PERCEPTIONS OF AND ATTITUDES TOWARDS A COURSE MANAGEMENT SYSTEM AT THE HONG KONG POLYTECHNIC UNIVERSITY

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Perceptions of and attitudes towards a Course Management System at The Hong Kong Polytechnic University

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CERTIFICATE OF ORIGINALITY

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Abstract

This thesis is about university students' perceptions of and attitudes towards a course management system (CMS) in Hong Kong.

CMS has been widely adopted by universities in Hong Kong. Adoption of CMS is a decision made by the university administrators and lecturers. No matter what reasons behind its employment, on rare occasion students are being consulted. Students even have no autonomy in using CMS. Whenever lecturers adopt CMS, students have no alternative but are compelled to use it. Even though many previous research on CMS focused their attentions on the relationship between teaching practice and learning outcome, the way of students in perceiving CMS itself rarely be addressed. Nonetheless, students' perceptions of and attitudes towards CMS are also important as they are related to other educational areas such as learning motivations and learning outcomes. With a view of having a better understanding of the issue, especially within the context of The Hong Kong Polytechnic University, this study was thus proposed.

Equipping with the technology acceptance model (TAM) as a theoretical framework, this study has adopted a qualitative research approach to understand students' perceptions of and attitudes towards CMS. Through collecting data from 34 semi-structured interviews, this study has discovered that students perceived CMS disconnected from their daily life and developed the attitudes of deploying it as their pawns to achieve their pragmatic goal of acquiring university qualification. In addition, this study has proclaimed that TAM alone is inadequate to offer a comprehensive understanding of students' perceptions of and attitudes towards CMS. Further modification of TAM has been suggested in this dissertation. What is more, this study has called forth educationists that, when integrating educational technology into teaching and learning activities, they should take the context in which students are situating at into consideration.

Publications arising from the thesis

Chiu, S. K. (2018). A symbolic interactionist study on blended learning in Hong Kong. In The International Academic Forum (Ed.), *Surviving & Thriving: Education in Times of Change* (pp. 199-207). Retrieved from http://papers.iafor.org/wp-content/uploads/conference-proceedings/ACEID/ACEID2018_proceedings.pdf.

Chiu, S. K. (2019). A phenomenological study on experiencing in-class discussion among university students in Hong Kong. In The International Academic Forum (Ed.), *Independence and Interdependence* (pp. 45-50). Retrieved from http://papers.iafor.org/wp-content/uploads/conference-proceedings/ACEID/ACEID2019_proceedings.pdf.

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I had a dream.

It has been a dream for many years to complete my PhD. The dreaming was a challenging and unforgettable experience. It not only motivated me to perform better but also pushed me to explore more on different dimensions of humanity. Supports were vital in facilitating me to overcome difficulties.

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It is the moment to pursue another when a dream came true.

I have a dream.

May dreams of small potatoes come true.

I have a dream. …….

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Chapter 1

Introduction

1.1 Technology and course management systems

Information and communication technologies have affected almost every aspect of our society. It has shaped the ways we organize our daily life, communicate with others and experience the world. It also has broken physical and time boundaries and has easily drawn one attention (boyd, 2014, pp. 77-80; Ito et al., 2013, p. 84). Education is of no exception. With introduction of educational technology, learning and teaching environments have experienced dramatical variation. Livingstone (2012) argued that educational technology has played a significant role in education as it has enabled the teacher to extend his teaching and teacher-student relationship from the classroom to their homes. For instance, Lingard (2014) expressed that implementing the computer and the Internet in education has helped to contribute a better measure to manage teaching and learning activities, and reconsider almost every aspect in education, including methods of teaching and evaluation. Encircled by information technologies, people can study and learn at almost everywhere in a digital way (Livingstone, 2010, pp. 2, 11). Inspired by the inventions of the computer and the Internet, educationists have combined the two and changed the teaching and learning activities by creating course management systems (CMS), known as virtual learning environments or learning management systems (Simonson, 2007, p. vii).

CMS is the Internet-enhanced platform which incorporates various functions and aims at satisfying different pedagogical concerns (Adlakha & Aggarwal, 2009, p. 26). As an educational technology, CMS has been widely employed among universities all over the world. Hong Kong is no exception. As far as I understand, many Hong Kong universities have adopted CMS such as Blackboard and Moodle to offer courses in their teaching and learning activities. Professors can upload lecture notes, reading lists, announcements, feedbacks and

even an online discussion forum into the system. By making use of CMS, some professors have also carried out pedagogy of blended learning. In some cases, when necessary, professors can also keep track of every action of the students in the system.

1.2 Advantages of using CMS

1.2.1 University administrators

As an educational technology, CMS is vital to university administrators, academic staff and sales. For university administrators, CMS can be incorporated with university developmental strategy in offering both conventional and online courses, catering for the needs of both full-time and part-time students (Awidi, 2008, p. 27; M. S. Pittinsky, 2003, pp. 3-4). In other words, CMS can help the university to generate more financial rewards by attracting and connecting with potential students (Harrington et al., 2004, p. 4; Ismail, 2011, p. 257; Maeroff, 2003, pp. xii-xiii). In addition, CMS can minimize teaching workload, so academic staff can concentrate on what the university may emphasis, such as consulting students, conducting research and targeting for publications (Harrington et al., 2004, p. 2; Ring et al., 2012, p. 855). What is more, by offering teacher-oriented approach of pedagogical platform, CMS can fulfill university administrators' desires for cost-effective and efficient cultivating, enlightening, reciprocating, and satisfying demands of as many students' learning needs as possible (Bransford et al., 2000, p. 204; Herrington & Standen, 2000, pp. 196-197).

1.2.2 Academic staff

For academic staff, CMS is important in enhancing teaching and learning experiences for conventional lessons, blended learning and online courses (Ioannou & Hannafin, 2008, pp. 46-47; Vovides et al., 2007, p. 65). Especially, CMS plays an important role in course management, communication between teacher and students, conducting teaching and learning activities and facilitating students in accessing lecturer notes (Dutton et al., 2004, pp. 132-133; Grabe &

Christopherson, 2005, p. 292; Tella, 2011, p. 56; Woods et al., 2004, pp. 282-283). CMS can also help to facilitate academic staff in sharing students' works with their classmates, collecting students' assignments and returning feedbacks to them (G. Porter, 2011, p. 4).

In a word, CMS has contributed to educationists in many ways: providing a measure to meet university developmental strategies in recruiting potential students, offering a boundaryless and timeless platform to facilitate teaching and learning activities, and creating a transparent environment for communicating and sharing academic output and accomplishments.

1.2.3 Sales

For marketing, CMS is regarded as one of the potential platforms providing a one-stop solution for teaching and learning activities by selling and expanding various publications and academic tools such as exercising, evaluation, communication and alike to different institutions (Kim, 2004, pp. 276-277; Lang & Hall, 2007, pp. 1-3). In addition, CMS is a source of generating more income. Other possible revenue can be generated after selling CMS to institutes which include licencing, training, maintenance and so on (Blair & Godsall, 2006, p. 147; Harrington et al., 2004, p. 3; See & Teetor, 2014, p. 84).

1.3 Reflection on CMS and teaching

Nevertheless, traditional and most popular pedagogy method of lecturing are being challenged as ineffective in arousing students' learning motivation. Against this backdrop, can application of information technologies, such as CMS, in teaching and learning activities act as a masterstroke to enhance and motivate students' learning (Deale et al., 2010, p. 21)? We are now surrounded by all sorts of information technologies. One of the impacts of information technologies on the youth, as boyd (2014) suggested, is that they have tended to regard it as a channel for their social and leisure activities. The youth has spent a certain proportion of time in searching and accessing different sorts of materials via information technologies. Students' learning environment has also changed.

On one hand, encirclement by information technologies means that studying and learning takes place in a digital way (Livingstone, 2010, p. 2 and 11). On the other hand, as Cox and Marshall (2007) and Lei and Zhao (2007) indicated, embedding information technologies into education such as CMS does not equivalent to an improvement in teaching and learning activities.

1.4 Application of CMS in Hong Kong

In the case of Hong Kong, information technologies have been integrated with teaching and learning activities under an initiative from Government of Hong Kong since 1998 (Law, 2010, p. 5; A. Yuen et al., 2010, pp. 2-3). In 2007, the Education Bureau reviewed that students "should be aware of the social impact of rapid and indiscriminate exchange of information over the Internet" (Education Bureau, 2007, p. 16). Educationists may not have autonomy in adopting information technologies as educational technology since they may need to respond to and even comply with different political agenda (Ferneding, 2003, p. 8). However, as A. Yuen et al. (2010) further argued, the success of the integration of information technologies in education depends on how they are used (A. Yuen et al., 2010, p. 213). Reeves (2003) also pinpointed that the adoption of information technologies in education does not represent a sophisticated pedagogy (p. 8).

