nine times (see Appendix 3) throughout the year, and their meetings were recorded on the designated Google form. Communication was encouraged for both parties.

Table 5.9 below illustrates whether the mentees thought that their mentors understood them well.

Table 5.9 – Question 17: How would you describe your relationship with your mentor? Option 2: My mentor understands me well

	Pre-mentorship survey (Nov.)					Post-mentorship survey (Jul.)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	0	0	14	21	4	0	2	5	19	14
Newbie			6	12				4	12	3
Lukewarm			5	5			2	1	2	5
Enthusiast			3	4	4				5	6
Missing	1 (Newbie)					0				
Fisher's exact test found Total: Two-tailed p value: 0.005 Newbies: Two-tailed p value = 0.267 Lukewarm: Two-tailed p value = 0.009 Enthusiasts: Two-tailed p value = 0.269 2nd year overall: Two-tailed p value = 0.008										

It can also be observed that enthusiasts believed that they had a better understanding of their mentors compared to their counterparts, as over half of the enthusiasts strongly agreed that their mentors understood them well. In terms of the results of Fisher's exact test, there is a significant difference between the start and the end of the

programme in the total population, lukewarm group, and overall Year 2 group, but not in the newbie group and enthusiast group. As the enthusiasts were more engaged in the programme compared to the other two groups, with more MOOCs completed and more time spent on their MOOCs, I expected that they would have more meeting time with their mentors, and this might have led to the aforementioned results.

Table 5.10 shows that the mentees believed that the trust between their mentors and themselves was strengthened through the mentoring process, as 15 respondents strongly agreed that their mentors trusted in their capacity to do well in MOOCs, which is another significant rise compared to the pre-mentorship survey listed in Table 5.10.

Table 5.10 – Question 17: How would you describe your relationship with your mentor? Option 3: My mentor trusts in my capacity to do well in MOOCs

	Pre-mentorship survey (Nov.)					Post-mentorship survey (Jul.)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	0	0	11	23	5	0	0	8	17	15
Newbie			4	13	1			2	13	4
Lukewarm			5	5				3	2	5
Enthusiast			2	5	4			3	2	6
Missing	1 (Newbie)					0				
Fisher's exact test found Total: Two-tailed p value: 0.043 Newbies: Two-tailed p value = 0.401 Lukewarm: Two-tailed p value = 0.051 Enthusiasts: Two-tailed p value = 0.542										

There is a significant difference between mentors' and students' trust in the students' capacity to do well in MOOCs between the start and the end of the programme in the total population, lukewarm group, and the overall Year 2 group, but not in the newbie

group and enthusiast group. The trend indicates that the mentees thought that by working with their mentors for nine months through a series of meetings, their mentors might understand them better in terms of their working habits and capacities.

The results in Tables 5.11 and 5.12 suggest that the mentoring experiences of the students did have a positive impact on their MOOC experiences. Thirty-one students agreed or strongly agreed that mentoring facilitated their participation in MOOCs, and 37 respondents suggested that the mentoring experiences with their mentors were effective or really effective.

Table 5.11 – Question 17: How would you describe your relationship with your mentor? Option 5: This year, mentoring has facilitated my participation in MOOCs

	Pre-mentorship survey (Nov.)					Post-mentorship survey (Jul.)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	2	0	16	18	3	0	0	9	20	11
Newbie	1		9	8				4	15	
Lukewarm	1		4	5				3	5	2
Enthusiast			3	5	3			2		9
Missing	1 (Newbie)					0				

Fisher's exact test found
Total: Two-tailed p value: 0.027
Newbies: Two-tailed p value = 0.058
Lukewarm: Two-tailed p value = 0.650
Enthusiasts: Two-tailed p value = 0.017
2nd year overall: Two-tailed p value = 0.036

Table 5.11 shows that most of the enthusiasts stated that mentoring had facilitated their participation in MOOCs, and this finding echoes the other positive results of the enthusiast group, shown in Tables 5.8 to 5.10. As Table 5.11 shows, based on the results generated by Fisher's exact test, there is a significant difference between the

start and the end of the programme in the total population, newbie group, enthusiast

group, and overall Year 2 group, but not in the lukewarm group.

Table 5.12 – Question 20: How effective are the forms of support that the school offered you during your participation in MOOCs? Option 1: Mentoring experience with your mentor

	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Really ineffective	Ineffective	Effective	Really effective	Really ineffective	Ineffective	Effective	Really effective
Total	0	3	32	5		3	29	8
Newbie		1	15	3		2	16	1
Lukewarm		1	9			1	7	2
Enthusiast		1	8	2			6	5
Fisher's exact test found Total: Two-tailed p value: 0.740 Newbies: Two-tailed p value = 0.694 Lukewarm: Two-tailed p value = 0.721 Enthusiasts: Two-tailed p value = 0.361								

In terms of the relationship between the start of the programme and completion of the

programme, listed in Table 5.12, no significant relationships exist based on the results

of Fisher's exact test. This trend indicates that enthusiasts in particular believed that

owing to their commitment to MOOCs, they would benefit from their mentoring

experiences, as their mentors communicated better with them and understood their

capacities better than those of the members of the other groups.

Contrary to the results in Tables 5.8 to 5.12, Table 5.13 indicates that only 12 student

mentees in the post-mentorship survey agreed or strongly agreed that their mentors

had provided them with links to MOOCs; This suggests mentor support was different

than just providing links.

Table 5.13 – Question 17: How would you describe your relationship with your mentor? Option 4: My mentor has provided me with links to MOOCs

	Pre-mentorship survey (Nov.)					Post-mentorship survey (Jul.)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	0	3	17	16	3	0	4	24	9	3
Newbie		2	6	10			1	12	5	1
Lukewarm		1	6	3			1	5	2	2
Enthusiast			5	3	3		2	7	2	
Missing	1 (Newbie)					0				

Fisher's exact test found
Total: Two-tailed p value: 0.355
Newbies: Two-tailed p value = 0.141
Lukewarm: Two-tailed p value = 0.800
Enthusiasts: Two-tailed p value = 0.145

Despite having a better understanding of their mentors after more meetings, the respondents believed that their mentors might not be resourceful in terms of sharing resources that were helpful for their engagement in MOOCs. Only two enthusiasts agreed that their mentors had provided them with links to MOOCs; this contrasts with the other positive results shown in the other questions regarding their relationships with their mentors. This will be further examined in the discussion section. In terms of the relationship between the start of the programme and completion of the programme regarding whether the mentors provided them with links to MOOCs, no significant relationships exist based on the results of Fisher's exact test.

The MOOC participants were mostly satisfied with the overall support from the programme, particularly regarding their experiences with their mentors. The enthusiasts were especially impressed with their mentoring experiences, with positive results highlighted in most of the questions, except with regard to the links to the MOOCs that their mentors recommended.

5.4.3 Impact of Training Support Offered by HKU

Training session from HKU TELI

The training session from HKU was conducted at the start of the mentorship programme. Therefore, the results of the pre-mentorship survey are relevant. The results in Table 5.14 illustrate that the training session from HKU TELI was considered a less effective measure compared to mentoring and reimbursement, with eight students declaring in the pre-mentoring survey that the training session from HKU TELI was ineffective.

Table 5.14 – Question 20: How effective are the forms of support that the school offered you during your participation in MOOCs? Option 3: Training sessions from HKU TELI

	Pre-mentorship survey (Nov.)			
	Really effective	Ineffective	Effective	Really effective
Total	0	8	32	0
Newbie		2	17	
Lukewarm		3	7	
Enthusiast		3	8	

The content of the workshop focused on the exploration of the MOOC platforms and provided the students with tips for picking the right MOOCs. Of the 19 newbies who began their MOOC journeys early in the year, 17 indicated that the workshop was effective. The workshop might prove to be an effective measure for beginners, as the content of the workshop fits their needs with regard to registering their accounts, finding the MOOCs they like, and understanding the ways to tackle procrastination. However, for the students in the lukewarm and enthusiast groups who had prior

experiences with MOOC learning, the general advice provided in the workshop might not address their specific needs for completing a MOOC—namely, the study skills needed for a MOOC or how to complete certain assessment items. They might have a higher expectation by comparing it with the workshop they attended the previous year; therefore, the results might show that the content of the training did not live up to their expectations.

The MOOC Starters' Guide

The *MOOC Starters' Guide* was distributed at the beginning of the mentorship programme, and no further update was provided later in the year. I analyse only the results of the pre-mentorship survey. Based on Table 5.15, seven out of 40 students in the pre-mentorship survey declared that the *MOOC Starters' Guide* was ineffective; this is significantly higher than the numbers for mentoring and reimbursement (with three students stating that they were ineffective).

Table 5.15 – Question 20: How effective are the forms of support that the school offered you during your participation in MOOCs? Option 4: *MOOC Starters' Guide*

	Pre-mentorship survey (Nov.)			
	Really ineffective	Ineffective	Effective	Really effective
Total	0	7	28	5
Newbie		1	16	2
Lukewarm		3	6	1
Enthusiast		3	6	2

Specifically, the feedback in the pre-mentorship survey was largely positive, with the majority of the newbies stating that the guide was effective or really effective. However, the students in the lukewarm and enthusiast groups were not starters, as they participated in the programme in the previous year, and the content might be less

relevant to their current status in the MOOC journey. It will be interesting to know the

reasons behind this. More insights from the three groups of students will be

illuminated in Chapter 6, which deals with the interview results.

5.5 Research Question 3: How Do the Student Mentees' Participation in the

School-Based MOOC Mentorship Programme Impact Their Future Plans?

5.5.1 The Impact of the MOOC Experiences on the Student Mentees' Plans for

Further Studies

Similar to the results shown in Table 5.4, Table 5.16 reveals that the particular MOOC

topics offered by universities had the greatest impact out of the seven options.

Table 5.16 – Question 23: How much do you think the following factors influence
your decision to apply to tertiary institutes? Option 6: The particular MOOC topics
offered by the universities

	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	0	8	19	13	0	5	16	19
Newbie		5	10	4		3	10	6
Lukewarm		2	5	3		2	4	4
Enthusiast		1	4	6			2	9
Fisher's exact test found Total: Two-tailed p value: 0.300 Newbies: Two-tailed p value = 0.510 Lukewarm: Two-tailed p value = 1.000 Enthusiasts: Two-tailed p value = 0.361								

13 and 19 students suggested that the particular topics they chose in the MOOCs had

a significant impact on their decisions regarding university application. When the

results of both surveys were compared, it was evident that the interests of the students were consistent, and the enthusiasts were especially interested in the particular MOOC topics. In terms of the relationship between the start of the programme and completion of the programme regarding whether the particular topics studied through MOOCs impact the participants' plans for their future studies, no significant relationships exist based on the results of Fisher's exact test.

5.5.2 The Impact of Verified MOOC Certificates on Students' Plans for Further Studies

The results shown in Tables 5.5 and 5.6 suggest that students were motivated to complete MOOCs and receive certificates. However, the results in Table 5.17 highlight that students were less sure of the impact of MOOC certificates on their plans for further studies in comparison to the results shown in Tables 5.5 and 5.6.

Table 5.17 – Question 23: How much do you think the following factors influence your decision to apply to tertiary institutes? Option 7: Recognition of verified MOOC certificate

	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total		7	17	16	1	13	16	10
Newbie		5	6	8	1	5	9	4
Lukewarm		1	6	3		3	3	4
Enthusiast		1	5	5		5	4	2
Fisher's exact test found Total: Two-tailed p value: 0.159 Newbies: Two-tailed p value = 0.454 Lukewarm: Two-tailed p value = 0.359 Enthusiasts: Two-tailed p value = 0.175								

A downward trend can be seen in the results of the post-mentorship survey, with only 26 students suggesting that MOOC certificates had some or a great deal of impact on their further education; this is a significant decline from the numbers in the pre-mentorship survey. It is interesting to illuminate the reason for the decline, and one of the reasons is that of the 40 MOOC students, only 18 managed to complete one or more MOOCs by the end of the year. Consequently, these students were not able to benefit from the MOOC certificates, so this may have been a factor in the results shown in Table 5.17. Regarding whether the recognition of MOOC certificates impacts participants' plans for their future studies, no significant relationships exist based on the results of Fisher's exact test.

Table 5.18 illustrates the overall impression of how the MOOC experience impacts students' decisions about their further studies. The majority of the respondents (25 and 23) in both surveys indicated that their overall experiences in the MOOC programme had only some impact on their decisions regarding further studies, and the number of students suggesting that it had a significant impact remained low in both surveys. There is a significant difference between the start and the end of the programme in the lukewarm group but not in the total population, newbie group, enthusiast group, and overall Year 2 group.

Table 5.18 – Question 22: How much do you think your experience in the MOOC mentorship programme impacts your decision regarding further studies?

	Pre-mentorship survey (Nov.)				Post-mentorship survey (Jul.)			
	Total	Newbie	Lukewarm	Enthusiast	Total	Newbie	Lukewarm	Enthusiast
Not at all	2	1		1	2			2
Little	5	3	1	1	3	3		
Some	25	12	7	6	23	16	2	5
A lot	8	3	2	3	10		6	4
Total	40	19	10	11	38	19	8	11
Missing	0				2		2	
Fisher's exact test found Total: Two-tailed p value = 0.915 Newbies: Two-tailed p value = 0.286 Lukewarm: Two-tailed p value = 0.054 Enthusiasts: Two-tailed p value = 1.000								

Similar to the results shown in Research Questions 1 and 2, interesting subjects in the MOOCs offered by the university could impact the participants' decisions regarding their tertiary education. Interestingly, unlike the results for Research Question 1, a downward trend was evident when examining the impact of verified MOOC certificates on their decisions for further studies. Based on the survey results, MOOC mentorship programmes may not be considered a significant factor in students' decisions to pursue further education.

5.6 Summary

Chapter 5 has presented the results of the pre- and post-surveys. These results suggest that most of the students were encouraged to start working on MOOCs under the supervision of their mentors. The students' participation in the programme was linked to their intrinsic motivation—namely, their pursuit of particular topics that they were

interested in—and their extrinsic motivation, such as their recognition of the MOOCs in their lives and reimbursement for purchasing the MOOC certificates. The students also indicated that the overall mentoring support—the *MOOC Starters' Guide*, a training workshop, the reimbursement policy, and the sharing sessions—had a positive impact on them in terms of their participation in the MOOCs. Regarding the impact on students' decisions regarding their further education, the results state that MOOC mentorship programmes might not be considered a significant factor. Chapter 6 will discuss the qualitative findings in response to the three research questions posed in Chapter 1.

Chapter 6

Interview Results

6.1 Introduction and Purpose of the Chapter

This chapter presents the results of the qualitative analysis of the individual and focus group interviews. The results include the themes which emerged from the interview data and two sample mentee profiles. The interviews explored the participants' views on their mentoring experiences in the programme.

6.2 Individual and Focus Group Interviewees

The details of the participants in the individual and focus group interviews are shown in Tables 6.1 and 6.2. The criterion sampling technique was used to categorize the participants for the interviews (refer to Section 4.5.2). Six students were selected for the individual interviews and six for the focus group interview. Three male and three female students were selected because this represents the ratio of the population (19 male, 21 female). The same categorization method was applied in the focus group, with three Secondary 5 students, two Secondary 4 students, and one Secondary 2 student who represented enthusiasts, lukewarm mentees, and newbies. I also gave some consideration to students who had some prior rapport with me and who were communicative by nature. The criterion sampling technique was preferred because the participants who were selected for the interviews were not selected as mere volunteers. This categorization helps to shed some light on both sides of the spectrum. You may

also refer to Appendix 3 for the MOOCs they completed before the mentorship

programme.

Categories	Selected students	Form	First year or second year of participation	MOOCs completed in the previous 12 months	The frequency with which they worked on the MOOCs in the previous month
Enthusiasts	Christy	S.5	2nd year	8	Every day
	Kelly	S.5		6	Two to three times a week
Lukewarm	Greg	S.5		1	At least once every month
	Shane	S.2		1	At least once every month
Newbies	Ben	S.4	1st year	None	Never
	Elly	S.2		None	Never

Table 6.1 Interviewees for individual interviews

Table 6.2 Interviewees for focus group interview

Categories	Selected students	Form	First year or second year of participation	MOOCs completed in the previous 12 months	The frequency with which they worked on the MOOCs in the previous month
Enthusiasts	Chris	S.5	2nd year	2	Once a week
	Wesley	S.5		2	Once a week
Lukewarm	Bowen	S.4		0	Less than once a month
	Nancy	S.5		0	At least once every month
Newbies	Venus	S.2	1st year	None	Never
	Ellen	S.4		None	Never

6.3 Presentation of Themes

I will respond to the three major areas outlined in the research questions (refer to

Section 4.1) by discussing the prominent themes that emerged from the results of the

content analysis. As can be seen from Table 6.3, the five major themes directly related

to the research questions are as follows: (1) "schoolwork and MOOC" (Research

Question 1), (2) "motivation" (Research Question 1), (3) "mentoring" (Research

Question 2), (4) "support from school" (Research Question 2), and (5) "further

studies" (Research Question 3).

Table 6.3 – Thematizing (Refer to Appendices 11 and 12)

Themes	Sub-themes
(1) Schoolwork and MOOC	● Time management
	● Procrastination
	● Priority
	● MOOC experience
(2) Motivation	● Intrinsic motivation • Areas of interest • Quest for knowledge • Sense of achievement
	● Extrinsic motivation • Certificate • Skills • Preparing for the HKDSE
(3) Mentoring	● Mentor's academic support regarding MOOCs
	● Mentor's support regarding time management and planning
	● Challenges of mentee's interaction with mentor
(4) Support from school	● Reimbursement
	● Training from HKU
	● *MOOC Starters' Guide*
(5) Further studies	● Impact of mentor on university application
	● Impact of MOOC experience on university application
	● Career planning

Table 6.4 shows the number of labels for each major theme in the individual and focus group interviews. I will discuss each theme in the sections below.

Table 6.4 – Thematizing: Number

Theme	Number of labels (codes)
(1) Schoolwork and MOOC	143
(2) Motivation	135
(3) Mentoring	120
(4) Support from school	96
(5) Further studies	88

6.3.1   Theme: Schoolwork and MOOC

The theme "schoolwork and MOOC" was mentioned most in the transcribed interview data. The interviewees reported that time management, procrastination, setting priorities, and MOOC experiences were important to their concerns regarding their participation. There are therefore the sub-themes.

Time management

Time management was considered the most prominent issue in relation to schoolwork and MOOCs. When I asked Ben, a newbie, how he managed his time and set his priorities with regard to MOOC, schoolwork, extracurricular activities, and family, he stated,

I would think about the assignment that I would submit tomorrow first. It would be practicing piano, dealing with my little brother's assignment, and then working on the MOOC. I like the MOOC, but it's an exam-oriented schooling system in Hong Kong, and my family is also important. So, the MOOC is not the most urgent matter in this regard. It's just pure interest.

I also asked Greg, one of the lukewarm mentees, about the most challenging part of his MOOC experience. He replied,

I would say time management, and I still struggle with it… Although like I have designated sessions to do the assessment, I still sometimes procrastinated, playing video games and stuff, and it finally messed up my time sessions.

Procrastination

In the second interview near the end of the school term, I asked Greg again about his struggles with time management:

Greg: Procrastination…for me, it just comes and goes. The more interest I have, the more free time I have, and the more I work on the tasks. The reason you procrastinate is that you'd rather be doing something else.

Interviewer: How did you overcome it after all?

Greg: Maybe I didn't.

Setting priorities

Several key surprises emerged from the data. Although these students understood that schoolwork would have far more impact on their further studies compared to MOOCs, several of them admitted that they prioritized MOOCs over their schoolwork. As Greg revealed that he had trouble managing his time, I asked him how he met the MOOC assignment deadlines even when he was busy with his schoolwork. He replied,

If I'm being completely honest, I ditched homework, and I worked on MOOCs.

Greg clearly prioritized the MOOC ahead of his own schoolwork. When I asked him

about the reasons behind this, he stated,

> The assignments in the MOOC won't take me too long to complete, and I
> enjoyed the feeling of getting the job done, unlike my Chinese assignments,
> which felt like a dead end for me.

It is evident that despite struggling with his schoolwork, Greg prioritized the MOOC

because completing the MOOC tasks gave him a sense of achievement.

MOOC experience

As the content of MOOCs is designed for adult learners, it was considered

challenging for secondary school students. But based on the responses from the

student mentees, they were intrigued by the interesting content, and they had various

strategies for finding MOOCs that fit their needs rather than feeling overwhelmed by

the challenging content. I asked Kelly, one of the enthusiasts, about her preparation

for her first MOOC and her incentive for completing it. She replied,

> My first MOOC is about the Japanese language. Because I know a bit about the
> language, I felt that the content was quite interesting, so I prioritized this MOOC.
> I started the course when it had been launched for two to three weeks already, so
> I had to catch up with the schedule. Luckily, the workload was fine, and I was
> able to complete it in two days. I became more motivated indeed, because the
> first one was simple yet very interesting. I suddenly realized I could actually
> handle MOOCs, so I applied for a few more that fit my interest.

In the focus group interview, when I asked the six MOOC student mentees about the

most challenging part of their MOOC experiences, three students declared that time

management was the most difficult part, while two other students stated that the

assessments in the MOOCs were too challenging for them:

Venus: Mainly not having enough time.

Nancy: Time. It's because I struggled to reserve extra time to finish it.

Chris: For senior form students, we have other tasks to deal with, and seldom do we have time to sit in front of the computer to finish MOOC.

Ellen: I don't like doing the MOOC on the laptop; it's much easier to take a course on the phone.

Wesley: It's about the exam. I thought I would get all correct, but in the end, I needed to retake the assessment.

Bowen: I am very forgetful, and sometimes I forgot that I'd enrolled in a course.

6.3.2   Theme: Motivation

The second theme that appeared to be salient in the interviewees' statements was based on motivation. Intrinsic motivation and extrinsic motivation were the two sub-themes that emerged from the data.

6.3.2.1 Intrinsic Motivation

Relatively few questions focused directly on intrinsic motivation. Regarding the students' pursuit of MOOCs, areas of interest, quests for knowledge, and sense of achievement, some predominant themes emerged from the transcripts.

Quest for knowledge

The primary factor related to some student mentees' participation in MOOCs was not the certificate nor reimbursement from school but, rather, their desire to explore the fields they were interested in. Kelly, one of the enthusiasts, stated that she was very

strategic in her pursuit of the MOOCs that she was interested in. When I asked her

about the secret behind completing 15 MOOCs in just a few months, she replied,

> I will join any MOOCs I am interested in. I will audit one or two MOOCs first
> and watch the first and second videos about the lectures. If I find it difficult, I
> will switch to another one that fits my needs and level. I will also choose the
> topics that I am familiar with—primarily, Chinese poetry—then I can treat the
> content of the MOOC as revision. Not only can I work on topics I am interested
> in, but I can also do revision at the same time.

Area of interest

Chris, an enthusiast from the focus group interview, also stated that exploring fields

that he liked was his main motivation for participating in MOOCs:

> I am really interested in programming. And I know the course I took is about the
> introduction to C++, and I believe I can handle it. I will audit first and check out
> the assessment. I won't choose the ones with essays, because this is too time-
> consuming.

Sense of achievement

Quite prevalent in the responses of the student mentees were their remarks about how

enjoyable the experience was, outside of any concrete results. All of these findings

indicate that the challenges and rewards may be far different from what one might

expect from an adult in a similar position. Having completed a MOOC from a top

university at the age of 13, Elly, a MOOC newbie, was asked in her second interview

about her approach to handling the difficult assessment tasks and reading in the

MOOC. She replied,

> It wasn't really that hard. I mean the programme was really fun, and I expected
> to read a few pieces of literature, but it wasn't just that. The course also
> introduced me to a festival museum and taught me some history. That wasn't just
> about literature, so it was kind of interesting.

When I asked Elly about her routines when she worked on her MOOCs and her feelings about completing a MOOC from Harvard University, she stated the following:

> I normally work on MOOCs at night. Maybe when I don't really want to sleep and I want something to entertain me, I just watch some of the videos. By finishing a MOOC from Harvard University, I believe I am pretty smart!

In Elly's second interview, she stated that she considered the lecture videos as entertainment for her in her free time, and she used adjectives such as "fun" and "interesting" to describe the complex literature texts that she was reading. This clearly explains her incentives to pursue MOOCs, which was about exploring her interests and gaining a sense of accomplishment from finishing a MOOC; this was very fulfilling for her.

6.3.2.2 Extrinsic Motivation

There were several additional sub-themes of the findings on extrinsic motivation that were especially striking; these included "prepare for the HKDSE", "certificate", and "skills".

Prepare for the HKDSE

Several mentees stated that MOOCs could serve as a tool in their revision for the HKDSE in areas such as mathematics, science, and even Chinese literature. In the first interview, Kelly, an enthusiast mentee, said that she could strike a balance between pursuing her interest in MOOCs and at the same time preparing for her public examination with the additional input from the MOOCs:

> I am actually working on English MOOCs and MOOCs about Chinese literature right now. I believe that some content I found in the MOOCs does help me in my

preparation for my DSE.

Certificate

Although some of the student mentees declared that pursuing subjects they were interested in would be an important factor in their MOOC experiences, the vast majority of student mentees also pinpointed certificates and skills as the most dominant factors in their pursuit of MOOCs. When I asked the students in the focus group interview about their incentives to spend time on MOOCs rather than pursuing their personal interests, they replied as follows:

> Ellen: Certificate.
>
> Chris: Certificate and reimbursement.
>
> Venus: Money.
>
> Wesley: Certificate.
>
> Ellen: I mean the actual process of learning is important, but the main thing is the certificate.
>
> Nancy: The assistance in career planning—aka the certificate.

Skills

Shane, a lukewarm mentee, was more motivated by the skills he could acquire from the MOOC as he would be equipped to design a video game and obtain a professional certificate as well. When I asked him why he opted for programming and video game design as his choice of MOOC, he replied,

> I went to check out MOOCs, and I thought they caught my interest, and there were skills I really wanted to acquire, like tricks for making a video game, getting some professional qualifications, and maybe a certificate.

6.3.3   Theme: Mentoring

As support from the school in the MOOC mentoring programme represents a practical arena for illuminating student mentees' MOOC experiences, it was especially notable that mentoring support was highly recognized by the student mentees as the most effective form of support. Several mentees expressed the importance of a dedicated, supportive mentor and how they positively impacted student mentees' MOOC experiences vis-à-vis planning their schedules. They also reflected on the difficulties they encountered in their interactions with their mentors.

Greg, a lukewarm MOOC mentee, enjoyed a long-term friendship with his mentor, who was his form teacher back in Secondary 1. When I asked him about the most effective form of support he received from the mentorship programme in his first interview, he said the following:

> The mentor. Other people do not know where they can actually seek help from, but we have these mentors who can give us advice. I can casually talk to my mentor when we are in the lift or during lunchtime.

Mentor's academic support for MOOCs

I asked Greg in his second interview whether his main discussion topic with his mentor was about academic support during his MOOC experience. He stated,

> We did talk about it, but it's like not that much. He told me to just skip it when I had difficulties with the content, because, as I said, most of my problems were just time management, so he just gave me some advice.

However, in his second interview, the focus gradually switched from MOOCs to university applications, as Greg stated,

Impact on the MOOC experience… I wouldn't say a lot, but he did support me. He sometimes checked on my progress and what new courses I was doing, but we wouldn't go into detail as I said. Very quickly, the topic switched to future studies.

Although it was hoped that mentorship would have a noticeable influence on the mentee's progress in regard to his MOOC experience, Greg virtually switched his focus from the MOOC to further studies when he communicated with his mentor. The rationale behind his primary concern for his studies was to pursue tertiary education at an overseas university; so, naturally, the attention switched to university applications instead of MOOCs.

When I asked Christy, an enthusiast, whether her mentor offered academic support during her MOOC experience, she was positive regarding her mentor's assistance:

> Last week, I asked him a question about differentiation that I found in MOOCs through WhatsApp. He would leave voice messages explaining all the possible steps, even after school hours.

Mentor's support for time management and planning

Kelly, an enthusiast, appeared to be more grateful for her mentor's support regarding time management and planning. When I asked Kelly about where she would seek help when she encountered obstacles in her MOOC experience, she replied as follows:

> I would talk to my mentor, because my mentor would set a timetable with me. She advised me to finish one or two videos per day, and she would test my understanding with her the following day. When I knew I procrastinated, she would push me. When I had a problem with the MOOC about IELTS the last time, I talked to my English teacher, who was also my mentor.

In the focus group interview, some of the interviewees shared similar ideas to Kelly's

regarding the support they received from their mentors:

> Bowen: She would constantly send me messages through WhatsApp and encourage me to follow our planned schedule. Without her reminder, I don't think I would have finished my MOOC.
>
> Ellen: I think my mentor cared about my progress in MOOC more than I did. He kept checking my progress time after time.

Challenges in mentees' interactions with their mentors

Regarding possible problems in her communication with her mentor, Christy, a

MOOC enthusiast, stated,

> I usually work on MOOCs late at night, and I don't think it's appropriate to text him at 1:00 or 2:00 at night.
>
> Apart from math, he could only give me encouragement to work on other areas. He encouraged me to try new languages but confessed that he might not be the most knowledgeable mentor to answer questions in the other fields.

In the focus group interview, Venus and Nancy also mentioned the challenges of their

interactions with their mentors:

> Venus: They would make comparisons between me and his other mentee. Whether she could finish a MOOC and I couldn't at that time.
>
> Nancy: Since my mentor was not my subject teacher, it was hard to meet her on a regular basis, and we had limited fixed meetings.

Greg, a lukewarm MOOC mentee, stated in both interviews that having regular

meetings was one of the challenging parts of his mentorship experience:

> I would say the meetings were inconsistent because I kept forgetting.

6.3.4   Theme: Support from School

Another important concept that was shared in the interview was "support from school" in regard to the MOOC mentorship programme; this related to assisting students who were participating in the MOOCs. "Support from school" was categorized into three elements—namely, reimbursement, training from HKU TELI, and the *MOOC Starters' Guide*. Compared to the training offered by HKU TELI and the *MOOC Starters' Guide*, reimbursement of the verified certificate was recognized by the student mentees as a more effective form of support offered by the school.

Reimbursement

For Ben, a newbie, the most helpful form of support he received from the school was the reimbursement of the MOOC certificate:

> They refund the certificate. It allowed me to do my MOOC for free, and I have more motivation to work on it during my free lessons at school.

Shane, a lukewarm mentee, insisted that reimbursement was the most effective form of support, as participants were attracted by the idea that they could attain a university-verified certificate for free. He was also positive about the opportunity to present on his MOOC experience.

> The reimbursement of the money for the certificate quite motivates a whole lot of people who want to enrol in universities later. Second, the presentation in assembly also built up my confidence on stage, and I was able to abandon my stage fright.

Training from HKU

The training support from HKU TELI, the *MOOC Starters' Guide*, and sharing of MOOC experiences during school assemblies were originally believed to be the key elements in the participants' MOOC experiences. When I asked Christy, an enthusiast, about the impact of the training offered by HKU TELI at the beginning of the year, she responded positively:

> I did learn more about different MOOC platforms through their training session since I mostly worked on MOOCs in edX before their introduction of Coursera. They mentioned that a professional certificate and X-Series could be the stepping stone to a professional career.

In contrast, when I asked Greg, a lukewarm student, about attending the training workshop for the second consecutive year, he stated,

> I didn't understand what the training workshop was about because it was conducted in Chinese. I read the PowerPoint slides, but they didn't help that much.

MOOC Starters' Guide

An in-house *MOOC Starters' Guide* was provided to the MOOC mentees. I asked Christy, an enthusiast, in her first interview about the impact of the booklet on her MOOC experience. She replied,

> I saw my photo in my profile in the booklet, and it's hilarious. I did try out some of the MOOCs there. To see the successful experiences of other schoolmates gives you an idea that those MOOCs are manageable for high school students.

However, in her second interview, Christy stated that she had barely opened the MOOC booklet in the past few months, indicating that the list of recommended MOOCs was outdated.

6.3.5 Theme: Further Studies

The fifth theme that emerged from the interviews was the "further studies" that the interviewees would be considering while participating in the MOOC mentorship programme. Three areas for "further studies" were often mentioned by the interviewees: "impact of mentor on university application", "impact of MOOC experience on university application" and "career planning".

Mentor's impact on university application

In both of Greg's interviews, university application was the main theme that emerged from his interaction with his mentor and his participation in MOOCs. When I asked Greg about the possible influence of his mentor on his university application and on choosing MOOCs, he said,

> About college, then it wouldn't be about MOOC. It would be more about like me and my future and the possibility of me moving to Australia. My mentor is helping, like by gathering some information, so he has kind of turned into my career mentor.

Impact of MOOC experience on university application

Personal interests and the subjects they offer would be the primary criteria for students' university applications, and mentors' suggestions would also be a valuable indicator of their considerations. In Greg's second interview, he further explained that working on MOOCs about music and zoology was merely fulfilling his interests rather than using the certificates to facilitate his university application. He stated,

> I always knew that I was going to apply for zoology. But my enrolment in zoology has nothing to do with MOOCs. I did MOOCs because I am interested

in animals. But I have no interest in applying to those universities.

Given that Greg had completed several MOOCs from some top local universities, I asked him whether he would use the verified certificates to apply to the tertiary institutes. He replied,

Not HKU. Because I would not pass my Chinese exam.

Similar to Greg, Ben, a newbie, did not consider applying for the universities where he completed MOOCs; instead, he would apply only to the programmes for which he had the public examination results to support him. When I asked Ben whether he would apply to Harvard after he completed a MOOC from there, he stated,

I never had this thought. First of all, I completed a MOOC about music from Harvard, but this doesn't mean I can be a student at Harvard. You still need grades to back you up. And I know myself well; I will never be a professional musician. It is for fun only.

When I asked the student mentees in the focus group interview whether the completion of a MOOC would help them apply to the university where they did the MOOC, most of them did not believe that their MOOC experiences would be an important indicator of their university applications:

Venus: No. It's because I did not apply for MOOCs from the universities in Hong Kong.

Nancy: I will only apply for programmes that I am interested in and the subjects that they offer.

Ellen: I mean it depends on the subject and location, and like, I don't think I will go to Japan for college, so I won't apply for it because I completed a MOOC there.

Chris: I won't. It's a bit premature.

The student mentees in both interviews indicated that despite their successful completion of MOOCs from various universities, many of them would not consider those programmes when contemplating university admission due to financial and geographical barriers.

Career planning

The findings also highlighted that only the MOOC enthusiasts who completed multiple MOOCs thought they would experience a positive impact on their university applications and interviews. As the universities were expecting the MOOCs to be attractive to potential applicants and to encourage them to enrol in their programmes, more attention will be paid to this area in the next chapter, which will examine whether MOOCs are a luring factor for secondary school students in regard to their university admission. Kelly, a MOOC enthusiast, insisted that she was given an edge in interviews because of her experience with MOOCs. When I asked her the main reason that she was chosen to participate in a very competitive exchange programme to Japan, she replied,

> I think I have been given an edge because of the Japanese MOOCs I took. When I told the interviewers I had already completed MOOCs about Japan at Wasada University, they were amazed by my experience since they kept saying those MOOCs are very challenging, even for adults. And they couldn't believe a high school student could complete them.

6.4 Sample Student Mentee Profiles: Christy and Elly

In order to take a holistic view of the impact of MOOC experiences on students' lives, I introduce two sample student profiles. Christy and Elly were two of the more articulate mentees, and their transcripts were chosen because they best illustrated the

experiences of the first- and second-year students.

6.4.1 Christy

Christy was a Secondary 5 student who had participated in the MOOC mentorship programme for two years, completing 30 MOOC programmes within this span. She was an average science student who would sit public examinations in one year's time. Christy's experience was not typical; she reflected on her experience more deeply and expressed herself more clearly than the other student mentees. Yet, her experience did reveal the potential power of participating in the MOOC programme and how she benefitted from the mentoring process. The advancements in her knowledge and her resume might have impacted her study habits, university application, and even her future career. Notably, her account of her experience shows that even an average secondary school student who is motivated has much to gain from the opportunity that the MOOC mentorship programme offers.

In her first interview, Christy stated that she would work on a MOOC whenever she found a topic she was interested in. When I asked her how she could reserve the time to complete multiple MOOCs even during the normal school period, she replied,

> I would do it while I was taking a bus to school. For lecture videos, I can fast-forward at 1.5X speed and watch them on the bus. I can even complete multiple-choice questions on the bus.

She further stated that she saw her participation in MOOCs as a leisure activity:

> I completed a MOOC from Hong Kong PolyU in three days. I had a long weekend last week, and I had nothing to do, actually. I had snacks, worked on

MOOCs, and got to know some new programming skills at the same time.

In the second interview, Christy had some new insights about the balance between her schoolwork and MOOCs. When I asked her whether she would still do MOOCs whenever she felt like, she replied,

> For now, I have to put the HKDSE as my first priority. I had a bad experience in the previous term test, in which I was too focused on the assessment of one MIT course, and I failed my biology term test. I think I was very foolish to do so. I like MOOCs, but I don't want to tank my grade, especially in a subject I like.

When I further asked her whether she would still work on so many MOOCs if she could start the year again, she replied,

> I feel like it's a part of my life now, and it's what lifelong learning actually is.

It is obvious that Christy struggled to strike a balance between her schoolwork and MOOCs. In the latter stage, she set schoolwork as her priority. However, the self-directed learning habit of MOOC was deeply rooted, as she revealed that she would still engage in MOOC because it was a learning platform she enjoyed.

Christy enjoyed her success in MOOCs, as she completed 16 MOOCs during the year, and as highlighted in her interview, this changed the landscape of her secondary school life. In her first interview, when I asked her how she would describe her status after completing multiple MOOCs, she replied,

> To receive the MOOC certificates in the ceremony and present on my experience in front of the schoolmates, I believe it is a really cool experience. My brother once joked that I would never make it to tertiary education, and now I can prove him wrong with my MOOC certificates.

In her second interview, I asked Christy about her most memorable MOOC experience. She shared her experience of being invited to attend a MOOC alumni meeting offered by MIT, and she was honoured to be the only secondary school student at that event. She stated,

> Literally, I was the only one in school uniform there. The MOOC alumni and professor from MIT were surprised with my presence and kept saying it was unbelievable for a high school student to complete their MOOC.
>
> It was an amazing experience for me as well since in the sharing sessions, all these adults did listen to my ideas, and I felt I received a lot of respect from them.

Through this experience, Christy learned that by exploring her interests through online platforms such as MOOCs, she gained recognition and felt that she was just as intelligent as other adults. She stated,

> The other alumni were just like me, working on MOOCs in their spare time and suffering from the tough assessment in this intermediate MOOC programme. I gained a lot of confidence since I was able to accomplish this at a young age, and it shows I can excel in the subjects that I am interested in as well.

Apart from gaining a sense of achievement and exploring her interest in MOOCs, extrinsic motivation also played a significant role in Christy's MOOC experience. Over the two years, she attained over 30 verified MOOC certificates and received over HKD 20,000 in reimbursements from the school.

In her first interview, when I asked Christy about the main attraction for her to join the MOOC mentorship programme, she replied,

> Seeing the pile of MOOC certificates really gives me the confidence boost.

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Unlike my trophy-laden primary school days, I am not a top student now, and I received fewer certificates in the past few years. But my MOOC experience has revitalized my school life.

In her second interview, Christy highlighted that MOOCs could also provide support for her preparation for the public examination:

I checked out some MOOCs about differentiation. At first, I thought the syllabus might be different, but I later realized that some of the content was very similar. So I discussed this MOOC with my mentor and saw that it served as useful revision practice for me.

Apart from the reimbursement, Christy also enjoyed her friendship with her mentor, who was also her mathematics teacher. When I asked her about these interactions, she stated,

He is like my friend really. We can talk casually about MOOCs, differentiation, or any silly topics in his class or after school. When I had problems with MOOCs, I would take a screenshot and send him my questions through WhatsApp. Surprisingly, he would respond in a detailed manner, even after school hours.

I further asked Christy about the best form of support offered by her mentor in addition to his friendly approach. She replied,

I think the best thing is that he gives me absolute autonomy. Frankly speaking, we never have fixed meetings, and we just chat regularly in math lessons. I like this relationship since he always says I can do whatever MOOCs I like.

When I asked Christy about the impact of her mentor on her selection of her MOOC, she stated,

He has zero impact, and it is really down to me and my interest in choosing the MOOCs I like.

I suspect that he has not done any MOOCs himself, so he may not know the system or so. And if I tell him more about my plan, then he might feel that I want to be monitored.

Although I hoped that mentorship would have a noticeable influence on the mentees, Christy's experience underlined that motivated learners may prioritize autonomy, flexibility, positive reinforcement, and support of subject knowledge in their interactions with their mentors. The flexibility offered by her mentor might have played a role in her success, as she stated she did not feel restricted. However, the kind of support she needed from her mentor was largely affective and actually unrelated to the challenging MOOC content.

Despite acknowledging that MOOCs might not give her a clear advantage in terms of her university applications, Christy would embrace the chance to study at the universities that offer MOOCs if such opportunities were given:

I like the justice MOOC offered by Harvard, as the professor is very descriptive in his illustration of cases. If I had the chance to study there, I would definitely take it.

In her second interview, when I asked Christy about her mentor's influence on her further studies, she replied,

His suggestion does have an impact on my university application. We once talked about my enthusiasm about programming like Python and how devastated I was that I could not choose Computer Studies as my elective subject. He encouraged me to take MOOCs and learn from there, and I did. I will apply for programming at the university.

It can be seen that not only was MOOC impactful in regard to Christy's choice of

further studies, but it also widened her horizon in terms of the programmes she might choose in the future.

Another notable difference between Christy and other MOOC student mentees is her description of how MOOCs impacted her experience in various programme admission interviews and possibly her career prospects. In her second interview, when I asked her about how MOOCs impacted her studies, she replied,

> MOOC experience gives me an advantage in interviews. I had a university admission interview about programming, and the interviewers were shocked yet interested in knowing about my MOOC experience and how I learned Python during it. They gave me a conditional offer at the end.

In addition to her interview experience, Christy also mentioned the aspiration she drew from some of the professionals whom she met at the MIT MOOC alumni meeting:

> The alumnus of the MIT course told me that by completing the MOOC, I will attain a verified certificate and that it is highly recognized in his field. He even told me that he landed his current job because of his MIT certificate. I don't know if it is true, but MOOCs might be useful to a certain extent.

Christy's fruitful experience in joining the interviews and the MOOC alumni gathering further strengthened her belief that MOOCs can impact her studies and, more importantly, her resume and career path as well.

6.4.2 Elly

Elly was an elite student from junior form (Secondary 2) who excelled in the English language. Initially, Elly was motivated by the idea of pursuing her interest—namely, English literature—through MOOC platforms. Having completed the academic year with a verified MOOC certificate from Harvard University, she confessed that it was her family's support and the need to get her certificate reimbursed that got her over the finishing line. She also believed that her mentor was largely supportive of her MOOC experience, and more importantly, she equipped herself to be a self-directed learner along the way. Supporting measures from the school and HKU generated mixed results; this is similar to Christy's experience.

Elly was one of the youngest participants in the mentorship programme, and her quest for knowledge, especially in the world of literature, was the main aim of her participation in MOOCs:

> To satisfy my hunger for knowledge. One of the reasons I joined MOOCs was to extend my knowledge about English literature. In the future, I would love to become a writer, so by doing MOOCs I can maybe learn more about it, because in Hong Kong there isn't that much about it.

In her second interview, when I asked her how she kept herself motivated to complete a MOOC about literature from Harvard University in just 48 hours, she said,

> To learn more. It was interesting to see a piece of literature being introduced in a historical way to see how people struggled to keep this piece of literature going. You need to get into the world to get other people to also read world literature.

I further asked Elly whether she needed to prepare a lot for the MOOC she completed. She responded as follows:

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Not much preparation really; they gave you everything. I utilized the materials they provided and completed all assignments and assessments within those 48 hours.

As Elly frequently stated that her participation in MOOCs was driven by her quest for knowledge in English literature, I asked her about her incentives to learn English literature and how she could apply them in her daily life. She stated,

I would say it's the usage of vocabulary; that's definitely more mature, more sophisticated. I would apply them in my own writing.

I want to polish my writing with it, and it's an upgrade for me. In order to be a writer, you need a wide range of vocabulary and a good understanding of various contexts.

Apart from intrinsic motivation, Elly also appeared to be motivated by the pursuit of the verified MOOC certificate. When I asked her how she could overcome procrastination and obtain a verified certificate from a Harvard English literature MOOC, she stated,

I mean if I didn't pass the course, I wouldn't even get a certificate, and I would have just wasted eight hundred dollars. At first, I was really curious about it, but I was busy later on, and I lost motivation. Luckily, my mentor constantly asked me questions, and with the certificate just looming around my head, I told myself I needed to get the certificate, and I nailed it in the end because of the reimbursement.

Elly also shared her mother's reaction to her participation in MOOCs:

My mum just seems really glad that I'm enjoying the course…that for once I'm actually doing something that I am not procrastinating on that much.

I mean I'm learning more too. I am widening my horizon, and of course they'll be glad I am doing something. When my mum paid USD 99 for me to pursue the verified certificate, she didn't really push me to finish it. It was me pushing myself.

At first, Elly was motivated to explore the field she was interested in. But when she

had to strike a balance between schoolwork and MOOC, she believed that the reimbursement policy was the key to helping her cross the finishing line, as she did not want to disappoint her mother, who fully supported her in regard to her MOOC experience.

An experienced English teacher was assigned to Elly as her mentor. Interestingly, she was also Elly's instructor in the English Debate Club, so a strong bonding was already formed before the start of their mentorship. When I asked Elly to describe her relationship with her mentor, she stated,

> I can casually joke with her. Indeed, the respect is still there, but we are kind of friends.
> She was a driving force for me to keep going on. She kept reminding me to do this MOOC, so she pushed me to do it quicker: "Don't procrastinate."

Because of her age and the fact that she was a junior form student, the MOOC content, especially the specific vocabulary, might have been challenging for her. When I asked Elly how her mentor would help her solve the problems she encountered in MOOCs, she replied,

> I don't really ask her that many questions. She's the one who asks me questions about MOOC, like "How's the course going? How many lessons do you have left?"
> I did share with her some stories about Greek mythology, and she was interested.

I further asked Elly whether she sought help from her mentor most of the time when she encountered difficulties. She stated,

> I got all the definitions from the internet. That's quicker, I guess. I tried to email her before, but it's very time-consuming. So I would try to ask Google instead.

Despite having a good relationship with her mentor, Elly did not actively share her

MOOC experience with her, because it was mostly her mentor asking her questions

during their meetings. I would consider Elly to be a motivated student who excelled in

self-directed learning. When she encountered problems with difficult concepts or

vocabulary, she would search them up on the internet rather than relying on her

mentor's advice.

I invited Elly to join the MOOC training workshop offered by HKU in October. When

I asked her about the knowledge she had taken home from that workshop, she replied,

> They had some genuine advice for you, and they are very experienced. In the
> training, time management is kind of a key point, because if you don't manage
> your time well you won't be able to achieve much. I do buy into the concept of
> completing small tasks on a daily basis rather than doing them all in one day.

Apart from commenting on the impact of the HKU training workshop, I also asked

Elly whether the *MOOC Starters' Guide* was effective in regard to her MOOC

experience. She stated,

> Maybe that's a bit pretentious. They give you examples of MOOCs completed
> by various students. There are a few pages about their MOOC experiences and
> what they learned from MOOCs.

It can be concluded that the HKU training workshop was somehow effective in regard

to equipping Elly with time management skills. However, the *MOOC Starters' Guide*

was an ineffective form of support in Elly's eyes, as she considered it "pretentious".

6.5 Summary

Chapter 6 concentrated on the qualitative interview data. Thematic analysis was used

to analyse qualitative data from the interviews. Time management and setting priorities are the most notable topics regarding schoolwork and MOOCs. The students stated that intrinsic motivation—namely, their quests for knowledge of particular topics they were interested in—and extrinsic motivation, such as the recognition of MOOCs in their lives and reimbursement for purchasing MOOC certificates—were key to their participation in MOOCs. This was similar to the findings of the quantitative analysis. The interviewees believed that mentoring support was essential to their MOOC experiences, as dedicated mentors had a positive impact on these experiences. Several surprising findings—namely, the acquisition of professional skills and the matter of how students utilized MOOCs to prepare for their public examinations—were also highlighted in the data. Some of the enthusiasts also suggested that the recognition of MOOC certificates can benefit them in their university applications and their careers in the future. Two sample mentee profiles were also presented in this chapter. Christy's MOOC experience was not typical because she was extremely motivated to make the most out of it. Elly was a typical newbie who was driven by her interest in English literature. Chapter 7, the next chapter of the dissertation, discusses the findings in response to the three research questions posed in Chapter 1.

Chapter 7

Discussion

7.1 Introduction and Purpose of the Chapter

Chapters 5 and 6 presented the results of the survey and interviews. This chapter concentrates on the principal findings of this study and discusses them in response to the research questions proposed in Chapter 1.

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7.2 Research Question 1: What Are the Experiences of the Students in the MOOC Mentorship Programme?

The research findings suggest that not only did MOOCs provide students with a wide range of courses outside of the confines of an institution, but they also offered a platform for students to obtain skills and verified certificates issued by universities. The students also acquired time management skills through their MOOC experiences, and they had fun while taking control of their own learning. The findings of this study indicate that self-determination theory (Deci and Ryan, 1991) is a viable theory to illuminate learners' motivations for and experiences of studying MOOCs in a mentorship programme.

7.2.1 Motivations for MOOC Participation

Research has shown that learners' engagement in MOOCs is highly affected by their motivation (Barak et al., 2016; de Barba et al., 2016; Yang, 2014). Regarding student

motivation, a wide range of courses, a desire for growth and enrichment from the MOOC experience, preparation for public examinations, and the acquisition of life skills were the key topics that emerged from the findings. The above findings also confirm Wheeler's (2012) assertion that intrinsic and extrinsic motivations encourage learners to be self-determined in their online learning approach.

7.2.1.1 A Wide Range of Courses

As stated in Section 5.3.2, interest in a particular topic was a prominent factor in motivation to pursue MOOCs. The majority of students declared in their pre-mentorship and post-mentorship surveys that the topics had a significant impact on their participation. This finding is also evident in the individual and focus group interviews highlighted in Section 6.3.2. One possible explanation is that students welcome a higher degree of autonomy in their learning, and they tend to be more in control of finding areas of interest through the wide range of courses provided by MOOCs. Kizilcec and Schneider (2015) also expressed that most learners who participated in different MOOCs on MOOC platforms, such as edX and Coursera, reported "general interest in the topic" as their motivating force. The Qualtrics survey (Instructure, 2013) on the motivations of MOOC participants also showed that course topic was the main motivator of enrolment among 35% of MOOC participants.

Providing learners with a wide range of choices for course selection is considered one of the autonomy support practices with reference to self-determination theory (Reeves, 2002), and it is also connected to student engagement patterns in online learning (Ragan, 2012). However, one of the barriers that prevents students from engaging in multiple MOOCs is the cost of purchasing verified MOOC certificate (Bonk & Lee,

2018). As the school offered reimbursement to students who purchased the MOOC certificate, students who completed multiple MOOCs, such as Christy, Kelly and Greg, were not prohibited by the cost of signing up for MOOCs, and they had the autonomy of participating in various MOOCs based on their interests.

7.2.1.2 A Desire for Growth and the Enrichment of Their MOOC Experience

The students were motivated to adopt a variety of strategies to complete MOOCs in their spare time. The strategies showed that a majority of the students tended to explore their interests in advanced subjects and wanted to master new professional skills, fulfil their curiosity, and satisfy their hunger for knowledge through their MOOC experiences. The above findings are consistent with those of Zheng et al. (2015) and Kizilcec and Schneider (2015) in terms of identifying the personal benefits of MOOC enrolment. Most of the MOOC students reported a desire for "growth and enrichment" as the forces motivating their MOOC participation (Kizilcec and Schneider, 2015). The participants were also motivated by the idea that they now had access to valuable educational resources that they had always been interested in but that had previously been difficult to access (Zheng et al., 2015).

The students received support academically and financially, and they gained unprecedented recognition from the institutions at their alumni gatherings. Christy completed MOOCs that were originally designed for working adults with a bachelor's degree; thus, her experience (see Section 6.4.1) was typical of MOOC completers, as her MOOC participation made her feel as intelligent as other adult MOOC participants. This is in line with the results of studies conducted by Lopes et al. (2014) and Stevanović (2014), which suggested that students are intrinsically motivated by

the opportunity to join high-quality courses delivered by renowned professors at prestigious universities across the globe. Kelly, who strategically completed 15 MOOCs in just a few months, stated that her ability to pursue the subjects she likes was one of the quintessential factors in her continued MOOC participation. The experiences of Kelly and Christy echo de Waard and Kukulska-Hulme's (2019) study, which suggested that personal learning goals and intrinsic motivation are the main enablers of self-directed learning in students' MOOC experiences.

7.2.1.3 Utilizing MOOCs to Acquire Skills and Prepare for Public Examinations

A discussion regarding students using MOOCs as a part of their examination preparation and professional skills acquisition can be found in Section 6.3.2. This is an unexpected finding. Rao et al. (2015) suggested that MOOCs encourage lifelong learning and improve knowledge and skills; thus, in the pre-mentorship and post-mentorship interviews, I asked the students about the factors that motivated them in terms of their MOOC experiences. The question was designed to prompt respondents to rate the role of the knowledge they acquired in impacting their further studies. However, contrary to my expectations, three out of six respondents in the individual interviews suggested that they were able to acquire skills from their MOOC experiences to prepare for public examinations. As stated in Section 6.3.2.2, Kelly's experience in enrolling in MOOCs that were related to the subjects she took in school gave her extra practice in preparing for her public examinations. Respondents' emphasis on the academic utility of MOOCs echoes the findings of Belanger and Thortan's (2013) study (see Section 2.3.2), which found that bolstering their academic progress is one of the primary motivators for student participation in MOOCs.

The MOOCs that the students took in the programme were those that were offered to the general public. This is different from the specialised AP examination MOOCs that have been developed for middle and high school students as university preparatory courses. Extrinsically motivated students were still able to highlight the MOOCs that were relevant to their exams and utilise them to polish their examination skills. Shane, a newbie, would even consider MOOC as the platform to be used to acquire professional skills that might impact his future career. The findings are similar to the results obtained by previous researchers, such as Breslow et al. (2013), Fearn (2014), and Ho et al. (2014), who argued that the primary reason for enrolling in MOOCs was for the knowledge and skills that would be gained. Kelly and Shane's experiences also subscribe to the motivational process of self-determination learning theory (see Section 2.5.2), which states that a learner's intrinsic and extrinsic motivations can positively impact their behavioural performance in their online courses (Deci & Ryan, 2010).

7.2.2 Time Management and Students' Experiences in Studying MOOCs

In Section 6.3.1, I discussed the importance of developing generic skills, such as time management and priority setting, in students' MOOC mentoring experiences. This is because with regard to MOOC engagement, students need to allocate their time wisely in order to manage MOOCs, schoolwork, extracurricular activities, and family. Kizilcec et al. (2013) suggested that the most prominent reasons learners disengage from MOOCs are 1) personal commitments; 2) work conflicts; and 3) course workload. In this study, overcoming procrastination by scheduling a timetable, setting priorities, and utilising travel time on public transport were the key strategies identified in the interviews.

7.2.2.1 Time Management Skills

Time management skills were talked about more frequently than MOOC content during the mentoring sessions because the participants needed to utilise time management skills to strike a balance between schoolwork and MOOCs. The findings suggest that emphasis on generic competence can positively affect academic outcomes, as attested to in some previous studies (Benninga, Berkowitz, Kuehn, & Smith, 2003; Raymond, 2001). In reality, this tension between schoolwork and MOOCs was also faced by the MOOC students at the school, and they needed advice from their mentors in regard to overcoming issues such as procrastination. DuBois et al. (2002) found that mentors whose backgrounds include prior experience and success in helping roles were able to create more significant outcomes; seeking useful advice from the figure they trust would be one way for students to improve their time management skills. In the interviews, the mentors recommended setting a timetable, monitoring students' planned schedules, and checking students' MOOC progress from time to time. As discussed in Section 6.3.3, Bowen and Kelly both stated that their mentors set timetables with them and supervised them as they followed their schedules.

Bowen's struggles in time management (see Section 6.3.3) confirm Shapiro et al.'s (2017) study, which showed that students who did not consider themselves skilled at time management often had difficulty with MOOC engagement. Unlike Bowen, Kelly utilised the time management skills shared by her mentor and was motivated to complete multiple MOOCs. Kelly's experience supports Beavin et al.'s (2014) findings: that a better understanding of the participatory skills necessary to succeed in

MOOCs, such as time management skills, might moderate self-determined learning. With reference to self-determination theory (Deci and Ryan, 1991; Ragan, 2012), simple practices, such as goal setting or a mentor's feedback on mentee performance, may have significant impacts on learner motivation and generic competence.

7.2.2.2 Priority Setting

Schoolwork is hoped to be the main focus for all secondary students, particularly senior form students, as they prepare for public examinations. Several key surprises emerged from the data. Some MOOC enthusiasts and lukewarm students said that they prioritised MOOCs over schoolwork. Greg confessed that he worked on MOOCs instead of his schoolwork because he found his MOOC engagement more satisfying. Understanding the motivation of these students is crucial to understanding why they would prioritise MOOCs over important schoolwork. Greg's experience was atypical. He enjoyed the sense of satisfaction he derived from completing a challenging yet interesting MOOC assessment but not the sense of failure he experienced when handling difficult Chinese homework. This is in line with Biggs (1995) and Baker et al. (2015), who stated that students are more motivated to acquire knowledge that is important and meaningful to them (Biggs, 1995) and that students can access MOOC content without the pressure of passing the course or obtaining good grades (Baker et al., 2015).

However, having experienced mixed results in both MOOC and schoolwork after the nine-month mentoring period, some students had matured, and they moved on from pursuing their personal interests in MOOCs to focusing on schoolwork when necessary. As discussed in Section 6.4.1, Christy, who completed 16 MOOCs that

year, stated that instead of investing more time in pursuing MOOCs, she had to prioritise exam preparation over MOOC learning because of the decline in her school results. Interestingly, all but one Secondary 5 student in the enthusiast group needed to take the public examination in a year's time.

To strike a balance between the pursuit of her interests in her MOOC learning experience and her school assessment, Christy came up with some innovative ideas for managing her time. She described watching MOOC videos at 1.5X speed and completing MOOC assessments while taking the bus back to school. In the focus group interview, Ellen, a MOOC newbie, also stated that she enjoyed the flexibility of working on MOOCs on her mobile phone anytime she wanted. The experiences of Christy and Ellen accord well with previous researchers' (Baker et al., 2015; Yu, 2015) arguments that MOOCs remove time and place constraints, as well as the commitment associated with traditional university learning. Christy's experience echoes the notion that the MOOC environment shifts control from the instructor to the learner, as the latter have the autonomy to dictate the time and place of their MOOC learning (Bremer, 2012). This is also consistent with Deci and Ryan's (2010) finding that providing learners with autonomy, with reference to self-determination theory, is an important characteristic of successful online learning. Self-directed learners, such as Christy, are expected to benefit from MOOCs because they allow for flexibility in organised learning, particularly regarding lecture videos and assessment modes (Milligan & Littlejohn, 2017).

7.2.2.3 Fun and Enjoyment in the Challenging MOOC Experience

The present findings from the interviews echo Belanger and Thornton's (2013)

position that the majority of the participants indicated "fun and enjoyment" as the primary reason for their participation in Duke University's first MOOC. Similarly, Elly suggested that she considered reading the challenging English literature texts in her MOOC as entertainment, and she was able to complete the MOOC from Harvard University in 3 days (see Section 6.3.2.1). In Section 6.3.5, Ben and Shane also suggested that their participation in MOOCs is purely for fun. These findings accord with the results of Hew and Cheung's (2014) study, which indicate that "personal challenge" (such as completing a challenging engineering course) and "curiosity about MOOCs" are major motives for enrolment.

Most MOOCs are designed for adult learners. It was challenging for secondary school students to work on MOOCs, regardless of whether they were the first-year or second-year students in this mentorship programme. But based on the responses from the student mentees, they were more intrigued by the interesting content, and they were ready to take it as a "personal challenge" to complete a MOOC. The experiences of Ben and Shane (see Section 6.3.2.2) are also consistent with Morris's (2014) findings that intrinsic motivation, such as completing a challenging MOOC in areas learners are interested in from recognised institutions, may positively impact learners' experience in studying MOOCs, as indicated by the self-determination theory.

7.2.3 Students' Experience of Studying MOOCs and Self Determination Theory

Examining the findings of this study in light of a model of self-determination theory generated mixed results. Students' comments frequently addressed issues of autonomy, competence, and relatedness as the key elements of Deci and Ryan's (2010) self-determination theory model. Some patterns could also be identified between

students' behaviours and these factors in their MOOC experiences.

Autonomy

Students frequently cited a wide range of factors contributing to their enjoyment and academic utility of MOOCs, including scheduling autonomy and flexibility of working on MOOCs on their mobile phones. A clear link was seen between autonomy support practices and programme engagement for achievement outcomes since all nine respondents who completed at least one MOOC from the individual and focus group interviews stated that they were motivated by these MOOC autonomy practices. These findings are inconsistent with Baker et al.'s (2015) study, who suggested that MOOC autonomy practices were generally viewed as both beneficial and detrimental, depending on an individual student's metacognitive and self-regulatory behaviours. This may be because scheduling autonomy was balanced by a relative lack of topic selection options and assignment deadlines within courses. In this study, autonomy support practices did in fact increase programme participation and use, leading to a greater completion rate, since the MOOC completion rate for the programme (45%). This is significantly higher than the average completion of MOOCs (5%–15%) reported by Atiaja and Proenza (2016). This signifies students are intrinsically motivated to overcome learning barriers, such as the lack of deadlines, procrastination, and poor time management skills, when they are engaging in a wide range of programmes they are interested in. MOOC participants commonly recognise and discuss the high levels of autonomy through the use of mobile applications, and these findings support Yu's (2015) study, which showed that MOOCs are a forerunner in the field of mobile education, as cell phones, tablets, and mobile devices are commonly utilised tools in many MOOC programmes.

Competence

The concept of competence also seemed to have a mixed relationship with learner behaviours. While previous literature (see Section 2.3.3.2) has stressed the lack of technological ability and language skills in impacting student competency and has shown how it can lead to high dropout rates in online courses (Fini, 2009; Kop, 2011), these two did not have a significant impact on the respondents of this study. With reference to Kop's (2011) study, MOOCs were only available on the web in 2011 and students could only work on MOOCs when they had a stable internet connection at home or at school. With the technological developments of the internet and computer technology in education, students in this study demonstrated a high technological ability while taking MOOCs. None of the interviewees of this study suggested they were concerned about technological barriers. Some students, such as Christy and Ellen (as discussed in Sections 6.3.1 and 6.4.1), capitalised on the flexible nature of using mobile devices to work on MOOCs anytime and anywhere they want. As all respondents were students from a Hong Kong English-medium school, they were fluent in English, and the language barrier did not prove to be much of a barrier to them. Even when a young learner, such as Elly (as discussed in Section 6.4.2), encountered difficulties with the MOOC content, she was able to utilise online applications, such as Google search engine, to search for the definition of the terms she did not understand.

Where competence did seem to be a factor was in the notion of subject competence and time management skills. Regarding subject competence, some clear patterns could be seen in the data. Respondents such as Christy, Kelly, and Elly (see Sections 6.3.3 and 6.4.1), reported that they possessed insufficient knowledge about the subject being studied and they sought academic guidance from their mentor. As stated in

Section 5.3.2, the majority of the respondents reported that they enrolled in MOOCs to grow competence in the subject area they were interested in. Some respondents, such as Shane (as discussed in Section 6.3.2), were motivated by the opportunity to earn a MOOC certificate in recognition of their subject competence. These findings are consistent with Kizilcec and Schneider's (2015) study, which showed that intrinsic motivation, namely, that the course was relevant to their school curriculum, and extrinsic motivation, such as getting a certificate, were key to the MOOC learner's enrolment. Students who did not consider themselves skilled at time management and priority setting often had difficulty with MOOCs. This supports Ejreaw & Drus's (2017) findings that motivation, self-monitoring, and self-management are crucial to self-directed learning in MOOCs. In contexts in which self-management was minimised, students often saw diminished value in their efforts and were more liable to withdraw participation.

Relatedness

Relatedness, the third component of the self-determination theory model, had a relatively minimal role in terms of the respondents of this study. While only Christy (as discussed in Section 6.4.1) reported that she interacted with peers and instructors in the MOOC alumni meeting offered by MIT, the common consensus was that respondents did not feel such interactions were necessary. All the MOOCs discussed in the study offered discussion forums and chatrooms for social interaction, but no respondents reported utilising these resources to any significant extent aside from Christy. This mirrors the findings of Atiaja and Proenza (2016), who suggested that imbalanced student-teacher ratio, lack of interaction between students, and absence of real-time questioning and feedback from instructors are considered unfavourable outcomes of MOOCs. In fact, the nine interviewees in the individual and focus groups

who completed at least one MOOC, mentioned feedback from their teacher mentor, rather than their peers and instructors in MOOCs, as being significant to their motivation and engagement. Interestingly, however, Christy spoke of the role of peer interactions in the MIT alumni meeting in aiding her continued participation in MOOCs. This may indicate that despite very few participants stating the importance of peer interactions in MOOC-related activities, it is a more important factor than most participants were aware of.

Summary

Ultimately, the findings of this study suggest that self-determination theory is a viable theory for further understanding MOOC motivation. The findings of this study suggest that a wide range of MOOC choices, scheduling autonomy, and the flexibility of working on MOOCs on mobile phones are major factors contributing to participants' enjoyment of MOOCs, and they moderate the autonomy practices of self-determined learning. Mixed results were generated in this study regarding competence and relatedness of self-determination theory. But since these topics were so frequently raised by respondents, it may speak to their potential importance. Subject competence and time management skills were significant factors in motivating respondents' continued participation in MOOCs. Christy's experience of meeting and interacting with her peers in the MIT alumni meeting does speak volumes to the importance of peer support in the MOOC experience.

7.3 Research Question 2: How Does the Support Students Receive from the MOOC Mentorship Programme at the Case School Impact Their Experiences in Studying MOOCs?

The findings from both the questionnaires and interviews indicated that the students were mostly positive regarding the overall support offered by the school, with mentoring being regarded as the most popular form of support. The relatively high MOOC completion rate and positive results from both questionnaires and interviews confirm Tomkin et al.'s (2016) findings that coached high school students were more likely to perform well in MOOCs. The school promoted mentorship as a signature programme, and students were recognised for their accomplishments in MOOCs. This result confirms that of Chan and Ho's (2008) study that students attending a school where the benefits of mentoring was recognised would benefit more from mentoring than students who attended schools that did not recognise the importance of mentoring. Tharp and Gallimore's (1988) four-stage model of scaffolding procedures, with reference to ZPD and scaffolding theory, also illustrates how a school-based MOOC mentorship programme impacts students' MOOC experiences and future plans.

7.3.1 The Impact of Mentoring Experience on Studying MOOCs

The findings from the post-mentorship questionnaire (as discussed in Section 5.3.3) confirmed that the mentoring experiences of the students had a positive impact on their MOOC experiences, with the majority of the students agreeing or strongly agreeing that mentoring helped them in terms of their participation in MOOCs. Most of them suggested that their mentoring experiences were effective or really effective. These findings were consistent with the results of a study conducted by Leon Urrutia et al. (2015), which showed that mentorship support in the delivery stage of a MOOC is an added value vis-à-vis the attainment of effective learning.

7.3.1.1 Relationships with Their Mentors

Based on the findings in the individual and focus group interviews, one of the advantages of having the class or subject teacher as their mentor was that it allowed students and mentors to get to know each other better. This is consistent with Soucy and Larose's (2000) findings that mentees who developed a secure attachment to their mentors showed greater emotional and academic adjustment. Mentors may even become "parent surrogates" (Ainsworth, 1989, p. 714). As discussed in Section 6.3.3, students who had their former class or subject teachers as their MOOC mentors felt closer attachment to them vis-à-vis their MOOC experiences. Greg established a close bond with his previous form teacher through mentoring, as he enjoyed communicating with him. Similar to Greg's experience, Ellen and Bowen also stated that their mentors were able to supervise them well because they were their class or subject teachers. DuBois et al. (2002) found that when mentors' backgrounds included prior experiences with their clients and success in helping roles, this led to more significant outcomes in the respective mentoring schemes. According to Appendix 3, 78% (31 out of 40) of mentors were the class teachers or subject teachers of their mentees, and the mentors in these positions could take advantage of their previously built bonding with their mentees and cater to their needs in terms of their MOOC experiences.

7.3.1.2 Length of Relationship

A nine-month mentoring cycle was incorporated into the design of the mentorship programme so that students and mentors had sufficient time to build relationships. This is echoed by research studies showing that negative outcomes—namely, disengaged learners—may be associated with programmes in which mentors quit

prematurely or provided only short-term support (six months or less) (Grossman & Rhodes, 2002; Karcher, 2005, 2008; Rhodes, Grossman, & Resch, 2000).

A variety of views surfaced in the results of the post-mentorship questionnaire (as discussed in Section 5.4.3), but the general consensus among the second-year MOOC students—namely, the lukewarm students and enthusiasts—was that they communicated with their mentors better, their mentors understood them better, and their mentors knew their academic capabilities better. The results from the individual interviews also supported the idea that a nine-month-long mentoring scheme would continually urge students to pursue MOOCs in a regular manner. Based on Section 6.4.2, Elly considered her mentor the driving force behind her completion of her MOOC, as her mentor sent her timely reminders to study. Kelly and Shane also had similar experiences to Elly's because they developed strong relationships with their mentors over the nine-month mentoring period. These findings are inconsistent with those of the study conducted by DuBois et al. (2002), who could find no significant correlation between the length of the relationship and the mentorship bond. However, feedback about keeping the same mentor for a mentoring period of longer than nine months was not collected in either the questionnaires or the interviews. Consequently, the question of whether a mentoring relationship that lasts longer than nine months can allow for better mentor–mentee relationships is still up for debate. It is likely that others might question how relationship length affects mentors and mentees who are not on good terms, and others might point out the opportunity cost of not being exposed to other possible mentors.

7.3.1.3 Frequency of Contact and Quality and Intensity of Relationship

As the mentors are also teachers at the school, all 27 mentors fulfilled the standard requirement of the mentorship programme, as they all met their mentees at least nine times per semester (see Appendix 3). The mentors were heavily committed based on the Google mentorship record mainly because they are paid staff members of the school, and the current school setting enables them to have the time to meet with their mentees and to access them freely during school hours.

Having a mentor who was the class teacher or subject teacher of the mentee was associated with higher mentoring outcomes. Greg's and Christy's experiences were typical examples among the MOOC participants because their quality interactions with their mentors positively impacted their MOOC experiences. In Section 6.3.3, Greg similarly stated how additional activities, such as engaging in conversation in the corridor or during lunchtime, supported his MOOC experience. Christy's experience of texting her mentor after school hours for advice also contributed to the mentoring process by allowing for greater knowledge on the part of the student and a stronger mentor–mentee relationship. Contrary to the findings of Chen's (2010) study, which argued that Hong Kong secondary school teachers use fixed meetings at lunchtime and after-school periods for tutoring, Greg's corridor catch-ups and Christy's texting after school hours were not scheduled meetings. However, these meetings did serve the same purpose, as student mentees from both studies received additional and timely outside-the-classroom tutoring that catered to their needs.

DuBois et al. (2002) noted that the expectations set by the programme regarding the frequency of contact is a significant moderator of efficacy in many studies. The

results are also in line with the research showing a strong linkage between the frequency and intensity of mentoring relationships with positive outcomes (Chen, 2010; Smith, 2014). In Section 6.3.3, some mentees suggested that the best form of mentoring support was to offer absolute autonomy by communicating regularly at school or via social media without fixed meetings, being supportive of their choices, and being responsive when they had problems. This is in line with findings from some research (Johnson, 2004; Smith, 2014), indicating that removing barriers to learning to cater to mentees' individual needs is a requirement of effective mentoring. As discussed in Section 6.4.1, Christy and Bowen were thankful for their mentors' swift yet detailed feedback through WhatsApp, even when it was after school hours. Mentors being responsive and flexible in the form of meetings was also a key factor, as students enjoyed communicating with mentors in a more convenient manner— namely, texting outside regular school hours. Although the frequency of scheduled meetings definitely plays a role in strengthening the mentorship bond, what is perhaps more important is that mentees can identify with their mentors, can view them as "my mentor", and are open to seeking help from them. Once such a relationship is established, then while formal scheduled tutoring sessions might not occur at a fixed venue or in a fixed time slot, mentoring will still be effective owing to the emotional closeness and longevity that are developed during the mentoring process. This flexibility also offers room for mentees to discuss personal issues with their mentors; discussing personal issues is one of the preconditions for successful mentoring and target setting because bonding is strengthened during the mentoring periods (Herrera, 2004). The findings are also in line with those of a study by DuBois et al. (2002) that showed that multiple features of the relationship, such as frequency of contact, longevity, and emotional closeness, may each make significant and distinctive contributions to better student engagement in the mentoring process.