1.4.1 Settings of The Hong Kong Polytechnic University

Nonetheless, CMS has been widely employed among universities in Hong Kong. One of the examples is The Hong Kong Polytechnic University (PolyU). Like other universities, CMS has constituted a significant role in teaching at PolyU (Katz, 2003, p. 50). Before outlining how CMS is valued in PolyU, a brief introduction on some background information of PolyU will be made first. Founded in 1937 named as the Government Trade School, she was the first government-funded institute offering some full-time technical or craftsmanship skill trainings for around 70 students at her campus in Wan Chai on three fields of mechanical engineering, building construction and radio operation for sailors (The Hong Kong Polytechnic University, 2017a, pp. 5, 15;

2018c). Unlike current practice, technical trainings during that period were mainly provided by secondary schools, trading schools or post-secondary institutes (Farmer, 2015a; Waters, 2002, p. 18). Nonetheless, the School was not well received at that time as the public generally perceived that conventional apprenticeship or some equivalent job trainings were already good enough (Faculty of Construction and Land Use, 2007, p. 4). Owing to various reasons, the School closed in 1941 and then resumed its operation in 1947 after changing its name to the Hong Kong Technical College, which offered both full-time and part-time programs for 25 and 599 students respectively (Faculty of Construction and Land Use, 2007, pp. 5-6, 8; Waters, 2002, pp. 18-19). At around 1950s, the College responded to the governmental policy on providing more technical trainings with a view of answering the needs of and demands from a flooding inflow of immigrants, refugees, capital, resources and opportunities from China (Faculty of Construction and Land Use, 2007, pp. 6-8; Farmer, 2015b; The Hong Kong Polytechnic University, 2017a, p. 18). While general status of technical training among the public increased, females were admitted for the first time to full-time technical courses in 1955 (W. O. Lee, 1991, p. 106; Waters, 2002, p. 18). Meanwhile, after securing one million donations from The Chinese Manufacturers' Association of Hong Kong and the financial and land supports and arrangement from the government in 1956, the College relocated her campus from Wan Chai to Hung Hom in 1957, with 345 full-time students and 5,532 part-time students (Faculty of Construction and Land Use, 2007, p. 8; The Hong Kong Polytechnic University, 2017a, p. 18; 2018c). By 1971, the College offered full-time, part-time and part-time day release programs for more than 1,700, 9,340 and 740 students respectively (The Hong Kong Polytechnic University, 2018c).

After passing of the Hong Kong Polytechnic Ordinance in 1972, the Hong Kong Technical College was renamed as The Hong Kong Polytechnic at the same year and offered courses on management, engineering, natural studies, commerce, mathematics, textiles and science (Government of the Hong Kong Special Administrative Region, 2012; The Hong Kong Polytechnic University, 2017a, p. 19; 2018c). The Polytechnic has embarked on various phrases of campus developments and renovations since 1978 (The Hong Kong Polytechnic

University, 2017a, pp. 23-28). With her establishments, the Polytechnic firstly launched her Degree, Master and PhD programs in 1983, 1986 and 1989 respectively (The Hong Kong Polytechnic University, 2018c; Waters, 2002, p. 23). In 1994, when obtaining university status, the Polytechnic was granted university title and formally renamed as PolyU (Government of the Hong Kong Special Administrative Region, 2012; The Hong Kong Polytechnic University, 2017a, p. 21; 2018c). Up to 2017, more than 390,000 students have graduated from PolyU and a total number of 48 alumni associations have been set up all over the world (Institutional Research and Planning Office of The Hong Kong Polytechnic University, 2018, p. 13; The Hong Kong Polytechnic University, 2017a, p. 2).

As a university ranked 31 in Asia and positioned 106 globally in 2019, PolyU has already established 265 exchange partners all over the world and installed 6 faculties, 2 schools and 26 academic departments offering various qualifications award-bearing programmes from sub-degree, higher diploma, undergraduate to postgraduate in both full-time and part-time modes (Quacquarelli Symonds Limited, 2019a, 2019b; The Hong Kong Polytechnic University, 2017a, pp. 1, 5; 2018a, 2018b). By her 81st anniversary in 2018, the number of students admitted by PolyU at the level of sub degree, undergraduate, taught postgraduate, professional doctorate, research postgraduate was 1,570, 15,474, 7,558, 619 and 1,867 respectively (Institutional Research and Planning Office of The Hong Kong Polytechnic University, 2018, p. 10; The Hong Kong Polytechnic University, 2018c). 89% of undergraduate students came from Hong Kong whilst 64% research postgraduate students came from Mainland China, Macau and Taiwan (Institutional Research and Planning Office of The Hong Kong Polytechnic University, 2018, p. 9). While PolyU accommodated 932 incoming exchange students, 62.5% of her undergraduate students experienced international learning (Institutional Research and Planning Office of The Hong Kong Polytechnic University, 2018, p. 10). As of October 2017, PolyU recruited 5,429 staff, in which 1,352 of were academic staff, 1,409 were research staff and 2,668 were administrative or supporting staff (The Hong Kong Polytechnic University, 2018a). Among academic staff, 61% came from Hong Kong while 23% from overseas countries or regions other than Mainland China, Macau, and

Taiwan (Institutional Research and Planning Office of The Hong Kong Polytechnic University, 2018, p. 9).

1.4.2 PolyU and CMS

In accordance with her latest strategic six-year plan, PolyU will continue to strive for accomplishing one of the top regional universities excelling in knowledge conveyance, researches and teaching and learning activities (The Hong Kong Polytechnic University, 2018e, p. 3). With regard to her teaching and learning activities, PolyU has embraced a conviction that adopting educational technology is probably a promising way to achieve learning outcomes with quality (Learning and Teaching Committee, 2002, p. 2). Employment of educational technology is therefore recommended in various teaching and learning activities including e-learning, especially for those class accommodating 200 students or more, in order to enhance students' learning experience (Learning and Teaching Committee, 2005, pp. 1-2; 2017, p. 1; The Hong Kong Polytechnic University, 2018e, p. 3). Even though using educational technology is not clearly and explicitly stated on the document in judging performance of teaching practices, it was listed as one of PolyU's strategic plans for teaching and learning, and was also perceived in the university's annual report as a distinctive teaching practice (Learning and Teaching Committee, 2003; The Hong Kong Polytechnic University, 2012, p. 18; 2018d, pp. 38-39).

To further consolidate and uphold the belief, the way of using educational technology in pedagogy is one of the assessed items in peer teaching evaluation (Learning and Teaching Committee, 2014, p. 5). What is more, during an exercise of evaluating the level of teaching performance of a teaching staff, use of educational technology is also one of the criteria in reviewing teaching quality and effectiveness (The Hong Kong Polytechnic University, 2016, p. 12). In other words, adoption of educational technology, including CMS, in pedagogy is considered by PolyU as one of the essential indicators for desirable and favorable teaching practice. Theoretically, whether or not employing educational technology into teaching and learning activities is a professional judgement among academic staff and is subjected to several concerns. However, as teaching performance is one of the evaluating criteria in appraisal exercise, it is

reasonably assumed that a certain proportion of teaching staff, especially those who are employed under contract base, have taken adopting educational technology into consideration when designing their pedagogy (The Hong Kong Polytechnic University, 2016, p. 4).

While overall direction and objective of PolyU's stance and policies on educational technology are affirmative and appreciative, there are at least two issues that are worthy of notice. First, in term of practicing educational technology in pedagogy, attention has rarely drawn on students, at least from the university's perspective. Light has mainly shed from the university's perspective on such as how the university has created an environment for teaching staff to adopt educational technology in teaching and learning activities. For instance, educational technology or even technology is not listed as one of the attributes of intended learning outcome among bachelor graduates and therefore it is not included as the objective of cultivation during the entire period of undergraduate study (Learning and Teaching Committee, 2012a, 2012b). Besides, concerning an adoption of educational technology including e-learning, Educational Development Centre mainly targets at co-operating with teaching staff and other concerned units or departments in the university, rather than the students (Educational Development Centre, 2013a, 2013c). In addition, regarding the use of educational technology, the Information Technology Services Office basically offers technical and informative supports to students only (Information Technology Services Office, 2014b). These arrangements sound logical and reasonable from an institutional perspective. However, there are still many scopes to work on with before students can really appreciate educational technology as a way to enhance their learning outcomes. After all, students' perceptions and attitudes must be taken into consideration so as to successful adopt educational technology, including CMS, in pedagogy.

Second, as mentioned, it is a desire of PolyU to enhance students' learning experiences and academic outcomes through educational technology (Learning and Teaching Committee, 2002, p. 2). Nevertheless, while the university intends to achieve certain goals through adopting educational technology such as CMS, it does not mean that students have to be in line with

this thought. As PolyU emphasizes on a core status of students in teaching and learning, it is a vital call not only for the university but also for those educational practitioners to have a comprehensive understanding on how students perceive and feel towards CMS and how that perceptions and attitudes are mediated (The Hong Kong Polytechnic University, 2012, p. 14).

1.5 Experiencing CMS

From my understanding, many courses offered at the university level have adopted CMS such as Blackboard and Moodle. However, students' perceptions of and attitudes towards CMS are different from university administrators, academic staff and marketing. For instance, based on my personal experience, students could not really benefit from current adoption of educational technology. Being one of the course developers, I was a teaching assistant of a degree course in one of the universities in Hong Kong for a few years. The course was on liberal studies offered to non-majored full-time undergraduate students. Generally speaking, the course was one of the many similar electives but compulsory courses on liberal studies offered in the university that all non-majored students had to get at least a pass before they could meet the graduation requirement. Normally, students had to take a 3-hour lecture and attend a 2-hour tutorial lesson every week. In some cases, students attended the lecture first before attending the tutorial lesson and sometimes vice versa. Nevertheless, students' attendances in lecture and tutorial lesson were recorded. As a teaching assistant, my responsibilities were mainly guiding tutorial lessons, helping students to consolidate their learnings from lecture and marking students' assignments and examination scripts. In many occasions, I needed to design some teaching and learning activities for my tutorial lesson.

Owing to my roles as a teaching assistant, I noticed two phenomena. First, there were some e-tutorial lessons in the course. Students needed not to attend regular tutorial lessons on those days. However, they were required to discuss and share their opinions with classmates on certain topics in the discussion forum of CMS within regular tutorial lesson schedules. Participation

in the forum would partly contribute to their assessments and class attendances. As the teaching assistant, I had to monitor the whole progress of the e-tutorial lessons. I found that just around half of the students participated in the discussion forum at the regular tutorial schedules. Besides, in term of contribution, while some students actively participated in the discussion, some just did it perfunctorily and some even did not participate at all. For instance, some students just made a meaningless contribution by saying something like “hello”. As a teaching assistant, I restrained myself from having too much intervention. On the one hand, I discovered that educational technology of CMS allowed and empowered students to behave according to their schedules and preferences. Even though students' identities during the process of discussion were known to everyone when they were required to login CMS, students tended to have another set of behavior over there than in physical setting. At least, similar meaningless contributions were never being found in the regular tutorial lesson. On the other hand, I would interpret the meaningless contributions as reflections on the students’ desires to fulfill the course requirement without really willing to pay any concrete efforts.