Karcher (2005, p. 65) states in his study that the mentor's inconsistent attendance at common programme activities is associated with the mentee's decline in behavioural competence and self-esteem, suggesting that an absent mentor "may do more harm than good". As stated in Section 6.3.3, mentees who were matched with mentors who were neither their class teachers nor their subject teachers struggled to find common time slots in which to meet up, and this was the major obstacle to both mentors and mentees communicating about MOOCs. As discussed in Section 6.3.3, Nancy, a lukewarm student in the focus group interview, stated that she struggled to meet with her mentor on a regular basis because she was not her subject teacher. Nancy's experience was typical among students who were not mentored by their class or subject teachers. Therefore, I suggest that in the future, the school should make it compulsory for students to pair up with their subject teachers.

Students complaining about their mentors making comparisons between different mentees was an atypical problem that was highlighted in the findings. Each mentor was assigned one or two mentees, and mentors were sometimes accused of making unnecessary comparisons in regard to their mentees' MOOC completion. As discussed in Section 6.3.3, Venus, a newbie in the focus group, complained about her mentor making comparisons between her and the other mentee who completed a MOOC. It is generally acknowledged by several scholars (e.g. Littkey & Allen, 1999; West-Burnham, 2010; Younger et al., 2005) that active mentors should offer positive feedback in regard to supporting learning strategies and clear goal-setting strategies that emphasise learning over grades. Indeed, mentors should prioritise students' learning experiences and value their efforts over the completion of MOOCs because not all students have the capacity to finish a university programme. Spencer (2007)

also identifies deficiencies in mentor relational skills (such as unrealistic or developmentally inappropriate expectations of the youth, a lack of youth focus, and low awareness of personal biases and how cultural differences shape relationships) as one reason for relationship failures and, consequently, as a mentor deficiency that has to be addressed.

7.3.1.4 Academic and Career Mentoring

Academic mentoring and further studies are two other topics that emerged from the results in Sections 6.3.3 and 6.3.5. Based on the results of the interviews, if the mentees were matched with their subject teachers and the MOOCs that the mentees opted for were related to the same subject areas, effective academic mentoring could be provided by the mentors. This is in line with the findings of Smith's (2014) study that the rich application-oriented experiences provided by active mentors, such as their subject teachers, can foster high levels of interaction. This is because they were familiar with the contexts and knowledge. As discussed in Section 6.4.1, Christy had her mathematics teacher as her mentor, and detailed feedback was provided by her mentor regularly. Christy's experience taking a math MOOC confirms Vygotsky's (1978, p. 86) idea of the ZPD that "the actual developmental level is determined by independent problem solving". Since the syllabus of the Math MOOC was different from that of the Hong Kong public examination, Christy's mentor guided Christy in addressing the gaps between the two syllabuses and came up with solutions to tackle questions in the MOOC. Having applied the strategies provided by her mentor, Christy completed the MOOC independently, which indicated that Christy attained the actual developmental level in ZPD by solving the problems independently. Kelly's experience of being mentored by her English teacher (see Section 6.3.3) also confirms

Vygotsky's (1978) position that language is learned more naturally and retained better when the mentees are helped by teachers who are more capable than themselves.

According to Leon Urrutia et al. (2015), one of the most effective interventions for online MOOC mentors in MOOC forum discussions is offering their mentees links to suitable content. Based on the results discussed in Section 5.4.3, the respondents believe that their mentors struggled to offer relevant materials to them and that their suggestions were not helpful. The enthusiasts were the least impressed group out of the three. The implication of the above findings is that mentors did not have access to ongoing training, as they were given only one training workshop at the beginning of the mentorship (see Section 3.2.3), and they did not have any assistance from the school during this period. They may not have been familiar with the context of the MOOC, as the syllabus of the secondary school curriculum is vastly different from that of MOOCs. The motivated enthusiasts and newbies—namely, Christy and Elly— were comfortable pursuing their MOOCs on their own, and they were able to complete the MOOCs without close supervision by their mentors.

The findings from the interviews also echoed the idea that the mentors struggled to provide effective academic mentoring if they were consulted about subject areas that they were unfamiliar with. However, even with limited encouragement or positive reinforcement, mentors may still encourage students to learn in a self-directed manner. For example, Kelly and Christy said that it was their mentors who encouraged them to try different MOOCs. But at the same time, Christy's mentor conceded that he would not be able to provide assistance in those very specific subject matters. The findings from the interviews are in line with those of Smith's (2014) study, which indicated that providing a limited level of advice increases students' involvement in their own

learning processes. This is thought to better prepare them for rapidly changing technologies and business paradigms by developing their abilities to learn in preparation for careers that demand lifelong learning skills (Smith, 2014). Offering positive feedback is also one of the strategies used to motivate students to engage in academic mentoring in the secondary school context (Smith, 2014; West-Burnham, 2010; Younger et al., 2005).

MOOC mentors become students' career mentors, as their suggestions will be valued in mentee's university application. The findings highlighted in Section 6.3.5 show that mentors' suggestions or recommendations for university applications impacted mentees' decisions. For example, Christy said that she was encouraged by her mentor to choose the subject that she liked, which is programming, rather than the subjects she studied in her public examinations. Christy's experience echoes Vygotsky's (Vygotsky, 1934, p. 222, in Wertsch, 1985, p. 71) findings that "by serving as tutors to younger students, the mentors act as 'the more knowledgeable other' that is required for the zone of proximal development". As discussed in Section 6.4.1, Christy said she accepted her mentor's instruction since her mentor was more knowledgeable in university applications, and his advice would benefit her development. Greg also stated that his MOOC mentor had turned into his career mentor, as he provided him with links for exploring further studies in Australia (see Section 6.3.5). These examples also show the flexibility of mentors to see beyond the limits of just mentoring MOOCs. The impact of MOOC mentors on students' decisions regarding their further studies is echoed by Karcher et al. (2006), who argued that the role of mediator is, in fact, a large part of what mentoring is, and that, if it is done well, the mentor can indeed bring about stable and meaningful changes in the student.

7.3.1.5 Online and Peer Mentoring

There were some surprises regarding how mentoring took place online. WhatsApp and email were the two applications mentioned in the interviews. As discussed in Section 6.4.1, Christy interacted with her mentor through WhatsApp after school. Christy also received guidance from her mentors about the MOOC content in their regular face-to-face meetings at school and found the timely online mentoring impactful to her MOOC learning. Christy's experience echoes Salmon's (2013) findings that online socialisation, information exchange, knowledge construction, and knowledge development can positively motivate mentees and encourage them to reflect upon their online learning experiences.

Bowen struggled with his time management (see Section 6.3.3) and he found Whatsapp messages from his mentor helpful because he learned time management skills through these online interactions with his mentor. Online mentoring, such as interactions through WhatsApp, develops mentoring relationships by linking a senior individual with a less skilled student independent of place or scheduling conflicts (Akin & Hilbun, 2007). Based on the findings in Sections 6.3.3 and 6.4.2, Kelly and Elly both suggested that they would regularly communicate with their mentors after school through email. Kelly found the exchange of emails helpful in planning her schedule for completing MOOCs. However, Elly stated that sending emails to her mentors was a time-consuming process, and she would find a solution with a search engine, such as Google, instead. The findings regarding the use of WhatsApp and email support Purser et al.'s (2013) position that the intensive use of social media may help provide timely academic support, create a sense of community, and get students

engaged during the online mentoring process.

Most students in the programme worked on their MOOCs alone, so there is little evidence of peer mentoring in the data. The primary focus was to illuminate the interactions between mentees and their mentors rather than with the other mentees. The HKU TELI MOOC training workshop was one of the few events that encouraged students to "acquire knowledge and skill through active helping and supporting among status equals or matched companions" (Topping, 2005, p. 638). As discussed in Section 6.3.4, mutual learning among participants and the sharing of successful MOOC learning experiences were observed in the HKU TELI training session. However, the HKU TELI training workshop was designed for technologists to equip the students with the essential skills needed to complete MOOCs. It was not a forum for students to interact with each other.

The most significant evidence of peer mentoring was Christy's interactions with her course mates and instructor at an MIT MOOC alumni meeting (see Section 6.4.1). Christy's experience supports Garreta et al.'s (2015) findings that peer interactions in MOOC settings may increase students' satisfaction and Beavin et al.'s (2014) study, which showed that the ability to connect with others in MOOCs might moderate self-determined learning. Christy's experience was atypical as she was the only secondary school student at that event. Christy fruitful experience in the knowledge sharing gathering with her peers in MOOCs further strengthened her belief that MOOCs can impact her studies and her career path as well. This is consistent with Hase and Kenyon's (2007, p. 12) findings, with reference to self-determination theory, that the impetus to learn in online courses lies in "learning to learn" and learners' self-determination in knowledge sharing.

In summary, by equipping or sharing their experiences with their mentees, mentors might serve as mediators and play a crucial role in the transformation of the students. The positive impact provided by the mentorship programme also supports the findings of cognitive theorists: that learners learn best when they are helped by others who are more capable than themselves (Vygotsky, 1978). With reference to Ku et al.'s (2008) four key forms of mentoring support that impact students' success in an academic mentoring programme—namely, emotional and psychological support, academic support, role modelling, and career guidance—mentors were able to provide advice regarding time management skills, academic assistance, and positive reinforcement to the mentees to help them complete MOOCs independently. However, the mentors were relatively weak in modelling or demonstrating their experiences with MOOC completion, as some students—for example, Christy in Section 6.4.1—indicated that their mentors might not have completed MOOCs themselves.

7.3.2 Impact of Academic Support on Studying MOOCs

It is generally acknowledged (e.g. Carter and Francis, 2001; DuBois et al., 2002; Smith, 2014) that offering effective generic training and removing learning barriers for mentors and mentees plays an important part in academic mentoring because these actions determine the extent to which the mentees will actively prepare themselves for learning. In this regard, the training workshop provided by HKU TELI, the reimbursement offered for verified MOOC certificates, and the *MOOC Starters' Guide* given to cater to MOOC students' needs were expected to be the highlights of the mentorship programme. However, training from HKU TELI and the *MOOC Starters' Guide* generated mixed responses according to the findings of the

questionnaires and interviews.

7.3.2.1 Scaffolding in the HKU TELI MOOC Training Workshop

The MOOC Mentorship Programme was newly introduced at the school, and the

training provided to both mentors and mentees was a good introduction to the

programme. DuBois et al. (2002) suggested that structured activities for mentors and

youth is the successful factor for an effective mentoring programme. Hence, many

MOOC learning strategies that cater to students' needs were included in the training

workshop at the beginning of the year. It was hoped that assistance provided by

MOOC technologists, who were considered more capable than the MOOC students,

could "cater to the needs of the participants until they master learning themselves and

become independent of support" (Vygotsky, 1978, p. 86).

The findings discussed in Section 5.4.3 indicate that the training session from HKU

TELI was considered a less effective measure than reimbursement and mentoring.

This result was predictable, as the workshop only took place at the beginning of the

year, and ongoing training might have provided mentors and mentees with better

support for students' work with the MOOCs. This confirms DuBois et al.'s (2002)

findings that ongoing training, instead of one-off training, should be provided to both

mentors and mentees during their relationships. As reported in the previous section,

some mentors failed to provide mentees with links to suitable MOOC content, and the

lack of ongoing training might have been one of the factors that contributed to this

problem. This result also parallels Terrion et al.'s (2007) finding that a major

hindrance to effective mentoring relationships is a lack of or inadequate training for

participants. As explained in Section 6.3.4, the workshop's content was another factor

that contributed to the mixed reception of the MOOC mentees. Initially, first-year newbies who had just begun their MOOC journeys might have found it useful to learn how to register their account, select MOOCs that suit their literacy levels, and understand how to tackle procrastination. In contrast, second-year lukewarm students and enthusiasts might not have found that content as useful, as they participated in the training workshops in the previous year and had already completed MOOCs. The mixed results discussed in Section 6.3.4 provide more detailed answers to second-year students' receptiveness to MOOCs.

As discussed in Section 5.4.3, the results of the survey show some respondents downplayed the effectiveness of the training workshop. However, several second-year lukewarm students and enthusiasts indicated in the interviews that the workshop provided effective guidance. In Section 6.3.4, Christy said that she was inspired by the MOOC technologists, who shared in the workshop how to complete professional certificates such as X-Series in edX. This scaffolding process confirms Wood et al.'s (1976) research, showing that scaffolding is a form of tutoring in which teachers demonstrate how to complete a task and then assist students in attaining mastery of the task, which is difficult for them to achieve without assistance. Chris, an enthusiast in the focus group interview, also stated that the training in generic skills and time management could be useful in his future. These findings echo the idea that adults can help children maximise their learning through scaffolding (Vygotsky, 1978; Wood et al., 1976).

The mixed findings from both questionnaires and interviews indicated that the reception of the MOOC training workshop offered by HKU TELI did not meet some of the students' expectations. In Sections 6.3.4 and 6.4.2, Greg and Elly did not find

the scaffolding process of the workshop helpful; they said that the medium of instruction for the workshop and the successful practices shared by the MOOC technologists did not match their needs, and this was typical for some of the participants. As Ehrich et al. (2004) stated, the effective training of participants might determine the success of a mentoring programme, irrespective of the framework or model used.

7.3.2.2 Developing Skills and Network through the *MOOC Starters' Guide*

Similar to the training workshop offered by HKU TELI, the *MOOC Starters' Guide* aimed to introduce the basic features of MOOC mentoring, such as account registration, MOOC teaching and assessment methods, MOOC discussion forums, and the details of the reimbursement policy. The design of the *MOOC Starters' Guide* follows the practices recommended in Leon Urrutia et al.'s (2015) study regarding online mentoring by including the successful experiences of former MOOC student mentees. A recommended list of MOOCs, mainly those completed by the previous cohorts, was included in the guide. It was hoped to provide students with links to these successful cases and encouraged them to reach out to the MOOC completers.

As with the study conducted by Carter and Francis (2001), relevant and effective generic training for an academic mentoring programme would need to be well thought out because mentoring is highly contextualised. As the booklet is called a "Starters' Guide", the guide's content is expected to cater to the needs of first-year newbies instead of all students. The results of the pre-mentorship survey suggest that most of the newbies reported that the guide was effective or really effective. Some MOOC completers—including Christy, whose case is discussed in Section 6.3.4—enjoyed

seeing their profiles printed in the guide, and the recommended MOOCs would help students' MOOC learning.

However, second-year students indicated in the pre-mentorship survey (see Section 5.4.2) that the guide was ineffective because they were not MOOC starters. The content they found helpful, such as the successful experiences of their peers or the MOOCs completed by former students, was not elaborated on in a detailed manner. The students in the lukewarm and enthusiast groups want to take the MOOCs that were completed by their peers and learn from their successful experiences through the *MOOC Starters' Guide* (see Section 6.3.4). The findings are echoed by research studies showing that with an evaluation of others' work and practices and an exchange of successful practices, students could develop new criteria to improve their own learning activities, such as MOOCs (Akin & Hilbun, 2007; Salmon, 2013). These suggestions parallel Brooks et al.'s (2015) findings on the impact of peer support in MOOC learning, as learners who sign up for MOOCs with friends have higher completion rates than those who do not.

7.3.2.3 Removing Financial Barrier with Reimbursement of MOOC Certificates

As discussed in Section 5.3.4, reimbursement for verified certificates was one of the most popular forms of support. Despite offering content that is often free of charge, some MOOCs collect a fee for certificates, credits, or credentials (Downes, 2008). The fees for certificates have become a barrier for students, as they need to pay to have their completion of MOOCs recognised. The popularity of the reimbursement policy confirms Smith's (2014) finding that removing barriers to learning—namely, the fee for the recognition of MOOC completion—is essential to the success of an

academic mentoring programme. The policy also significantly motivated some enthusiasts, such as Christy, who suggested that her collection of 16 MOOC certificates gave her a confidence boost and that her MOOC experience revitalised her school life. Christy's experience is typical among MOOC completers because their MOOC certificates were subsidised. This confirms previous researchers' findings, which indicated that the educational benefits of engaging in MOOCs can be conceptualised regarding academic gains and earning certificates (Kizilcec & Schneider, 2015; Milligan & Littlejohn, 2017).

Many second-year students were supportive of the reimbursement measure (see Section 5.3.4), and these findings are in line with the number of MOOC completers among the second-year students (see Section 5.2). The findings from the interviews further supported the notion that reimbursement was considered an important form of support in motivating students vis-à-vis MOOC learning. In the focus group interview, Chris, Wesley, Venus, and Bowen also stated that reimbursement for MOOC certificates provided them with an incentive to complete their courses. By collecting the reimbursement fees for the verified MOOC certificates, students were eager to work on multiple MOOCs without worrying about the prohibitive fees. These findings are consistent with Bonk and Lee's (2018) study that the cost of signing up for a MOOC verified certificate may be prohibitive for some learners and prevent them from having a positive experience with MOOCs.

7.3.3 The Impact of Sociocultural Theories on the MOOC Mentorship Programme

Vygotsky's sociocultural theories provide a framework within which to interpret the findings and experiences of the participants. Initially, the scaffolding through the interaction with more capable others, such as teacher mentors, MOOC technologists, or peers in MOOC alumni gatherings, appeared to be important in facilitating learning and promoting motivation, self-confidence, and strategy during the process of overcoming challenges and problems. From a sociocultural perspective, the discussion with the more capable others provided a knowledge-sharing experience and helped the students to develop their knowledge, abilities, and self-confidence. This social interaction appears to increase mentor-mentee interaction because students came to self-direct their MOOC experiences. This confirms Bruner's (Wood et al., 1976) assertion that modelling by a more capable other promotes the transfer of knowledge from the external social world to the internal world of a learner's thinking and remembering. Consistent with this view, as Smith (2014) suggests, the rich application-oriented experiences provided by active mentors can foster high levels of interaction. Johnson (2004) states that the work of mentors, namely mentoring pupils for their individual needs, can be seen as an attempt to remove barriers to learning. Thus, by considering the learning process in the MOOC mentorship programme a social practice, insights from interactions between mentors and mentees, as well as the dynamic impact of such on MOOC mentees' traits, can provide useful information for educators and researchers.

The impact of the mentorship programme on the students' MOOC experience appears to manifest Vygotsky's theories of the ZPD. In particular, the four-stage model (Tharp

& Gallimore, 1988) helps us examine the learning processes by providing a further interpretation of students' MOOC experiences at various stages, as well as how those experiences assisted them to become more self-regulated MOOC learners.

In stage one, the students demonstrated a limited understanding of the purposes of MOOCs and the essential skills they need to participate in MOOCs, such as time management skills and knowledge about the basic functions of MOOC platforms. They also lacked the ability to choose MOOCs that match their ability levels, interests, and needs. In response to this, teacher mentoring and the HKU TELI training workshop were intended to equip students with the skills and knowledge they need for a successful MOOC experience. For instance, at the beginning of the mentorship programme, some respondents, such as Christy and Elly (see Sections 6.4.1 and 6.4.2), said they learned about different MOOC platforms, MOOC assessment, and even strategies for tackling procrastination through the HKU TELI training session. Some respondents also perceived their participation and completion of MOOCs as beneficial in enhancing their subject competence, further studies, and career planning. However, students later reported an inability to tackle time management, procrastination, priority setting, and challenging content in their MOOC experiences. The data showed that the recommendations of their mentors and MOOC technologists had a positive impact in terms of addressing these concerns (see Sections 5.4.2 and 6.3.3). These findings are in line with stage one of Tharp and Gallimore's (1988) framework that learners initially have limited understanding of the basic knowledge and purposes of the tasks, and they rely on more capable others to regulate their learning and provide scaffolding or learning directions.

Bock and O'Dea (2013) suggested that high school students lack the self-directed

learning skills that MOOCs require. Teacher mentoring and the dissemination of good practices in the HKU TELI workshop were crucial to raising awareness of students' MOOC learning processes and the task requirements of the MOOC platforms. According to the findings of this study, the respondents initially demonstrated their need for support from or the presence of more capable others, such as MOOC technologists and mentors. Consulting their mentors through formal face-to-face tutoring sessions or during the problem-solving processes helped to enhance students' motivation to continue their MOOC learning. Thus, interactions with mentors and MOOC technologists were essential in providing scaffolded help in the early stages (see Sections 6.3.3 and 6.3.4). These social interactions familiarised the students with the abilities, skills, and awareness needed, which supported them because they became more responsible in studying their MOOCs.

In stage two, with an increased understanding of MOOC features and enhanced time management skills, the students gradually became more self-directed in their MOOC experiences. One feature of this stage is that students shared their MOOC experiences actively and extensively with their mentors during their face-to-face meetings, such as Elly (as discussed in Section 6.4.2) sharing her Greek literature stories with her mentor after her English lesson. These findings are consistent with stage two of Tharp and Gallimore's (1988) framework that learners give self-talk, such as presenting their plan verbally to the more capable others, step by step when they are engaging in specific learning tasks. It is notable that learning, at this stage, may not always be pleasant or successful. For example, Venus complained about her mentor making comparisons between her and the other mentee and Christy suggested that her mentor struggled to provide effective academic mentoring in subject areas that he was unfamiliar with (see Sections 6.3.3 and 7.3.1.4). As the findings of the study suggest,

the students consistently encountered problems before they developed effective strategies or methods, and they still needed academic and affective support from their mentor, as well as to learn from the successful MOOC experiences in the *MOOC Starters' Guide*, before becoming self-directed MOOC learners.

In stage three, in the latter half of the mentoring period, the study found that students seemed to study MOOCs more independently, with less academic assistance from their mentors. They approached problems using their own learning patterns and methods flexibly, such as Elly (see Section 6.4.2), who worked through challenging MOOC content using a search engine rather than reaching out to her mentor after school. These findings are also in line with stage three of Tharp and Gallimore's (1988) framework that learners' task performance is 'optimized', 'automatic,' and 'internalized' as they no longer require a great deal of assistance from their mentor. Students had also matured in terms of striking a balance between their schoolwork and MOOCs, setting reasonable goals for their MOOC participation and accessing the resources (e.g., *MOOC Starters' Guide*) to complete more MOOCs. Based on the findings, a stronger bond between the mentee and mentor was established at this stage, and students enjoyed communicating with mentors in a more convenient and flexible manner, namely texting outside regular school hours when they needed assistance.

In stage four, some students were able to complete the assessment tasks in MOOCs independently and attain the verified certificate. However, when the participants intended to connect their successful MOOC experience with other challenging tasks, such as preparation for public examinations or interviewing for university, they would again require support from their mentor. In fact, MOOC mentors may also become students' career mentors, such as Greg's case of consulting his mentor about overseas

university applications after his MOOC completion (as discussed in Section 6.3.3). This is consistent with Sakamoto and Tamanyu (2014), who found that guided practice through mentorship and interaction with more capable peers allows self-directed learners to mature and achieve their academic goals.

In summary, this study has raised issues with regard to the dynamics and complexity of reaching the ZPD. It suggests that the process of scaffolding that learners need to reach the ZPD is complicated. The findings of this study argue that the interaction between the mentor and mentee has mixed effects on students, which did not promise scaffolded help but doubts or even frustration at times. However, challenges and problems caused by inputs in the mentorship programme may become a form of scaffolding if they can channel learners to acquire knowledge or abilities that will enable them to complete MOOCs. This problem-solving experience in MOOCs encouraged learners to actively seek support, develop abilities, and adapt themselves to the learning process. Hence, the learning process is not straightforward, because the students always moved back and forth between the above-mentioned problems and self-directed learning in the ZPD when they developed abilities or faced new challenges.

7.4 Research Question 3: How Do the Student Mentees' Participation in the School-Based MOOC Mentorship Programme Impact Their Future Plans?

In Sections 5.5.1 and 5.5.2, the majority of the respondents indicated that their overall experiences in the MOOC programme had only some impact on their decisions regarding further studies. This indicates that their MOOC participation was important but might not be a decisive factor in their future planning. The findings in Section

6.3.5 also align with the results above, as public examination results were more impactful with regard to students' university applications than their MOOC experiences.

7.4.1 Impact of MOOC Subjects on Students' University Applications

The impact of MOOC subjects on students' university applications was relatively positive. As mentioned in the findings in Section 5.5.1, the students enjoyed the wide range of subjects offered by MOOCs; most of the enthusiasts declared that MOOC subjects had a significant impact on their further studies. These results are consistent with both the pre-surveys and post-surveys, and they are in line with the findings in the interviews as well. When the students were asked about their interest in pursuing studies at the university from which they completed MOOCs, some students responded positively in the first interview. Christy, who completed a MOOC from Harvard University, stated that she would consider studying at the universities where she completed her MOOCs.

However, there exists the notion that some interviewees from the individual and focus group interviews would not consider applying to the universities where they completed MOOCs. This obviously contradicts the results from both questionnaires. As stated in Section 6.3.5, Greg insisted that public examination results, instead of MOOCs, were the determining factor in his university application. Some students— for instance, Christy—shared contrasting views compared to their first interviews, because they understood that public examination results would be the most important factor in regard to their university applications and that their MOOC experiences might only supplement their applications. In Section 6.3.5, Ellen suggested that the

geographical barrier was a concern for her despite her participation in a MOOC from a Japanese university. This leads to further discussion regarding whether the recognition of MOOC completion—namely, the verified MOOC certificate—would complement the students' university applications.

7.4.2 Impact of Extra-Credential Learning on Students' University Applications

In this study, some students used their verified MOOC certificates as a form of extra-credential learning to gain an edge in their university applications. When asked about the factors that influenced their decisions to apply to tertiary institutes, the questionnaire results suggested that the students were most likely to be influenced by the subjects they studied through MOOCs, followed by the recognition of the verified MOOC certificates. Based on the findings in Sections 6.3.1 and 6.4.1, it seems that the students perceived that they were gaining an edge over their counterparts owing to their successful completion of MOOCs and their certificates. Kelly and Christy stated that they were given bonus marks and conditional offers based on their successful completion of MOOCs (see Sections 6.3.5 and 6.4.1). These offerings confirm that MOOC completion is one of a wide variety of educational opportunities vying for attention in an increasingly complex postsecondary ecology (Kamenetz, 2010; Scott & Biag, 2016; Stevens, 2015). The students' experiences above correspond with the results of various studies, which show that MOOCs play an important supplementary role in learners' current formal educational opportunities (Belanger & Thornton, 2013; Schmid et al., 2015; Zheng et al., 2015).

As explained in Section 6.3.2.2, Shane suggested that acquiring professional qualifications through online learning was his main incentive in studying MOOCs.

Five out of the six interviewees from the focus group also indicated that they were motivated to attain verified MOOC certificates due to the flexible nature of studying MOOCs. These experiences echo Yuan and Powell's (2013) position that learners are attracted to extra-credential learning opportunities due to greater flexibility in participation and the possibility of earning alternative credentials (Kato et al., 2020).

In general, it seems that students' MOOC completion and MOOC certificates were useful in helping them progress in their further studies. However, as in the discussion in the previous section, some students shared contradictory views regarding whether MOOC completion would play a decisive role in their university applications. A downward trend can be highlighted in the results of the post-mentorship survey (see Section 5.5.2), with a few respondents suggesting that MOOC certificates had some or a significant impact on their further education. The reason for this decline may be that only 18 students managed to complete at least one MOOC by the end of the year. Consequently, some students did not benefit from the MOOC certificates, as they failed to complete them, which might have influenced the results.

Even the students who completed MOOCs stated that MOOCs might not be the decisive factor that impacts their university applications. For example, Greg stated that his completion of a MOOC from HKU did not guarantee him a place at the university, and he believed that his examination results would still be the decisive factor in his application (see Section 6.3.5). Under the current exam-oriented system in Hong Kong, MOOC completion may be auxiliary in students' university applications because public examination results are considered the main factor in securing a spot at a university. Certificates may only serve as a complement, an achievement, and evidence of MOOC learning that might support their university

applications. This confirms the research findings that indicate that since verified

MOOC certificates are less well respected than the results of traditional public

examinations, many MOOC completers took the course just to receive a valuable

certificate as evidence of their learning achievement in supporting their university

application (Watted & Barak, 2018).

7.4.3 Impact of Informal Learning on Secondary Students' Career Planning

There is limited research on how secondary school students approach MOOCs as a

form of informal learning and how they impact their career planning (Tomkins et al.,

2016). The mixed findings from both questionnaires and interviews indicated that

some students viewed MOOCs as a benefit to job applications, while some did not. It

is important to explore students' perceptions regarding the impact of MOOCs on their

career planning.

Working on MOOCs for fun rather than to improve employability
According to a report released by the Census and Statistics Department in 2018, over

80% of Hong Kong secondary students begin higher education or vocational

education instead of moving into the job market. In response to these statistics, this

study focused primarily on further studies rather than employability, as the students

were expected to focus on pursuing their interests in MOOCs rather than career

advancement. Similar findings are evident in Section 6.3.5. Ben confessed that his

completion of a MOOC in music was for fun only. He insisted that the new alternative

credential of a MOOC certificate could not replace traditional degree programmes.

Ben's experience confirms Kizilcec et al.'s (2019) study, in which most of the online

survey respondents believed that online university programmes are less legitimate and

less rigorous than traditional face-to-face classes. As discussed in Section 5.5.2, Ben's experience was typical, as 14 out of 40 respondents indicated in the post-mentorship questionnaire that the recognition of verified MOOC certificates had little or no influence on their career planning. Students' expectations may relate to Pickard's (2018) finding that alternative credentials attained via informal online learning programmes are not yet standardised enough to be a currency in the labour market.

The possibility of achieving career advancement through MOOCs

However, some unexpected findings from the interviews can be highlighted, such as professional skills acquisition and the enhancement of employability. As discussed in Section 6.3.2.1, Kitty utilised the flexible nature of MOOCs to expand her Japanese language learning. Chris was motivated to broaden his programming knowledge by taking C++ courses. These findings confirm Dannwolf's (2020) study that informal learning places, such as MOOCs, can offer students new insights into methods, materials, and objects that cannot be used in classrooms. Chris's experience was also a typical example among participants of IT MOOCs, as they were encouraged by the intrinsic and practical benefits of earning extra credentials from MOOCs (Pearson VUE, 2019). They used MOOCs for credit recognition and to continue professional development pathways (Brown, 2018).

Christy was informed by her fellow course mates at the MIT alumni gathering that a verified MOOC certificate is highly recognised in their field and that they landed their current jobs because of MOOC certificates. These findings are inconsistent with the results of some research (Garrido et al., 2016; Radford et al., 2014), which indicates that many human resource professionals said that MOOCs failed to demonstrate a specific skill as compared to a traditional credential. This may be owing to their lack

of familiarity with MOOCs, the lack of accreditation, and the lack of formal qualifications, such as a university degree. By interacting with working adults through informal learning events such as MIT alumni gatherings, Christy was inspired by the professional dialogues. Christy learned that informal learning experiences such as MOOCs have the "potential for more meaningful learning experiences than formal training" (Noe et al., 2013, p. 248). Christy's experience was atypical, as she had already recognised the possibility of achieving career advancement through MOOCs even before her graduation from secondary education. This finding parallels those of Stevanović (2014), whose study indicated that some students perceive MOOCs as a tool for establishing a professional network. Dillahunt et al. (2016) found that enhancing employability was a key reason many learners enrolled in MOOCs. These findings also echo those of Littlejohn et al. (2016), who found that improving skill sets and gaining general content knowledge related to current and future practices are incentives for MOOC participants.

7.5 Summary

This chapter presented a discussion of the research questions surrounding students' MOOC experiences (Research Question 1), the support offered by the school (Research Question 2), and how the students' MOOC experiences impacted their future (Research Question 3).

Deci and Ryan's (1991) model of self-determination learning theory is examined in this chapter to illuminate learners' experiences and motivations for studying MOOCs in the MOOC mentorship programme. A wide range of choices for MOOCs, scheduling autonomy, and the flexibility of working on MOOCs on mobile phones are

significant factors that contributed to participants' continued participation of MOOCs. These factors moderate the autonomy practices of self-determined learning. Mixed results were generated in this study regarding competence and relatedness to self-determination theory. Subject competence and time management skills were major factors in motivating students' MOOC participation. Christy's meeting with her peers in the MIT alumni meeting is also an important example of peer support in the MOOC experience.

Mentoring support and reimbursement of MOOC certificates were highlighted as the most effective forms of school support. Unexpected outcomes were found regarding the support offered by HKU TELI. The training workshop provided by HKU TELI, which was expected to be the highlight of the programme, and the *MOOC Starters' Guide* were considered less effective measures compared to reimbursement and mentoring, due to the lack of ongoing training and content updates. The MOOC completion rate for the programme (45%) exceeds the average completion rate of MOOCs (5%–15%) reported in the research literature. This suggests that under the supervision of a mentor and with the other support offered by the school, students might be more capable of successfully completing MOOCs.

The four-stage model (Tharp & Gallimore, 1988), with reference to Vygotsky's sociocultural theories, provides a framework to illuminate students' experiences taking MOOCs at the different stages and how those experiences helped them reach the ZPD. The impact of the mentorship programme on the students' MOOC experiences manifested Vygotsky's theories of ZPD, as problem-solving experiences encouraged learners to actively seek support, develop abilities, and adapt themselves to the learning process. Therefore, the learning process is not straightforward or linear

because the students were constantly pushed back and forth, to and from the sources of scaffolding during their MOOC learning, particularly when they faced new challenges.

The findings of this study indicate that students' MOOC participation was important but might not be a decisive factor in their future planning. Interesting MOOC subjects had the most impact on participants' decisions regarding their tertiary education, followed by the recognition of the verified MOOC certificates. Some students used their verified MOOC certificates as a form of extra-credential learning to gain an edge in their university applications. Unexpected findings from the interviews can be highlighted, such as professional skills acquisition and the enhancement of employability being pinpointed as benefits of the informal learning experiences of MOOCs.

Chapter 8, the conclusion of the study, will focus on the contributions of the research to related areas, as well as on the limitations of the present study. Recommendations and implications for further research will also be discussed.

Chapter 8

Conclusions

Chapter 7 presented a discussion of the research findings, and this chapter finalises the dissertation. First, it concentrates on contributions arising from previous research in related areas, followed by the limitations of the present study and proposals for future research. Recommendations for practitioners in the field of MOOC mentoring in the secondary school context are also provided. Finally, a conclusion is drawn.

8.1 Academic and Practical Contributions of this Study

Academic contributions

From a theoretical viewpoint, the findings of this study indicate that self-determination theory (Deci and Ryan, 2010) is a viable theory for further understanding students' motivation to take MOOCs. The findings of this study suggest that a wide range of choices for MOOCs, scheduling autonomy, and flexibility of working on MOOCs on mobile phones are major factors that contribute to participants' enjoyment of MOOCs, and these factors moderate the autonomy practices of self-determined learning. Mixed results were generated in this study regarding competence and relatedness of self-determination theory. Subject competence and time management skills were significant factors in motivating respondents' continued participation in MOOCs and a MOOC enthusiast's experience meeting and interacting with her peers in the MIT alumni meeting speaks volumes to the importance of peer support in the MOOC experience. While previous literature has stressed the lack of technological ability and language skills in impacting student

competency in online courses (Fini, 2009; Kop, 2011), these two factors did not have a significant impact on the respondents of this study.

The concept of the four-stage model (Tharp & Gallimore, 1988) illustrates the MOOC learning process, sequences, and changes, showing that the MOOC mentees were supported in the mentorship programme to reach the ZPD. The experience of taking MOOCs also shifts from receiving guidance from more capable others to complete MOOCs to completing the tasks independently. The process for students to reach ZPD was accomplished through the support of teacher mentoring, dissemination of good practices from HKU TELI training workshops, and even peer interaction in MOOC alumni gatherings. The ZPD is manifested throughout the supporting measures in the school-based mentorship programme. The findings of this study also revealed a more complex picture than the framework presents, which indicates that the learning process is not straightforward or linear. The students were always pushed back and forth, to and from the sources of scaffolding during their MOOC learning, particularly when they faced new difficulties. In this regard, this study has contributed more specific details to this framework, because it illuminates the students' MOOC experience in the school-based mentorship programme.

The findings of this study also indicate that students' MOOC experiences have relatively little impact on their decisions regarding further studies. The particular subjects that students are interested in and their MOOC completion may have some influence on their decisions regarding further studies, but these may not be decisive factors, as the students acknowledged that MOOC certificates cannot replace the results of public examinations under the current school system treated in this study.

Based on interviews, enhanced employability resulting from acquiring MOOC certificates was highly valued by the secondary school students in this mentoring programme. Some students used these extra credentials attained through informal learning experiences in MOOCs to gain an edge in their university applications. These were unexpected findings from this research.

Practical contributions

From a managerial viewpoint, this study explored the experiences of 40 Hong Kong secondary school students over time who had taken MOOCs with mentoring from schoolteachers. Having adapted Chen's (2010) model in this study of a school-wide, one-on-one teacher–student mentoring programme in Hong Kong, I evaluated the effectiveness of the support offered by the school, such as the collaboration with HKU to provide training workshops, mentoring support, reimbursement for MOOC certificates, and the *MOOC Starters' Guide*.