Second, based on my observations and interactions with students within and beyond lessons, students tended to be much eager to secure a qualification of a bachelor degree. For instance, in regular tutorial lesson, I designed an activity to help students better understand the impact of credential society on them. Before debriefing, I formed students into different groups and asked them to discuss and make a choice between university qualification and concrete trainings to prepare for future uncertainties. Almost without any exceptions, every cohort of students indicated their preferences to me by selecting university qualification. Despite my further questions and challenges, students still insisted on their inclinations. The results were also consistent whether they already attended the lecture or not. While students’ inclinations were not mediated by lecturer or me but solely reflected their own preferences, the choices also mirrored the importance and the value judgement of university qualification from their minds.

The two phenomena suggested that students could have their own agenda in using CMS. Their agenda could be different from their lecturers and even the institution. In addition, students wanted to earn qualification but resisted from engaging in their teaching and learning activities. That makes me wonder, even though most of the universities have adopted CMS, how university students perceive and feel towards the adoption of CMS and whether CMS is able to fulfill what she has promised. With a view of better understanding of the captioned issues, this study has thus proposed. In general, perceptions are a "person interprets the stimuli into something meaningful to him or her based on prior experiences" while attitudes are "a mindset or a tendency to act in a particular way due to both an individual's experience and temperament" (Pickens, 2005, pp. 44, 52). In other words, perceptions are one's interpretation of the surrounding after the experience. Meanwhile, attitudes are one's taken behaviors after judging from one's perceptions. Through the presentations in the coming chapters, this study is going to propose that students' perceptions of CMS as unimportant and unconnected with them while their attitudes towards CMS was just a pawn for them to achieve their pragmatic goal of securing a university qualification. Students' perceptions of and attitudes towards CMS were largely mediated by socially desirable behavior especially about pursuing a university qualification. Experiencing the persistent indoctrination on the importance of having a university qualification, whether students found themselves in line with the belief or not, they had no alternative but needed to strive for complying with the expectation through almost all possible measures, CMS was thus utilized for this purpose.

1.6 Organization of thesis

This thesis is organized as follows. There is a total of 7 chapters. Chapter 1 provided background information of this study, offering an overview of the merits and criticisms of CMS. While suggesting a general picture on the rationales and expectations behind its practice in one university in Hong Kong, this chapter also pinpointed the discrepancy between conceptions and realities through the author's personal experiences and observations. The difference has

constructed more than just the screen setting but also called forth for a need of better understanding of CMS and the adopted theoretical framework in this study. To address on those significant issues, Chapter 2 covers definition and brief examination on the development of CMS with special reference to the context of PolyU. It also reviews and proposes a theoretical framework for approaching and understanding CMS in this study out of two common approaches in perceiving technology, namely, dichotomy of digital natives and digital immigrants and theory of Technology Acceptance Model (TAM). Scope of study and research questions in this study are also presented here. Empowerments from the two earlier chapters, Chapter 3 further conveys this study to research paradigmatic and methodological level by discussing and inspecting the issues such as data collection method and the way of handling the data. Reasons for adopting a qualitative research approach, semi-structured interview and ethnography will be typically highlighted during the inspection.

Germinating from the previous three chapters, Chapter 4 to 6 unscramble the research question through discussion and analysis of the data finding. Chapter 4 focuses on students' engagement in CMS. By looking at students' usages of CMS, attention will be made mainly on the way of students in regarding CMS as compulsory and inevitable experiences in their university life. Through probing into students' perceived easiness and usefulness in using CMS, Chapter 5 sheds light on the rationale behind students in perceiving CMS as a media for their better futures. Blossoming and fructifying from Chapters 4 and 5, Chapter 6 reaches a remark on how CMS disconnect with classroom teaching and low incentives among students and even staff in using it. In this chapter, while commenting on students' perceptions of and attitudes towards CMS, research question and appropriateness of TAM in applying on CMS will also be addressed. Especially, suggestion for improving TAM will be recommended. Fertilized by the denotations from the previous six chapters, conclusive remarks will be drawn in Chapter 7. Apart from outlining theoretical contribution and the significant implications towards educationists and policymakers, the limitation of this study will also be suggested. Lastly, this study endeavours to nourish and nurse further studies by proposing some of the possible and desirable relevant research directions.

Chapter 2

Literature Review

2.1 Definition of CMS

Owing to its complexity in nature, it is not easy to reach a consensus over a simple, direct and specific definition of CMS (A. Yuen, Fox, et al., 2009, p. 190). On one hand, CMS is "software packages that reside on an Internet server and provide various functions such as storing course-related information online and electronically quizzing students" (K. Oliver, 2001, p. 48). On the other hand, Lane (2011) regards it as "a program or software package designed to serve, present, or host online classes" (p. 46). Meanwhile, CMS can be defined as "provides an instructor with a set of tools and a framework that allows the relatively easy creation of online course content and the subsequent teaching and management of that course including various interactions with students taking the course" (EDUCAUSE Evolving Technologies Committee, 2003, p. 1). In addition, CMS can also be interpreted as "an Internet-based software program that provides a set of integrated tools for assessment and evaluation, content development, content management and delivery, communication, and course administration" (Adlakha & Aggarwal, 2009, p. 26). In short, CMS can generally be understood as an online platform which facilitates teaching and learning activities.

Similar to other educational technology, CMS has its own special path of development which will be examined as follows.

2.2 Development of CMS

The personal computer was invented in 1977 (Molenda, 2008, p. 16). Partly because of its small size and reasonable price, soon after its introduction, many

schools began to adopt personal computer as educational technology, evidenced by increasing number. For instance, percentages of the American high schools and primary schools equipped with at least one personal computer dedicated for teaching purpose in 1980 were 20% and around 5% respectively. The corresponding figures raised to 85% and 42% in 1983 (Centre for Social Organization of Schools, 1983, pp. 4-5). Saettler (1990) reckoned that there could be up to three million of personal computers installed at the two levels of the American schools in 1988 (p. 457). Meanwhile, teachers were keen on learning how to operate a computer and it gave rise to a movement of computer literacy (Roblyer & Doering, 2013, p. 7). The rise of computer literacy among teachers was a vital signal not only showing that an increasing number of teachers knowing how to operate a personal computer and its applications, but also representing a call of more demands in using the computer for teaching and learning activities. Viewing a huge potential of the educational market, many different types of educational software on different subject areas, such as humanities, science, mathematics, and agriculture, were introduced in the 1980s (Cox, 2012, p. 4). Enthusiasm on the personal computer as educational technology, however, faded out which watershed the popularity of the Internet and its combination with the personal computer. The United States invented the Internet for military purpose in 1969 (Hackbarth, 1996, p. 241). Because of the convenience in communication, over 150 American schools accessed to email in 1989 (Warth, 2006). In around 1993, the Internet has gradually become available for general usages (Molenda, 2008, p. 17). Viewing its educational value, more schools have adopted the Internet as educational technology. In 1999, 64% of computers in the American classrooms were connected with the Internet. A decade later, the figure raised to 93% (L. Gray et al., 2010, p. 5; Reiser, 2012, p. 21). Besides, in 1999, 94% of school teachers expressed using the Internet for teachings and class preparations (L. Gray et al., 2010, p. 12). Adoption of the Internet as an educational technology at last give rises to CMS.

Development of CMS can be traced back to the time when teachers tried to make use of the Internet for educational purposes by incorporating certain online commands (Harrington et al., 2004). For higher education, one of the pioneers was Project Athena which has been launched by Massachusetts Institute of

Technology since 1983 (Arfman & Roden, 1992, p. 550). Originated to enrich students' exposures in using computers, one of the exploitations of Project Athena was to set up a preliminary form of online teaching environment which facilitated students to share their works over there (Arfman & Roden, 1992, p. 550; Charles & Frederick, 2018). The online teaching environment, however, could involve a lot of complicated technical issues, which hindered the adoptions and integrations of online resources such as email and the Internet with teaching and learning activities in the 1990s (Al-Shboul, 2011, p. 224). With a view to facilitate teachers to handle the design and the implementation of online teaching and learning activities, especially those who did not acquire certain necessary technical skills and knowledge, some universities and other institutions began to work together to introduce some comparatively user-friendly packages for them (Lamberson & Lamb, 2003, p. 61). CMS was then gradually evolved (Harrington et al., 2004).

In general, there were two types of CMS, commercial and open-source (Simonson, 2007, p. viii). The first claimed commercial CMS was released in 1991 (TEDS, 2007). As suggested, one of the advantages of using CMS is that it can minimize teacher's technical considerations when conducting blended learning or online courses (Papastergiou, 2006, p. 596). The online course was first offered by Penn State University in 1995 (Corbeil & Corbeil, 2015, p. 54). By the end of the 1990s, there were many online institutions offering online courses (Convene, 1998). While commercial CMS was booming in 1997, a preliminary version of open-source CMS was introduced in 1999 (Al-Shboul, 2011, p. 220; Dougiamas & Taylor, 1999). First version of open-source CMS was released in 2002 (Moodle, 2019). Since then, the growth of open-source CMS burgeoned (Vicent & Segarra, 2010, p. 27).

The popularity of CMS in the United States affected other parts of the world as well. For instance, in 1996, partly responding to the tendency of CMS in the United States, European Union reviewed the application and the role of educational multimedia in Europe (European Commission, 1996, p. 1). In addition, users of CMS gathered for the first time in a Canadian conference to share their experiences in 1999 (Schellenberg, 2007; Virkus, 1999). With the

popularity of mobile Internet access, CMS has begun to develop its own version for the mobile device in the 2000s while the first open-source CMS was launched at cloud platform in 2008 (Oxagile, 2016).