This study revealed that the support offered by the case school had a positive impact on students' experiences in studying MOOCs. Previous works indicate that mentoring is the most effective form of learning support, as confirmed by Vygotsky (1978) and Wood et al. (1976), whose research demonstrated that an experienced mentor could help students maximise their learning through scaffolding. In essence, experienced teacher mentors in this study provided time management skills, academic assistance, and positive reinforcement to help mentees complete MOOCs independently over a designated period. The findings of the present research also relate back to the literature and fill a gap in existing knowledge, as outlined in Section 2.5. According to Hill (2015), a major concern about MOOCs is the lack of guidance and interaction between students and experts in the course subjects. This study underscores this gap

and provides in-depth empirical evidence to address it. The relatively high completion rate (45%) of MOOCs in this programme supports Tomkin et al.'s (2016) findings that under the supervision of mentors and other support offered by the school, secondary students can thrive and complete MOOCs.

With the potential benefits elicited from the results of the study, the idea of mentoring secondary school students for MOOCs can be shared with other secondary schools in Hong Kong and possibly in other countries, as we observed that students benefit from the rich content of the MOOC platforms under the supervision of mentors. Various forms of support provided by the school in the programme (e.g. mentoring, reimbursement, and the *MOOC Starters' Guide*) were explored based on their impact on the students' experiences in studying MOOCs. For technologists who are involved in designing or teaching MOOCs, the findings of this dissertation may provide useful information on the experiences of their target audience—secondary school students—in regard to their MOOC participation under the supervision of teacher mentors.

8.2 Limitations

The limitations of this study can be characterized as follows:

1. Rather than an intensive 9-month period to conduct the current research, a longitudinal study over two years might have afforded time to conduct further interviews to illuminate the mentoring experiences of the students.

2. Originally, three individual interviews were scheduled for October, February, and July to record students' experiences in three stages of their mentorships.

However, the February interview was eventually cancelled because there was no available time slot for the students due to their engagement in the first exam and other schoolwork.

3. The power relationship between my students and myself could also be a concern in the data collection process. Due to my position as administrator of the MOOC programme, a senior teacher at the school, and the researcher of this study, the students may have had certain reservations regarding sharing their experiences. Additionally, their comments may have had an impact on other stakeholders—namely, their mentors. The students may not have expressed opinions and replied frankly. This may have reduced the accuracy of the research results. However, as stated in Section 4.9.2, I positioned myself as a doctoral student in front of the interviewees, and I applied different measures to ease the tension. The interviews were more conversational than typical classroom interactions between teacher and student. Appendix 10 shows that I started with casual conversation in the interviews to make sure that the students were comfortable. A rapport was built over the course of the year, as I maintained contact with the students both in and outside the classroom.

4. Fine-tuning could have been done in the categorization of the MOOC students to find further distinctions between the three groups. Questions might be raised regarding the separation between enthusiasts and lukewarm students. I explored the possibility of having subgroups in the categorization and determined that students in the Year 2 group who had completed fewer MOOCs the previous year may have spent more time in MOOCs than their

counterparts. The decision was made to include two categories within the second-year group—namely, enthusiasts and lukewarm students—to address the differences in their commitment and achievements in relation to their MOOC mentoring experiences. Even within the Year 1 group, there is learner diversity, as some amateurs might be more committed, achieve more, and easily outperform the lukewarm students in the Year 2 group.

5. Another limitation is the failed attempt to record meetings between mentor and mentee with an online mentorship form. An online Google mentorship form (Appendix 1) was originally designed to be filled out by both mentor and mentee, and the main foci of the mentorship form were on setting goals and reviewing the mentoring process on a monthly basis. However, by the end of the year, it became clear that the mentorship forms were mostly filled out by the mentors. As a result, the students' mentoring experiences and their perceptions of the support they received could be elicited only through the survey and interview results.

8.3 Recommendations

Successful practices for a MOOC mentorship programme in a K-12 setting can be pinpointed in this study and can serve as an important reference for other MOOC mentoring programmes in other demographic contexts.

1. In terms of mentoring support, students told the researcher that their mentors equipped them with generic skills, such as time management to overcome procrastination. Flexibility and affective support are the keys to

fostering a tight bond with the mentor; some interviewees thrived when they
were given the autonomy and systematic support to explore their MOOCs in
this study.

2. Offering training workshops and updated MOOC-related learning materials
   is the key to encouraging better participation, as the MOOC interviewees
   suggested that having the most up-to-date information on the various MOOC
   platforms would positively impact their MOOC experiences.

3. Reimbursement is largely welcomed by MOOC students, who view it as
   removing a barrier to learning; in this case, the fee for gaining recognition for
   their MOOC completion is essential to the success of the academic
   mentoring programme.

4. More preparation could have been done in the design of the HKU's MOOC
   training workshop. The students' expectations and needs could have been
   collected and considered by distributing pre-mentorship online surveys,
   especially for students who were attending the training workshop for the
   second consecutive year. The MOOC workshop might have been evaluated
   early on so that ongoing training opportunities could have been considered
   by me or indeed HKU TELI.

5. The *MOOC Starters' Guide* can be converted to an e-version and renamed,
   such as the *MOOC Guide*, to allow regular updates on strategies and tips for
   working with MOOCs. The list of MOOCs completed throughout the year
   could be updated. Not only might beginners be motivated by the MOOCs
   completed by their peers, but the data would also serve as a reference for
   secondary students who are exploring the MOOCs they are capable of
   completing. Regarding the lack of an updated guide, the introduction of an e-
   version that includes constant updates regarding the MOOCs that are newly

completed by their peers would be helpful.

Mentors could be encouraged to exercise more flexibility in meetings with their mentees. Structured activities, such as lunch gatherings with other mentors and mentees, as proposed in Chen's (2010) study, and meetings coordinated by the school would create a MOOC learning community in which good practices and experiences can be shared. This could also support less motivated participants and indeed encourage mentors to better support mentees. The idea of creating a MOOC learning network for both MOOC teachers and students could have been envisaged in the design of the MOOC mentorship programme in the first place. Not only do mentors need to fulfil a role as academic advisers in mentoring, but they also need to be facilitators, motivators, maintainers of discipline, and so on (as discussed in Section 7.2). This has implications for mentors' training needs. Apart from equipping mentors with the specific features of MOOCs, training regarding generic skills—namely, time management and online communication skills—should be given to mentors so that they can provide up-to-date strategies to enable their mentees to thrive in their online MOOC learning.

At the mentee level, students' voices from the aforementioned lunchtime gatherings and forums can help improve the execution of the mentoring programme and mentor–mentee matching. Such gatherings would build a community to share experiences and support each other over and above the support from mentors. This strategy may give students greater ownership of their learning. Students should be given the opportunity to participate in evaluating the MOOC mentoring programme by seeking their comments and input. Personal factors, such as the mentees' academic performance and peer relationships at school, can be further explored in connection with their

MOOC experiences. Peer learning and peer mentoring can be introduced in these gatherings and forums to reinforce students' sense of community through exchanging ideas and sharing experiences in the discussion forum of the MOOCs. By sharing their practices and evaluating others' practices and outcomes, students can develop new criteria to improve their own learning activities (Akin & Hilbun, 2007).

8.4 Implications for Further Research

As discussed in Section 7.2, exploring the impact of MOOC mentoring programmes from the mentors' perspectives would be a good topic for further research. It would be ideal to have the experiences and background of the mentors, as this could impact the investigation of role modelling and personal factors from the mentors' perspective. This point is supported by recent research suggesting that feelings of closeness and emotional support are key elements in mentoring relationships that are associated with improvements in youth functioning (DuBois et al., 2002; Herrera et al., 2000).

As the qualitative aspects of the study focused mainly on students' perspectives, this allowed for saturation in terms of the good practices that surfaced from the receivers' standpoint. Conversely, some glimpses of the alternative perspective of how mentoring can fail and what causes such failures could be gleaned from the mentors' reflections. Including mentors' voices—highlighting interactions in the mentoring process from the mentor's perspective—would be more comprehensive in terms of illuminating the students' experiences in the mentoring programme. Mentors' input would have a positive impact on the evaluation of the mentoring programme because the instruments used in this dissertation can be adapted based on their feedback.

Longitudinal studies, possibly lasting two to three years, could be carried out to determine whether MOOC mentees gain maturity by building strong and long-lasting bonds with their mentors. Any breakdown in the mentoring relationship can also be examined in the process. An extended period in a longitudinal study would allow for more flexibility to conduct multiple interviews during the mentorship, and the researcher(s) could further explore the possible changes that emerge in mentoring processes over time.

In future research, I can further explore the feasibility of recording MOOC students' interactions with their mentors during their scheduled meetings or activities. In regard to understanding the MOOC learning and mentoring experiences of new MOOC students, the interaction between MOOC students and their mentors might be the most valuable data. As stated in the limitations section, it is very difficult to collect such data unless I am authorised to audio-record the conversations between MOOC students and their mentors on a daily basis. The main challenges relate to the willingness and cooperation of the students and their mentors. Teachers and students are very busy throughout the school year, and it requires both their willingness to devote the time and my constant reminders as a researcher.

8.5 Conclusion

Pandemics always create uncertainties, as we have experienced with COVID-19. However, if we look back at history, these uncertainties also create opportunities for evolving knowledge dissemination. Even when regular face-to-face classes can be resumed after COVID-19, it will still be difficult for ordinary K-12 students to explore humanities subjects or cutting-edge STEM areas, as these are often

unavailable in school. Fortunately, MOOCs provide opportunities for all learners to access high-quality education on any topic. This dissertation has illuminated the experiences of Hong Kong secondary school students engaging in MOOCs and how the different forms of support offered by the case school impacted their experiences in studying MOOCs and their decisions regarding further studies. The present study is a new research area and has been conducted in a data-based, systematic, and non-judgemental manner. It has contributed to the field of school-based MOOC mentoring and MOOC experiences for secondary school students.

Personally, the findings, limitations, proposals for future research, and recommendations proposed in this study offer insights into potentially useful changes in e-learning at my school and have even brought global recognition in the form of various awards. In collaboration with the University of Hong Kong, this school-based MOOC initiative was shortlisted by the Reimagine Education Awards and Conference 2019—the "Oscars of Education"—in the e-learning category. After the quantitative and qualitative data were collected from this study, a "MOOC for All" project was further introduced to Secondary-3 students at my school during the summer holiday of 2020 amid the COVID-19 pandemic. Online mentoring and ongoing training workshops were offered to the students, coupled with the updated version of the MOOC Guide that included listing MOOCs completed by former students. The result is promising: over 200 MOOCs were completed by 95 students in just two months. This shows a better understanding of how MOOC mentoring in secondary schools can impact self-directed and online learning at the target secondary school. I plan to conduct more studies in the field of MOOCs for K-12. I am also interested in following former participants of the programme to see whether they have continued with MOOCs and internalised the support received from their mentors.

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Appendix 1 – A Sample Google Mentorship Form

Student Profile

	Name of Mentee:
	Class (No.):
	Name of Mentor:
Fields / Subjects that the mentee is interested in	Chinese, Art, Translation
Universities that mentee plans to attend in the future	National University of Singapore, The University of Hong Kong (HKU)

MOOCs Details

MOOC(s) that you have enrolled	University of the MOOC(s)	Starting date	Result
E.g. Think. Create. Code	*University of Adelaide*	*2/11/2016*	*Complete*
東坡詞(Ci Poetry of Su Dong Po)	National Taiwan University	26/12/2016	Complete

Mentorship Details

Meeting date, time and duration	Progress	Mentor's feedback
Date: 9/10/2017 Time: 16:15-16:30 Duration: 15 mins	- Selecting MOOC(s) - Setting goals: to complete at least one Chinese literature related course by the end of this term.	After registering the courses, Samantha is encouraged to start one of them after the first term test.
Date: 16/10/2017 Time: 16:15-16:30 Duration: 15 mins	**Called her several times but Samantha revealed that she needed to prepare for term test	**Will contact Samantha after term test
Date: 13/11/2017 Time: 16:15-16:30 Duration: 15 mins	-The starting/end date of the course -Assignments required in the course -Next meeting date	Remind her to start the registered course one by one, and work on them after the revision of HKDSE subjects.
Summary of 1st term	- **Samantha has already enrolled two MOOCs and she is aware of the deadline for the programmes.** - **Samantha found her interest mainly in Literature and animals**	

香 港 大 學
THE UNIVERSITY OF HONG KONG

University of
BRISTOL
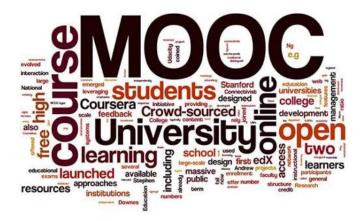
HLC x HKU MOOC Initiative

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Appendix 3 - List of MOOC students and MOOCs completed

N – Newbies (19 first-year students)

L – Lukewarm (10 second-year students)

E – Enthusiasts (11 second-year students)

1) Students who completed MOOCs (18 students)

Age (Gender)	Name	MOOC(s) completed	Institution	Matched Mentor (Class Teacher (CT) / Subject Teacher (ST) / Non CT and ST)	1st year / 2nd year	Time Spent on MOOC (Pre-Q.2)	MOOC Completed (Pre)	MOOC Completed (Post)	No. of meeting	Group
13 (F)	Newbie 1 (Elly)	HUM12.2x: Modern Masterpieces of World Literature	Harvard University	(ST)	1st	never	0	1	18	N
14 (M)	Lukewarm 1 (Shane)	1. GAME102x: Video Game Design and Balance	1. Rochester Institute of Technology	(ST)	2nd	at least once this month	1	2	9	L
		2. GAME105x: Gameplay Programming for Video Game	2. Rochester Institute of Technology							

		Designers								
17 (M)	Lukewarm 2 (Greg)	1. AB101x: Introduction to Animal Behaviour	Wageningen University	(CT)	2nd	at least once this month	1	2	15	L
		2. JX001x: Music Theory 101	The Juilliard School							
17 (M)	Newbie 2	Video Game Design History	Rochester Institute of Technology	(CT)	1st	never	0	1	11	N
17 (M)	Enthusiast 1 (Christy)	1. ER22.1x: Justice (2017)	1. Harvard University	(ST)	2nd	every day	8	16	26	E
		2. MCB64.1x: Cell Biology: Mitochondria	2. Harvard University							
		3. 6.00.1x: Introduction to Computer Science and Programming Using Python	1. Massachusetts Institute of Technology (MIT)							
		4. 18.01.1x: Calculus 1A: Differentiation	2. Massachusetts Institute of Technology (MIT)							
		5. ANATOMY403.1x: Integumentary and Musculoskeletal Anatomy	5. University of Michigan							

6. Human anatomy	6. The Hong Kong Polytechnic University
7. Essential Human Biology: Cells and Tissues	7. The University of Adelaide
8. Tsinghua Chinese: Start Talking with 1.3 Billion People	8. Tsinghua University
9. Introduction to HTML and JavaScript	9. Microsoft: DEV211.1x
10. Introduction To Music Theory	10. Berklee College of Music
11. Vocal Recording Technology	11. Berklee College of Music (
12. Pet Birds 101: Introduction to Avian Care and Medicine for the Pet Bird Enthusiast	12. University of Tennessee
13. ILDIV1x Communication Skills for Bridging Divides	13. Catalyst
14. HTML5.0x: HTML5 Introduction	14. The World Wide Web Consortium
15. 20000001x Intermediate Chinese Grammar 中级汉语语法	15. Peking University

		16. Math essential for MBA success	16. Imperial College							
16 (M)	Enthusiast 2 (Chris)	1. CYBER503x: Cybersecurity Risk Management	1. Rochester Institute of Technology	(ST)	2nd	once a week	2	4	17	E
		2. CYBER504x: Network Security	2. Rochester Institute of Technology							
		3. CYBER501x: Cybersecurity Fundamentals	2. Rochester Institute of Technology							
		4. CYBER502x: Computer Forensics	3. Rochester Institute of Technology							
17 (F)	Enthusiast 3 (Kelly)	1. B1x: Unconscious Bias: From Awareness to Action	1. Catalyst University	(ST)	2nd	two to three times a week	6	15	20	E
		2. IL4x: Inclusive Leadership Training: Get Beyond Work-Life Balance	2. Catalyst University							
		3. IL5x: Inclusive Leadership Training: Leading with Effective Communication	3. Catalyst University							
		4. Il2x: Inclusive leadership Training: Becoming a Successful Leader	4. Catalyst University							

5. Ildiv1X: Communication Skills for Bridging Divides	5. Catalyst University						
6. Inclusive Leadership (Professional Certificate)	6. Catalyst University						
7. CLD213x: Managing Projects with Microsoft Project	7. Microsoft Corporation						
8. TOURISMx: Tourism and Travel Management	8. The University of Queensland						
9. MUS24.3x: First Nights – Beethoven's 9th	9. Harvard University						
10. Hum3.1x: Hamlet's Ghost	10. Harvard University						
11. Gse2X: Leaders of Learning	11. Harvard University						
12. 90640012X: Just Reading and Writing in English	12. Tsinghua University						
13. 00690863x: Introduction of Ci Poems in Tang and Song Dynasty	13. Tsinghua University						
14. JX 004x: Introduction to Performance Psychology	14. The Juilliard School						

		15. 03530190x: Japanese Culture and Art	15. Peking University							
16 (M)	Enthusiast 4 (Wesley)	1. An Introduction to American Law	1. University of Pennsylvania	(ST)	2nd	once a week	2	3	14	E
		2. Chemical and Health	2. John Hopkins University							
		3. Drug Discovery	3. UC San Diego							
17 (F)	Enthusiast 5	1. First Step Korean	1. Yonsei University	(CT)	2nd	two to three times a week	1	2	15	E
		2. Speak English Professionally: In Person, Online & On the Phone	2. Georgia Institute of Technology							
16 (F)	Lukewarm 3 (Nancy)	Stanford Introduction to Food and Health	Stanford University	(Non CT or ST)	2nd	less than once a month	0	1	12	L
16 (F)	Enthusiast 6	1. JX001x: Music Theory 101	The Juilliard School	(Non CT or ST)	2nd	two to three times a week	1	2	16	E
		2. Essential Human Biology: Cells and Tissues	The University of Adelaide							
15 (M)	Newbie 3 (Ben)	JX001x: Music Theory 101	The Juilliard School	(ST)	1st	never	0	1	15	N

14 (M)	Lukewarm 4	中國古代歷史人物—秦始皇 (Qin Shi Huang)	National Taiwan University	(ST)	2nd	less than once a month	1	1	11	L
17 (M)	Enthusiast 7	Pet Birds 101: Introduction to Avian Care and Medicine for the Pet Bird Enthusiast	University of Tennessee	(ST)	2nd	once a week	1	1	13	E
17 (F)	Enthusiast 8	1. Property and Liabilities: An Introduction to Law and Economics	Wesleyan University	(CT)	2nd	once every two weeks	1	2	15	E
		2. Finance for Everyone: Smart Tools for Decision-Making	University of Michigan							
17 (M)	Enthusiast 9	1. Crime101x: The Psychology of Criminal Justice	The University of Queensland	(ST)	2nd	once a week	2	4	16	E
		2. Rights2x: Human Rights: The Rights of Refugees	AMNESTY INTERNATIONAL							
		3. Introduction to Marketing	The University of British Columbia							
		4. HLS2X: Contract Law	Harvard University							
17 (F)	Enthusiast 10	1. Japanese Pronunciation for	WASADA University	(ST)	2nd	once a week	1	2	16	E

Age (Gender)	Name	Area(s) of interest	Matched Mentor	1st year / 2nd year	Time Spent on MOOC	MOOC Completed (Pre)	MOOC Completed (Post)	No. of meeting	Group
		Communication							
		2. Introduction to Avian Care and Medicine for Pet Bird Enthusiast	The University of Tennessee						
17 (F)	Enthusiast 11	1. Chemistry	University of Kentucky	(ST)	2nd	two to three times a week	2	5	18	E
		2. Stanford Introduction to Food and Health	Stanford University						
		3. Introduction to the Biology of Cancer	John Hopkins University						
		4. Epigenetic Control of Gene Expression	The University of Melbourne						
		5. Understanding Cancer Metastasis	John Hopkins University						

2) Students who did not complete MOOCs (22 students) (9m 13f)

Age (Gender)	Name	Area(s) of interest	Matched Mentor (Class Teacher (CT) / Subject Teacher (ST) / Non CT and ST)	1st year / 2nd year	Time Spent on MOOC (Pre-Q.2)	MOOC Completed (Pre)	MOOC Completed (Post)	No. of meeting	Group

16 (F)	Lukewarm 5	English, Chemistry, Mathematics	(ST)	2nd	at least once this month	0	0	10	L
15 (M)	Newbie 4	Video games, Engineering	(ST)	1st	less than once a month	0	0	9	N
15 (F)	Newbie 5	Arts and design, English, Music	(ST)	1st	never	0	0	9	N
14 (F)	Newbie 6	English Literature, Chemistry, Biology	(Non CT or ST)	1st	never	0	0	9	N
15 (M)	Newbie 7	Economy, Engineering, Mathematics, Physics	(ST)	1st	never	0	0	9	N
14 (F)	Newbie 8 (Venus)	English, Chemistry, Psychology	(Non CT or ST)	1st	never	0	0	10	N
15 (M)	Newbie 9	Engineering, Chemistry, Computer Science	(Non CT or ST)	1st	never	0	0	9	N

15 (F)	Newbie 10 (Ellen)	English, Physics, Chemistry	(ST)	1st	Not stated	0	0	9	N
14 (F)	Newbie 11	Biology, Chemistry, BAFS	(Non CT or ST)	1st	never	0	0	10	N
13 (F)	Newbie 12	Business, Criminology	(ST)	1st	never	0	0	9	N
15 (M)	Lukewarm 6 (Bowen)	Mathematics, Chemistry, Geography	(ST)	2nd	at least once this month	0	0	12	L
15 (F)	Newbie 13	Psychology, English	(CT)	1st	Not stated	0	0	9	N
15 (F)	Newbie 14	Chinese, Tourism, History	(ST)	1st	never	0	0	11	N
16 (M)	Newbie 15	Law, Psychology, History	(ST)	1st	never	0	0	10	N
14 (M)	Newbie 16	Geography, Economics	(ST)	1st	never	0	0	9	N

15 (F)	Newbie 17	Economics, BAFS	(Non CT or ST)	1st	Not stated	0	0	9	N
14 (M)	Newbie 18	Mathematics, Chemistry	(ST)	1st	never	0	0	12	N
14 (F)	Lukewarm 7	Child Education, English Poetics	(ST)	2nd	less than once a month	0	0	12	L
15 (F)	Lukewarm 8	Biology, Business	(CT)	2nd	less than once a month	0	0	11	L
14 (M)	Newbie 19	Physics, Biology, Art	(Non CT or ST)	1st	never	0	0	9	N
16 (M)	Lukewarm 9	Chemistry, Biology, Music, Psychology	(Non CT or ST)	2nd	less than once a month	0	0	11	L
15 (F)	Lukewarm 10	Biology, Chemistry, Music	(ST)	2nd	less than once a month	0	0	10	L

Appendix 4 - The survey questionnaire for students

MOOCs Mentorship Programme Post Survey Questionnaire

- I'm a doctoral researcher (博士研究生) from the Graduate School of Education, University of Bristol. As part of a research project (研究項目) on students' mentoring experience (學生和導師的指導經驗) from the MOOCs mentorship programme, the purposes (目的) of this questionnaire are to find out what you have experienced in the mentorship programme and how mentoring process impact your participation in MOOCs.
- The information you provide here will not be shared with other teachers or affect your grades in school. It will be used in academic research (學術研究) only.
- Instructions: Please fill in this form to reflect your opinions as accurately (準確)as possible.
- Please place a tick on the line or in the box where appropriate.
- There are no right or wrong answers. You only need to reflect on your own experience.

Part (A): Personal information

Gender: Male   Female   Age____
                 ☐   ☐

Native Language: Cantonese   English   Putonghua   Others (Please specify _____)
                     ☐   ☐   ☐   ☐

Part (B): MOOCs Experience

(1) How long have you been participating in MOOCs?

Year(s) _____ month(s) _____

(2) In the previous month, how long do you normally work on MOOCs?
   ☐ every day
   ☐ two to three times a week
   ☐ once a week
   ☐ once every two weeks
   ☐ at least once this month
   ☐ less than once a month
   ☐ never

What topic areas are you most interested in MOOCs? (Put a tick in every row)

	Really Like	Like	Neither like nor dislike	Dislike	Really Dislike	Not Applicable
Science						
Mathematics and Engineering (工程學)						
Humanities (人文學科)and Cultures (文化)						
English						
Chinese and Chinese Literature						
Social Sciences (社會科學)						
Sports Science						
Music						
Gamification and Programming						
Other Languages						
Business and Economics						
Others (If any) _____						

What MOOC are you currently working on (e.g. Human Anatomy- PolyU HK)?

_____

(5) When did you start working on this MOOC?

_____

(6) For the MOOC that you are working on, how much do you like the experience?

Really Like	Like	Neither like nor dislike	Dislike	Really Dislike
☐	☐	☐	☐	☐

(7) What MOOCs have you completed?

_____

_____

_____

(8) How much do you think the following factors motivate (激勵) you to engage in (參與) MOOCs? (Put a tick in every row)

	A lot	Some	Little	Not at all
I am interested in a particular topic / subject				
I am curious (好奇) in knowing new knowledge or ideas				
I want to be an expert (專家)who knows a lot about that particular topic / subject				
I want to show that I know more than my peers				
I feel satisfied (滿足) by performing well in MOOCs				

I believe the knowledge I acquired (獲得) from MOOCs will be useful in my life and my study				
I believe the certificate (證書)I acquired from MOOCs will be useful in my life and my study				
It is worth the time and effort to do MOOCs				

Part (C): Mentoring experience <u>this year</u>

(9) In terms of understanding of MOOCs' lessons and teaching methods, my mentor has

□ a lot of understanding
□ some understanding
□ little understanding

(10) In terms of experience of doing MOOCs, my mentor has

□ a lot of experience
□ some experience
□ little experience

(11) My mentor is

□ my class teacher and subject teacher
□ subject teacher only
□ class teacher only
□ others (Please specify _____)

(12) In the previous month, how many times did you meet your mentor for individual (單獨) mentoring sessions this year?

_____

In the previous month, the individual mentoring sessions last for on average

☐ less than 10 minutes
☐ 10 – 20 minutes
☐ 20 – 30 minutes
☐ more than 30 minutes

(14) Who normally sets the goals during your mentoring sessions?

☐ Me
☐ My mentor
☐ My mentor and I set the goal together

(15) How often do we review (檢閱) the past goals?

☐ Always
☐ Sometimes
☐ Never

(16) We wrote down goals / area for improvement in the Google mentoring form or elsewhere.

☐ Always
☐ Sometimes
☐ Never

(17) How do you describe (描述) your relationship (關係) with your mentor? (Put a tick in every row)

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
We communicate well.					
My mentor understands me well.					
My mentor trusts in my capacity (能力) to do well in MOOCs.					
My mentor has provided me links to related MOOCs					

This year, mentoring has helped me in my participation in MOOCs.					

Part (D): Support you received <u>this year</u>

(18) Do you think the support provided by the school brings positive impact (積極的 影響) to you in your participation in MOOCs?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
☐	☐	☐	☐	☐

(19) To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? (Put a tick in every row)

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Offered me the most updated (最新資訊) form of assessments (學習評估) in MOOCs (e.g. self-assessment (自我評估), peer- assessment (同儕評估))					
Offered me the most common (常見) form of assessments in MOOCs (e.g. self-assessment, peer- assessment)					
Introduced me the gist (要點) of lessons in MOOCs (e.g. videos)					
Introduced me the gist of learning activities in MOOCs (e.g. games)					

Provided links to suitable content (合適的內容) of MOOCs for students at my level					
Introduced the idea of fostering (促進) learning through online discussion forum (論壇) in MOOCs					
Convinced (說服) me that MOOCs provide a suitable platform for me to pursue the knowledge in the topic / subject					
Able to arouse(引起) my interest in a particular topic / subject					
Convinced me that the knowledge I attain (獲得) from MOOCs will benefit my further studies (高等教育)					
Convinced me that the certificate I attain from MOOCs will benefit my further studies					

(20) How effective (有效) are the forms of support (支援) that the school offered you in your participation in MOOCs? (Put a tick in every row)

	Really Effective	Effective	Ineffective	Really Ineffective
Mentoring (導師指導) experience with my mentor				
Talking to my subject teacher				

Training sessions from HKU TELI				
MOOCs for Starters Guide (指南)				
Interaction (交流) with other student mentees from my school in the training of MOOCs mentorship programme				
Reimbursement (報銷) for the fee of purchasing (購買) the verified certificate (資格證書)				
Other form of support (Please specify _____)				

Part (E): Impact of MOOCs mentoring in your decision for further studies

(21) How do the following stakeholders (權益關係者) / factors (因素) influence (影響) your choice of further education (高等教育)?

	A lot	Some	Little	Not at all
Self				
Parents				
Independent agent (獨立升學代理人)				
Other relatives (親屬)or friends				
Career (生涯規劃) teacher from my school				
Scholarship (獎學金) to institution (大學機構)				

Others (Please specify _____)				

(22) How much do you think your experience in MOOCs mentorship programme impact (影響) your

decision for your further studies?

A lot	Some	Little	Not at all
☐	☐	☐	☐

(23) How much do you think the following factors (因素) influence (影響) your decision in applying for

tertiary institutes (高等學院)? (Put a tick in every row)

	A lot	Some	Little	Not at all	Not applicable
The suggestions from my mentor (導師) in MOOCs mentorship programme					
MOOCs training from HKU TELI					
Interaction with the current students / instructors in the MOOCs online discussion forum					
Social media (社交媒体) updates from the institution (e.g. Facebook, Twitter)					
Teaching methods (教學法) from the instructors (講師) of MOOCs					
The particular topic / subject / domain in the MOOCs offered by the university					

The recognition (認證) of verified MOOC certificate (資格證書) (e.g. credit transfer(學分轉移) , MOOCs diploma (文憑)programme)					

(24) If you are interested in taking part in the interview session for my research focusing on mentoring experience in MOOCs, please leave your name, class and class number here.

Name _____ Class _____ Class No. _____

Thank you very much for your co-operation!

Appendix 5 – Questionnaire items in relation to relevant literature

Question	Purpose	Relevant Literature	Connection to the current research context
Q8	To examine the students' motivation in engaging in MOOCs	- de Barba et al. (2016) 's research on motivation being the key factor that leads to high performance in achievement situation like MOOCs. - Wigfield & Cambria, (2010)'s research on three constructs from achievement motivation, namely interest, achievement goals and value beliefs, being considered to be parts of the broad construct of intrinsic motivation	In order to measure the constructs, individual and situational interests, mastery and performance approaches, coupled with attainment, utility and cost values, are all embedded in question 8 (i) to 8 (vii) respectively
Q9 to Q16	To explore the mentoring experience and relationship between mentor and mentee	Chen's (2010) research focusing on teacher-student guidance mentoring programme and Smith's (2014) study in academic mentoring	Since both of the studies focus on uncovering the one-on-one, school wide mentoring programme at the secondary school level, the questionnaire items can be modified so as to accommodate the mentoring context in the case school
Q17	To explore the challenges the students encountered in the mentoring process	Leon et al. (2015)'s research on challenges for MOOC mentors	Leon et al. (2015) stated that three major challenges for them would be maintaining good communication with their mentee, identifying key issues for their mentee and maintaining confidence in mentor's own content knowledge.

Q19	To investigate student mentees' perception of the training support from HKU TELI	Leon et al. (2015) and Alario-Hoyos et al. (2016) 's research on assessing the measures introduced to tackle the key challenges encountered by MOOCs participants	The key factors are (i) understanding the form of assessment, (ii) mode of the lesson and learning activity, (iii) providing links to suitable content, (iv) fostering learning conversation, and (vii) understanding the acceptance of the certificate issued by MOOCs platform.
Q23	To highlight how MOOCs mentorship programme influence students' decision in applying for tertiary institutes	Lai et al. (2013) conclude that marketer controlled factors, marketer non-controlled factors, College attributes and satisfaction are the four key factors that impact students' decision making for their post-secondary education	Question 23 (i) and (ii) on marketer non-controlled factors (Adapted from Donnellan (2002) and Gomes & Murphy (2003))
			Question 23 (iii) and (iv) on marketer controlled factors (Adapted from Willis and Kennedy (2004) and Bers (2005))
			Question 23 (v) and (vi) on college attributes (Adapted from Drewes and Michael (2006))
			Question 23 (vii) on satisfaction factors (Adapted from Maringe (2006))

Appendix 6 – Interview questions in relation to literature

Research Question 1. What are the experiences of students in the MOOCs mentorship programme?		
Interview questions	Purpose	Relevant literature
1. How would you describe your relationship with your mentor? 2. To what extent does your mentor impact your MOOC experience? 3. How has mentoring helped you in participating in MOOCs?	To explore the mentoring experience and relationship between mentor and mentee	Chen's (2010) research focusing on teacher-student guidance mentoring programme and Smith's (2014) study in academic mentoring
4. What is the most challenging part in your communication with your mentor? 5. How does the Google mentoring record influence your communication with your mentor?	To explore the challenges the students encountered in the mentoring process	Leon et al. (2015)'s research on challenges for MOOC mentors
6. What do you need to prepare in order to complete MOOCs? 7. What keeps you motivated in completing MOOCs? 8. What would be your major challenge in completing MOOCs? How do you overcome it?	To examine the students' motivation in engaging in MOOCs	- de Barba et al. (2016) 's research on motivation being the key factor that leads to high performance in achievement situation - Wigfield & Cambria, (2010)'s research on three constructs from achievement motivation

Research Question 2. How does support students receive from the MOOCs mentorship programme in the case school impact their experiences in studying MOOCs?		
9. Please describe the support you received from MOOCs mentorship programme.	To investigate student mentees' perception of the training support from the MOOCs mentorship programme	Leon et al. (2015) and Alario-Hoyos et al. (2016) 's research on assessing the measures introduced to tackle the key challenges encountered by MOOCs participants
10. Where can you find support when you face difficulties in participating in MOOCs?		
11. How much do you think the training from HKU TELI helped you in understanding more about assessments and learning activities in MOOCs?		
12. To what extent do you think the training from HKU TELI identify your needs and pinpoint the potential challenges in taking MOOCs?		
13. Having been given the guidebook 'MOOCs for Starters', how does it impact your initial experience in taking MOOCs?		
14. Which is the most helpful form of support the MOOCs mentorship programme offered you? Why?		
15. What is the further support you need in order to complete more MOOCs?		

Research Question 3. How does the student mentees' participation in the school-based MOOCs mentorship programme impact their future plan?		
1. How do the suggestions given by your MOOC mentor influence your choices in the universities you will apply for?	To highlight how MOOCs mentorship programme influence students' decision in applying for tertiary institutes	On marketer non-controlled factors (Adapted from Donnellan (2002) and Gomes & Murphy (2003))
2. How do your interactions with other MOOC students and MOOC instructors in the online platform influence your choices in the university you will apply for?		On marketer controlled factors (Adapted from Willis and Kennedy (2004) and Bers (2005))
3. How do the teaching methods you experienced in MOOCs influence your choice in the universities you will apply for?		On college attributes (Adapted from Drewes and Michael (2006))
4. To what extent does your MOOC experience related to the universities you are interested to apply for?		
5. To what extent does your MOOC experience related to the programmes you are interested to apply for		
6. How does completing MOOCs give you the advantages in applying for tertiary institutes?		On satisfaction factors (Adapted from Maringe (2006))

Appendix 7 - The pilot survey questionnaire for students

MOOCs Mentorship Programme Survey Questionnaire

- I'm a researcher from the Graduate School of Education, University of Bristol. As part of a research project on students' mentoring experience from the MOOCs mentorship programme, the purposes of this questionnaire are to find out what you have experienced in the mentorship programme and how mentoring process impact your participation in MOOCs.
- The information you provide here will be kept strictly confidential and used in academic research only.
- Instructions: Please fill in this form to reflect your opinions as accurately as possible.
- Please place a tick on the line or in the box where appropriate.
- There are no right or wrong answers. You only need to reflect on your own experience.

Part (A): Personal information

Gender: Male   Female   Age___

       ☐   ☐

Native Language: Cantonese   English   Putonghua   Others (Please specify _____)

          ☐   ☐   ☐   ☐

Part (B): MOOCs Experience

(1) How long have you been participating in MOOCs?

    Year(s) _____ month(s) _____

(2) In the previous month, how long do you normally work on MOOCs?

    ☐ every day

    ☐ two to three times a week

    ☐ once a week

    ☐ once every two weeks

    ☐ at least once every month

    ☐ less than once a month

    ☐ never

What topic areas are you most interested in MOOCs? (Put a tick in every row)

	Really Like	Like	Neutral	Dislike	Really Dislike	Not Applicable
Science						
Mathematics and Engineering						
Humanities and Cultures						
English						
Chinese and Chinese Literature						
Social Sciences						
Sports Science						
Music						
Gamification and Programming						
Other Languages						
Business and Economics						
Others (If any) _____						

(4) What MOOC are you currently working on (e.g. Human Anatomy- PolyU HK)?

_____

(5) When did you start working on this MOOC?

_____

(6) For the MOOC that you are working on, how much do you like the experience?

Really Like	Like	Neutral	Dislike	Really Dislike
☐	☐	☐	☐	☐

(7) What MOOCs have you completed?

_____

_____

_____

(8) How much do you think the following factors motivate you to engage in MOOCs?

(Put a tick in every row)

	A lot	Some	Little	Not at all
You are interested in a particular topic / subject				
Novelty – Your curiosity in knowing new knowledge or ideas				
You want to be an expert who knows a lot about that particular topic / subject				
You want to show that you know more than your peers				
You feel satisfied by performing well in MOOCs				

You believe the knowledge you acquired from MOOCs will be useful in your life and your study				
You believe the certificate you acquired from MOOCs will be useful in your life and your study				
It is worth the time and effort to do MOOCs				

Part (C): Mentoring experience <u>this year</u>

(9) In terms of understanding of MOOCs, my mentor has

□ good understanding
□ some understanding
□ very little understanding

(10) In terms of experience of MOOCs, my mentor has

□ good experience
□ some experience
□ very little experience

(11) My mentor is

□ my class teacher and subject teacher
□ subject teacher only
□ class teacher only
□ others (Please specify _____)

(12) In the previous month, how many times did you meet your mentor for individual mentoring sessions this year?

- ☐ 0 times
- ☐ 1 times
- ☐ 2 times
- ☐ 3 times
- ☐ 4-5 times
- ☐ 6-7 times
- ☐ 8 times or more

(13) In the previous month, the individual mentoring sessions last for on average

- ☐ less than 10 minutes
- ☐ 10 – 20 minutes
- ☐ 20 – 30 minutes
- ☐ more than 30 minutes

(14) Who normally sets the goal during your mentoring sessions?

- ☐ Me
- ☐ My mentor
- ☐ My mentor and I set the goal together

(15) How often do we review the past goals?

- ☐ Always
- ☐ Sometimes
- ☐ Never

(16) We wrote down goals / area for improvement in the Google mentoring form or elsewhere.

- ☐ Always
- ☐ Sometimes
- ☐ Never

(17) Which of the following statement best describe your relationship with your mentor? (Put a tick in every row)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
We communicate well.					
My mentor understands me well.					
My mentor trusts in my capacity to do well in MOOCs.					
My mentor has provided me links to related MOOCs					
This year, mentoring has helped me in my participation in MOOCs.					

Part (D): Support you received <u>this year</u>

(18) Do you think the support provided by the school brings positive impact to you in your participation in MOOCs?

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

☐   ☐   ☐   ☐   ☐

(19) To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? (Put a tick in every row)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Offered you the most updated form of assessments in MOOCs (e.g. self-assessment, peer- assessment)					

Offered you the most common form of assessments in MOOCs (e.g. self-assessment, peer- assessment)					
Introduced you the gist of lessons and learning activities in MOOCs (e.g. videos)					
Introduced you the gist of learning activities in MOOCs (e.g. games)					
Provided links to suitable content of MOOCs for students at your level					
Introduced the notion of fostering learning through online discussion forum in MOOCs					
Convinced you that MOOCs provide a suitable platform for you to pursue the knowledge in the topic / subject					
Able to arouse your interest in a particular topic / subject					
Convinced you that the knowledge you attain from MOOCs will benefit your further studies					
Convinced you that the certificate you attain from MOOCs will benefit your further studies					

(20) How effective are the forms of support that the school offered you in your

participation in MOOCs? (Put a tick in every row)

	Really Effective	Effective	Ineffective	Really Ineffective
Mentoring experience with your mentor				
Talking to your subject teacher				
Training sessions from HKU TELI				
MOOCs for Starters Guide				
Interaction with other student mentees from your school in the training of MOOCs mentorship programme				
Reimbursement for the fee of purchasing the verified certificate				
Other form of support (Please specify _____)				

Part (E): Impact of MOOCs mentoring in your decision for further studies

(21) How do the following stakeholders / factors influence your choice of further

education?

	A lot	Some	Little	Not at all
Self				
Parents				
Independent agent				
Other relatives or friends				

Career teacher from your school				
Scholarship to institution				
Others (Please specify _____)				

(22) How much do you think your experience in MOOCs mentorship programme impact your decision for your further studies?

A lot	Some	Little	Not at all
☐	☐	☐	☐

(23) How much do you think the following factors influence your decision in applying for tertiary institutes? (Put a tick in every row)

	A lot	Some	Little	Not at all	Not applicable
The suggestions from your mentor in MOOCs mentorship programme					
MOOCs training from HKU TELI					
Interaction with the current students / instructors in the MOOCs online discussion forum					
Social media updates from the institution (e.g. Facebook, Twitter)					
Teaching methods from the instructors of MOOCs					

The particular topic / subject / domain in the MOOCs offered by the university					
The recognition of verified MOOC certificate (e.g. credit transfer, MOOCs diploma programme)					

(24) If you are interested in taking part in the interview session for my research focusing on mentoring experience in MOOCs, please leave your name, class and class number here.

Name _____ Class _____ Class No. _____

Thank you very much for your co-operation!

Appendix 8 - Major adjustments made after the pilot studies

Piloting	Participants	Adjustments	Rationale for the adjustments
Student focus group interview	3 Secondary four students, 3 Secondary five students and 4 Secondary 6 students	- Translated the interview questions from English to Chinese	To help students understand some of the terminologies in their first language
		- Switched the medium of interview from English to Chinese	To enable students to speak freely with their mother tongue
		- Re-worded the interview questions	To simplify the complex questions and allow students to answer them with ease
		- To invite 6 students for the focus group interview instead of 10	It was hard to identify the voice of the interviewees
		- To have it video-recorded rather than audio recorded	It was hard to identify the voice of the interviewees
Student survey questionnaire	1 Secondary two student, 2 Secondary five students, one Chinese teacher and one Native English teacher	- Simplified the wording of statements	To simplify the complex questions and allow students to answer them with ease
		- Provided more Chinese translations alongside English items	To help students understand some of the terminologies in their first language
		- Provided more overt and direct instructions on how to complete the questionnaires	To remove the obstacle in questioning and help students complete the questionnaire
		- Modified the layout of the survey to make the boxes clearer for the students	To remove the obstacle in the formatting and help students complete the questionnaire

Student individual interview	1 Secondary two student, 2 Secondary five students, one Chinese teacher and one Native English teacher	- Switched the medium of the interview from English to Chinese	To enable students to speak freely with their mother tongue
		- Asked the interviewees to recall details in the previous month instead of the whole year	To allow students to focus on their recent performance as their memory was still fresh
		- Deliberately allow space for the participants to talk about their experiences, support, difficulties and challenges, and development as "narratives" (Gillham, op cit)	These elements were woven together and it was therefore difficult to talk about them one by one.

Appendix 9 - Interview questions

Research Question 1. What are the experiences of the students in the MOOC mentorship programme?		
Interview questions	purpose	Relevant literature
1. How would you describe your relationship with your mentor? 2. To what extent does your mentor impact your MOOC experience? 3. How has mentoring helped you in participating in MOOCs?	To explore the mentoring experience and relationship between mentor and mentee	Chen's (2010) research focusing on teacher-student guidance mentoring programme and Smith's (2014) study in academic mentoring
4. What is the most challenging part in your communication with your mentor? 5. How does the Google mentoring record influence your communication with your mentor?	To explore the challenges the students encountered in the mentoring process	Leon et al. (2015)'s research on challenges for MOOC mentors
6. What do you need to prepare in order to complete MOOCs? 7. What keeps you motivated in completing MOOCs? 8. What would be your major challenge in completing MOOCs? How do you overcome it?	To examine the students' motivation in engaging in MOOCs	- de Barba et al. (2016) 's research on motivation being the key factor that leads to high performance in achievement situation - Wigfield & Cambria, (2010)'s research on three constructs from achievement motivation

Research Question 2. How does the support that the students receive from the MOOC mentorship programme at the case school impact their experiences in studying MOOCs?		
9. Please describe the support you received from MOOCs mentorship programme. 10. Where can you find support when you face difficulties in participating in MOOCs? 11. How much do you think the training from HKU TELI helped you in understanding more about assessments and learning activities in MOOCs? 12. To what extent do you think the training from HKU TELI identify your needs and pinpoint the potential challenges in taking MOOCs? 13. Having been given the guidebook 'MOOCs for Starters', how does it impact your initial experience in taking MOOCs? 14. Which is the most helpful form of support the MOOCs mentorship programme offered you? Why? 15. What is the further support you need in order to complete more MOOCs?	To investigate student mentees' perception of the training support from the MOOCs mentorship programme	Leon et al. (2015) and Alario-Hoyos et al. (2016) 's research on assessing the measures introduced to tackle the key challenges encountered by MOOCs participants

Research Question 3. How do the student mentees' participation in the school-based MOOC mentorship programme impact their future plans?		
16. How do the suggestions given by your MOOC mentor influence your choices in the universities you will apply for?	To highlight how MOOCs mentorship programme influence students' decision in applying for tertiary institutes	On marketer non-controlled factors (Adapted from Donnellan (2002) and Gomes & Murphy (2003))
17. How do your interactions with other MOOC students and MOOC instructors in the online platform influence your choices in the university you will apply for?		on marketer controlled factors (Adapted from Willis and Kennedy (2004) and Bers (2005))
18. How do the teaching methods you experienced in MOOCs influence your choice in the universities you will apply for?		On college attributes (Adapted from Drewes and Michael (2006))
19. To what extent does your MOOC experience related to the universities you are interested to apply for?		
20. To what extent does your MOOC experience related to the programmes you are interested to apply for		
21. How does completing MOOCs give you the advantages in applying for tertiary institutes?		On satisfaction factors (Adapted from Maringe (2006))

Appendix 10 - A sample of code note - labelling

Interviewer: Tony Wei
Interviewee: Greg
Date: 16th November, 2017
Time: 5:00 p.m. - 6:00 p.m.
Place: A classroom, XXX College, Hong Kong

I = interviewer
G = Greg

I: So thank you Greg. You know, always see you in the… in lift, always see you outside, always see you, you know, talking to different teachers and then, I see you as a very cheerful personality. Sometimes I suppose that you are very close to different teachers, and I know you have some difficulties last year because of Chinese, because you know, a very uncertain future, you're not sure about what you want to do later on, but it seems that this year you have a clearer path. Maybe you talk to your parents you talk to…

G: No…it's just counselling.

I: Counselling and then I can see that you having like a better mood this year.

G: Yeah.

I: Because I'm in constant contact with some of the teachers who's teaching you and then they also told me that you… you know, there's less burden for you this year. So for MOOC, you are one of the very… very first students to join his program last year I remembered. You volunteered to join his program.

G: Yeah.

I: Yes. So I think it's somewhere around like before Christmas I remembered. I want to join… no, no, it was before November.

G: It was ever since like previously I see the teacher introduced me to the program. Then I…

I: Mr Raymond Chan?

G: Yeah.

I: OK, and then you… I don't know your what your purpose is for this program, but you were the very first students to join it and then… I would like to know more about your experience there. So I've read your survey and a lot of my questions here comes from that. And then I am really interested to know your relationship with your mentor. Because you had been with Mr Pang for like a year and a half right?

G: Yeah.

I: Yeah. So I would like to know… like in the very beginning, what do you know about Mr Pang before the MOOC mentorship program?

G: Well, he used to be my class teacher in form one and so, of course, my first impression of him was strict because I was just an immature little kid back then, but then it's time you know… he

(academic support)

seems to be a pretty chill guy and I always like to talk to him more. Sometimes you can laugh about stuff and I guess like…based on MOOC we talk about a lot of stuff like how things turn out, should I go for this or should I go for that. And as you know we also have been talking about like

(mentor on university application)

my **university choices** in the future and how things will turn out which it starts to stabilise right now. Hopefully I can go to UBC.

I: We will talk about university later on, and according to the result of your survey you believe that MOOC has zero impact to your choices in university, but we will talk about that later. We will talk about that later. So, I'd like to know more about you and Mr Pang because, you know, the relationship is very important, you know, in your survey you said maybe you thought Mr Pang has some understanding of MOOC, maybe some experience in doing MOOC, and then he was just your class teacher back then, but now you don't have like a very formal tie and I guess he's not teaching you anymore, and then, but you know you did talk about goals, setting up goals sometimes. So I am interested to know, you know, how often do you see him and talk about MOOC?

(academic support)

G: Actually whenever we **meet each other** at the lift then we **talk**, or like whenever you just randomly meet each other then we just do it like a impromptu, or like an instant meeting right away.

I: So. Last time, last time that you talk to him, what do you talk about regards to MOOC?

(mentor on university application)

G: Regarding the MOOC. Actually I don't think we… I think we're more focused towards the **university** more than the MOOC.

I: So the topic changed.

(mentor on university application)

G: Yeah. it's a… it went from <u>"hey how's it going" and then after that like…a quick section end and… to</u> **<u>university</u>**.

I: OK I'd like you to recall your very first mentoring session with Mr Pang so you… I remember your first MOOC was about…let me …is about music?

G: No.

I: It's about biology, the animal behaviours.

G: Yeah.

I: Yes, think about your first MOOC and then… when you tell Mr Pang that you are going to work on the animal behaviours in university what did Mr Pang tell you at that time?

(intrinsic interested area)

G: I told him it's like because <u>he knows it was what I was **interested** in</u>… it has been… what I was… it is what I was have been…always have been interested in, sorry for the startles. And he

(intrinsic interested area)

said go for it because he understands that<u> I **enjoy that subject** a lot</u> so he just said go for it because

(academic support)

he thinks it's right for me. <u>It does not really like much input but there's a **support** go for it</u>.

I: So a very encouraging kind of gesture and then asking you to go for your interest. Did you talk about the content of the MOOC?

(academic support)

G: Not really. Like most of it… like…<u>We do talk but when we **talk**, it's like not that much</u>, it's not in detail I would say. It's like I don't tell him everything other than the course, most of it is just … I don't know, are distant but yet we still know what's going on.

I: Did you share with him your difficulties about the program?

G: At first I told him. Yeah, I had trouble getting used to like… what was going on, like I'm getting but then slowly… it stabilized and there wasn't much to tell him.

I: How did he help you when you told him about the difficulties?

(advice on time management)

G: He just… <u>If I remember correctly he told me to just **skip**</u>, because as I said most of my problems

(advice on time management)

were <u>just time management so he just gave me some **advice**</u>.

I: What kind of advice did he give you?

(advice on time management)

G: Set a stable **timetable** to work on it.

I: Did you do what he told you?

G: Until this year, I did it this year.

I: Oh, you did it this year.

G: I do it in ICT lesson and I drop that subject so…

I: Ok, alright so… So how would you describe his impact on your MOOC experience?

(academic support)

G: Impact of MOOC experience… I wouldn't say a lot but he did **support** me.

I: So a very supporting figure as he introduced value your time management, as told you to go for your interest.

(advice on time management)

G: He sometimes check on how… like my **progress**, what new courses are you doing, but we wouldn't go into detail as I said.

I: Ok, so what's the most challenging part in your communication with your mentor?

(challenge in interaction)

G: Most challenging part… ohh we rarely **see each other** that's why.

I: How often do you see each other?

(challenge in interaction)

G: I would say… It's **inconsistent**.

I: Inconsistent?

G: Yeah.

I: If…you can have… you say… would you want a more like…like a regular meeting with him, would that benefit your book experience even more?

(academic support)

G: Actually I would say it's good where's it at right now.

I: Why?

G: Because if we said …like … we sat a the regular meeting like… like regular, like we really meet

<div align="right">**(challenge in interaction)**</div>

regularly, it wouldn't be like, if I have nothing to say then it would just be… I'<u>d rather that we meet when I</u> <u>have something to say or have a **problem** to like</u>… turn to what to do. But if I don't then I guess I don't have to really meet him.

I: Ok, so you know, there's a Google forum, as a communication tool between you and your mentor. Have you ever checked out that forum? You never checked. That's what you said in your surveys and you never checked it out, you know, if nothing was updated but let me tell you the fact is Mr Pang was one of the teachers who regularly update that Google forum. And whenever you meet him, what you talk about, he has full coverage. So you can check that out as well.

G: I didn't know that.

I: You didn't know that. OK. So, on and all for your… you know in regards to MOOC, Mr Pang's figure was to support you, to encourage you, to have better time management and to have…

G: Remind me of things that I did not do.

I: Ok, to have some kind of very inconsistent form of meeting, whenever you available. So how would you describe the mentoring process so far with Mr Pang.

<div align="center">**(challenge in interaction)**</div>

G: Chill, that's the best way to describe it. It's, you know, <u>it's **casual**. I enjoy it</u>. Something I wouldn't mind doing even though I have something else to do. I am taking time, squeezing time, just to meet him.

I: So I would say is largely positive.

G: Yeah.

I: OK, right. So let's talk about your MOOC experience. So how many MOOC have you joined? I'm not saying complete, joined, so far.

<div align="center">**(MOOC experience)**</div>

G: Sometimes <u>I would like scroll it along like with the **course** catalog</u>.

I: But rather formal ones that you have officially… OK, I pressed the button, I joined this.

G: Recently joined, would be like five…

I: Did you pay for them?

G: Not yet.

I: Not yet. When would you pay for them. you enroll?

G: Yeah, I already completed, like that I passed in the progress bar, one of them.

(MOOC experience)

Right now just to work on the others. <u>It's really **time consuming**</u>. But, it's ok. I'll do it like, because right now I have like a set time session to do. Hopefully they'll improve.

I: Ok. All right so. Yes, alright, so that means you attempt several MOOC, you don't need… you don't know the number. So far I mean starting from last year you joined this program, how many MOOC to have you attempt? Guess?

G: Last year I didn't like attempt, you know, as many as this year. This year, all of a sudden, like a surge of enrollments.

I: Really? So there's an increase this year.

G: Yeah, I enrolled in them but I am not paid, I have completed yet I intend to.

I: What led to that change? Last year you were pretty picky. You started with animal behavior and then you did the music program with Berkeley and then you attended the HKU one about a dinosaur. But this year what makes you, you know, join so many programs?

(MOOC on university application)

G: I actually <u>join a lot of music **program** , and also some that will be beneficial to me in the future</u>, and I said I might be leaving next year, and so one of the… things like I actually read… just enroll, like today and it was about math and calculus, like pre-calculus. So I can study beforehand, so I can have no problems like next year, whatsoever.

I: So what's your motivation? You talked about future. What was your motivation in enrolling in MOOC. Or spending the time there?

(quest for knowledge)

G: Well I would say it's just so <u>I can learn a lot more because in some ways I'm obsessed with</u> **<u>knowledge</u>**, in some ways I'm not, but it just depends on whether like these things appeal to me, and so when these things do, I would go all over it like I would go into… in-depth.

I: Alright, so you talk about, you know, your interest is the major motivation for you and then you will do whatever it takes if you're really into that program, is that what you just said?

G: Yeah.

I: Yeah. Ok, so you know, by enrolling different programs what will be the most challenging part in completing the MOOC? Because you joined some, you missed out on some of them, but you completed some of them. What was the most challenging part?

(time management)

G: **Time**.

I: Time management.

(procrastination)

G: And I still struggle about… although like I have like a set session to do it, I still sometimes **procrastinate** or forget or got something else to do out, lead to be messing up my time sessions.

I: OK. So how did you overcome it? I mean you did have some success, you completed a few.

(time management)

G: I would say it was just by sheer **luck**. I still haven't like get anything, but I'd still haven not…I really can't speak of it, I still can't. Nail the timing but then it's all right. That's how I like manage to complete the course before like it's…

I: Tell me more about the one about Berkeley, the music one. How did you complete it?

(MOOC experience)

G: That one, that was actually really really quick, like I spent a lot of time on it because it was talking about blues, which I like, and so yeah it was a bit hard though, especially like some of the peer…

I: Peer assessment. Did you need to type essays?

G: No but we needed to do some things that are pretty hard to do.

I: Performance, to upload it and then…

G: Yeah upload it on like streaming apps I think.

I: Yes.

G: And so it will be really challenging is like a lot of background, and recording it wouldn't be really accurate as well. And the trouble of having like a low quality mic. also when comes to the play, and so it

was a bit challenging, and like there are also something… pictures of what we did like with the right twelve bar blues, it's rather art.

I: So how did you overcome all those difficulties?

<div align="center">(priority)</div>

G: I just…spent, I actually… <u>if I would be completely honest, I ditch homework, I ditch homework and I work on it</u>.

I: Oh, so that's long hours.

G: Yeah I'd like. Because it's like… It took me a while to completely understand what I wanted me to do because I have to take picture, upload it, upload that, and make sure it's uploaded, and wait for the results, and so there are some, you know, assignments which I just left.

I: When you had those difficulties who did you ask for help?

<div align="center">(advice on time management)</div>

G: I didn't really like <u>Mr Pang already knows about like my **time management** issues</u>, so I just let it

<div align="center">(priority)</div>

be, I mean, as long as I know, <u>get my **priorities** straight</u>, like these almost aren't as important, this is rather important to me, I will get this done, but if those like assignments are really important, then I would do it.

I: What makes you think MOOC is more important than your assignment?

G: No, it wasn't like… not MOOC is not …

I: OK. Why did you prioritize MOOC ahead of those assignments.

G: For example of those assignments are like …they won't like take a lot of… they won't count as much of it like a daily assessment marks or they won't…if they're so long, if there are like, the work hours, the workload is way more than what it's worth then I would just go…gets them and

(interested area)   **(priority)**

<u>something I enjoy</u>, something I can get done. And some of the workloads like <u>studying for **Chinese** dictation are dead-ends</u>, they would be, you know, left as well.

I: So it's like an escape rather than you prioritising MOOC.

<div align="center">(priority)</div>

G: I don't know, it was definitely prioritised. <u>It was me **prioritising** them</u>.

I: Yeah, I think it is interesting because what you wrote in your survey was you really enjoyed the MOOC experience.

G: I do but…

I: You enjoyed it because you got the topic that you like you got the knowledge that you want to explore and you want to be an expert in a particular field. What expert you will want to become?

G: I still haven't pinpoint, like make a pinpoint decision on one of them but then I would say
(interested area)
<u>geology and music</u> so far.

I: The science of music and maybe some other languages that's where you wrote.

G: Yeah but I still dropped that.

I: Dropped that. OK, right. So yeah. What about the one for HKU you did the one about dinosaur. Yeah so comparing with the music one, which is more challenging?

G: The dinosaur.

I: OK, so what makes it so challenging?
<center>**(MOOC experience)**</center>
G: There are <u>a lot of things to remember. They use really specific names and like some really new words</u> that I never came… come across, and so it was rather challenging but it's the… it isn't like… so it wasn't so hard that I wouldn't be able to do it in the end.

I: So tell me more about the lesson that you had in the HKU one. So how would you describe the lessons there?
(MOOC experience)
G: <u>Very very very very detailed</u>.

I: What about the lecture? Is he just talking or there was some videos, some interaction or…

G: There are like videos. There are like he sometimes interviews another professor or like some of the people that like found another fossils or he sometimes even like… dust out the fossil for you
<center>**(quest for knowledge)**</center>
to inspect the environment, for audiences to inspect. <u>So I would say it's really good</u> it's…

I: Did you read the lecture notes?

<center>333</center>

(MOOC experience)

G: No, <u>I just listen to him</u>.

I: You just listen to him.

(MOOC experience)

G: And <u>I also read the scripts</u>.

I: Were there any quizzes?

G: Yeah, there were.

I: Did you manage to get a pass without reading the lecture note?

G: No.

I: OK, so you…

(MOOC experience)

G: Because it was like … whenever I like miss a point I would look back at it, <u>because I watch the video several sometimes</u>, just to get a point into my head, and so that is how I usually complete the MOOC instead of reading the lecture notes.

I: So you are more of an audio learner you like to listen rather than reading in this regard.

G: I know but it's not exactly true.

I: You also read the transcript right?

(MOOC experience)

G: Yeah <u>I read the transcript</u>.

I: So what about the assessment? What did they ask you to do?

(MOOC experience)

G: It's <u>just like a knowledge check</u> on like every…oh, assessments?

I: Yeah. The homework. How do you complete …

G: It was a lot of like… multiple choice questions.

I: So there aren't any essays?

G: Were there any essays? I don't remember.

I: What about the discussion like the chat room, the discussion forum?
(MOOC experience)

G: <u>I've never joined the discussions</u>.

I: You never joined the discussions. Were they one of the requirements for you to pass?

G: Not really, I don't think they were though, were they? I don't remember as well but I do… I don't think discussions were necessary.

I: So it's very different from the Berkeley one in terms of the assessment?

G; I don't think you also needed to.

I: You only need to upload the performances.

G: Yeah, you only need to upload it, and people…like peer assessment so…

I: OK, so having like joined so many MOOC which one is the most challenging one for you?

G: So far, I would… there actually two, one would be the tropical coastal ecosystems and the other one would be about paleontology.

I: What makes it so challenging?
(MOOC experience)   **(MOOC experience)**

G: <u>Paleontology, as I said, way too details</u>. And for tropical coastal ecosystems. <u>That was just hard to get</u>. It's in my head because those big words I said also detail, but it is … I wouldn't say it's harder than Paleontology, but it's somewhere in the same level.

I: OK, they're hard because of the details.

G: Yeah a lot of new words. Very hard to get into you. Like… I don't know, know nothing **off a** face ship's.

I: OK, so you haven't completed those two MOOC yet, right? You haven't completed those two MOOC yet, right?
(MOOC experience)

G: <u>The Paleontology completed. Although I wouldn't say... actually I did actually pretty well</u>, never mind, but the other one I passed for… as it now, but then like I haven't completed per se.

OK, you need to give some suggesting to somebody who's new to MOOC ,and they want to complete one, what would be your suggestion?

(MOOC experience)

G: <u>Read the lecture notes</u>.

I: Read the lecture notes. But you are not doing that.

G: I don't do it but then I recommend you to do it.

I: Why?

(procrastination)

G: It's after like… <u>I don't read the lecture notes but like when I'm **bored** sometimes I would go back to it,</u> and when I look at one of those, I could have used that. I could have read those and that would be like a quick tip for me. But then, It was too late now.

I: But you insist not reading it.

(MOOC experience)

G: Yeah <u>I don't learn from my mistakes.</u>

I: OK so that's all you need to compare in order to complete a MOOC.

G: Well not really. I also would recommend people like make sure you're a hundred percent committed to one thing. there have been several times where I have not been committed then I messed up the time. Have edge with a lot.

I: Is it has do with your homework again? Or maybe assessment…

(procrastination)

G: No <u>it was just me being **lazy**</u>.

I: OK, it's all about prioritising things. OK, so I'd like to know more about like what the school offered you, as you know, we offer you a mentor that's one form of support. Can you name the other support that the school gave you during this process in this mentorship program?

(certificate)

G: Ohh yeah, they <u>refund the certificate</u>.

I: Yes, yes.

G: That helps. I'm allowed to do my MOOCs during my free lessons, which means ICT.

I: Yeah

G: So, that's nice.

I: Yes.

G: And other than that I wouldn't say much, the mentors…

I: Yeah, you went to one workshop in late October.

(Training from HKU)

G: Yeah workshop, <u>that workshop. Although I didn't understand what the workshop</u>…

I: Because it was conducted in Chinese?

G: Yeah.

I: But the Powerpoint was in English. The Powerpoint was in English.

(Training from HKU)

G: Yeah, <u>I read the Powerpoint in the workshop but it didn't help that much</u>.

I: So you have difficulties in understanding Chinese

G: Yes, I do.

I: OK, so what about you know you've been given a booklet about the MOOC for starters, I mean the menu that…

(MOOC for Starters Guide)

G: To be a hundred percent honest, <u>I did not read that</u>.

I: You did not read that at all. Do you find your page there? There's one page for you about Griffin Lam and what program you completed.

(MOOC for Starters Guide)

G: It was the same… <u>it seems like the page you showed last year, but it's just like there's more stuff like MOOCs completed by others</u>.

I: Yeah, because people talk about like they don't know how to register an account, they don't know do pay, they don't know how their whole refund, their whole reimbursement done and they don't know what are the key dates.

G: I don't know.

I: Yeah, these all can be found on that booklet. Yeah, OK. So even though you told me that you don't really understand what was going on for that HKU Tele. training program, but you did agree with some of the things that they do. You said you liked it just that they presented to you about MOOC, like what MOOC is about, what the most popular MOOC…

G: I beg your pardon?

I: Yeah, in your survey. You did agree that, you know, that HKU did give you something about telling what MOOC is about?

G: Yeah, like…the only reason like I didn't even know Paleontology would become like the course

<p align="center">**(Training from HKU)**</p>

itself, so when that guy, I forgot his name already, <u>he talked about that MOOC, I was instantly intrigued</u>.

I: Oh, OK.

G: So that was what I meant by just…

I: Ok, they talked about you know what a common form of assessment, what a common form of lessons, Were they very similar to what you experienced in your own MOOC experience?

G: You mean during the lecture?

I: Yeah, during the lectures they told you like…I mean in the workshop, they said OK, for MOOC is mostly about watching videos, reading lecture notes before assessment, peer assessments, multiple choice, were they very similar to your MOOC experience?

<p align="center">**(Training from HKU)**</p>

G: Yeah, <u>I came across like peer assessments, essay assessments, and also MC</u>.

I: OK. And the second speaker did he talk about time management? Like you know, pay attention to your procrastination, pay attention to how you manage your time, is it because it's conducted in Chinese so you didn't really understand.

<p align="center">**(Training from HKU)**</p>

G: <u>I really don't understand what anyone of them said</u> so…

I: OK so. But you did agree that the support from the school was OK?

<p align="center">**(Training from HKU)**</p>

G: Yeah, <u>it was all right</u>.

I: Because apart from… OK, the school also offer you to do a sharing in a morning assembly but you declined.

G: Yeah and I was uncomfortable about that somehow.

I: Yeah, you have problem talking to, you know, a lot of people right?

G: Yeah.

I: So you were like an audience for most of those sharing last year. So how did you find the other sharings from the other students?

G: Was I paying attention…

I: You didn't pay attention?

(Training from HKU)
G: I think I was too sleepy to pay attention.

I: But you didn't know there were some sharing.

G: I didn't know, like I was aware. I think it was… Dephanie was up there?

I: Dephanie, Watson, Hayron…

G: Jenny.

I: There was…Crystal… Crystal, Kitty, Marie and… Marie and there's Erica talk about Chinese in the MOOC. You forgot it all. OK, so what about the sharing from the associate vice president from HKU, the vice principal from HKU, do remember what he said in the sharing?

G: I…

I: No? So that wasn't your inspiration at all, right? OK, but he was using English, he was speaking in English.

(Training from HKU)
G: Yeah. If I were to be completely honest it was quite boring.

I: Yeah, OK. He's like He's speaking alien language and none of you understand.

G: Everybody around me slept.

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I: OK, I wont let him know what you just said. He came all the way from HKU just to deliver that sharing, ok?

G: I know… I like, I didn't… I could, I myself I can't sleep but then <u>I look around it's like everybody's asleep</u>, well I don't know what to do.

I: OK, so you describe the effective support, in the mentor, having a mentor that you think is effective, or maybe your subject teacher also helped you in explaining some of your ideas in the MOOC, and also you believe the reimbursement is also important as well, and what would be the most effective support for you at this moment that the school gave you? The most effective one out of all that we just talked about?

G: Mentor.

I: Mentor. Why is it like so important for you?

(academic support)

G: <u>I would say a mentor</u>… I'm not speaking as of my own perspective but like a general

(academic support)

perspective <u>it could actually help people who are struggling in things</u> as like most of the MOOCs I've seen online, they are conducted in English, and then people do not understand they could actually seek help from like these mentors, and like not only in that way, but also in other aspects

(advice on time management)

like <u>time management, like the mentors have more experience in these kind of things</u> and they can actually input a lot.

I: OK. So you believe that's the most important support that a school offered you?

G: Yeah.

I: What… OK, you did talk about some of the ineffective ones including the HKU training, including the… you know the guide for MOOC.

G: Yeah.

I: And also you didn't really interact with other MOOC students in the school right?

G: I mean…

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I: Did you talk to other students about the MOOC? That you…

G: About MOOC no, but I did talk to the students.

I: So when you see some other students like Dephanie, like Jenny, like Crystal, you never talk about MOOC?

G: I don't talk to them at all actually.

I: You don't talk to them at all.

G: I talk to Alice but we don't talk about MOOCs.

I: OK, there's another boy in your classes in the program that's Anson Ng, did he tell you anything about MOOC?

G: Nothing, like we don't talk at all.

I: You don't talk at all. That's… What about Matthew? Matthew is your friend he completed the MOOC.

G: Yeah, he told… he told me he completed the MOOC that's it.

I: He didn't further talk about

(MOOC for Starters Guide)

G: Oh yeah, <u>he told me a little bit about his MOOC about how like</u>…actually, I don't remember what he said.

I: OK, but he did talk?

G: He really didn't…what… it's almost never really significant or it's like never really memorable in anyway I talked, I talked to him about my MOOCs too but then he doesn't know what I'm talking about.

I: OK. So would you think it'd be better to have a MOOC community, you know, embedded in the school? Or you think he's not necessary because you're happy with what you have?

G: It really depends on personal perspective really, but I wouldn't say… to me it's pretty much the

(MOOC for Starters Guide)

same as I don't talk to anybody but then… I mean <u>some people would appreciate it,</u> as they can,

(MOOC for Starters Guide)

you know, <u>share the knowledge and make it you know</u>…They can work on somethings together and that may actually help you.

I: OK. So, right. Having been this program for more than a year. What is the further support that you need, you know, that is not existing right now, that you need in order to complete more MOOC? The further support that you might need.

G: I wouldn't say I have any comments on that really.

I: So you are happy, you're content with what you have right now? What the school offered you? You think that's good enough?

G: Kind of.

I: OK.

(Reimbursement)

G: I actually <u>I would say offering refund is actually a pretty nice policy on its own</u>.

I: Really? You don't need to say that because I'm sitting here, I mean I would be, you know, appreciate if there's some genuine and frank, you know, suggestions from you so…

G: It's just I can't think of any.

I: Ok.

G: Then it's like… I have a problem with… nothing, no.

I: OK. So you are happy.

G: I'm. Generally content with it.

I: OK. Have you got your cheque ready for the reimbursement?

G: Now I return it…

I: Because like you don't have a bank account.

G: Yeah, and they haven't given it back yet so…

I: OK. All righ,t so let's move on the last topic. It's is about was happening you know in MOOC and would that affect your future, some of the prospect that you may want to focus on, and like what I said right in the very beginning, you enjoy MOOC but you believe it has zero influence to what you want to do later on your life.

(MOOC on university application)

G: Influence on my life. Well what I want to do, <u>I don't believe it would have influence on what I want to do</u>, but it would have influence on what I want to know and how I would…how I'd apply what I know to what I do but I guess it's… I really don't know.

I: So it… but I'd like to ask you this question, well how about the suggestion give by your mentor, your MOOC mentor, would that influence your choice of university that you apply later on?

G: It really….Because as of right now as I said I have like a set university to go to, but sometimes you make suggestions like some other universities to check out, but then to be honest I would have really like… What I have right now is pretty solid I would say, so I wouldn't say it would change my

(mentor on university application)

mind, so <u>whatever affect my decision as of now? No, I don't think so</u>.

I: But will you take his suggestion into account?

(mentor on university application)

G: <u>I would keep it in mind</u>.

I: Alright so. Yeah, because I understand based on that Google form I recognize that a lot of your discussion right now is around what you going to do later on.

G: Yeah.

I: Instead of the MOOC program, a lot of them is about what you should study, would there be a scholarship, would there be more opportunities while you're moving forward, so what did your mentor tell you about that?

(MOOC on university application)

G: <u>About college. It wouldn't be about MOOC</u>, it would be more about like me and my future and along with, along the lines of me moving to Australia, what schools are there, he's helping me contact his former student, and helping me like gather some information, so I can be ready for it I guess, like now I know they aren't as…uptight. As like people in Hong Kong and that's good to know when the people there are nice. I think so.

I: So your MOOC mentor has turned into a career mentor.

(mentor on university application)

G: <u>Kind of</u>.

I: Alright, so the conversation, the topic changed after all. Does it have to do any… have anything to do with MOOC in your conversation right now, so you know, you did this MOOC may be from Australia, so may be you can try that in university, did he say anything like that?

G: Not that I could remember.

I: So, it's just mostly about like there's a preferred destination, he tries to bring you some help, some support.