Emerged in the 1990s and drew so much attention that, in 2000, CMS was commented as one of the key educational technology (Gandel, 2000, p. 13; Rabinowitz & Ullman, 2004). In 2001, 20.6% of the American tertiary courses within researched institutes indicated using of CMS (The Campus Computing Project, 2001, p. 3). 83% and over 90% of American universities adopted CMS in 2002 and 2003 respectively (Hawkins et al., 2004, pp. 35-36; Reiser, 2012, p. 22). Some of the popular CMSs included Blackboard, Moodle and Canvas. As of October 2015, Blackboard and Moodle were the two major CMS in the United States, Britain, Canada and Australia (Oxagile, 2016). By Fall 2018, 31%, 30% and 18% of American institutions have already adopted Blackboard, Canvas and Moodle respectively (Edutechnica, 2018). Apart from universities, CMS has been widely adopted now in different educational institutions, private organizations, government and military for teaching and training purposes (Artino, 2007, p. 192; Gast, 2017, p. 59; Kok, 2013, p. 143; Olson, 2004, pp. 89-90; Regan & Delaney, 2011, p. 433; Saccol et al., 2010, p. 262; Vicent & Segarra, 2010, pp. 23-24).

As an educational technology, CMS is vital in enhancing teaching and learning experiences for conventional lessons, blended learning and online courses (Ioannou & Hannafin, 2008, pp. 46-47; Vovides et al., 2007, p. 65). Especially, CMS has assumed an important role in helping course management, communication between teachers and students, conducting teaching and learning activities, and facilitating students in accessing learning materials (Dutton et al., 2004, pp. 132-133; Grabe & Christopherson, 2005, p. 292; Tella, 2011, p. 56; Woods et al., 2004, pp. 282-283). However, Zhang et al. (2004) raised concern over intellectual property rights in using CMS (p. 79). Besides, while pointing out some of its advantages, Jafari et al. (2006) underlined some shortcomings of CMS, such as boring and non-user friendly interface (p. 61). Moreover, CMS was critisized for failing to facilitate and support both cooperative learning among students and vary difference of learning needs of each student (Boekaerts,

1997, p. 171; Singh et al., 2010, p. 305; Vovides et al., 2007, p. 67). Furthermore, another feeble feature of CMS was that it had to be better managed and structured before it could contribute to a positive learning experience for students (Nijhuis & Collis, 2003, p. 200). In addition, partly because of the need to satisfy desire of everyone, CMS not only failed to cater for special needs of different disciplinaries but also pushed and modelled almost all courses regardless its disciplinary following a particular teaching practice of lecturing, discussions and evaluations at an almost standardized format (Lamberson & Lamb, 2003, pp. 63-65; G. Morgan, 2003, p. 51; Reich & Daccord, 2008, p. 267; Vicent & Segarra, 2010, pp. 32-35; Weigel, 2005, p. 191). What is more, CMS was also accused of influencing pedagogy of lecturers (Lane, 2009).

Despite facing some criticisms, the popularity of CMS has still reached such a level that G. Morgan (2003) commented and described it as a critical pedagogical part embedded with tertiary education (p. 85). Courses of both blended learning and distance learning had also adopted CMS (Vovides et al., 2007, p. 65). Harrington et al. (2004) even indicated that CMS altered conventional lecturing in university education. As a media of technology, they further denoted a uniqueness of CMS in massively and promptly shaping university education (Harrington et al., 2004).

Since CMS originated from facilitating teaching and learning activities, its functions were shaped and constrained by the capabilities of the device that students used for accessing (Vicent & Segarra, 2010, p. 28). Various CMS offers different functions. Owing to the limitation and the necessary, it is impossible to cover all of them in this thesis. For the sake of illustration, functions offered by Blackboard will be briefly described. From the perspectives of students and lecturers, those functions in Blackboard can be categorized into four major areas, namely “transmitting course content”, “evaluating students”, “creating class discussions” and “creating computer-based instruction” (Malikowski et al., 2007, p. 156). Depending on the usage, however, some functions are not necessary or suitable to be strictly grouped under a single catalogue (Malikowski et al., 2007, p. 166). Brief accounts on the four major areas are as follows.

The function of “transmitting course content” is the most popular feature in CMS (Malikowski et al., 2007, p. 156). This function enables the lecturers to make use of CMS to disseminate course materials such as course outlines, lecture notes and the likes to students in different file formats (Ansorge & Bendus, 2003, p. 186; Dutton et al., 2004, p. 141; Woods et al., 2004, p. 286). By disseminating course materials to students, the major role of CMS is to help managing and organizing materials rather than to assume a creating tool for lecturers (Vicent & Segarra, 2010, p. 23). Updated information of the course can be made available to students through an announcement in CMS (Adlakha & Aggarwal, 2011, pp. 128-129). Depending on necessary, lecturers can also send message to a particular student, selected group or the whole class through email in CMS (Adlakha & Aggarwal, 2011, p. 134). On one hand, the function of “transmitting course content” enables students to be kept informed unidirectionally on the progress of the course. As the course materials are stored online, students can access it anywhere and anytime as long as they can access the Internet (Al-Shboul, 2011, p. 220). For instance, before attending the lesson, students can access CMS to download the latest version of lecture notes, or to check for an arrangement of the supplementary lesson. On the other hand, the function also facilitates lecturers in delivering and managing course materials and information.

About “evaluating students”, this feature is to facilitate lecturers and students themselves to monitor and review their learning progress and learning outcomes (Piña, 2012, p. 35). For instance, lecturers can set up tests for students in CMS. Based on the learning need, different format of tests such as multiple-choice, short questions, matching and alike can be installed (Adlakha & Aggarwal, 2011, p. 135; Malikowski et al., 2007, p. 161). Depending on the desire of the lecturers, students can access the correct answers and explanations after attempting the tests (Wink, 2011, p. 5). In addition, students can submit their assignments and type their works in CMS. Some functions in Blackboard, like “journal”, even support peer review. Students can also submit their assignments by uploading it to CMS through Turnitin. In this case, Turnitin can help check the similarity of students’ works which are in general interpreted as an indicator of committing plagiarism. The lecturer can choose to return the assignments to students in CMS with feedbacks (Wink, 2011, p. 5). Usually,

students need to attempt the tests or submit their assignments before a specified date (Vicent & Segarra, 2010, p. 30). Marking and grading can be done in CMS as well, and it is subjected to the lecturers whether it is available to the students or not (Adlakha & Aggarwal, 2011, pp. 136-137). While students can understand their learning processes, the feature of "evaluating students" also provides an additional channel for the lecturers to identify students' educational needs and implement necessary interventions when needed.

With regard to "creating class discussions", it is one of the interactive features in CMS which allows students to collaborate and learn from each other (Malikowski et al., 2007, p. 159; Vicent & Segarra, 2010, pp. 29-30). Overall speaking, discussion in CMS is similar to the discussion in the Internet forum. However, when discussing in CMS, identities of students are known, while discussion in the Internet forum can be anonymous. When conducting a discussion in CMS, lecturers will base on the subject matters and learning process of students to formulate a discussion topic. Depending on the desire of the lecturers, students can participate into the discussion individually or form as a group either by themselves or assigned by the lecturers (Adlakha & Aggarwal, 2011, p. 133; Wink, 2011, p. 4). In some cases, students have to do some preparation before participating in the discussion, either reading the assigned articles or searching necessary information. Usually, students are required to participate in the discussion beyond lesson time within a specific period of time. Besides expressing their views on the discussion topic, students are usually required to respond to questions or feedback from their classmates. To facilitate the progress of the discussion and for the sake of peer learning, the contents of the discussion are usually available to all registered students in the course. When necessary, lecturers or teaching assistants will moderate the whole progress of the discussion. This feature of "creating class discussion" not only provides lecturers another media to look into students' learning needs but also offers students a chance to review their learning progresses. Interventions and efforts can be made when necessary.

With the development of CMS, the feature of "creating computer-based instruction" become more mature (Malikowski et al., 2007, p. 165). For instance,

various multimedia such as videos and flash are supported by CMS and lecturers can make use of these variations as teaching resources (Vicent & Segarra, 2010, p. 31; Wink, 2011, p. 6). In addition, CMS also supports Microsoft Office applications, PDF, images and graphical presentations (Vicent & Segarra, 2010, pp. 29-30). Combing with other features of CMS like "transmitting course content", "evaluating students" and "creating class discussions", teaching and learning activities can be instructed beyond classroom settings and regular lesson periods (Hooper & Reinartz, 2002, p. 312; Malikowski et al., 2007, pp. 165-166). The feature of "creating computer-based instruction" is especially useful for distance learning or courses that embedded with blended learning (Vovides et al., 2007, p. 65). Students can engage with learning in everywhere and at any time as long as they have a mobile device that can access the Internet (Zhang et al., 2004, p. 75).

After reviewing the definition and development of CMS, the focus will be concentrated on its applications in Hong Kong at tertiary education.

2.3 Major previous literatures on CMS in Hong Kong context

There are many previous literatures on CMS in the Hong Kong context. Some of the major literatures departed from teachers' or institutional perspective while others addressed associated CMS with students' learning outcomes and satisfactions and experiences. These major literatures informed this study in various manners. The followings are a brief account.

2.3.1 CMS with teachers' or institutional perspective

S. Y. S. Chan and Leung (2002) conducted a study to assess the design and implementation of a web course on taxation hosted by one of the CMSs, WebCT, which targeted for postgraduate students in Hong Kong (pp. 24-25). Instead of focusing their attention on students, S. Y. S. Chan and Leung (2002) shed their lights on academic staff by suggesting four important elements for a successful implementation of a web course, namely "shared commitments", "adequate

communication", "supportive relationship" and "willingness to share expertise" (S. Y. S. Chan & Leung, 2002, p. 37). The findings remind us that successful adoption of CMS in teaching and learning activities required efforts and cooperation from both academic staff and students.