G: Yeah, because as I said there isn't really much to tell.

I: OK, right so… all right. Since you said you never gained any access to the discussion forum in the MOOC program, but do you know there's a discussion forum, have you ever clicked into that forum or basically…

G: Once or twice when some courses forced me to.

I: Force you to use. What do you see in those forums?
<div align="center">**(MOOC experience)**</div>
G: <u>Just people literally just writing out their ideas</u> like… writing like any questions or answers towards the things that they are forcing us to do, for example they want to go to discussions and session…section and to just…discuss about some stuff, without like some answers to this question and then do some experiments and discuss the results. I never took part, once that part occurred I was like… No, bye bye.

I: Why? Why would you object such move?

G: I'm just not really comfortable with it. I'm trying to be more comfortable with it now. Now. But in the past no, and I was a no go.

I: OK. So, right. So you didn't make any friends there as I suppose?

G: Yeah.

I: OK. What about… OK, you've done several MOOCs, you've tried the local ones, one from HKU, you tried one from Berkeley, try the one for animal language that's in America. Is there any particular lectures or professors that attract you? Their way of teaching, their way of delivering the lessons.

G: The Berkeley one.

I: What makes it so fascinating for you?

(MOOC experience)

G: <u>He makes it really fun to learn</u>.

I: Tell me what he did. Tell me what he did in his lesson.

G: I couldn't pinpoint out what he did it's just…a combination of things that make the lesson

(MOOC experience)

intriguing, like <u>there's several demonstrations in the videos, there are several tips on how they remember</u> something. He just made the entire course fun.

I: OK. So is the manner that he delivered, or it's the format, or did he just did some solo, like demonstration with a guitar or anything like that?

G: All of that really… like the… that one… the second one I would not … maybe not I think. But the first one he definitely did like … I mean definitely demonstrated and there is definitely really the way he like… expressed what he wanted to teach us.

I: Have you ever thought about applying for the university because of that lecture? Yes? At that moment?

(MOOC on university application)

G: Yes. At that moment I was like <u>if that professor taught me I would love that so much</u>.

I: Then what change your mind later on?

G: By slow realization that music isn't really you know… really stable way to go.

I: So is like getting back to basics, thinking about, you know, money, thinking about the careers.

G: Not really it's just that when I think about it, am i really good at music? Not really. Am I like qualified completely to join it? Will I be capable to do all the things that they require me to do? No. I

(interested area)

don't think so but <u>it's just good to know as an interest, I guess</u>. But for wildlife, I would say I have put a lot of effort in it.

I: OK. So what about in wildlife, is there any I mean, college, or is there any universities or the lectures that really attracted you?

G: Not really, they were all pretty plain. I was saying there were some things that really discussed about discuss about some…really interesting points like how…things slowly, even the things that aren't

supposed … don't normally learn, they can still learn nevertheless and … some way to adapt to change of everything, and it's just amazing.

I: So you like the content but you didn't like the delivery, am I right?

G: Delivery… Well it was all right.

I: But it was not the most fascinating one,not as good as the one for the music.

G: Yeah, I guess it's because, just because of like the subject, because music it can be…you can do it in a variety of ways to introduce it but then for like…things that are just factual, then may be not.

I: OK. So… Is there a preference like you talk a lot about science here. Is there any programs after joining the MOOC, you would like to apply for that? Like maybe you've done the one for animal behaviors and you like that, and then you thought about applying for that university in America.

G: Oh, not really. Because of prices…you know, money.

I: If you…

G: But then I would say I would, consider joining the course itself, but maybe not from that university in particularly.

I: Why not? Maybe that's what you want.

G: Well because like I did my research in class, like I look around different universities and like I need like one that I can afford, and one that is credible I would say.

I: You are thinking about studying in Australia.

G: Yeah. Right now.

I: Have you checked out any MOOC from Australia universities?

G: Actually the one I just passed was from Queensland, but then Queensland is more expensive
(MOOC on university application)
but alternatively by <u>I looked at another university which I don't think has a MOOC yet</u>.

I: What's the name?

G: Murdoch University? I don't know it's from Perth like their research…They have really good research…

I: There's University of Western Australia in Perth.

G: Yeah but i go towards the Murdoch because it's…the subject I want to study there it's really beneficial in that university, I get a lot of advantages in that university I would say. Yeah.

I: Do you think your MOOC experience in University of Queensland would benefit you in entering Murdoch University?
(MOOC on university application)
G: <u>Maybe</u>.

I: Will you talk about that you if there's an interview? Will you tell them that…

G: Oh, the thing I'm doing will not have an interview I think.

I: Oh, if there's one would you share with them your MOOC experience?

G: Yeah, I would, I would, I would.

I: What makes you so exclusive for you to share about your MOOC experience in an interview?

G: Exclusive…

I: Or special. Or was appealing to other people that you might think.

G: Maybe, it's… I have no idea to be honest.

I: Oh, so you do MOOC because you're interested in knowledge, it doesn't really mean that you want to use it as a tool for university application.
   (quest for knowledge)   **(Curriculum Vitae)**
G: <u>I use it as **knowledge**</u>. <u>It can be use as something like support your **resume**</u>, or…

I: Would you include that in your application letter that you've done something about the science in University of Queensland? Would you write something like that?

G: If it's related, yeah. If it's related.

I: If the thing is worth mentioning.

G: It's worth mentioning. I mean, with all that hard work put in why not mention it? But that's not the main reason I did it, but it would be one of the reasons.

I: OK. Think about like before you…joined a MOOC mentorship program, you know, and after you join it for a year and a half, what is the most significant change that you believe you… you've, you've got from this program? Change after this program or gains or…

(quest for knowledge)
G: **Knowledge** that's… that's simply, it …

I: Did it shape you in any way?

G: Shape me? I wouldn't say so. I mean… It …in really like…minuscule amounts that it inspired me to work a bit more… on these topics.

I: Did you gain more confidence after completing MOOC?

G: No, that's not where my confidence came from, it's here.

I: OK. If somebody tell you are you are really good, you completed university courses when you're still in high school, what do you think about that?

G: I still wouldn't be confident.

I: So your confidence doesn't come from what you've accomplished?

G: Not really.

I: What does it come from then?

G: I have no idea.

I: you have no idea.

G: I'm a very…I basically have no confidence but then I guess I'm trying to change that now, because I need it.

I: Yeah.

G: I then pretty sure I do but then…It's all right. It's slowly getting there I'm trying to…force myself to it I guess but. By forcing myself I'm slowly getting there.

I: Did you tell your parents that you are able to complete a MOOC from HKU?

G: I am sure they know, I only tell them I complete MOOCs. I only tell them I complete MOOCs.

I: What was their response?

G: Nothing really, they was like nod and OK.

I: Well, when you're on the stage last time when the vice you know … the associate vice president came to our school and you awarded on the stage, how did you feel about that?
   (Training from HKU)
G: <u>It was pretty awkward</u>.

I: OK. Why do you think so?

G: Standing after there, after the… without waiting for the picture to be taken…

I: There was a very brief description of your journey to MOOC. How did you feel about that?

G: It was … like looking back on the road… to see what you, what you've done so far…it's all right.

I: So you don't really get confidence from that.

G: Yeah.

I: You found it awkward. Did you check out the people standing around you? Do you know who they are?

G: Some.

I: Some. So to be standing with the so called the cream on the form, how did you feel at that moment?

G: I beg your pardon.

I: You know, the most… some of them like Daphanie, and Alice, and Crystal, and you know, they are considered as the "cream", so called the top students…

G: Oh, ok.

I: For the form and I had to be very honest with you. I think a lot of teachers change their impression towards you because of this MOOC program because, yeah, because they've never recognized that Griffin would complete university courses.

G: Hahaha.

I: Because every time, you know, where your name appears, it usually has to do with Chinese, and usually you didn't do so well, and the people has to, I mean, has to have a discussion whether you get to be promoted or anything, so knowing the fact that there were some teachers who say but he is pretty good, he is able to complete a MOOC from HKU.

G: He can do it.

I: Yeah. So, so I'm just curious like, you, seldom do I see you on stage to be honest, and then to be on a stage but you found it awkward, so it's fine.

Right, so after all, after completing all these MOOC, or the experience or knowledge you've gained, do you think that gives you any sort of advantage in applying for a tertiary institute?
                              (MOOC on university application)
G: Tertiary institute. Really? Because…University? I wouldn't say. I don't think so.

I: What about certificates? Do they give you some sort of support for your application?
                              (MOOC on university application)
G: Not really because of like, basically since I'm going to the agency, all they really look at right now would be like whether I pass my report cards, my health, and if I would pass English, which… i think is alright…

I: OK, so now it is just the beginning of the year right now, because it's just two, three months past for the MOOC mentorship program, and then, what do you expect from the months ahead, like towards the end of year what do you want to achieve?

G: More MOOC, like as of now I'm kind of restricted as in like would I be able to complete these MOOCs but then I… hopefully I can I would say.

I: Are you driven by the number of MOOCs completed? Are you driven by…
   (quest for knowledge)
G: The knowledge.

I: The knowledge.

G: Yes.

I: So numbers is not important to you.

G: Yeah, like some courses are like really big three year courses that, wow, there's whole lot of content.

I: OK, so you feel you must focus on what you want to know.

G: Yeah.

I: What do you expect from your mentor in the months ahead, because he seems that your composition doesn't stop the MOOC, when you go… you… goes above it you know talk about different stuff. What do you expect from your mentor in the weeks, months ahead?

G: It's really unpredictable.

I: Why would you use the word unpredictable?

G: We won't know what we will be talking about by then, like what would happen…

I: So what'd be your expectation apart from being unpredictable. Yes, to expect something you know, maybe just like just do what we usually do, just keep it that way you know.

G: Probably you know just very inconsistent and you know just talk about universities more than I do talk about MOOCs probably that's how it's going to turn out.

I: OK so. Do you talk to your career teacher about what's going on right now?

G: My…

I: Career teacher like Miss Joyce Wong. You just talk too Mr Pang about you choice right?

G: Well I've talked to like several teachers…

I: Form teacher?

G: Any teachers that are interested really.

I: Really?

G: Yeah.

I: Do you talk to a former teacher about that?

G: Oh.He knows I'm going to because I'm happy as well, and I asked him if he could teach me, help me like boost up my math skill, I definitely need that. So yeah. Slowly…

I: It seems to me that you're closer to Mr. Pang than your form teacher.

G: I'm actually closer to many teacher than my form teacher but recently I've been getting closer to my form teacher I would say.

I: Because of the communication that you had about your… you know university application or…

G: Oh no, just music.

I: It's music.

G: Yeah.

I: So you got that common ground?

G: Yeah, common ground.

I: OK, so on and all, you don't have much expectation towards these programs, basically just let it flow, let it cruise.

G: Time though, I enjoy it and I…Kind of let it go, I go with the flow.

I: OK.

G: Wherever it takes me I will go.

I: So it'll be interesting that when I meet you in March, there will be some update about your experience in MOOC, and also experience in your mentor. OK, thank you Griffin.

Appendix 11 - A sample of code note - thematizing

Interviewer: Tony Wei
Interviewee: Greg
Date: 16th November, 2017
Time: 5:00 p.m. - 6:00 p.m.
Place: A classroom, XXX College, Hong Kong

I = interviewer
G = Greg

I: So thank you Greg. You know, always see you in the… in lift, always see you outside, always see you, you know, talking to different teachers and then, I see you as a very cheerful personality. Sometimes I suppose that you are very close to different teachers, and I know you have some difficulties last year because of Chinese, because you know, a very uncertain future, you're not sure about what you want to do later on, but it seems that this year you have a clearer path. Maybe you talk to your parents you talk to…

G: No…it's just counselling.

I: Counselling and then I can see that you having like a better mood this year.

G: Yeah.

I: Because I'm in constant contact with some of the teachers who's teaching you and then they also told me that you… you know, there's less burden for you this year. So for MOOC, you are one of the very… very first students to join his program last year I remembered. You volunteered to join his program.

G: Yeah.

I: Yes. So I think it's somewhere around like before Christmas I remembered. I want to join… no, no, it was before November.

G: It was ever since like previously I see the teacher introduced me to the program. Then I…

I: Mr Raymond Chan?

G: Yeah.

I: OK, and then you… I don't know your what your purpose is for this program, but you were the very first students to join it and then… I would like to know more about your experience there. So I've read your survey and a lot of my questions here comes from that. And then I am really interested to know your relationship with your mentor. Because you had been with Mr Pang for like a year and a half right?

G: Yeah.

I: Yeah. So I would like to know… like in the very beginning, what do you know about Mr Pang before the MOOC mentorship program?

G: Well, he used to be my class teacher in form one and so, of course, my first impression of him was strict because I was just an immature little kid back then, but then it's time you know… he

Mentoring (academic support)

seems to be a pretty chill guy and I always like to talk to him more. Sometimes you can laugh about stuff and I guess like…based on MOOC we talk about a lot of stuff like how things turn out, should I go for this or should I go for that. And as you know we also have been talking about like

Further studies (mentor on university application)

my university choices in the future and how things will turn out which it starts to stabilise right now. Hopefully I can go to UBC.

I: We will talk about university later on, and according to the result of your survey you believe that MOOC has zero impact to your choices in university, but we will talk about that later. We will talk about that later. So, I'd like to know more about you and Mr Pang because, you know, the relationship is very important, you know, in your survey you said maybe you thought Mr Pang has some understanding of MOOC, maybe some experience in doing MOOC, and then he was just your class teacher back then, but now you don't have like a very formal tie and I guess he's not teaching you anymore, and then, but you know you did talk about goals, setting up goals sometimes. So I am interested to know, you know, how often do you see him and talk about MOOC?

Mentoring (academic support)

G: Actually whenever we meet each other at the lift then we talk, or like whenever you just randomly meet each other then we just do it like a impromptu, or like an instant meeting right away.

I: So. Last time, last time that you talk to him, what do you talk about regards to MOOC?

Further studies (mentor on university application)

G: Regarding the MOOC. Actually I don't think we… I think we're more focused towards the university more than the MOOC.

I: So the topic changed.

Further studies (mentor on university application)

G: Yeah. it's a… it went from ==“hey how's it going” and then after that like…a quick section end and… to university==.

I: OK I'd like you to recall your very first mentoring session with Mr Pang so you… I remember your first MOOC was about…let me …is about music?

G: No.

I: It's about biology, the animal behaviours.

G: Yeah.

I: Yes, think about your first MOOC and then… when you tell Mr Pang that you are going to work on the animal behaviours in university what did Mr Pang tell you at that time?

Intrinsic Motivation (interested area)

G: I told him it's like because ==he knows it was what I was interested in==… it has been… what I was… it is what I was have been…always have been interested in, sorry for the startles. And he

Intrinsic motivation (interested area)

said go for it because he understands that ==I enjoy that subject a lot== so he just said go for it because

Mentoring (academic support)

he thinks it's right for me. ==It does not really like much input but there's a support go for it==.

I: So a very encouraging kind of gesture and then asking you to go for your interest. Did you talk about the content of the MOOC?

Mentoring (academic support)

G: Not really. Like most of it… like…==We do talk but when we talk, it's like not that much==, it's not in detail I would say. It's like I don't tell him everything other than the course, most of it is just … I don't know, are distant but yet we still know what's going on.

I: Did you share with him your difficulties about the program?

G: At first I told him. Yeah, I had trouble getting used to like… what was going on, like I'm getting but then slowly… it stabilized and there wasn't much to tell him.

I: How did he help you when you told him about the difficulties?

Mentoring (advice on time management)

G: He just… ==If I remember correctly he told me to just skip,== because as I said most of my problems

Mentoring (advice on time management)

were ==just time management so he just gave me some advice==.

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I: What kind of advice did he give you?

Mentoring (advice on time management)

G: ==Set a stable time table to work on it==.

I: Did you do what he told you?

G: Until this year, I did it this year.

I: Oh, you did it this year.

G: I do it in ICT lesson and I drop that subject so…

I: Ok, alright so… So how would you describe his impact on your MOOC experience?

Mentoring (academic support)

G: Impact of MOOC experience… ==I wouldn't say a lot but he did support me==.

I: So a very supporting figure as he introduced value your time management, as told you to go for your interest.

Mentoring (advice on time management)

G: He sometimes ==check on how… like my progress, what new courses are you doing==, but we wouldn't go into detail as I said.

I: Ok, so what's the most challenging part in your communication with your mentor?

Mentoring (challenge in interaction)

G: Most challenging part… ==ohh we rarely see each other that's why==.

I: How often do you see each other?

Mentoring (challenge in interaction)

G: I would say… ==It's inconsistent==.

I: Inconsistent?

G: Yeah.

I: If…you can have… you say… would you want a more like…like a regular meeting with him, would that benefit your book experience even more?

Mentoring (academic support)

G: Actually ==I would say it's good where's it at right now==.

I: Why?

G: Because if we said …like … we sat a the regular meeting like… like regular, like we really meet

regularly, it wouldn't be like, if I have nothing to say then it would just be… <mark>I'd rather that we meet when I have something to say or have a problem to like</mark>… turn to what to do. But if I don't then I guess I don't have to really meet him.

I: Ok, so you know, there's a Google forum, as a communication tool between you and your mentor. Have you ever checked out that forum? You never checked. That's what you said in your surveys and you never checked it out, you know, if nothing was updated but let me tell you the fact is Mr Pang was one of the teachers who regularly update that Google forum. And whenever you meet him, what you talk about, he has full coverage. So you can check that out as well.

G: I didn't know that.

I: You didn't know that. OK. So, on and all for your… you know in regards to MOOC, Mr Pang's figure was to support you, to encourage you, to have better time management and to have…

G: Remind me of things that I did not do.

I: Ok, to have some kind of very inconsistent form of meeting, whenever you available. So how would you describe the mentoring process so far with Mr Pang.

G: Chill, that's the best way to describe it. It's, you know, <mark>it's casual. I enjoy it</mark>. Something I wouldn't mind doing even though I have something else to do. I am taking time, squeezing time, just to meet him.

I: So I would say is largely positive.

G: Yeah.

I: OK, right. So let's talk about your MOOC experience. So how many MOOC have you joined? I'm not saying complete, joined, so far.

G: Sometimes <mark style="background-color:red">I would like scroll it along like with the course catalog</mark>.

I: But rather formal ones that you have officially… OK, I pressed the button, I joined this.

G: Recently joined, would be like five…

I: Did you pay for them?

G: Not yet.

I: Not yet. When would you pay for them. you enroll?

G: Yeah, I already completed, like that I passed in the progress bar, one of them.

Schoolwork and MOOC (MOOC experience)

Right now just to work on the others. It's really time consuming. But, it's ok. I'll do it like, because right now I have like a set time session to do. Hopefully they'll improve.

I: Ok. All right so. Yes, alright, so that means you attempt several MOOC, you don't need… you don't know the number. So far I mean starting from last year you joined this program, how many MOOC to have you attempt? Guess?

G: Last year I didn't like attempt, you know, as many as this year. This year, all of a sudden, like a surge of enrollments.

I: Really? So there's an increase this year.

G: Yeah, I enrolled in them but I am not paid, I have completed yet I intend to.

I: What led to that change? Last year you were pretty picky. You started with animal behavior and then you did the music program with Berkeley and then you attended the HKU one about a dinosaur. But this year what makes you, you know, join so many programs?

Further studies (MOOC on university application)

G: I actually join a lot of music program , and also some that will be beneficial to me in the future, and I said I might be leaving next year, and so one of the… things like I actually read… just enroll, like today and it was about math and calculus, like pre-calculus. So I can study beforehand, so I can have no problems like next year, whatsoever.

I: So what's your motivation? You talked about future. What was your motivation in enrolling in MOOC. Or spending the time there?

Intrinsic Motivation (quest for knowledge)

G: Well I would say it's just so I can learn a lot more because in some ways I'm obsessed with knowledge, in some ways I'm not, but it just depends on whether like these things appeal to me, and so when these things do, I would go all over it like I would go into… in-depth.

I: Alright, so you talk about, you know, your interest is the major motivation for you and then you will do whatever it takes if you're really into that program, is that what you just said?

G: Yeah.

I: Yeah. Ok, so you know, by enrolling different programs what will be the most challenging part in completing the MOOC? Because you joined some, you missed out on some of them, but you completed some of them. What was the most challenging part?

School work and MOOC (time management)

G: Time.

I: Time management.

<div align="right">

School work and MOOC (procrastination)

</div>

G: And I still struggle about… although like I have like a set session to do it, I still sometimes procrastinate or forget or got something else to do out, lead to be messing up my time sessions.

I: OK. So how did you overcome it? I mean you did have some success, you completed a few.

School work and MOOC (time management)

G: I would say it was just by sheer luck. I still haven't like get anything, but I'd still haven not…I really can't speak of it, I still can't. Nail the timing but then it's all right. That's how I like manage to complete the course before like it's…

I: Tell me more about the one about Berkeley, the music one. How did you complete it?

<div align="right">

Schoolwork and MOOC (MOOC experience)

</div>

G: That one, that was actually really really quick, like I spent a lot of time on it because it was talking about blues, which I like, and so yeah it was a bit hard though, especially like some of the peer…

I: Peer assessment. Did you need to type essays?

G: No but we needed to do some things that are pretty hard to do.

I: Performance, to upload it and then…

G: Yeah upload it on like streaming apps I think.

I: Yes.

G: And so it will be really challenging is like a lot of background, and recording it wouldn't be really accurate as well. And the trouble of having like a low quality mic. also when comes to the play, and so it

was a bit challenging, and like there are also something… pictures of what we did like with the right twelve bar blues, it's rather art.

I: So how did you overcome all those difficulties?

School work and MOOC (priority)

G: I just…spent, I actually… <mark>if I would be completely honest, I ditch homework, I ditch homework and I work on it</mark>.

I: Oh, so that's long hours.

G: Yeah I'd like. Because it's like… It took me a while to completely understand what I wanted me to do because I have to take picture, upload it, upload that, and make sure it's uploaded, and wait for the results, and so there are some, you know, assignments which I just left.

I: When you had those difficulties who did you ask for help?

Mentoring (advice on management)

G: I didn't really like <mark>Mr Pang already knows about like my time management issue</mark>s, so I just let it

School work and MOOC (priority)

be, I mean, as long as I know, <mark>get my priorities straight</mark>, like these almost aren't as important, this is rather important to me, I will get this done, but if those like assignments are really important, then I would do it.

I: What makes you think MOOC is more important than your assignment?

G: No, it wasn't like… not MOOC is not …

I: OK. Why did you prioritise MOOC ahead of those assignments.

G: For example of those assignments are like …they won't like take a lot of… they won't count as much of it like a daily assessment marks or they won't…if they're so long, if there are like, the work hours, the workload is way more than what it's worth then I would just go…**gets them (15:25)** and

Intrinsic Motivation (interested area)   **School work and MOOC (priority)**

<mark>something I enjoy</mark>, something I can get done. And some of the workloads like <mark>studying for Chinese dictation are dead-ends</mark>, they would be, you know, left as well.

I: So it's like an escape rather than you prioritising MOOC.

School work and MOOC (priority

G: I don't know, it was definitely prioritised. <mark>It was me prioritising them</mark>.

I: Yeah, I think it is interesting because what you wrote in your survey was you really enjoyed the MOOC experience.

G: I do but…

I: You enjoyed it because you got the topic that you like you got the knowledge that you want to explore and you want to be an expert in a particular field. What expert you will want to become?

G: I still haven't pinpoint, like make a pinpoint decision on one of them but then I would say
Intrinsic Motivation (interested area)
geology and music so far.

I: The science of music and maybe some other languages that's where you wrote.

G: Yeah but I still dropped that.

I: Dropped that. OK, right. So yeah. What about the one for HKU you did the one about dinosaur. Yeah so comparing with the music one, which is more challenging?

G: The dinosaur.

I: OK, so what makes it so challenging?
Schoolwork and MOOC (MOOC experience)
G: There are a lot of things to remember. They use really specific names and like some really new words that I never came… come across, and so it was rather challenging but it's the… it isn't like… so it wasn't so hard that I wouldn't be able to do it in the end.

I: So tell me more about the lesson that you had in the HKU one. So how would you describe the lessons there?
Schoolwork and MOOC (MOOC experience)
G: Very very very very detailed.

I: What about the lecture? Is he just talking or there was some videos, some interaction or…

G: There are like videos. There are like he sometimes interviews another professor or like some of the people that like found another fossils or he sometimes even like… dust out the fossil for you
Intrinsic Motivation (quest for knowledge)
to inspect the environment, for audiences to inspect. So I would say it's really good it's…

I: Did you read the lecture notes?
Schoolwork and MOOC (MOOC experience)
G: No, I just listen to him.

I: You just listen to him.

Schoolwork and MOOC (MOOC experience)

G: And I also read the scripts.

I: Were there any quizzes?

G: Yeah, there were.

I: Did you manage to get a pass without reading the lecture note?

G: No.

I: OK, so you…

<div align="right">**Schoolwork and MOOC (MOOC experience)**</div>

G: Because it was like … whenever I like miss a point I would look back at it, because I watch the video several sometimes, just to get a point into my head, and so that is how I usually complete the MOOC instead of reading the lecture notes.

I: So you are more of an audio learner you like to listen rather than reading in this regard.

G: I know but it's not exactly true.

I: You also read the transcript right?

Schoolwork and MOOC (MOOC experience)

G: Yeah I read the transcript.

I: So what about the assessment? What did they ask you to do?

Schoolwork and MOOC (MOOC experience)

G: It's just like a knowledge check on like every…oh, assessments?

I: Yeah. The homework. How do you complete …

G: It was a lot of like… multiple choice questions.

I: So there aren't any essays?

G: Were there any essays? I don't remember.

I: What about the discussion like the chat room, the discussion forum?

Schoolwork and MOOC (MOOC experience)

G: <mark>I've never joined the discussions</mark>.

I: You never joined the discussions. Were they one of the requirements for you to pass?

G: Not really, I don't think they were though, were they? I don't remember as well but I do… I don't think discussions were necessary.

I: So it's very different from the Berkeley one in terms of the assessment?

G; I don't think you also needed to.

I: You only need to upload the performances.

G: Yeah, you only need to upload it, and people…like peer assessment so…

I: OK, so having like joined so many MOOC which one is the most challenging one for you?

G: So far, I would… there actually two, one would be the tropical coastal ecosystems and the other one would be about paleontology.

I: What makes it so challenging?

Schoolwork and MOOC (MOOC experience)   **Schoolwork and MOOC (MOOC experience)**

G: <mark>Paleontology, as I said, way too details</mark>. And for tropical coastal ecosystems. <mark>That was just hard to get</mark>. It's in my head because those big words I said also detail, but it is … I wouldn't say it's harder than Paleontology, but it's somewhere in the same level.

I: OK, they're hard because of the the details.

G: Yeah a lot of new words. Very hard to get into you. Like… I don't know, know nothing **off a face ship's (20:16)**.

I: OK, so you haven't completed those two MOOC yet, right? You haven't completed those two MOOC yet, right?

Schoolwork and MOOC (MOOC experience)

G: <mark>The Paleontology completed. Although I wouldn't say… actually I did actually pretty well</mark>, never mind, but the other one I passed for… as it now, but then like I haven't completed per se.

OK, you need to give some suggesting to somebody who's new to MOOC ,and they want to complete one, what would be your suggestion?

Schoolwork and MOOC (MOOC experience)

G: Read the lecture notes.

I: Read the lecture notes. But you are not doing that.

G: I don't do it but then I recommend you to do it.

I: Why?

Schoolwork and MOOC (procrastination)

G: It's after like… I don't read the lecture notes but like when I'm bored sometimes I would go back to it, and when I look at one of those, I could have used that. I could have read those and that would be like a quick tip for me. But then, It was too late now.

I: But you insist not reading it.

Schoolwork and MOOC (MOOC experience)

G: Yeah I don't learn from my mistakes.

I: OK so that's all you need to compare in order to complete a MOOC.

G: Well not really. I also would recommend people like make sure you're a hundred percent committed to one thing. there have been several times where I have not been committed then I messed up the time. Have edge with a lot.

I: Is it has do with your homework again? Or maybe assessment…

Schoolwork and MOOC (procrastination)

G: No it was just me being lazy.

I: OK, it's all about prioritising things. OK, so I'd like to know more about like what the school offered you, as you know, we offer you a mentor that's one form of support. Can you name the other support that the school gave you during this process in this mentorship program?

Support from school (certificate)

G: Ohh yeah, they refund the certificate.

I: Yes, yes.

G: That helps. I'm allowed to do my MOOCs during my free lessons, which means ICT.

I: Yeah

G: So, that's nice.

I: Yes.

G: And other than that I wouldn't say much, the mentors…

I: Yeah, you went to one workshop in late October.

Support from school (Training from HKU)

G: Yeah workshop, that workshop. Although I didn't understand what the workshop…

I: Because it was conducted in Chinese?

G: Yeah.

I: But the Powerpoint was in English. The Powerpoint was in English.

Support from school (Training from HKU)

G: Yeah, I read the Powerpoint but it didn't help that much.

I: So you have difficulties in understanding Chinese

G: Yes, I do.

I: OK, so what about you know you've been given a booklet about the MOOC for starters, I mean the menu that…

Support from school (MOOC for Starters Guide)

G: To be a hundred percent honest, I did not read that.

I: You did not read that at all. Do you find your page there? There's one page for you about Griffin Lam and what program you completed.

Support from school (MOOC for Starters Guide)

G: It was the same… it seems like the page you showed last year, but it's just like there's more stuff.

I: Yeah, because people talk about like they don't know how to register an account, they don't know do pay, they don't know how their whole refund, their whole reimbursement done and they don't know what are the key dates.

G: I don't know.

I: Yeah, these all can be found on that booklet. Yeah, OK. So even though you told me that you don't really understand what was going on for that HKU Tele. training program, but you did agree with some of

the things that they do. You said you liked it just that they presented to you about MOOC, like what MOOC is about, what the most popular MOOC…

G: I beg your pardon?

I: Yeah, in your survey. You did agree that, you know, that HKU did give you something about telling what MOOC is about?

G: Yeah, like…the only reason like I didn't even know Paleontology would become like the course

Support from school (Training from HKU)

itself, so when that guy, I forgot his name already, <mark>he talked about that MOOC, I was instantly intrigued</mark>.

I: Oh, OK.

G: So that was what I meant by just…

I: Ok, they talked about you know what a common form of assessment, what a common form of lessons, Were they very similar to what you experienced in your own MOOC experience?

G: You mean during the lecture?

I: Yeah, during the lectures they told you like…I mean in the workshop, they said OK, for MOOC is mostly about watching videos, reading lecture notes before assessment, peer assessments, multiple choice, were they very similar to your MOOC experience?

Support from school (Training from HKU)

G: Yeah, <mark>I came across like peer assessments, essay assessments, and also MC</mark>.

I: OK. And the second speaker did he talk about time management? Like you know, pay attention to your procrastination, pay attention to how you manage your time, is it because it's conducted in Chinese so you didn't really understand.

Support from school (Training from HKU)

G: <mark>I really don't understand what anyone of them said</mark> so…

I: OK so. But you did agree that the support from the school was OK?

Support from school (Training from HKU)

G: Yeah, <mark>it was all right</mark>.

I: Because apart from… OK, the school also offer you to do a sharing in a morning assembly but you declined.

G: Yeah and I was uncomfortable about that somehow.

I: Yeah, you have problem talking to, you know, a lot of people right?

G: Yeah.

I: So you were like an audience for most of those sharing last year. So how did you find the other sharings from the other students?

G: Was I paying attention…

I: You didn't pay attention?

Support from school (Training from HKU)

G: I think <mark>I was too sleepy to pay attention</mark>.

I: But you didn't know there were some sharing.

G: I didn't know, like I was aware. I think it was… Dephanie was up there?

I: Dephanie, Watson, Hayron…

G: Jenny.

I: There was…Crystal… Crystal, Kitty, Marie and… Marie and there's Erica talk about Chinese in the MOOC. You forgot it all. OK, so what about the sharing from the associate vice president from HKU, the vice principal from HKU, do remember what he said in the sharing?

G: I…

I: No? So that wasn't your inspiration at all, right? OK, but he was using English, he was speaking in English.

Support from school (Training from HKU)

G: Yeah. <mark>If I were to be completely honest it was quite boring</mark>.

I: Yeah, OK. He's like He's speaking alien language and none of you understand.

G: Everybody around me slept.

I: OK, I wont let him know what you just said. He came all the way from HKU just to deliver that sharing, ok?

Support from school (Training from HKU)

G: I know… I like, I didn't… I could, I myself I can't sleep but then <mark>I look around it's like everybody's asleep</mark>, well I don't know what to do.

I: OK, so you describe the effective support, in the mentor, having a mentor that you think is effective, or maybe your subject teacher also helped you in explaining some of your ideas in the MOOC, and also you believe the reimbursement is also important as well, and what would be the most effective support for you at this moment that the school gave you? The most effective one out of all that we just talked about?

G: Mentor.

I: Mentor. Why is it like so important for you?

Mentoring (academic support)

G: <mark>I would say a mentor</mark>… I'm not speaking as of my own perspective but like a general

Mentoring (academic support)

perspective <mark>it could actually help people who are struggling in things</mark> as like most of the MOOCs I've seen online, they are conducted in English, and then people do not understand they could actually seek help from like these mentors, and like not only in that way, but also in other aspects

Mentoring (advice on time management)

like <mark>time management, like the mentors have more experience in these kind of things</mark> and they can actually input a lot.

I: OK. So you believe that's the most important support that a school offered you?

G: Yeah.

I: What… OK, you did talk about some of the ineffective ones including the HKU training, including the… you know the guide for MOOC.

G: Yeah.

I: And also you didn't really interact with other MOOC students in the school right?

G: I mean…

I: Did you talk to other students about the MOOC? That you…

G: About MOOC no, but I did talk to the students.

I: So when you see some other students like Dephanie, like Jenny, like Crystal, you never talk about MOOC?

G: I don't talk to them at all actually.

I: You don't talk to them at all.

G: I talk to Alice but we don't talk about MOOCs.

I: OK, there's another boy in your classes in the program that's Anson Ng, did he tell you anything about MOOC?

G: Nothing, like we don't talk at all.

I: You don't talk at all. That's… What about Matthew? Matthew is your friend he completed the MOOC.

G: Yeah, he told… he told me he completed the MOOC that's it.

I: He didn't further talk about

Support from school (MOOC for Starters Guide)
G: Oh yeah, he told me a little bit about his MOOC about how like…actually, I don't remember what he said.

I: OK, but he did talk?

G: He really didn't…what… it's almost never really significant or it's like never really memorable in anyway I talked, I talked to him about my MOOCs too but then he doesn't know what I'm talking about.

I: OK. So would you think it'd be better to have a MOOC community, you know, embedded in the school? Or you think he's not necessary because you're happy with what you have?

G: It really depends on personal perspective really, but I wouldn't say… to me it's pretty much the

Support from school (MOOC for Starters Guide)
same as I don't talk to anybody but then… I mean some people would appreciate it, as they can,

Support from school (MOOC for Starters Guide)
you know, share the knowledge and make it you know…They can work on somethings together and that may actually help you.

I: OK. So, right. Having been this program for more than a year. What is the further support that you need, you know, that is not existing right now, that you need in order to complete more MOOC? The further support that you might need.

G: I wouldn't say I have any comments on that really.

I: So you are happy, you're content with what you have right now? What the school offered you? You think that's good enough?

G: Kind of.

I: OK.

Support from school (reimbursement)

G: I actually I would say it is actually pretty nice on its own.

I: Really? You don't need to say that because I'm sitting here, I mean I would be, you know, appreciate if there's some genuine and frank, you know, suggestions from you so…

G: It's just I can't think of any.

I: Ok.

G: Then it's like… I have a problem with… nothing, no.

I: OK. So you are happy.

G: I'm. Generally content with it.

I: OK. Have you got your cheque ready for the reimbursement?

G: Now I return it…

I: Because like you don't have a bank account.

G: Yeah, and they haven't given it back yet so…

I: OK. All righ,t so let's move on the last topic. It's is about was happening you know in MOOC and would that affect your future, some of the prospect that you may want to focus on, and like what I said right in the very beginning, you enjoy MOOC but you believe it has zero influence to what you want to do later on your life.

Further studies (MOOC on university application)

G: Influence on my life. Well what I want to do, I don't believe it would have influence on what I want to do, but it would have influence on what I want to know and how I would…how I'd apply what I know to what I do but I guess it's… I really don't know.

I: So it… but I'd like to ask you this question, well how about the suggestion give by your mentor, your MOOC mentor, would that influence your choice of university that you apply later on?

G: It really….Because as of right now as I said I have like a set university to go to, but sometimes you make suggestions like some other universities to check out, but then to be honest I would have really like… What I have right now is pretty solid I would say, so I wouldn't say it would change my

Further studies (mentor on university application)

mind, so whatever affect my decision as of now? No, I don't think so.

I: But will you take his suggestion into account?

Further studies (mentor on university application)
G: I would keep it in mind.

I: Alright so. Yeah, because I understand based on that Google form I recognize that a lot of your discussion right now is around what you going to do later on.

G: Yeah.

I: Instead of the MOOC program, a lot of them is about what you should study, would there be a scholarship, would there be more opportunities while you're moving forward, so what did your mentor tell you about that?

Further studies (MOOC on university application)
G: About college. It wouldn't be about MOOC, it would be more about like me and my future and along with, along the lines of me moving to Australia, what schools are there, he's helping me contact his former student, and helping me like gather some information, so I can be ready for it I guess, like now I know they aren't as…uptight. As like people in Hong Kong and that's good to know when the people there are nice. I think so.

I: So your MOOC mentor has turned into a career mentor.

Further studies (mentor on university application)
G: Kind of.

I: Alright, so the conversation, the topic changed after all. Does it have to do any… have anything to do with MOOC in your conversation right now, so you know, you did this MOOC may be from Australia, so may be you can try that in university, did he say anything like that?

G: Not that I could remember.

I: So, it's just mostly about like there's a preferred destination, he tries to bring you some help, some support.

G: Yeah, because as I said there isn't really much to tell.

I: OK, right so… all right. Since you said you never gained any access to the discussion forum in the MOOC program, but do you know there's a discussion forum, have you ever clicked into that forum or basically…

G: Once or twice when some courses forced me to.

I: Force you to use. What do you see in those forums?

Schoolwork and MOOC (MOOC experience)

G: Just people literally just writing out their ideas like… writing like any questions or answers towards the things that they are forcing us to do, for example they want to go to discussions and session…section and to just…discuss about some stuff, without like some answers to this question and then do some experiments and discuss the results. I never took part, once that part occurred I was like… No, bye bye.

I: Why? Why would you object such move?

G: I'm just not really comfortable with it. I'm trying to be more comfortable with it now. Now. But in the past no, and I was a no go.

I: OK. So, right. So you didn't make any friends there as I suppose?

G: Yeah.

I: OK. What about… OK, you've done several MOOCs, you've tried the local ones, one from HKU, you tried one from Berkeley, try the one for animal language that's in America. Is there any particular lectures or professors that attract you? Their way of teaching, their way of delivering the lessons.

G: The Berkeley one.

I: What makes it so fascinating for you?

Schoolwork and MOOC (MOOC experience)

G: He makes it really fun to learn.

I: Tell me what he did. Tell me what he did in his lesson.

G: I couldn't pin point out what he did it's just…a combination of things that make the lesson

Schoolwork and MOOC (MOOC experience)

intriguing, like there's several demonstrations, there are several tips on how they remember something. He just made the entire course fun.

I: OK. So is the manner that he delivered, or it's the format, or did he just did some solo, like demonstration with a guitar or anything like that?

G: All of that really… like the… that one… the second one I would not … maybe not I think. But the first one he definitely did like … I mean definitely demonstrated and there is definitely really the way he like… expressed what he wanted to teach us.

I: Have you ever thought about applying for the university because of that lecture? Yes? At that moment?

Further studies (MOOC on university application)

G: Yes. At that moment I was like if that professor taught me I would love that so much.

I: Then what change your mind later on?

G: By slow realization that music isn't really you know… really stable way to go.

I: So is like getting back to basics, thinking about, you know, money, thinking about the careers.

G: Not really it's just that when I think about it, am i really good at music? Not really. Am I like qualified completely to join it? Will I be capable to do all the things that they require me to do? No. I

Intrinsic Motivation (interested area)

don't think so but it's just good to know as an interest, I guess. But for wildlife, I would say I have put a lot of effort in it.

I: OK. So what about in wildlife, is there any I mean, college, or is there any universities or the lectures that really attracted you?

G: Not really, they were all pretty plain. I was saying there were some things that really discussed about discuss about some…really interesting points like how…things slowly, even the things that aren't supposed … don't normally learn, they can still learn nevertheless and … some way to adapt to change of everything, and it's just amazing.

I: So you like the content but you didn't like the delivery, am I right?

G: Delivery… Well it was all right.

I: But it was not the most fascinating one,not as good as the one for the music.

G: Yeah, I guess it's because, just because of like the subject, because music it can be…you can do it in a variety of ways to introduce it but then for like…things that are just factual, then may be not.

I: OK. So… Is there a preference like you talk a lot about science here. Is there any programs after joining the MOOC, you would like to apply for that? Like maybe you've done the one for animal behaviors and you like that, and then you thought about applying for that university in America.

G: Oh, not really. Because of prices…you know, money.

I: If you…

G: But then I would say I would, consider joining the course itself, but maybe not from that university in particularly.

I: Why not? Maybe that's what you want.

G: Well because like I did my research in class, like I look around different universities and like I need like one that I can afford, and one that is credible I would say.

I: You are thinking about studying in Australia.

G: Yeah. Right now.

I: Have you checked out any MOOC from Australia universities?

G: Actually the one I just passed was from Queensland, but then Queensland is more expensive

Further studies (MOOC on university application)

but alternatively by I looked at another university which I don't think has a MOOC yet.

I: What's the name?

G: Murdoch University? I don't know it's from Perth like their research…They have really good research…

I: There's University of Western Australia in Perth.

G: Yeah but i go towards the Murdoch because it's…the subject I want to study there it's really beneficial in that university, I get a lot of advantages in that university I would say. Yeah.

I: Do you think your MOOC experience in University of Queensland would benefit you in entering Murdoch University?

Further studies (MOOC on university application)

G: <mark>Maybe</mark>.

I: Will you talk about that you if there's an interview? Will you tell them that…

G: Oh, the thing I'm doing will not have an interview I think.

I: Oh, if there's one would you share with them your MOOC experience?

G: Yeah, I would, I would, I would.

I: What makes you so exclusive for you to share about your MOOC experience in an interview?

G: Exclusive…

I: Or special. Or was appealing to other people that you might think.

G: Maybe, it's… I have no idea to be honest.

I: Oh, so you do MOOC because you're interested in knowledge, it doesn't really mean that you want to use it as a tool for university application.

Intrinsic Motivation (quest for knowledge)   Further studies (Curriculum Vitae)

G: <mark>I use it as knowledge</mark>. <mark>It can be use as something like support your resume</mark>, or…

I: Would you include that in your application letter that you've done something about the science in University of Queensland? Would you write something like that?

G: If it's related, yeah. If it's related.

I: If the thing is worth mentioning.

G: It's worth mentioning. I mean, with all that hard work put in why not mention it? But that's not the main reason I did it, but it would be one of the reasons.

I: OK. Think about like before you…joined a MOOC mentorship program, you know, and after you join it for a year and a half, what is the most significant change that you believe you… you've, you've got from this program? Change after this program or gains or…

Intrinsic Motivation(quest for knowledge)

G: <mark>Knowledge that's… that's simply</mark>, it …

I: Did it shape you in any way?

G: Shape me? I wouldn't say so. I mean… It …in really like…minuscule amounts that it inspired me to work a bit more… on these topics.

I: Did you gain more confidence after completing MOOC?

G: No, that's not where my confidence came from, it's here.

I: OK. If somebody tell you are you are really good, you completed university courses when you're still in high school, what do you think about that?

G: I still wouldn't be confident.

I: So your confidence doesn't come from what you've accomplished?

G: Not really.

I: What does it come from then?

G: I have no idea.

I: you have no idea.

G: I'm a very…I basically have no confidence but then I guess I'm trying to change that now, because I need it.

I: Yeah.

G: I then pretty sure I do but then…It's all right. It's slowly getting there I'm trying to…force myself to it I guess but. By forcing myself I'm slowly getting there.

I: Did you tell your parents that you are able to complete a MOOC from HKU?

G: I am sure they know, I only tell them I complete MOOCs. I only tell them I complete MOOCs.

I: What was their response?

G: Nothing really, they was like nod and OK.

I: Well, when you're on the stage last time when the vice you know … the associate vice president came to our school and you awarded on the stage, how did you feel about that?

Support from school (Training from HKU)

G: It was pretty awkward.

I: OK. Why do you think so?

G: Standing after there, after the… without waiting for the picture to be taken…

I: There was a very brief description of your journey to MOOC. How did you feel about that?

G: It was … like looking back on the road… to see what you, what you've done so far…it's all right.

I: So you don't really get confidence from that.

G: Yeah.

I: You found it awkward. Did you check out the people standing around you? Do you know who they are?

G: Some.

I: Some. So to be standing with the so called the cream on the form, how did you feel at that moment?

G: I beg your pardon.

I: You know, the most… some of them like Daphanie, and Alice, and Crystal, and you know, they are considered as the "cream", so called the top students…

G: Oh, ok.

I: For the form and I had to be very honest with you. I think a lot of teachers change their impression towards you because of this MOOC program because, yeah, because they've never recognized that Griffin would complete university courses.

G: Hahaha.

I: Because every time, you know, where your name appears, it usually has to do with Chinese, and usually you didn't do so well, and the people has to, I mean, has to have a discussion whether you get to be promoted or anything, so knowing the fact that there were some teachers who say but he is pretty good, he is able to complete a MOOC from HKU.

G: He can do it.

I: Yeah. So, so I'm just curious like, you, seldom do I see you on stage to be honest, and then to be on a stage but you found it awkward, so it's fine.

Right, so after all, after completing all these MOOC, or the experience or knowledge you've gained, do you think that gives you any sort of advantage in applying for a tertiary institute?

Further studies (MOOC on university application)
G: Tertiary institute. Really? Because…University? I wouldn't say. I don't think so.

I: What about certificates? Do they give you some sort of support for your application?

Further studies (MOOC on university application)
G: Not really because of like, basically since I'm going to the agency, all they really look at right now would be like whether I pass my report cards, my health, and if I would pass English, which… i think is alright…

I: OK, so now it is just the beginning of the year right now, because it's just two, three months past for the MOOC mentorship program, and then, what do you expect from the months ahead, like towards the end of year what do you want to achieve?

G: More MOOC, like as of now I'm kind of restricted as in like would I be able to complete these MOOCs but then I… hopefully I can I would say.

I: Are you driven by the number of MOOCs completed? Are you driven by…
Intrinsic Motivation (quest for knowledge)
G: The knowledge.

I: The knowledge.

G: Yes.

I: So numbers is not important to you.

G: Yeah, like some courses are like really big three year courses that, wow, there's whole lot of content.

I: OK, so you feel you must focus on what you want to know.

G: Yeah.

I: What do you expect from your mentor in the months ahead, because he seems that your composition doesn't stop the MOOC, when you go… you… goes above it you know talk about different stuff. What do you expect from your mentor in the weeks, months ahead?

G: It's really unpredictable.

I: Why would you use the word unpredictable?

G: We won't know what we will be talking about by then, like what would happen…

I: So what'd be your expectation apart from being unpredictable. Yes, to expect something you know, maybe just like just do what we usually do, just keep it that way you know.

G: Probably you know just very inconsistent and you know just talk about universities more than I do talk about MOOCs probably that's how it's going to turn out.

I: OK so. Do you talk to your career teacher about what's going on right now?

G: My…

I: Career teacher like Miss Joyce Wong. You just talk too Mr Pang about you choice right?

G: Well I've talked to like several teachers…

I: Form teacher?

G: Any teachers that are interested really.

I: Really?

G: Yeah.

I: Do you talk to a former teacher about that?

G: Oh.He knows I'm going to because I'm happy as well, and I asked him if he could teach me, help me like boost up my math skill, I definitely need that. So yeah. Slowly…

I: It seems to me that you're closer to Mr. Pang than your form teacher.

G: I'm actually closer to many teacher than my form teacher but recently I've been getting closer to my form teacher I would say.

I: Because of the communication that you had about your… you know university application or…

G: Oh no, just music.

I: It's music.

G: Yeah.

I: So you got that common ground?

G: Yeah, common ground.

I: OK, so on and all, you don't have much expectation towards these programs, basically just let it flow, let it cruise.

G: Time though, I enjoy it and I…Kind of let it go, I go with the flow.

I: OK.

G: Wherever it takes me I will go.

I: So it'll be interesting that when I meet you in March, there will be some update about your experience in MOOC, and also experience in your mentor. OK, thank you Griffin.

Appendix 12 - A sample of focus group interview – code note and thematizing

Interviewer: Tony Wei

Interviewees: Chris (Enthusiast), Wesley (enthusiast), Bowen (lukewarm), Nancy (lukewarm), Venus (newbie), Ellen (newbie)

Date: 10th, July 2018

Time: 5:00 p.m. - 6:30 p.m.

Place: A classroom, XXX College, Hong Kong

INTERVIEWER: Thank you for joining the focus group interview today. The topic for today is your experience in the mentorship programme. You can share any experience you have. My first question is whether you know your mentor. You can speak in both English or Cantonese.

Chris: I know my mentor.

Wesley: Yes.

Bowen: Yes.

Ellen: Yes

INTERVIEWER: Have you all met your mentors this year?

Nancy: Yes.

INTERVIEWER: How many times have you seen him or her?

STUDENT: 6 to 7 times per semester.

INTERVIEWER: Mentor? You can speak in Cantonese. Cantonese, English anything you feel comfortable. How many time have you seen him or her?

Ellen: 8-9 times per semester.

Bowen: 10 times per semester

Nancy: I don't know.

Venus: 4 to 5 times, I think.

Chris: 12 times, I think.

Wesley: 10 I think.

INTERVIEWER: How would you describe your relationship with him or her

Mentoring (challenges in interaction)

Chris: <mark>he is my teacher and I can say a **friend** to me</mark>

Mentoring (challenges in interaction)

Venus: ==A very ordinary teacher student **relationship**==

INTERVIEWER: Bowen, I know your mentor is Ms Ho. Did she teach you this year? How would you describe your relationship with her?

Mentoring (challenges in interaction)

Bowen: ==A **friend** maybe. She taught me Math this year.==

INTERVIEWER: friend? Wesley?

Wesley: Teacher and student.

INTERVIEWER: Do you think your mentor has helped you in your MOOC experience this year?

Wesley: Yes.

INTERVIEWER: How did he or she help you?

Mentoring (advice on time management)

Bowen: ==She would constantly send me **message** through WhatsApp and encouraged me to follow our planned schedule. Without her reminder, I think I wouldn't have finished my MOOC.==

INTERVIEWER: What about others? Any other experience you would like to share? It can be negative impact as well. It doesn't need to be all positive.

Mentoring (advice on time management)

Ellen: ==I think my mentor cared about my **progress** in MOOC more than I did. He kept checking my progress time after time.==

INTERVIEWER: You both were mentored by Ms Chow, am I right? Did you have similar support from her?

Nancy: I forgot.

INTERVIEWER: Nancy, did Ms Chow contact you consistently?

Nancy: I would say yes.

INTERVIEWER: Does it help? Was it positive for you?

Mentoring (academic support)

Nancy: ==I would say she would send me **email** encouraging me to do more, and offer a list of courses for me to explore.==

INTERVIEWER: So some teachers did try to offer a list of MOOCs based on your ability. Ellen what about your mentor?

Mentoring (challenges in interaction)

Ellen: <mark>He is alright, but he doesn't **actively help** me.</mark>

INTERVIEWER: I heard the word "actively help you"

Ellen: When he saw me when he was on duty, he would ask me to finish my course as quickly as possible and move on to the next one.

INTERVIEWER: It seems to me like it's an order and he wanted you to finish the course quickly. Did he provide any encouragement on the way?

Mentoring (challenges in interaction)

Ellen: <mark>He wanted me to finish before summer holiday so he could get this **job** done.</mark>

INTERVIEWER: I would say it's like an order then, What about others? Did you receive order like this?

Mentoring (advice on time management)

Venus: <mark>She would keep **reminding** me that holiday is coming and I needed to this and that</mark>.

INTERVIEWER: Okay, Next question. What is the most challenging part in your interaction with your mentor?

Mentoring (challenges in interaction)

Venus: <mark>They will make **comparison**.</mark>

INTERVIEWER: What kind of comparison?

Mentoring (challenges in interaction)

Venus: <mark>They would make **comparison** between me and his other mentee. Whether she could finish a MOOC and I couldn't at that time.</mark>

Mentoring (challenges in interaction)

Nancy: <mark>Since my mentor was not my subject teacher, it's hard to meet her on a regular basis and we had **limited fixed meetings**</mark>.

INTERVIEWER: So having regular meetings is a concern.

Mentoring (challenges in interaction)

Ellen: <mark>I don't think having regular **meetings** is a challenge</mark>.

INTERVIEWER: So yours was very smooth.

Mentoring (challenges in interaction)

Wesley: <mark>I think meeting regularly is a challenge. In the beginning of the year, because of poor communication, I missed a meeting with my mentor.</mark>

INTERVIEWER: Okay So some of you believe having regular meeting is challenging. What about your Google mentoring form? Based on the form, it seems most of your mentors have met the requirement of meeting you 9 times per semester. So does it reflect the actual situation?

Chris: Yes.

INTERVIEWER: You said yes because you went to all the meeting?

Chris: In the form, it is clearly stated that we mostly communicate through email, so it is a true reflection.

INTERVIEWER: Really? So it means that the record in Google form is valid for you all.

Ellen: Not really. I completed one assessment in one of the courses only. But the mentor stated I finished them all.

INTERVIEWER: Is it because of communication problems you had? Is there any issue regarding the Google mentoring form?

Venus: Maybe our number of meeting didn't meet the requirement so he kind of duplicated some of the other meetings. So some of the content is very similar.

INTERVIEWER: Okay. What about others?

Mentoring (challenges in interaction)

Bowen: <mark>Maybe it's not all valid. Some of the content is basically the same because the **conversation** is very similar.</mark>

INTERVIEWER: Okay, so the reason for having similar content is because the interaction is very similar. Have you filled out the form yourself? Or is it mostly done by your mentor?

Wesley: I have seen it in the drive, but I never fill it out.

INTERVIEWER: So you just read it and not fill it out?

Ellen: This is the same for me as well. I just have it printed out at the end of the year and I didn't really check it.

INTERVIEWER: Okay. So most of you solely depended on your mentor to fill it out for you?

Wesley: Yes.

INTERVIEWER: Okay. So the next question is whether you all have joined a MOOC and completed its assessment. How many of you have finished your programme? Based on stats in Google form, Chris and Wesley have completed MOOCs.

School work and MOOC (MOOC experience)

Ellen: I did some **assessments**, but I did not finish the programme.

INTERVIEWER: Whether you finish the MOOC or not is not the concern, it's about exposure and a learning experience really. Maybe the mentors might put more focus on completion based on your previous comments.

INTERVIEWER: Bowen you completed a MOOC based on the form, is it true?

School work and MOOC (MOOC experience)

Bowen: Yes, I completed one. But I did not attain the certificate because I didn't pass the **assessments**.

INTERVIEWER: Okay. So how do you pick your MOOCs? If you only have two hours of free time a day, how to you choose to work on one of them since there are so many?

Intrinsic Motivation (interested area)

Bowen: I will just choose **ones** that I am interested in.

Intrinsic Motivation (interested area)

Ellen: Go for **something** interesting.

INTERVIEWER: Some of you did pick but you never do them.

School work and MOOC (Time management)

Venus: I forget to do it. When I do remember, I don't really have **time**. Just end up not doing it.

INTERVIEWER: Time issue.

INTERVIEWER: Chris and Wesley, what about you? I know Chris is working on a C++ MOOC.

Intrinsic Motivation (interested area)

Chris: I choose the **programme** based on my interest. I am really interested in programming. And I know the course I took is about the introduction to C++ and I believe I can handle it. I will audit first and check out the assessment. I won't choose the ones with essay because it is too time consuming.

Intrinsic Motivation (interested area)

Wesley: I choose **MOOC** based on my interest as well.

INTERVIEWER: Wesley, I know you completed a MOOC about music and now you are working on a MOOC about science. What is it about?

Wesley: Food and Health.

INTERVIEWER: Why would you pick this MOOC?

School work and MOOC (MOOC experience)

Wesley: I am interested in it and the course is an introductory one, so it won't be too **difficult.** I believe I can finish it.

INTERVIEWER: Have you checked out other relevant programmes?

Extrinsic Motivation (prepare for HKDSE)

Nancy: Yes. If I need to choose one, I will only pick the **ones** I am curious about. Apart from

Intrinsic Motivation (quest for knowledge)

that, I will pick the ones that will help my DSE electives. If essays are needed for the assessment then I won't choose them.

INTERVIEWER: In MOOC, multiple choice questions are the probably the most common type of assessment. Maybe you won't prefer to pick games or essay for your assessment because they are comparatively more complex since they need to be peer-assessed. So who has tried the online essay?

School work and MOOC (MOOC experience)

Nancy: No, once I see **essay**, I will not choose that MOOC.

School work and MOOC (MOOC experience)

Bowen: I did pick one **assessment** which is about making a movie about experiment. But…

INTERVIEWER: Didn't you do it?

Bowen: I didn't do well.

INTERVIEWER: Was it peer-assessed? Did other students give you a lower grade?

School work and MOOC (MOOC experience)

Bowen: Not really. But I didn't read the **assessment** guidelines well.

INTERVIEWER: What about Chris?

School work and MOOC (MOOC experience)

Chris: In my **MOOC** I needed to complete some tasks, then everyone needs to answer questions. You need to answer some corresponding codes to fulfil the requirement. For peer assessment, we need to review those codes.

INTERVIEWER: Okay. What about Wesley?

School work and MOOC (MOOC experience)

Wesley Yes, most of the **assessment** are MCs. I worked on a MOOC about respiration and the labelling task in the assessment is quite difficult too. I couldn't find the answer after working on it for an hour.

INTERVIEWER: I see. So I heard quite a number of assessment modes just then. Some are easy and some are more challenging. Some may result in poor grades and some of you will skip the MOOC if there

is essay in the assessment. So my next question is, what is your motivation in completing the MOOC? Why would you send so much time on it?

Extrinsic Motivation (certificate)

Ellen: Certificate.

Extrinsic Motivation (certificate)   Suport from School (reimbursement)

Chris: Certificate and reimbursement.

Suport from School (reimbursement)

Venus: Money

Extrinsic Motivation (certificate)

Wesley: Certificate

                                        Extrinsic Motivation (certificate)

Ellen: I mean the actual process of learning is important, but the main thing is the certificate.

Future Studies (impact of MOOC experience) Extrinsic Motivation (certificate)

Nancy: The assistance in career planning, aka the certificate.

                    Intrinsic Motivation (quest for knowledge)

Bowen: Maybe I just want to spend time on the knowledge that I want to acquire. Or simply I might want to do something in my spare time.

INTERVIEWER: Just to keep yourself busy. What about Chris?

Extrinsic Motivation (certificate)

Chris: Certificate.

          Future Studies (impact of MOOC experience)

Wesley: My future, career prospects and further education really.

                    Extrinsic Motivation (Skills)

Nancy: To spend my time wisely and learn some professional skills maybe.

                    Intrinsic Motivation (sense of achievement)

Chris: Agree, some MOOCs are quite easy and we can do something meaningful.

Intrinsic Motivation (sense of achievement)

Ellen: I don't have much to do apart from playing games in my spare time so completing MOOC might be a more meaningful then.

Bowen: I agree that some MOOCs are interesting but when I got a poor grade in the test I kind of give up.

INTERVIEWER: So even they are interesting, and you worked so hard, but when you got a poor result you won't do it again.

STUDENT: Yes, I will just skip that kind of assessment when I see them again.

INTERVIEWER: So what's the most challenging part of your MOOC experience?

School work and MOOC (MOOC experience)

Ellen: Actually the course that I chose was very difficult, I think it requires Year 2 or Year 3 University Chemistry level, so the material was way beyond I was supposed to know. Sometimes it's challenging but explanation is detailed, so it's ok.

School work and MOOC (time management)

Venus: Mainly not having enough time.

School work and MOOC (MOOC experience)

Nancy: Time. It's because I struggled to reserve extra time to finish it.

School work and MOOC (priority)

Chris: For senior form students, we have other tasks to deal with and seldom do we have time to sit in front of the computer to finish MOOC.

School work and MOOC (MOOC experience)

Ellen: I don't feel like doing on the laptop, it's much easier to take a course on the phone.

School work and MOOC (MOOC experience)

Wesley: It's about the exam. I thought I would get all correct but at the end I need to retake the assessment.

School work and MOOC (time management)

Bowen: I am very forgetful and sometimes I forgot that I enrolled a course.

INTERVIEWER: So in order to finish your MOOC, you need support from the school. Apart from providing a mentor for you, what kind of support did the school offer?

Support from School (training from HKU)

Nancy: There is a training workshop at the beginning of the year.

Ellen: There is a workshop but I don't know...I went to the workshop but I remember nothing.

INTERVIEWER: Chris, did you attend the workshop?

Chris: Yes.

INTERVIEWER: How helpful was it?

Support from School (training from HKU)

Chris: A bit helpful.

INTERVIEWER: A bit. What about Wesley?

Wesley: Yes, I did attend.

INTERVIEWER: How was it?

Support from School (training from HKU)

Wesley: I was a bit tired that day so I don't remember much.

INTERVIEWER: Bowen, you attended the workshop for the past two years. How were the workshops?

Support from School (training from HKU)

Bowen: It was alright. The content was very similar.

INTERVIEWER: Okay. I will inform HKU about your comments just then. Did the workshop offer you something hands-on and practical for your MOOC experience?

Support from School (training from HKU)

Venus: I would say it's minimal.

INTERVIEWER: Okay, that's pretty direct.

Support from School (training from HKU)

Bowen: I almost fell asleep.

INTERVIEWER: So was it mostly negative?

Ellen: I don't remember what happened.

Support from School (training from HKU)

Bowen: They did mention quite a lot of professional certificate in Edx and how it would impact our study and career.

Support from School (training from HKU)

Chris: Yes, that's topic for the past two years.

INTERVIEWER: Okay, apart from the workshop, the school also offered a booklet called MOOC for Starter's Guide for your reference. How helpful was it for your MOOC experience?

Support from School (MOOC for Starter's Guide)

Bowen: What is it?

INTERVIEWER: Every student would be given one in the beginning of the year.

Support from School (MOOC for Starter's Guide)

Ellen: I don't know what it is.

Support from School (MOOC for Starter's Guide)

Venus: I didn't know much about it as well.

INTERVIEWER: So was it helpful?

Support from School (MOOC for Starter's Guide)

Chris: You will know the MOOCs completed by our students.

INTERVIEWER: Did you check out the MOOCs completed by our students?

Support from School (MOOC for Starter's Guide)

Chris: Not in great detail but I will read them and try them out.

INTERVIEWER: For the MOOCs you completed this year, can I include them in the MOOC Starters' Guide as well?

Wesley: Sure.

INTERVIEWER: We have about 18 students completing 45 MOOCs this year. Some students can complete up to 15 MOOCs. So the reimbursement she received is over $10000, it might be more than the scholarship we offer. Some MOOC can cost around USD 100. So with all the support we mentioned, what is the most effective form of support the school offered?

Support from School (reimbursement)

Chris: Reimbursement for the certificate.

INTERVIEWER: Reimbursement, money.

Support from School (reimbursement)

Ellen: Money.

Support from School (reimbursement)

Wesley: Money

INTERVIEWER: So some of you believe reimbursement is even more important than mentoring?

Extrinsic Motivation (certificate)

Chris: Mentoring is an important form of support, but for me attaining a certificate justifies all the hard work.

INTERVIEWER: Okay. As some of you will be invited to attend the prize ceremony in HKU for your MOOC completion, do you think it's encouraging?

Wesley: I would say it's the same

Nancy: I don't mind joining it as long as we can have free transportation.

INTERVIEWER: Free transportation will be provided.

Support from School (training from HKU)

Venus: I think that's nice as I can visit HKU. But for MOOC I think the impact in minimal.

Support from School (training from HKU)

Wesley: Yes, you can get to see HKU before we enter university.

INTERVIEWER: Okay, with the HKU visit and the MOOC you completed, will it be a factor for you to apply for HKU, or that particular university?

Future Studies (MOOC on university application)

Chris: Maybe it's helpful.

INTERVIEWER: Will you apply for HKU because you completed a MOOC from that university?

Future Studies (MOOC on university application)

Chris: I will think about it. Maybe.

INTERVIEWER: Okay. For your MOOC experience, would you mentor's comment regarding university application or MOOC impact your decision in university application?

Future Studies (mentor on university application)

Wesley: I might consider it.

Future Studies (mentor on university application)

Bowen: I might think about it.

INTERVIEWER: So mentor's advice might be a factor then. Apart from that, will you share with other classmates about your MOOC experience?

Nancy: Not really.

INTERVIEWER: Not even one?

Future Studies (MOOC on university application)

Ellen: The only time when I talked to others about MOOCs was like "Hey did you do anything about MOOC"?

INTERVIEWER: Did you meet any friends through MOOCs? Like from discussion forum?

Chris: Do you mean in the course?

INTERVIEWER: Yes.

Chris: No, I am usually very passive.

Bowen: No one would care about what I wrote in the forum.

INTERVIEWER: Have you tried to communicate with other students there? Or have you met some really interesting professors from the MOOCs?

Future Studies (MOOC on university application)

Ellen: I mean the courses I joined were issued by Kyoto University which I don't think I would go to Japan for, so I don't think it would help if I really like the teacher. I mean I do think the

Future Studies (MOOC on university application)

professor is good, but it doesn't affect which college I would go to.

INTERVIEWER: So that's it mean that your MOOC experience may not impact your university application?

Future Studies (MOOC on university application)

Venus: No. It's because I did not apply for MOOCs from the universities in Hong Kong.

Nancy: I will only apply for programmes that I am interested in and the subject that they offer.

Future Studies (MOOC on university application)

Ellen: I mean it depends on the subject and location, and like I don't think I will go to Japan for college, so I won't apply for it because I completed a MOOC there.

Chris: I won't. It's a bit premature.

Future Studies (MOOC on university application)

Bowen: I might apply for it. But I wouldn't know if my interest can last for the next two years. So it's a bit uncertain.

INTERVIEWER: But will you continue to apply for the Math MOOCs?

Bowen: I will.

INTERVIEWER: What is the biggest impact for attaining a MOOC certificate for you all?

Future Studies (MOOC on university application)

Chris: Maybe for our university application.

INTERVIEWER: What about career prospect?

Future Studies (Curriculum vitae)

Wesley: Not much I think.

INTERVIEWER: Okay. Final question. How would you describe your overall MOOC experience this year?

School work and MOOC (MOOC experience)

Venus: I didn't do much really.

INTERVIEWER: What about others?

School work and MOOC (MOOC experience)

Ellen: I mean I tried in the first half of the year and the second half I gave up.

INTERVIEWER: So why did you give up?

STUDENT: Well, time and motivation.

INTERVIEWER: Chris, you complete a MOOC from Microsoft, how do you feel about it?

School work and MOOC (MOOC experience)

Chris: Kind of fulfilling.

INTERVIEWER: Fulfilling, that's the final word for the programme. Wesley, how do you feel about your completion of MOOCs?

Wesley: I think it was alright.

INTERVIEWER: Alright. What about Nancy? I know you are currently working on a MOOC offered by Stanford University.

School work and MOOC (MOOC experience)

Natalie: I think it's an eye-opening experience. I wouldn't have access to university lectures without joining MOOCs. I think it is a challenging yet interesting experience.

INTERVIEWER: Bowen, what about your experience in MOOCs about Math?

School work and MOOC (MOOC experience)

Bowen: I get to know more about the very advanced math.

INTERVIEWER: So was the experience very different from what you expected?

Chris: Not really.

Venus: I didn't expect that much.

INTERVIEWER: No expectation.

School work and MOOC (MOOC experience)

Bowen: Like I actually didn't expect join so many programmes.

School work and MOOC (time management)

Nancy: Little bit low expectation because I expected I had more time to do it.

INTERVIEWER: Wesley?

School work and MOOC (time management)

Wesley: Maybe time management is an issue as each MOOC has completion deadline and I

School work and MOOC (priority)

had to balance my school work in order to get it done.

INTERVIEWER: Time management. Venus, what was your concern in not spending too much time on MOOC?

Intrinsic Motivation (quest for knowledge)

Venus: I didn't have that much of motivation indeed.

INTERVIEWER: Bowen? Did you give up because of the poor assessment score?

Bowen: Kind of. But I did join other programmes later

INTERVIEWER: Okay. Thank you so much for coming to the interview today. Your presence is appreciated.

Appendix 13 - GSoE Research Ethics Form

GSoE RESEARCH ETHICS FORM

It is important for members of the Graduate School of Education, as a community of researchers, to consider the ethical issues that arise, or may arise, in any research they propose to conduct. Increasingly, we are also accountable to external bodies to demonstrate that research proposals have had a degree of scrutiny. *This form must therefore be completed for each piece of research carried out by members of the School, both staff and students*

The GSoE's process is designed to be supportive and educative. If you are preparing to submit a research proposal, you need to do the following:

1. **Arrange a meeting with a fellow researcher**
   The purpose of the meeting is to discuss ethical aspects of your proposed research, so you need to meet with someone with relevant research experience. A list of prompts for your discussion is given below. Not all these headings will be relevant for any particular proposal.

2. **Complete the form on the back of this sheet**
   The form is designed to act as a record of your discussion and any decisions you make.

3. **Upload a copy of this form and any other documents (e.g. information sheets, consent forms) to the online ethics tool**
   at: https://dbms.ilrt.bris.ac.uk/red/ethics-online-tool/applications.

   Please note: Following the upload you will need to answer ALL the questions on the ethics online survey and submit for approval by your supervisor (see the flowchart and user guides on the GSoE Ethics Homepage).

If you have any questions or queries, please contact the ethics co-ordinators at: gsoe-ethics@bristol.ac.uk

Please ensure that you allow time before any submission deadlines to complete this process.

Prompts for discussion
You are invited to consider the issues highlighted below and note any decisions made. You may wish to refer to relevant published ethical guidelines to prepare for your meeting. See http://www.bris.ac.uk/education/research/networks/ethicscommittee/links/ for links to several such sets of guidelines.

1. Researcher access/ exit
2. Information given to participants
3. Participants right of withdrawal
4. Informed consent
5. Complaints procedure
6. Safety and well-being of participants/ researchers
7. Anonymity/ confidentiality
8. Data collection
9. Data analysis
10. Data storage
11. Data Protection Act
12. Feedback
13. Responsibilities to colleagues/ academic community
14. Reporting of research

Be aware that ethical responsibility continues throughout the research process. If further issues arise as your research progresses, it may be appropriate to cycle again through the above process.

Name(s): Wei Hong Qiang (EdD (Hong Kong), Cohort 18)

Proposed research project: MOOCs mentoring and how it can support online learning: case study of a school-based teacher-student mentoring programme in Hong Kong

Proposed funder(s): Wei Hong Qiang

Discussant for the ethics meeting: Mr. Edmond Yeung (EdD (Hong Kong), Cohort 15)

Name of supervisor: Prof. Sally Barnes

Has your supervisor seen this submitted draft of your ethics application? **Y**/N

Please include an outline of the project or append a short (1 page) summary:

Abstract of research

This article reports on a mixed methods case study research into the experience and support of secondary school students who are engaged in a school-based MOOCs mentorship programme in Hong Kong (HK). It describes their perceived experience and socialization, particularly with regard to the school-based training and mentoring support they receive during their spell in the programme. While the benefits of different forms of mentoring support in secondary school context have been established, few studies have focused on specific factors that affect the perceived effectiveness of mentoring regarding MOOCs, from the point of view of the mentees. The current study therefore breaks new ground in investigating the perspectives of different stakeholders in the mentoring process for assisting secondary students undertaking MOOCs. What is more, the article explores the roles that MOOCs and mentoring play in students' academic support and further education. The article concludes by providing recommendations on how schools can better support secondary students in completing MOOCs.

Research Questions and Overview of the research design

The research project aims to answer the following three research questions:

(1) What are students' actual experiences in the MOOCs mentorship programme?

(2) How does support students received from the MOOCs mentorship programme in the case school impact their learning experience in MOOCs?

(3) How does the student mentees' participation in the school-based MOOCs mentorship programme impact their decision in further education?

A mixed methods explanatory design is adopted for the study as the design consists of two distinct phases: Quantitative followed by qualitative (Creswell et al., 2003; Creswell & Clark, 2007). The qualitative data in my study thus has an important role in helping us to interpret further the nature of these relationships and to explore the subjective meanings and interpretations behind the quantitative findings. Most studies involving mentoring programmes tend to be case studies (Stewart, 2006, Gibb, 1999), surveys (Mitchell, 1999) or quantitative studies around attainment (Hylan and Postlethwaite, 1998). Use of both quantitative and qualitative methods also allows us more possibilities for triangulating my data and increasing the credibility of the findings, as Altrichter et al. (2008) extend that triangulation "gives a more detailed and balanced picture of the situation" (p.147). This design starts with the collection and analysis of a quantitative questionnaire survey. This is followed by the subsequent collection of qualitative data to explain and elaborate the results of the survey. Thus the two phases are connected in the intermediate stage in the study. Semi-structured focus group interviews and in-depth individual interviews involving pairs of student mentees and teacher mentors will be organized to collect qualitative data from mentees who can best help to explain the findings. The process is also supported by the documentation like the computerized mentoring record introduced by the case school. The second phase is crucial as more in-depth data can be obtained.