Besides, Kember et al. (2010) interested in finding out the way of how an application of CMS in blended learning helps to achieve educational outcomes at four universities in Hong Kong. While pointing out that most of the application of CMS in Hong Kong mainly serve at providing course information, the study argued that educational goal for implementing CMS was to improve students' learning outcome, adoption of CMS should focus more on involving students into activities that facilitated them to learn and discuss on course materials (Kember et al., 2010, p. 1191). This study provided an example of an application of educational technology into teaching and learning activities from teachers' perspective.

Both S. Y. S. Chan and Leung (2002) and Kember et al. (2010) studied CMS from teachers' or institutional perspective. Their research focuses lacked one of the important elements in the whole adoption of CMS, that was, students. Adopting and implementing CMS from the top without much concerning students' perceptions of and attitudes towards it could not be able to achieve something really beneficial to enhance students' learning experiences. Even though there were many previous researches on CMS not from students' perspective, their main concerns mainly focused on students' learning outcomes or learning satisfactions and experiences instead of students' perceptions of and attitudes towards CMS as pedagogy itself.

2.3.2 CMS with students' learning outcomes

Some of the previous major literatures on CMS drew their attentions on its linkage with students' learning outcomes. For instance, in order to make an exploration of whether different academic performance exists between conventional lecturing mode and an adoption of WebCT in teaching and learning activities, Leung (2003) studied part-time postgraduate computer sciences students in Hong Kong. Through comparison between two groups of students

studying under the traditional mode of lecturing and online WebCT course supplemented with the optional conventional tutorial setting, the study discovered not much difference of academic performance between these two groups (Leung, 2003, pp. 125, 128, 133). While focusing on academic performance and proclaiming of its finding was in line with other previous literatures, how students perceived and felt towards CMS when it was adopted in teaching and learning activities should not be undermined (Leung, 2003, p. 135).

Tse and Lo (2008) conducted a study to explore the effect of an adoption of WebCT in teaching Chinese nursing undergraduate students. As indicated by collected data from 119 student participants, when compared with conventional lecture mode of pedagogy, most students expressed that the adoption of WebCT in teaching and learning activities helped them to understand the subject matters and acquired necessary skills (Tse & Lo, 2008, pp. 921, 923). Based on the findings, Tse and Lo (2008) called forth to more adoption of information and communication technologies, such as WebCT, in teaching and learning activities. Nonetheless, this study failed to understand how students perceive and feel towards WebCT. Since students' perceptions of and feelings towards CMS are one of the crucial mediating factors in shaping our understanding on an integration of technologies with education, further studies are desirable.

Lin et al. (2009) interested in finding out how application of information and communication technology can enhance teaching and learning activities among traditional Chinese medicine university students in Hong Kong. Rather than following conventional lecture approach, Lin et al. (2009) embed electronic database into WebCT to store and share teaching and learning materials on traditional Chinese medicine among teachers and students (pp. 332-333). Results showed that students found the adoption of electronic database into teaching and learning activities was useful in enhancing their learning experiences and suited for their learning purposes (Lin et al., 2009, p. 336). Meanwhile, the application of electronic database into teaching and learning activities was also well received among teaching staff (Lin et al., 2009, pp. 339-340). This study provided an example of adopting information and communication technology in enhancing teaching and learning experience for both teachers and students.

A. Yuen, Fox, et al. (2009) interested in perceptions of adopting different educational technology in the same university among undergraduate and postgraduate students in Hong Kong (A. Yuen, Fox, et al., 2009, p. 192). The findings showed that although instant messenger and rich site summary (RSS) are the types of educational technology that most of the undergraduate and postgraduate students used, the most beneficial educational technology for their learning purpose was email. Besides, most of the students experienced in using WebCT and two of the functions in CMS that used most were accessing course materials and checking course announcement. In addition, most of the students commented on CMS as it facilitated them to access course materials and beneficial for their learning. However, the finding also indicated that some students were not keen in using CMS. Due to competition and worries about posting questions in CMS's forum would do something good to other students, some students tended not to use CMS and preferred to raise questions to the professor via email (A. Yuen, Fox, et al., 2009, pp. 193-196, 198). This study showed an interesting picture that students did perceive educational technology as a two side of a coin. On one hand, it facilitated their learning activities. On the other hand, it could be a potential channel to undermine their educational goals, especially in term of learning outcome. In my study, this was a very useful idea to understand the reason why some students were keen in using educational technology while some were not.

2.3.3 CMS with students' learning satisfactions and experiences

Meanwhile, there were many previous major literatures on CMS concerned over students' learning satisfactions. For instance, as satisfaction was one of the factors affecting learning motivation, Sit et al. (2005) studied online learning experience, especially in terms of satisfaction level, area of satisfaction and online learning difficulties in using WebCT among university part-time nursing students in Hong Kong (pp. 141-142). The results of the study proposed that over half of the university part-time nursing students were satisfied with online learning and the satisfactions were mainly attributed to the convenience in accessing learning materials and scheduling learning progress. Meanwhile, their major online learning difficulties were lack of learning companions and

confidence (Sit et al., 2005, pp. 143-144). This study showed that there were both positive and negative consequences generated from the employment of educational technology. From students' perspective, sustainable motivation for keeping them to use educational technology was that generated positive consequences from using educational technology should be larger than that of negative consequences unless they were under compulsory to do so. As my research focused on the perceptions of and attitudes towards CMS among university students in Hong Kong, the findings of the study inspired me as I was also looking for some positive or negative consequences or reasons to explore why some students were keen in using CMS whilst some were not.

With a view of having a better understanding on the way of adopting WebCT in contributing to the teaching of construction, Chung et al. (2005) conducted a survey among 185 undergraduate students in Hong Kong (p. 298). Finding from the study pointed out that, overall speaking, even though both full-time and part-time students found the employment of WebCT enhanced their learning, part-time students tended to be higher suffice than full-time students towards employing WebCT in teaching and learning activities (Chung et al., 2005, p. 300). While the finding from Chung et al. (2005) proposed a linkage between mode of study and degree of sufficing towards the employment of WebCT, it was important to understand that students' suffices could be mediated by their perceptions and attitudes (Chung et al., 2005, p. 301). Motivated by the finding, further studies on students' perceptions of and attitudes towards CMS are needed.

White and Cheung (2006) carried out a similar research by probing into the competency of using various functions in CMS among year three undergraduate radiography students in Hong Kong who were taking a course on blended-learning mode (p. 246). Apart from introducing how WebCT was adopted in teaching and learning activities, finding from 54 students suggested that even though most of them found it easy to use different functions in WebCT, not so many students perceived that WebCT was useful for their study purposes (White & Cheung, 2006, pp. 246-249). In return, this was related to TAM, as Davis

(1986) proposed, on how one perceived easiness and usefulness in using technology.

Eagerness in finding out if CMS could meet students' educational desires, C. C. Chan et al. (2008) implemented a small-scale study which looked into an adoption of WebCT in teaching and learning activities among part-time postgraduate social work students who were already full-time engaged in social welfare in Hong Kong (pp. 89-90). Collected data from 13 research participants, the finding from this study illustrated that most of the students found WebCT easy to use and it promoted their learnings activities (C. C. Chan et al., 2008, pp. 91, 94-95). Nonetheless, the study focused on whether or not WebCT could fulfill students' learning desires without shedding much attention to how they perceived and felt towards WebCT as pedagogy itself. Again, it was necessary to conduct more studies in this area, especially in the Hong Kong context.

Shroff et al. (2008) interested in finding out the impact of information and communication technology on intrinsic learning motivation by looking at how university business students in Hong Kong perceived tasks performed on an online discussion forum in Blackboard. A modified version of Self-determination Theory was deployed for understanding intrinsic learning motivation among students. According to the theory, intrinsic learning motivation could be affected by both internal and external issues and that were based on mental fulfillment of "competence", "autonomy" and "relatedness". "Competence" was about confidence and required skills in driving the student to learn. "Autonomy" was about available options for the student while "relatedness" was about the desire of social connection (Shroff et al., 2008, pp. 113-114). The study revealed that, despite viewing the tasks performed on an online discussion forum as a kind challenge, students were confident in using the forum. Besides, it was vital to have some forms of interactive mutual responses for performing tasks on online discussion forum. In addition, the online discussion forum was generally well received as it was an interesting way for students to exercise their curiosity at their own paths (Shroff et al., 2008, pp. 119-120). As my study was also looking at the perceptions of and attitudes towards CMS among university students, this study offered an insight into my study. This study proclaimed that an online

discussion forum could affect students' intrinsic learning motivation. This study reminded me that, instead of being affected and form a particular type of perception toward educational technology, educational technology itself could also affect students back too. When we were talking about "medium is message", we also needed to consider "message is medium" as well (McLuhan, 1964, p. 9).

Focusing on a comparison between different usages of CMS, especially WebCT, between two modes of pedagogy mainly online learning and blended learning, A. H. K. Yuen, Deng, et al. (2009) studied learning experience and perceptions of these two applications among university architecture students in Hong Kong. The course was divided into two parts. The first part was conducted in online learning mode via the application of WebCT. The second part was delivered in blended learning manner, combined with conventional lecture and also with the application of WebCT (A. H. K. Yuen, Deng, et al., 2009, pp. 256-257). The study showed that overall speaking, the learning experience of students with WebCT was mediated by the instability of the system. Concerning students' perceptions of different applications of WebCT under online learning mode and blended learning, students believed that blended learning mode was more beneficial for their learning needs than online learning, as a professor could physically elaborate and answer students whatever related to the subject matter. Despite making learning more convenient, application of WebCT in online learning mode was just being regarded as a channel for accessing course materials, which was nothing to do really much with students' learning (A. H. K. Yuen, Deng, et al., 2009, pp. 257-258). The study illustrated one important point, that is, no matter what the intention of the professor was in adopting educational technology in teaching and learning activities, sometimes in some cases students could just regarded educational technology as a tool of achieving their certain goals and that could have no relationship with their learning needs or even educational desire. In other words, educational technology became a medium for their achievement. In my study, I took this notion a step further by proposing that university students not only regard educational technology as a tool of fulfilling their achievement but also take it as a medium to represent or express themselves. Medium is the message. Through the media of educational technology, see how they perceived and the way how they used it, we could have

a better, comprehensive and in-depth understanding on the students. Therefore, this study served as one of the important references in inspiriting my research.

Many of the above studies turned their attentions on aspects concerning information and communication technologies, generally known as e-learning. Adoption of CMS was one of the instances. With a view of better understanding on e-learning and how it has been implemented at tertiary level within Hong Kong context, an overview of e-learning together with a discussion on its adoption and related studies with reference to one of the universities in Hong Kong, PolyU, will be followed.

2.4 CMS and its practice at PolyU

2.4.1 E-learning

As a form of educational technology, e-learning has attracted both praises and condemns. Different opinions have formed towards e-learning. Some of the praising suggest that, like Gui et al. (2011) pointed out, one of the advantages of e-learning over other media of educational technology was that it could offer students more dimensional learning experiences (pp. 58-59). Through e-learning, Hodgson and Wong (2011) suggested that students could acquire a learning environment close to reality (pp. 197-198). In addition, Li et al. (2012) proposed that e-learning could enrich students' learning experiences and motivations by facilitating instant respond (p. 345). V. Ng et al. (2012) stated that e-learning could enhance collaborative learning among students with different disciplinary backgrounds (p. 426). Gui and AuYeung (2013) proclaimed that using e-learning as an educational technology not only serves for learning purpose, but can also be used as a strategic measure in promoting connection among different educationists in reality through exchanging innovative pedagogy over the Internet (pp. 86-88). On top of the above, B. Sun and Ng (2013) proposed that people would be shaped through interacting with others over social networking platform such as reading posts from others (pp. 128-129). D. Wong (2014)

indicated that e-learning could boost collaborative learning through verbal and non-verbal interactions with others (p. 338).

Despite afore-mentioned advantages, e-learning also received condemns. Some condemns were drawing from students' perspective because not all of them were well-receiving e-learning. Some students found it difficult to cope with e-learning because of, for instance, design, interface, system requirement, communication barriers and so on (Gui & AuYeung, 2013, p. 101; V. Ng et al., 2012, p. 426). Besides, characteristics of students, such as their academic and social backgrounds, could shape their effectiveness of e-learning (D. Wong, 2014, p. 339).

2.4.2 Practice of e-learning at PolyU

Despite all condemns, e-learning has been widely adopted as educational technology, including at tertiary level in Hong Kong. For instance, PolyU has widely employed e-learning as she has linked the adoption of educational technology, especially e-learning, with learning outcomes (Learning and Teaching Committee, 2002, p. 2). With a view of turning the embraced belief into reality, PolyU has adopted at least two strategies, namely, compulsory training workshop on teaching and administrative supports. In term of compulsory training workshop on teaching, before assuming teaching duties, all new academic staff, except for those with exemption, must attend a two-day workshop on teaching in which adopting educational technology in pedagogy is one of the covered areas (Educational Development Centre, 2013b; Learning and Teaching Committee, 1997, p. 1). With regard of administrative supports to academic staff, on one hand, Educational Development Centre is designated for overall suggesting, boosting and sustaining an adoption of educational technology, including e-learning, in the university (Educational Development Centre, 2013a, 2013c). On the other hand, one of the responsibilities for the Information Technology Services Office is to outline and facilitate implementations of educational technology (Information Technology Services Office, 2014a).

As an important part of e-learning, one of the CMS providers, Blackboard, is adopted at PolyU under the above context (Information Technology Services Office of The Hong Kong Polytechnic University, 2017). There are some studies on the adoption of Blackboard at PolyU, mainly associated it with teaching, learnings, and others. Some of the major studies are as follows.

2.4.3 Blackboard and teaching

Rather than focusing on students, Chow et al. (2018) drew their attentions on academic staff by probing into the functions that they used most in CMS. Drawing results from 1,457 academic staff, the study indicated that three most popular functions of CMS among academic staff were "content", "announcement" and "discussion board" (Chow et al., 2018, pp. 128, 133). While Chow et al. (2018) proposed that academic staff regarded CMS as an online platform for storing and disseminating teaching materials and course information, the study also brought out an issue that, the way academic staff used CMS could mediate how students perceived and felt about CMS (p. 133). When looking into students' perceptions of and attitudes towards CMS, attention had to be drawn on how academic staff used CMS.

2.4.4 Blackboard and learning

Kam et al. (2016) probed into the usage of Blackboard by employing a series of online writing tasks for inter-disciplines undergraduate students. According to the study, the adoption of Blackboard in teaching and learning activities could be one of the measures to reflect students' learning outcomes (Kam et al., 2016, pp. 145-146). This study demonstrated the usage of CMS in teaching and learning activities.

With an aim of helping students to arouse their learning motivation and better prepare for the lesson of company law, Mezzanotte (2017) conducted a study by incorporating some reading tasks with Blackboard and requiring students to complete the tasks before attending the lesson. Mezzanotte (2017) expressed that the online activity helped students to better prepare for the lesson

as this increased their abilities to learn independently (p. 357). This study showed the way of using CMS in helping students to arouse their learning motivations.

While the above two studies focused on how Blackboard affected and enhanced students' learning outcomes and learning experiences, students' usages and experiences in using Blackboard could be mediated by many other issues. It is inadequate to just perceive the adoption of CMS from the perspective of students' learning outcomes or their experiences. More attention should be given on students' perceptions of and attitudes towards CMS.

2.4.5 Blackboard and others

Interested in collaborative learning among students from different disciplines, V. Ng et al. (2012) conducted a survey on 148 undergraduate students from computing and hotel and tourism management by assigning them a collaborative task in Blackboard. One of the findings from the survey showed that students' most preferred way of communication was face-to-face communication rather than other channels such as within Blackboard environment (V. Ng et al., 2012, p. 423). The finding was interesting. Even though students were told to work collaboratively in Blackboard, they did not like to communicate within the Blackboard environment. The original intention of using Blackboard in hosting this teaching and learning activities were mediated by other issues such as students' perceptions of and attitudes towards CMS. In this regard, this study could offer a further understanding in this aspect.

Focusing on the preference of learning environment among engineering students, Tang and Yu (2018) conducted a survey among 148 engineering undergraduate students. Tang and Yu (2018) pointed out that students preferred mobile applications to Blackboard (p. 166). The finding deserved further attention as it showed that, even though CMS was widely adopted in teaching and learning activities among higher education, its effectiveness in facilitating students' learning was questionable as it failed to attract students' motivations in using it. While Tang and Yu (2018) did not explain it further, more studies on students' perceptions of and attitudes towards CMS were desirable.

After reviewing some of the major previous literatures on general adoption of CMS in Hong Kong and its practice in PolyU, at least two remarks can be made. First, students have no autonomy in choosing to use CMS or not. As instructed by professors, students are compelled to use CMS and that has become a part of course requirement to be fulfilled. In return, the way of how students use CMS depends on how they perceive and feel towards it. In this regard, when I collect data from my informants, I need to consider the elements that mediate their perceptions of and attitudes towards CMS. Second, students' learning motivation, learning strategy and academic outcome are associated with the application of CMS. These are likely to be related to how students perceive and feel towards CMS. This, in return, suggests me to pay attention to students' learning strategies and academic goals when collecting, transcribing, reviewing and analyzing the data.

2.5 Gaps in the discussion, mainly from non-student perspective

The aforementioned previous major studies on CMS deserve some attention. First, it shows that, on one hand, the academic staff does not have absolute autonomy in adopting e-learning. Morrall (2003) indicated that academic staff usually lack adequate technical skills and knowledge to handle e-learning, which leads to a consideration whether its design and even its content suit learning needs of students (p. 229). This can particularly arouse more concerns if the university does not offer many concrete supports to academic staff while pushing her academic staff to adopt educational technology such as e-learning in their pedagogy. This, in return, can affect how students perceive and feel CMS. On the other hand, students also have no autonomy in using CMS. Their usages of CMS can be just a measure to respond to the instruction from the professor.

Second, the majority of major previous studies focused their concerns on either institutional perspectives or influences on various aspects of teaching and learning practice and outcome. As Alexander (2001), Cook-Sather and Shultz (2001) and D'Angelo and Woosley (2007) suggested, study on how students

perceived the adoption of CMS itself as a part of teaching and learning activities deserved more attention, especially among social sciences students in Hong Kong context.

2.6 Research paradigm

This study on perceptions of and attitudes towards CMS was thus proposed with an intention to bridge the mentioned gaps. Particularly, a certain proportion of the above studies concern with how students perceived CMS. Those concerns were associated with how students perceived and thought of educational technology in a particular manner. Nonetheless, unlike scientific knowledge, perceptions and attitudes are both personal and subjective. It not only associated with research paradigm of this study but also called forth a need to employ a theoretical framework that enabled me to understand, learn, address and interpret these areas from a perspective of individual experience.

Research paradigm is about the position of researcher in perceiving his surroundings (Lather, 1986, p. 259; Mackenzie & Knipe, 2006). Kuhn (1970) firstly delineated paradigm for philosophical usage. The term "paradigm" can be translated as a "set of interrelated assumptions about the social world which provides a philosophical and conceptual framework for the organized study of the world" (Filstead, 1979, p. 34). A research paradigm is important for research as it not only helps to define and develop a research design in a more clear and logical manner but also facilitates research to identify a practical research approach (Easterby-Smith et al., 2002, p. 27). Many research paradigms have been proposed, in which, four signature paradigms are positivist paradigm, critical paradigm, postmodernist paradigm, and interpretivist paradigm (Giddens, 1987, pp. 28-29; 2017, pp. 18, 20; Qutoshi, 2015, p. 167; Sparkes, 1992, p. 21).