Ethical issues discussed and decisions taken (see list of prompts overleaf):

1. Researcher access/ exit

- Once the case school and the participants agree to take part in the research, the data collection process, which involves mainly the researcher, starts from October 2017 to June 2018.

2. Information given to participants

- The interviewees all have access to the transcripts and the final report, and their rights to delete anything on the transcripts that they do not wish to remain have been respected.

- The interviewees all have access to the transcripts and the final report, and their rights to delete anything on the transcripts that they do not wish to remain have been respected.

3. Participants right of withdrawal

- Participants can withdraw from the research at any period of the time and it is clearly stated in the consent form that was sent to the participants.

4. Informed consent

- The present study is a long piece of research which involved students selected from the MOOCs mentorship programme, the research had to seek formal approval by the school.

- The principal of the school, parents of the MOOCs student mentees and MOOCs student mentees are accessed for their permission to carry out the research.

- At the very beginning of the study, the participant consent form was delivered to each of the participant.

- The participants needed to be fully informed verbally and by way of a participant information sheet which contains the purposes of the research and how the data were used.

- A consent letter containing terms and conditions in participating in this research was given to the participants.

- Each of the participants needed to give their consent to taking part by signing a consent form.

- They needed to know that the data were held securely and confidentially and their names and locations were kept confidential and not revealed in the findings.

- Participants can also state their availability to attend the qualitative research sessions, namely semi-structured individual interviews and focus group interview, in the consent form and questionnaire.

5. Complaints procedure

- Complaint procedure, namely how participants can launch a complaint or enquire about the research procedure, is attached in the consent form that is sent to the participants.

6. Safety and well-being of participants/ researchers

- Safety and well-being of participants and researcher are ensured since the research mainly conducts in the school premises and the safety of students and staff is ensured by the school's insurance coverage.

7. Anonymity/ confidentiality

- The results of the research activity, or any resulting statistics, are not available in a form that identifies the data subjects.

8. Data collection

- The purpose for which personal data were collected and processed was made clear to the subjects.

- The collection of the written questionnaire survey is conducted by another teacher instead of researcher so as not to put pressure on the participants in providing their response to their MOOCs experience.

- All personal data held were clear in meaning, and sufficient and relevant but not excessive information were conveyed for the subjects to understand them

- The interviewees all have access to the transcripts and the final report, and their rights to delete anything on the transcripts that they do not wish to remain have been respected.

- There is one focus group at the end of the school year when the MOOCs student mentees also have a chance to validate what they have said.

9. Data analysis

- Although rare, in a few instances they can be also consulted in terms of the translation (from Cantonese to English) in the transcribing process.

- The personal data were only being used exclusively for the purposes the research intended, rather than being handed on to other people after the research was complete

10. Data storage

- The locations where sensitive data were stored, "together appropriate security measures necessary to prevent unauthorized or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data" (Data Protection Act, 1998) were considered thoroughly

11. Data Protection Act

- In the present study, a personal local computer was the main tool for analysing, saving and storing data which could not be easily replaced.

- The latest anti-virus, firewall, anti-spyware software, patches and updates were installed on the computer and they were up-dated from time to time

- Not only is the password kept secret, but a strong password is set to protect the computer and any sensitive or personal data were encrypted, so that, if stolen or lost, data on the computer could not be easily accessed.

- The data were backed up with two alternative external storage media include USB memory sticks and DVDs in case of tragedy, then backed up once a day or more frequently than once a day.

- Written data with the researcher's, school's or university's name, address or personal details used in this study were shredded. Then, all these data together with the two external storage devices mentioned before were kept in a safe case and labelled. No one except the researcher could access the information unless it was agreed.

12. Feedback

- There is one focus group at the end of the school year when the MOOCs student mentees also have a chance to validate what they have said.

13. Responsibilities to colleagues/ academic community

- Confidentiality of the data and information provided by both colleagues and participants is a major concern. Written data with the researcher's, school's or university's name, address or personal details used in this study were shredded. Then, all these data together with the two external storage devices mentioned before were kept in a safe case and labelled. No one except the researcher could access the information unless it was agreed.

If you feel you need to discuss any issue further, or to highlight difficulties, please contact the GSoE's ethics co-ordinators who will suggest possible ways forward.

Signed: (Researcher)   Signed: ██████   (Discussant): ████████

Date: 17/08/2017

Appendix 14 Consent form for parents, students and principal

Graduate School of Education

University of Bristol

University of BRISTOL

Parent / Guardian Consent Form

3rd October 2017

Dear Parents,

I am Mr Wei Hong Qiang Tony, a doctoral researcher from the Graduate School of Education, University of Bristol. I will conduct a research project on students' mentoring experience from the MOOCs mentorship programme and I would like to invite your child to participate. The study aims to find out what your child has experienced in the MOOCs mentorship programme and how mentoring process impact your child's participation in MOOCs. Your child's input will help to provide the students' perspective which is an important part of the research.

Students who participate in this research will be asked to complete two survey questionnaires and they will also be interviewed about their experience of the school's MOOCs mentorship programme and express their views about it. Interviews will be audio-taped or video-taped, but any information which may allow direct identification of the student such as his / her name or the name of his / her mentor will not be included in the transcription. Only the researcher will have access to the original data. The information your child provided will not be shared with other teachers or affect his / her grades in school. The student may also decline to answer certain questions if he / she wishes to.

Please complete the reply slip below to indicate whether you would allow your child to participate in this research soon. By taking part in this research, your child will be helping to contribute to the future improvement of the school's MOOCs mentorship programme as well as research into MOOCs mentoring programme in general which can benefit many other young people. Participation is entirely voluntary and can be withdrawn without prejudice, and all information obtained will be used for research purposes only. If you have any questions about the research, please feel free to contact Mr Wei Hong Qiang (97818908) and / or my supervisor, Professor Sally Barnes (Sally.Barnes@bristol.ac.uk).

Yours faithfully,

Mr. Wei Hong Qiang

Graduate School of Education

University of Bristol

Reply Slip

I have read the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I agree to participate in this research.

Student's Name: ███████████

Class: ███   Class No.:_███

Student's Signature: █████████████

Date: 10/10/2017

I have read the above information and **I** will** / will not give permission for my child to participate in the research. (** Please delete if inappropriate.)

Parent's Name: ████████████

Parent's Signature: ██████████

Date: 10/10/2017

A copy of this consent form has been given to you to keep as record and reference.

University of
BRISTOL

Consent Form for School Principal

3rd October 2017

Dear Principal Lee,

I am Mr Wei Hong Qiang Tony, a doctoral researcher from the Graduate School of Education, University of Bristol. I will conduct a research project on students' mentoring experience from the MOOCs mentorship programme and I would like to invite your students to participate. The study aims to find out what your students has experienced in the MOOCs mentorship programme and how mentoring process impact your students' participation in MOOCs. Your students' input will help to provide the students' perspective which is an important part of the research.

Students who participate in this research will be asked to complete two survey questionnaires and they will also be interviewed about their experience of the school's MOOCs mentorship programme and express their views about it. Interviews will be audio-taped or video-taped, but any information which may allow direct identification of the student such as his / her name or the name of his / her mentor will not be included in the transcription. Only the researcher will have access to the original data. The information your students provided will not be shared with other teachers or affect his / her grades in school. The student may also decline to answer certain questions if he / she wishes to.

Please complete the reply slip below to indicate whether you would allow your students to participate in this research soon. By taking part in this research, your students will be helping to contribute to the future improvement of the school's MOOCs mentorship programme as well as research into MOOCs mentoring programme in general which can benefit many other young people. Participation is entirely voluntary and can be withdrawn without prejudice, and all information obtained will be used for research purposes only. If you have any questions about the research, please feel free to contact Mr Wei Hong Qiang (97818908) and / or my supervisor, Professor Sally Barnes (Sally.Barnes@bristol.ac.uk).

Yours sincerely,

Mr. Wei Hong Qiang
Graduate School of Education
University of Bristol

Reply Slip

I have read the above information and I** will / will not give permission for my students to participate in the research. (** Please delete if inappropriate.)

Name of the principal: Ms. Lee Pak Lan

Signature: ██████████

Date: <u>10/10/2017</u>

A copy of this consent form has been given to you to keep as record and reference.

Appendix 15 - Results of pre- and post-mentorship questionnaires

Part (A): Personal Information

Gender		
	Frequency	Percent
Male	19	47.5
Female	21	52.5
Total	40	100.0

Native Language		
	Frequency	Percent
Cantonese	36	90.0
English	3	7.5
Putonghua	1	2.5
Total	40	100.0

Part (B): MOOCs Experience

Question 1 How long have you been participating in MOOCs?

Month(s) _____

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Total	Minimum	Maximum	Mean	Total	Minimum	Maximum	Mean
Number	40	0	24	5.975	40	2	33	18.85

Question 2 In the previous month, how long do you normally work on MOOC?

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Total	Newbies (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)	Total	Newbies (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)
Never	16	16			3	3		
Less than once a month At least once every month	6		6		26	16	10	
	4		4		0			
Once every two weeks Once a week	1			1	7			7
	5			5	4			4
Two to three times a week Every day	4			4	0			
	1			1	0			
Total	37	16	10	11	40	19	10	11
Missing	3	3			0	0		

Question 3 What topic areas are you most interested in MOOCs? Option 1 - Science

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	1	4	7	16	11	1	2	5	20	12
Newbie (1st year)	1	2	4	7	4	1	1	1	13	3
Lukewarm (2nd year)			1	6	3		1	2	4	3
Enthusiast (2nd year)		2	2	3	4			2	3	6
Missing	1 (Newbie)									

Question 3 What topic areas are you most interested in MOOCs? Option 2 - Mathematics and Engineering

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	1	8	15	12	2	2	8	9	17	4
Newbie (1st year)	1	4	6	4	2		5	5	9	
Lukewarm (2nd year)		2	3	5		1	3	2	3	1
Enthusiast (2nd year)		2	6	3		1		2	5	3
Missing	2 (Newbie)									

Question 3 What topic areas are you most interested in MOOCs? Option 3 - Humanities and Cultures

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total		10	14	9	3	3	6	11	19	1
Newbie (1st year)		3	8	4	1	1	5	9	3	1
Lukewarm (2nd year)		1	4	4		2	1	2	5	
Enthusiast (2nd year)		6	2	1	2				11	
Missing	3 (Newbie), 1 (Lukewarm)									

Question 3 What topic areas are you most interested in MOOCs? Option 4 - English

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total		5	11	18	4		2	15	17	4
Newbie (1st year)		4	3	10	1		2	11	6	
Lukewarm (2nd year)		1	3	5				1	7	2
Enthusiast (2nd year)			5	3	3			3	4	2
Missing	1 (Newbie), 1 (Lukewarm)					2 (Enthusiast)				

Question 3 What topic areas are you most interested in MOOCs? Option 5 - Chinese and Chinese Literature

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	6	11	13	4	1	5	12	15	5	1
Newbie (1st year)	5	5	5	2		2	8	8		1
Lukewarm (2nd year)		1	5	2		1	2	6	1	
Enthusiast (2nd year)	1	5	3		1	2	2	1	4	
Missing	2 (Newbie), 2 (Lukewarm), 1 (Enthusiast)					2 (Enthusiast)				

Question 3 What topic areas are you most interested in MOOCs? Option 6 - Social Sciences

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	1	5	15	12	3		14	11	10	3
Newbie (1st year)	1	3	7	5	1		5	7	6	1
Lukewarm (2nd year)			3	5	1		5	3	1	1
Enthusiast (2nd year)		2	5	2	1		4	1	3	1
Missing	2 (Newbie), 1 (Lukewarm), 1 (Enthusiast)					2 (Enthusiast)				

Question 3 What topic areas are you most interested in MOOCs? Option 7 - Sports Science

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	3	8	19	6		5	9	14	9	1
Newbie (1st year)	2	7	5	2		2	3	8	6	
Lukewarm (2nd year)		1	6	2		3	3	3	1	
Enthusiast (2nd year)	1		8	2			3	3	2	1
Missing	3 (Newbie), 1 (Lukewarm)					2 (Enthusiast)				

Question 3 What topic areas are you most interested in MOOCs? Option 8 - Music

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	3	4	12	14	4		1	16	13	6
Newbie (1st year)	2	1	7	6	2		1	10	5	3
Lukewarm (2nd year)	1		2	3	2			4	3	3
Enthusiast (2nd year)		3	3	5				2	5	
Missing	1 (Newbie), 2 (Lukewarm)					4 (Enthusiast)				

Question 3 What topic areas are you most interested in MOOCs? Option 9 - Gamification and Programming

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	3	11	16	3	6	3	8	11	8	8
Newbie (1st year)	2	5	5	3	3	1	5	8	3	2
Lukewarm (2nd year)	1	2	6		1	2	3	1	2	2
Enthusiast (2nd year)		4	5		2			2	3	4
Missing	1 (Newbie)					2 (Enthusiast)				

Question 3 What topic areas are you most interested in MOOCs? Option 10 - Other Languages

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	2		6	22	9		2	10	19	9
Newbie (1st year)	1		3	11	3		2	3	11	3
Lukewarm (2nd year)	1		2	4	3			5	1	4
Enthusiast (2nd year)			1	7	3			2	7	2
Missing	1 (Newbie)									

Question 3 What topic areas are you most interested in MOOCs? Option 11 - Business and Economics

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total	1	4	15	14	4	2	6	15	10	5
Newbie (1st year)		2	8	7	1	1	3	6	7	2
Lukewarm (2nd year)		1	3	5			1	7	2	
Enthusiast (2nd year)	1	1	4	2	3	1	2	2	1	3
Missing	1 (Newbie), 1 (Lukewarm)					2 (Enthusiast)				

Question 3 What topic areas are you most interested in MOOCs? Option 12 - Others (If any)

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total				3	5					3
Newbie (1st year)				3	1					1
Lukewarm (2nd year)					1					2
Enthusiast (2nd year)					3					
Missing	15 (Newbie), 9 (Lukewarm), 8 (Enthusiast)					18 (Newbie), 8 (Lukewarm), 11 (Enthusiast)				

Question 4 What MOOC are you currently working on?

Categories	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Total	Newbies (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)	Total	Newbies (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)
Science	8	2	2	5	5	2	1	2
Mathematics and Engineering	3	1	1	1	1			1
Humanities and Cultures	2		1	1	4	1	1	2
English	3	1		2	3	1		2
Chinese and Chinese Literature					2	1	1	
Social Sciences	2	2			1		1	
Sports Science								
Music	1	1			1	1		
Gamification and Programming	2		1	1	1			1
Other Languages	1			1	4	1	1	2
Business and Economics	1	1			1	1		
Others (If any)					1	1		
Total	24	8	5	11	24	9	5	10
Missing	16	11	5		16	10	5	1

Question 5 When did you start working on this MOOC?

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Total	Newbies (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)	Total	Newbies (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)
January, 2017	1		1		1		1	
February, 2017	1			1				
March, 2017	1		1					
April 2017	1			1				
May, 2017	1			1	1			1
June, 2017	1			1	1			1
July, 2017	1			1				
August, 2017	1			1				
September, 2017	2	1	1		1			1
October, 2017	9	3	1	5	2	1		1
November, 2017	6	5	1		1			1
December, 2017					2	2		
January, 2018					4	1	1	2
February, 2018					1		1	
March, 2018								
April, 2018					4	1		3
May, 2018					2	2		
June, 2018					2	1	1	
Not yet	3	1	2		2	1	1	
Total	28	10	7	11	24	9	5	10
Missing	12	9	3		16	10	5	1

Question 6 For the MOOC that you are working on, how much do you like the experience?

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Really dislike	Dislike	Neutral	Like	Really like	Really dislike	Dislike	Neutral	Like	Really like
Total			9	15	5		2	6	20	6
Newbie (1st year)			6	3	1		1	3	10	1
Lukewarm (2nd year)			3	5			1	2	5	
Enthusiast (2nd year)				7	4			1	5	5
Missing	9 (Newbie), 2 (Lukewarm)					4 (Newbie), 2 (Lukewarm)				

Question 7 What MOOCs have you completed?

Please refer to **Appendix 3** for the MOOC completed.

Question 8 How much do you think the following factors motivate you to engage in MOOCs? Option 1 - You are interested in a particular topic

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	0	1	18	21			12	28
Newbies (1st year)			10	9			8	11
Lukewarm (2nd year)		1	3	6			4	6
Enthusiast (2nd year)			5	6				11

Question 8 How much do you think the following factors motivate you to engage in MOOCs? Option 2 - I am curious in knowing new knowledge or ideas

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total		1	15	24		2	15	23
Newbies (1st year)			9	10		1	10	8
Lukewarm (2nd year)		1	2	7		1	2	7
Enthusiast (2nd year)			4	7			3	8

Question 8 How much do you think the following factors motivate you to engage in MOOCs? Option 3 - I want to be an expert who knows a lot about that particular topic / subject

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total		13	15	12	2	5	14	19
Newbies (1st year)		7	8	4		3	8	8
Lukewarm (2nd year)		3	4	3		2	1	7
Enthusiast (2nd year)		3	3	5	2		5	4

Question 8 How much do you think the following factors motivate you to engage in MOOCs? Option 4 - I want to show that I know more than my peers

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	9	11	15	5	7	14	13	6
Newbies (1st year)	5	4	7	3	4	8	4	3
Lukewarm (2nd year)	3	3	4			4	4	2
Enthusiast (2nd year)	1	4	4	2	3	2	5	1

Question 8 How much do you think the following factors motivate you to engage in MOOCs? Option 5 - I feel satisfied by performing well in MOOCs

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	3	8	19	10		13	18	9
Newbies (1st year)	3	6	5	5		7	10	2
Lukewarm (2nd year)		1	7	2		2	5	3
Enthusiast (2nd year)		1	7	3		4	3	4

Question 8 How much do you think the following factors motivate you to engage in MOOCs? Option 6 - I believe the knowledge I acquired from MOOCs will be useful in my life and my study

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	1	4	18	17	2	4	12	22
Newbies (1st year)		2	12	5		4	9	6
Lukewarm (2nd year)	1	1	4	4			3	7
Enthusiast (2nd year)		1	2	8	2			9

Question 8 How much do you think the following factors motivate you to engage in MOOCs? Option 7 - You believe the certificate you acquired in MOOC will be useful in your life

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	0	6	13	21	0	2	16	22
Newbie (1st year)		4	5	10		2	11	6
Lukewarm (2nd year)		1	4	5			5	5
Enthusiast (2nd year)		1	4	6				11

Question 8 How much do you think the following factors motivate you to engage in MOOCs? Option 8 - It is worth the time and effort to do MOOCs

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	1	7	21	11		6	23	11
Newbie (1st year)	1	5	9	4		6	10	3
Lukewarm (2nd year)		2	6	2			6	4
Enthusiast (2nd year)			6	5			7	4

Part (C): Mentoring experience this year

Question 9 In terms of understanding of MOOCs' lessons and teaching methods, my mentor has

	Pre-mentorship survey (Nov)			Post-mentorship survey (Jul)		
	a lot of understanding	some understanding	little understanding	a lot of understanding	some understanding	little understanding
Total	8	25	5	9	30	1
Newbie (1st year)	3	13	3	3	15	1
Lukewarm (2nd year)		7	2	2	8	
Enthusiast (2nd year)	5	5		4	7	
Missing	1 (Lukewarm), 1 (Enthusiast)					

Question 10 In terms of experience of doing MOOCs, my mentor has

	Pre-mentorship survey (Nov)			Post-mentorship survey (Jul)		
	a lot of understanding	some understanding	little understanding	a lot of understanding	some understanding	little understanding
Total	4	24	10	9	27	3
Newbie (1st year)	2	11	6	2	13	3
Lukewarm (2nd year)		6	4	2	8	
Enthusiast (2nd year)	2	7		5	6	
Missing	2 (Enthusiast)			1 (Newbie)		

Question 11 My mentor is

	Pre-mentorship survey (Nov)			
	my class teacher and subject teacher	subject teacher only	class teacher only	others (Please specify)
Total	3	24	3	9
Newbie (1st year)	1	10	1	6
Lukewarm (2nd year)	1	6	1	2
Enthusiast (2nd year)	1	8	1	1

Question 13 In the previous month, the individual mentoring sessions last for on average

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	less than 10 minutes	10 – 20 minutes	20 – 30 minutes	more than 30 minutes	less than 10 minutes	10 – 20 minutes	20 – 30 minutes	more than 30 minutes
Total	23	12	2		25	11	4	
Newbie (1st year)	15	2			10	5	4	
Lukewarm (2nd year)	7	3			10			
Enthusiast (2nd year)	1	7	2		5	6		
Missing	2 (Newbie), 1 (Enthusiast)							

Question 14 Who normally sets the goals during your mentoring sessions?

	Pre-mentorship survey (Nov)			Post-mentorship survey (Jul)		
	Me	My mentor	My mentor and I set the goal together	Me	My mentor	My mentor and I set the goal together
Total	23	5	11	17	1	22
Newbie (1st year)	8	4	6	10	1	8
Lukewarm (2nd year)	6	1	3	5		5
Enthusiast (2nd year)	9		2	2		9
Missing	1 (Newbie)					

Question 15 How often do we review the past goals?

	Pre-mentorship survey (Nov)			Post-mentorship survey (Jul)		
	Always	Sometimes	Never	Always	Sometimes	Never
Total	2	25	12	1	35	4
Newbie (1st year)		11	7		15	4
Lukewarm (2nd year)		5	5		10	
Enthusiast (2nd year)	2	9		1	10	
Missing	1 (Newbie)					

Question 16 We wrote down goals / area for improvement in the Google mentoring form or elsewhere.

	Pre-mentorship survey (Nov)			Post-mentorship survey (Jul)		
	Always	Sometimes	Never	Always	Sometimes	Never
Total	7	20	12	4	21	15
Newbie (1st year)		10	8		13	6
Lukewarm (2nd year)		6	4	2	5	3
Enthusiast (2nd year)	7	4		2	3	6
Missing	1 (Newbie)					

Question 17 How do you describe your relationship with your mentor? Option 1 - We communicate well

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	0	0	6	25	8	0	0	6	23	11
Newbie (1st year)			4	12	2			2	17	
Lukewarm (2nd year)			1	8	1			1	4	5
Enthusiast (2nd year)			1	5	5			3	2	6
Missing	1 (Newbie)					0				

Question 17 How do you describe your relationship with your mentor? Option 2 - My mentor understands me well

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	0	0	14	21	4	0	2	5	19	14
Newbie (1st year)			6	12				4	12	3
Lukewarm (2nd year)			5	5			2	1	2	5
Enthusiast (2nd year)			3	4	4				5	6
Missing	1 (Newbie)					0				

Question 17 How do you describe your relationship with your mentor? Option 3 - My mentor trusts in my capacity to do well in MOOCs

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	0	0	11	23	5	0	0	8	17	15
Newbie (1st year)			4	13	1			2	13	4
Lukewarm (2nd year)			5	5				3	2	5
Enthusiast (2nd year)			2	5	4			3	2	6
Missing	1 (Newbie)					0				

Question 17 How do you describe your relationship with your mentor? Option 4 - My mentor has provided me links to MOOCs

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	0	3	17	16	3	0	4	24	9	3
Newbie (1st year)		2	6	10			1	12	5	1
Lukewarm (2nd year)		1	6	3			1	5	2	2
Enthusiast (2nd year)			5	3	3		2	7	2	
Missing	1 (Newbie)					0				

Question 17 How do you describe your relationship with your mentor? Option 5 - This year, mentoring has helped me in my participation in MOOCs

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	2	0	16	18	3	0	0	9	20	11
Newbie (1st year)	1		9	8				4	15	
Lukewarm (2nd year)	1		4	5				3	5	2
Enthusiast (2nd year)			3	5	3			2		9
Missing	1 (Newbie)					0				

Part (D): Support you received this year

Question 18 Do you think the support by the school brings positive impact to you in your participation in MOOCs?

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Total	Newbie (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)	Total	Newbie (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)
Really dislike	0				0			
Dislike	1		1		0			
Neutral	4	2	1	1	7	5		2
Like	29	14	6	9	23	14	4	5
Really like	6	3	2	1	8		4	4
Total	40	19	10	11	38	19	8	11
Missing	0				2		2	

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 1 - Offered me the most updated form of assessments in MOOCs (e.g. self-assessment, peer- assessment)

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total		3	11	25			3	21	15	1
Newbie (1st year)			6	12				11	8	
Lukewarm (2nd year)		2	2	6				6	3	1
Enthusiast (2nd year)		1	3	7			3	4	4	
Missing	1 (Newbie)									

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 2 - Offered me the most common form of assessments in MOOCs (e.g. self-assessment, peer- assessment)

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total		5	6	26	3	1	5	16	17	1
Newbie (1st year)		3	4	10	2		1	9	9	
Lukewarm (2nd year)		1		9				5	4	1
Enthusiast (2nd year)		1	2	7	1	1	4	2	4	

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 3 - Introduced me the gist of lessons in MOOCs (e.g. videos)

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total		1	11	24	4		3	13	18	6
Newbie (1st year)			6	10	3		1	8	8	2
Lukewarm (2nd year)		1	3	6				3	5	2
Enthusiast (2nd year)			2	8	1		2	2	5	2

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 4 - Introduced me the gist of learning activities in MOOCs (e.g. games)

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total			12	24	4		3	13	22	2
Newbie (1st year)			5	10	4		1	10	8	
Lukewarm (2nd year)			5	5				3	5	2
Enthusiast (2nd year)			2	9			2		9	

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 5 - Provided links to suitable content of MOOCs for students at my level

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total		2	9	21	8		2	25	11	2
Newbie (1st year)			4	13	2			13	6	
Lukewarm (2nd year)		2	2	5	1			7	1	2
Enthusiast (2nd year)			2	4	5		2	5	4	

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 6 - Introduced the idea of fostering learning through online discussion forum in MOOCs

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	1	1	11	24	3			14	22	4
Newbie (1st year)		1	4	13	1			9	10	
Lukewarm (2nd year)			5	4	1			2	5	3
Enthusiast (2nd year)	1		2	7	1			3	7	1

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 7 - Convinced me that MOOCs provide a suitable platform for me to pursue the knowledge in the topic / subject

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total		1	8	28	3		2	7	29	2
Newbie (1st year)		1	3	12	3			3	16	
Lukewarm (2nd year)			3	7				4	4	2
Enthusiast (2nd year)			2	9			2		9	

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 8 - Able to arouse my interest in a particular topic / subject

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total		2	8	23	7	2	2	9	23	4
Newbie (1st year)			4	12	3	1	1	5	10	2
Lukewarm (2nd year)		1	2	6	1	1		4	3	2
Enthusiast (2nd year)		1	2	5	3		1		10	

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 9 - Convinced me that the knowledge I attain from MOOCs will benefit my further studies

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total		3	6	24	7			9	24	7
Newbie (1st year)		2	3	10	4			6	11	2
Lukewarm (2nd year)		1	1	8				3	4	3
Enthusiast (2nd year)			2	6	3				9	2

Question 19 To what extent do you think the training session offered by HKU TELI has supported you in your understanding and participation in MOOCs? Option 10 - Convinced me that the certificate I attain from MOOCs will benefit my further studies

	Pre-mentorship survey (Nov)					Post-mentorship survey (Jul)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total			5	22	11			4	30	6
Newbie (1st year)				13	5			3	15	1
Lukewarm (2nd year)			2	7				1	9	
Enthusiast (2nd year)			3	2	6				6	5
Missing	1 (Newbie), 1 (Lukewarm)									

Question 20 How effective are the forms of support that the school offered you in your participation in MOOCs? Option 1 - Mentoring experience with your mentor

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Really ineffective	Ineffective	Effective	Really effective	Really ineffective	Ineffective	Effective	Really effective
Total	0	3	32	5		3	29	8
Newbie (1st year)		1	15	3		2	16	1
Lukewarm (2nd year)		1	9			1	7	2
Enthusiast (2nd year)		1	8	2			6	5

Question 20 How effective are the forms of support that the school offered you in your participation in MOOCs? Option 2 - Talking to my subject teacher

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Really ineffective	Ineffective	Effective	Really effective	Really ineffective	Ineffective	Effective	Really effective
Total		2	31	7		7	29	4
Newbie (1st year)		2	13	4		1	18	
Lukewarm (2nd year)			10			1	7	2
Enthusiast (2nd year)			8	3		5	4	2

Question 20 How effective are the forms of support that the school offered you in your participation in MOOCs? Option 3 - Training sessions from HKU TELI

	Pre-mentorship survey (Nov)			
	Really effective	Ineffective	Effective	Really effective
Total	0	8	32	0
Newbie (1st year)		2	17	
Lukewarm (2nd year)		3	7	
Enthusiast (2nd year)		3	8	

Question 20 How effective are the forms of support that the school offered you in your participation in MOOCs? Option 4 - MOOC for Starters Guide

	Pre-mentorship survey (Nov)			
	Really ineffective	Ineffective	Effective	Really effective
Total	0	7	28	5
Newbie (1st year)		1	16	2
Lukewarm (2nd year)		3	6	1
Enthusiast (2nd year)		3	6	2

Question 20 How effective are the forms of support that the school offered you in your participation in MOOCs? Option 5- Interaction with other student mentees from my school in the training of MOOCs mentorship programme

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Really ineffective	Ineffective	Effective	Really effective	Really ineffective	Ineffective	Effective	Really effective
Total		4	31	5	2	12	24	2
Newbie (1st year)		1	16	2		8	11	
Lukewarm (2nd year)		2	8			4	4	2
Enthusiast (2nd year)		1	7	3	2		9	

Question 20 How effective are the forms of support that the school offered you in your participation in MOOCs? Option 6 - Reimbursement for the fee of purchasing the verified certificate

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Really ineffective	Ineffective	Effective	Really effective	Really ineffective	Ineffective	Effective	Really effective
Total	0	3	19	18		2	17	21
Newbie (1st year)		2	10	7		2	11	6
Lukewarm (2nd year)		1	4	5			1	9
Enthusiast (2nd year)			5	6			5	6

Question 20 How effective are the forms of support that the school offered you in your participation in MOOCs? Option 7 - Other form of support (Please specify)

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Really ineffective	Ineffective	Effective	Really effective	Really ineffective	Ineffective	Effective	Really effective
Total		1		1			1	
Newbie (1st year)		1		1			1	
Lukewarm (2nd year)								
Enthusiast (2nd year)								
Missing	17 (Newbie), 10 (Lukewarm(, 11 (Enthusiast)				18 (Newbie), 10 (Lukewarm), 11 (Enthusiast)			

Part (E): Impact of MOOCs mentoring in your decision for further studies

Question 21 How do the following stakeholders / factors influence your choice of further education?

Option 1 - Self

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	1	1	10	28		2	7	31
Newbie (1st year)			6	13		1	6	12
Lukewarm (2nd year)		1	3	6			1	9
Enthusiast (2nd year)	1		1	9		1		10

Question 21 How do the following stakeholders / factors influence your choice of further education?

Option 2 - Parents

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	6	9	15	10	6	13	17	4
Newbie (1st year)	3	6	7	3	4	7	8	
Lukewarm (2nd year)		2	4	4		3	4	3
Enthusiast (2nd year)	3	1	4	3	2	3	5	1

Question 21 How do the following stakeholders / factors influence your choice of further education?

Option 3 - Independent agent

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	20	9	10	1	20	12	4	1
Newbie (1st year)	8	6	4	1	9	9	1	
Lukewarm (2nd year)	5	1	4		4	2	2	1
Enthusiast (2nd year)	7	2	2		7	1	1	
Missing					1 (Lukewarm), 2 (Enthusiast)			

Question 21 How do the following stakeholders / factors influence your choice of further education?

Option 4 - Other relatives or friends

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	11	15	12	1	18	16	2	4
Newbie (1st year)	5	7	6		10	9		
Lukewarm (2nd year)	3	3	4		2	2	2	4
Enthusiast (2nd year)	3	5	2	1	6	5		
Missing	1 (Newbie)							

Question 21 How do the following stakeholders / factors influence your choice of further education?

Option 5 - Career teacher from my school

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	8	12	16	4	2	15	20	1
Newbie (1st year)	3	6	10			8	11	
Lukewarm (2nd year)	1	5	3	1	1	5	3	1
Enthusiast (2nd year)	4	1	3	3	1	2	6	
Missing					2 (Enthusiast)			

Question 21 How do the following stakeholders / factors influence your choice of further education?

Option 6 - Scholarship to institution

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	7	10	16	7	6	12	14	6
Newbie (1st year)	4	3	10	2	2	7	8	2
Lukewarm (2nd year)	1	2	4	3	1		5	4
Enthusiast (2nd year)	2	5	2	2	3	5	1	
Missing					2 (Enthusiast)			

Question 21 How do the following stakeholders / factors influence your choice of further education?

Option 7 - Others (Please specify)

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	2	1	1					
Newbie (1st year)	2							
Lukewarm (2nd year)								
Enthusiast (2nd year)		1	1					
Missing	17 (Newbie), 10 (Lukewarm), 9 (Enthusiast)				19 (Newbie), 10 (Lukewarm), 11 (Enthusiast)			

Question 22 How much do you think your experience in MOOC mentorship programme impact your decision for your further studies?

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Total	Newbie (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)	Total	Newbie (1st year)	Lukewarm (2nd year)	Enthusiast (2nd year)
Not at all	2	1		1	2			2
Little	5	3	1	1	3	3		
Some	25	12	7	6	23	16	2	5
A lot	8	3	2	3	10		6	4
Total	40	19	10	11	38	19	8	11
Missing	0				2		2	

Question 23 How much do you think the following factors influence your decision in applying for tertiary institutes? Option 1 - The suggestions from my mentor in MOOCs mentorship programme

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	1	9	24	5		14	21	5
Newbie (1st year)	1	3	14	1		5	14	
Lukewarm (2nd year)		2	7	1		3	5	2
Enthusiast (2nd year)		4	3	3		6	2	3
Missing	1 (Enthusiast)							

Question 23 How much do you think the following factors influence your decision in applying for tertiary institutes? Option 2 - MOOCs training from HKU TELI

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	3	17	18	1	11	17	7	3
Newbie (1st year)		7	11	1	5	6	5	1
Lukewarm (2nd year)	3	3	4		2	4	2	2
Enthusiast (2nd year)		7	3		4	7		
Missing	1 (Enthusiast)				2 (Newbie)			

Question 23 How much do you think the following factors influence your decision in applying for tertiary institutes? Option 3 - Interaction with the current students / instructors in the MOOCs online discussion forum

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total		14	21	5	8	12	14	3
Newbie (1st year)		6	12	1	5	4	6	2
Lukewarm (2nd year)		4	6		1	6	1	1
Enthusiast (2nd year)		4	3	4	2	2	7	
Missing					2 (Newbie), 1 (Lukewarm)			

Question 23 How much do you think the following factors influence your decision in applying for tertiary institutes? Option 4 - Social media updates from the institution (e.g. Facebook, Twitter)

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	5	9	19	6	4	16	15	3
Newbie (1st year)	2	5	10	2	3	6	7	2
Lukewarm (2nd year)	3	3	3	1	1	6	2	
Enthusiast (2nd year)		1	6	3		4	6	1
Missing	1 (Enthusiast)				1 (Newbie), 1 (Lukewarm)			

Question 23 How much do you think the following factors influence your decision in applying for tertiary institutes? Option 5 - Teaching methods from the instructors of MOOCs

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	2	6	23	9	2	4	23	9
Newbie (1st year)	1	2	13	3	1	3	13	1
Lukewarm (2nd year)	1	3	5	1	1	1	5	2
Enthusiast (2nd year)		1	5	5			5	6
Missing					1 (Newbie), 1 (Lukewarm)			

Question 23 How much do you think the following factors influence your decision in applying for tertiary institutes? Option 6 - The particular topic in the MOOCs offered by universities

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total	0	8	19	13	0	5	16	19
Newbie (1st year)		5	10	4		3	10	6
Lukewarm (2nd year)		2	5	3		2	4	4
Enthusiast (2nd year)		1	4	6			2	9

Question 23 How much do you think the following factors influence your decision in applying for tertiary institutes? Option 7 - The recognition of verified MOOC certificate

	Pre-mentorship survey (Nov)				Post-mentorship survey (Jul)			
	Not at all	Little	Some	A lot	Not at all	Little	Some	A lot
Total		7	17	16	1	13	16	10
Newbie (1st year)		5	6	8	1	5	9	4
Lukewarm (2nd year)		1	6	3		3	3	4
Enthusiast (2nd year)		1	5	5		5	4	2