On the whole, the positivist paradigm believes objective meanings do exist and are independent from individual (Ponterotto, 2005, p. 128; Wahyuni, 2012, p. 70). As the element of human is regarded as insignificance, Comte (1851) affirmed experiments and measurements as realistic and reliable strategies

to attain knowledge. Researches are driven by this paradigm which focuses on objectivity, explanation, experiment, and prediction (Candy, 1989, p. 102; Henning et al., 2004, p. 17; Kivunja & Kuyini, 2017, p. 30; Lather, 2006, p. 37). To achieve these, a researcher should constrain subjective bias and segregate himself from contacting with the subject of the studied as much as possible (Egon G Guba, 1990, p. 19; Kivunja & Kuyini, 2017, p. 33). One of the theories embraced by this paradigm is functionalism. Functionalists stress on running of the whole society. As various institutions such as schools contribute a significant role in ensuring and maintaining smooth operation of the society, individual is beyond the main focus of functionalists. With a view of ensuring smooth operation of the society, individuals have to be constrained by all sorts of social facts such as laws and religious beliefs (Baert, 1998, pp. 13-14; Bailey & Gayle, 2003b, pp. 115-121, 126-127; Ritzer, 2010b, pp. 15-18). Therefore, positivist paradigm is inappropriate to drive this study of students' perceptions of and attitudes towards CMS.

Meanwhile, critical paradigm casts doubts and challenges various phenomena in a society (Kincheloe & McLaren, 2000, p. 279). Explorations impelled by this paradigm aim not only at criticizing certain cultural and social values and beliefs but also enlightening, empowering, and emancipating the oppressed and powerless groups (Avramidis & Smith, 1999, p. 29; Egon G. Guba & Lincoln, 1994, pp. 109, 112; Ponterotto, 2005, p. 130). One of the theories under this paradigm is communism. In general, it is about struggles and tensions which attribute to an inequality between two different classes namely bourgeois and proletariat. While proletariat contribute lot of efforts, most of the resources are occupied by bourgeois (Engels, 1847; Seeman, 1959, pp. 784-785). Critical paradigm is not suitable for this study as it focuses on students' perceptions of and attitudes towards CMS rather than struggles or inequality between students and others.

Postmodernist paradigm, however, criticizes modernity by challenging its failure in preventing fatal disease, terrorism, violence, warfare and all kind of threats that threatening peaceful society and improvement of livelihood (Bloland, 1995, pp. 523-525). In other words, modernity not only fails to improve

livelihood of people but also brings human civilization backward. Postmodernist believe that the situation can only be improved when a new era arrives through questioning different types of rational frameworks, hierarchies, values, beliefs that set by modernity. Instead of targeting at reality, postmodernist approaches truth by developing in-depth understandings and interpretations of texts and issues. This can be done through an emphasis on the importance of questioning and deconstructing process of its reasons and development (Kivisto, 2011, pp. 516-517; Lyotard, 1984, pp. 79-82). As postmodernist questioned rationales and functions behind adoption of CMS, postmodernist paradigm is not suitable for this study.

Unlike positivist paradigm, interpretivist paradigm adjudges that object meaning does not exist, and thus attention should be drawn on understanding and interpreting different meanings constructed by different individuals (Rynes & Gephart, 2004, pp. 456-457). Crotty (1998) limned it as the "interpretations of the social life-world" (p. 67). Studies located in this paradigm focus on individual and seek to have a further understanding and interpreting of the researched topic (Crotty, 1998, p. 68; Lather, 2006, pp. 37-38). Instead of minimizing or even avoiding to contact with researched participants, researchers should and were encouraged to approach them directly and interactively (Kivunja & Kuyini, 2017, p. 33). Since this study focused its attention on students' perceptions of and attitudes towards CMS, interpretivist paradigm is appropriate to drive this study.

After reckoning the four paradigms, I have been in line with and influenced by interpretivist paradigm as I believe that, we did not share common and even standardized positions or viewpoints towards a same event, person or an argument. Based on my observations and experiences, it was atypical and even deviant when all individuals assigned an identical and unanimous interpretation without any differences to their surroundings. My personal experience outlined in Chapter 1 further consolidated and verified my belief that, instead of objective meaings, different individuals constructed and interpreted CMS with various understandings. Even though lecturers used CMS to enhance students' learning experiences, students tended to regard it as a measure to fulfill

course requirement. Experience played a role here. In other words, mediated by personal experiences, different individuals would interpret the same surrounding with different meanings. Similarly, in this study, I believed that students had no objective perceptions of and attitudes towards CMS. Instead, because of experiences in using CMS, different students would interpret it with different meanings. Owing to this nature, therefore, interpretivist paradigm enkindled this study. Under its embrace, interpretivist paradigm directed and influenced this study in terms of ontology, epistemology and methodology. On the whole, ontology refers to formation of reality and its relationship with self (D. E. Gray, 2014, p. 19; Wand & Weber, 1993, p. 220). Epistemology concerns the position and relationship between researcher and informants (Hirschheim et al., 1995, p. 20; Ponterotto, 2005, p. 131). Methodology is about the methods and procedures adopted in the research (Kivunja & Kuyini, 2017, p. 28; Ponterotto, 2005, p. 132).

In terms of ontology, the unique position of students in this study laid on the discrepancy and inharmonious over their intangible meanings constructed from experiencing CMS (Schwandt, 2000, p. 191). Since students' experiences and corresponding response did not have conformity and uniformity, I had to observe, contact and interact with them directly aimed at revealing, understanding, interpreting and co-constructing with different assigned meanings behind curtains of their perceptions of and attitudes towards CMS (Hansen, 2004, p. 135; Lather, 2006, pp. 37-38; Schutz, 1970, p. 274; Sciarra, 1999, pp. 44-45; Silverman, 1970, p. 127). This study was, therefore, precipitated in interpretivism as different voices of individuals constituted the universe of this research (Lincoln, 1995, pp. 282-283).

In addition, interpretivism further justified my consideration in employing either dichotomy of digital natives and digital immigrants or theory of TAM as a theoretical framework of this study. The consideration was based not only because they are two theoretical approaches to explain one's perceptions of and attitudes towards technology from an individual perspective but also they matched with my ontological position. In other words, rather than discovering an objective meaning, these two approaches offered a feasible theoretical

framework to explore how informants interacted with their surroundings and constructed their different perceptions of and attitudes towards CMS (D. E. Gray, 2014, p. 20).

In epistemological terms, instead of positioning myself with a superb identity, my epistemological stance also reminded me to assume a role as a learner and humbly learn from all research participants for their disinterested and, more importantly, their essential contributions to this study (Carter & Little, 2007, p. 1321).

What is more, in terms of methodology, interpretivism called forth this study to adopt an appropriate research practice such as qualitative research approach and semi-structured interview as data collection method. It is an individual who not only interprets but also constructs meanings of his surroundings based on his personal and subjective experiences. As proclaimed by interpretivism, students' perceptions of and attitudes towards CMS were interpreted and constructed by themselves separately. Since no objective meaning exists, a research approach that could probe and appreciate an individual's interpretation on experiencing his surroundings was required, which justified an adoption of emic epistemological approach which allowed direct contact and interaction with individuals like qualitative research method in this study (Kivunja & Kuyini, 2017, pp. 33-34; Lincoln & Guba, 2000, p. 167; D. L. Morgan, 2007, pp. 71-73). With a view of achieving better understandings and more sociological imaginations on students' voices, it justified this study to collect data by taking a direct, flexible and interactive approach such as semi-structured interview to contact with students directly (Carr & Kemmis, 1986, p. 88).

While further examinations on the ways of how qualitative research approach harmonized with this study will be discussed in Chapter 3, general discussions on the dichotomy of digital natives and digital immigrants and theory of TAM with some of the related studies in Hong Kong context as illustrations are as follows.

2.7 Theoretical approaches on perceptions of and feelings towards CMS

2.7.1 Dichotomy of digital natives and digital immigrants

With the popularity of computer and the Internet, Howe and Strauss (2000) and Tapscott (1998) proposed "Net Generation" and "Millennials" respectively and stated that young people had formed their own beliefs and behaviors. Marc Prensky (2001a) further suggested that, because of different sophistications in experiencing different types of media, society was basically formed by two generations, namely digital natives and digital immigrants. Roughly speaking, digital natives were the generation that was born after inventions of digital media such as mobile phone and the computer and the Internet. Under the influence of socialization, they were said to be used to all sorts of digital media and, as being influenced, form their own thinking styles (Prensky, 2001a, p. 2; 2001b, p. 2). On the contrary, digital immigrants were the generation that was born before such inventions. They behaved and thought differently as a result of having different experiences in using other media when compared with those of digital natives (Prensky, 2001a, pp. 2-3). In a word, it was the digital media that distinguish people in society. In term of education, teachers from digital immigrants had to change their ways of teaching and thinking styles. For instance, viewing digital media as extensions of digital natives' minds, teachers from digital immigrants should employ less lecture mode and adopt more digital media, such as games and MP3, in teaching and learning activities so as to meet learning needs and interest among digital natives (Prensky, 2005, pp. 9-12).

The dichotomy of digital natives and digital immigrants gained some echoes and supports. For instance, with a view of catering for special learning needs of the young generation who is living with digital media, Frand (2000) urged the university to change its pedagogy and improved the relationship between teachers and students (pp. 22-23). Besides, Oblinger (2003) suggested teachers to adopt more digital media in teaching and learning activities (p. 44). In addition, Dede (2005) showed his support to the dichotomy by advocating more adoption of digital media in instruction so as to cope with the learning pattern of digital

natives (p. 15.01). Moreover, D. Oliver (2006) reviewed data collected from 890 students in two Australian universities and found out that, when compared with elder generation, the young generation had their own special characteristics of working attitudes (pp. 61, 70). Furthermore, with a view of meeting the need of the younger generation, Lambert and Cuper (2008) called forth for an adoption of digital technology in pedagogy. What is more, Palfrey and Gasser (2008) took a step further to explain three remarkable strategies, namely "grazing", "deep dive" and "feedback loop", that digital natives use when collecting information (p. 241). Basically, grazing was on skimming and scanning the text. Deep dive referred the way to understand the whole messages through headlines and visual images. Feedback loop referred to communicate and exchange their understandings with others (Palfrey & Gasser, 2008, pp. 241-243). On top of these, to contribute to the dichotomy, Teo (2013) developed a scale to measure magnitude of digital natives.

Apart from the above, there are also some studies related to the dichotomy at the tertiary educational level within the Hong Kong context. For instance, M. Robinson (2008) conveyed that, with a target of satisfying the needs of digital natives, university libraries in Hong Kong had to improve both its tangible and intangible services, such as longer opening hours with 24 hours year-round services (pp. 72-73). What is more, driven by the dichotomy, Miller et al. (2012) conducted a study on the adoption of digital media in helping Hong Kong students learning English as a second language. One of the remarks from the study was that, as Prensky (2005) proclaimed, teachers had to employ more digital media in order to arouse learning motivations among students of digital natives. Borrowing the concept of digital natives, C. K. Y. Chan (2015) justified the need for adopting digital media, including animations, as a creative and innovative pedagogy in suiting the particular learning needs of students (pp. 475-476).

While receiving some endorsements, there were also some disagreements towards the dichotomy of digital natives and digital immigrants. There were at least two major criticisms towards the dichotomy, namely lacking empirical supports and terminology and classification. About lacking empirical supports,

G. Kennedy et al. (2007) collected data from 2,588 students in three Australian universities and commented that the so-called digital natives were not particularly keen on using the Internet (p. 517). Besides, Bennett et al. (2008) and Brown and Czerniewicz (2010) contested that assumptions behind the dichotomy were not based on a solid foundation. Meanwhile, Lovell and Baker (2009) even stated that the assumption behind digital natives was beyond reality (p. 57). Moreover, analyzing data from online research, Helsper and Eynon (2010) believed that there was no difference in digital literacy between students and teachers (p. 503). Salajan et al. (2010) also indicated that the dichotomy was over generalized and could not fairly reflect the real situation (p. 1402). Furthermore, Bullen et al. (2011) studied the difference in using digital technology among 507 post-secondary school students and concluded that age was not a determining factor (pp. 1, 17). In addition, Margaryan et al. (2011) expressed that support for holding assumptions behind the dichotomy was not yet established (p. 429). What is more, based on research findings from 1,434 university students, Romero et al. (2013) rejected the assumption of the dichotomy by indicating that computer literacy among younger students were even poorer than those of elder students (pp. 164, 176). In view of having various arguments over the dichotomy, Kirschner and Bruyckere (2017) proposed that, instead of blindly practicing, teachers should adopt digital technology in teaching and learning activities based on judgement of necessary only (p. 140).

There are also some related studies at tertiary educational level within the Hong Kong context that cast doubt on the dichotomy. For instance, in examining the call of adopting more digital media in pedagogy, Vogel et al. (2009) reviewed learning experiences with using digital devices among 800 university students in Hong Kong and found out that students were not keen on using such devices for studying (pp. 477, 480). Furthermore, after surveying 1,130 university students in Hong Kong, D. M. Kennedy and Fox (2013) contended that students' computer literacy needed further improvement and they deployed digital technology for recreation more than for studying purpose (pp. 67, 74, 76).

To investigate the dichotomy of digital natives and digital immigrants, after lecturing a class of 160 PolyU students for a semester, Herold (2012) argued that

computer skills of students, who were being labelled as digital natives, were not much desirable (pp. 81-82). Since the level of computer literacy had nothing with age, digital media were invalid to differentiate the two generations (Herold, 2012, pp. 74-76). This study not only casted doubt on an assumption of the dichotomy but also provided us with a reflection that students would not behave or thought as what we supposed them to be. When we were trying to understand, for instance, how they perceived and felt towards CMS, it was better for us to understand their surroundings and explore the way of certain factors in shaping their perceptions of and attitudes towards CMS.

Regarding the criticism on terminology and classification, the term "digital natives" was not neutral enough as Song (2008) associated it with the sufferings and suppressions on African under Western colonialization. Moreover, Bayne and Ross (2007), Bennett and Maton (2010) and Brown and Czerniewicz (2010) condemned the dichotomy as it offered inflexibility, over generalization, priority, and limitation in polarizing the concept. In addition, while Stoerger (2009) stated that age was not a vital factor in shaping digital literacy, Jones et al. (2010), based on 534 data collected from a two-year research at five universities in Britain, also pointed out that it was inappropriate and invalid to use age as a criteria for classification between digital natives and digital immigrants (pp. 724-725, 730).

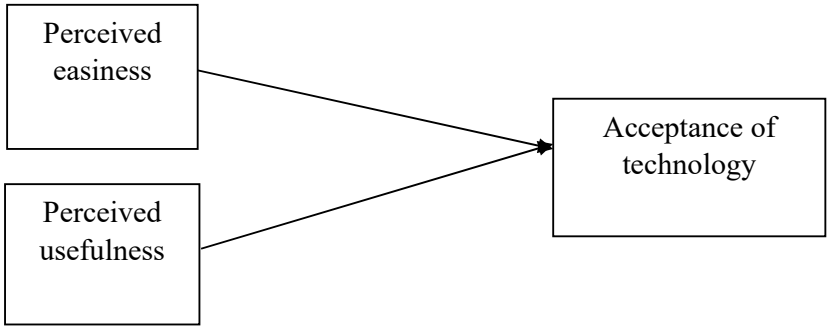
Partly responding to the criticisms, Prensky (2009) put forward an idea of digital wisdom as a way to update the dichotomy. Rather than stressing on differences between two generations, digital wisdom was cross-generation in nature and, in general, referred to strengthening and stretching our mental abilities and knowledge through digital media (Prensky, 2009). While Prensky (2005) and Prensky (2009) were in line with the proclaiming on media as an extension of man from McLuhan (1964), digital wisdom pointed out the power of digital media and the need of paying serious attention to it. In term of education, to cater for the need of students, Prensky (2012) called forth teachers to constitute digital wisdom and adopted more digital media in teaching and learning activities (p. 3).

As Lugano and Peltonen (2012) illustrated, by linking the motivational factor behind digital natives and digital immigrants, digital wisdom was associated with the willingness of a person in adopting and using digital media. Level of acceptance in deploying digital media was a critical factor. TAM is one of the widely employed theories on this regard.

2.7.2 TAM

With a view of anticipating and describing one level in adopting information and communication technology, Fred Davis (1986) proposed TAM under an inspiration from the Theory of Reasoned Action. TAM focusing on two perspectives, namely perceived usefulness of technology and perceived easiness in using technology (Davis, 1986, p. 24; Davis et al., 1989, p. 983). Perceived usefulness of technology generally referred to one anticipation of improving performance resulted from using the technology. On the other hand, perceived easiness in using technology briefly pointed to an evaluation between the level of difficulty in using the technology and the expected mediated performance resulted from using the technology (Davis, 1986, p. 26; 1989, p. 320). Both perceived usefulness of technology and perceived easiness in using technology could anticipate and describe one in accepting information and communication technology.

Figure 1: TAM



Nonetheless, as Davis (1989) further explained, people tended to value perceived usefulness of technology more than perceived easiness in using

technology (pp. 333-334). In other words, if a person believed that using certain information and communication technology could enhance his performance, he was likely to adopt the technology even though it was difficult to learn how to handle the technology. In addition, both perceived usefulness of technology and perceived easiness in using technology could be influenced by other factors (Davis et al., 1989, p. 985). Scholars like Hassan and Geys (2016), Lu et al. (2005), Marangunić and Granić (2015), Money et al. (2011), Shittu et al. (2011) and Šumak et al. (2011) denoted that because of its simplicity, TAM was one of the most commonly adopted measures in anticipating and describing an acceptance of information and communication technology. There are many studies on TAM, such as El-Gayar et al. (2011), Huang et al. (2012), Jabeen et al. (2015), Joo et al. (2014) and Meso and Liegle (2005), conducted all over the world. Particularly, there are also many types of research deployed TAM and conducted various studies on the degree of acceptance of different kinds of information and communication technologies among higher education in Hong Kong. The followings are a brief account of that.

Chau (2001) conducted research on predicting an intention of using computer among university students in Hong Kong and employed TAM to study on two external factors that influenced students' perceived usefulness of technology and perceived easiness in using technology, namely computer self-efficacy and manner on computer. The study found out that manner on the computer had a positive correlation with both perceived usefulness of technology and perceived easiness in using technology. Meanwhile, computer self-efficacy had a negative correlation with perceived usefulness of technology but had no influence on perceived easiness in using technology (Chau, 2001, p. 30). In other words, based on the findings, manner on the computer was one of the significant factors in shaping students' perceived usefulness of technology and perceived easiness in using technology. This finding suggested me to have an attention on it when I was looking for factors that shaped students' perceptions of and attitudes towards CMS.

A. H. K. Yuen and Ma (2002) adopted TAM and looked into gender difference in adopting computer among pre-service teachers in Hong Kong.

Instead of favourable position of perceived usefulness of technology over perceived easiness in using technology as suggested by Davis (1989), finding from A. H. K. Yuen and Ma (2002) discovered that perceived easiness in using technology occupied a more important position in shaping pre-service teachers in using the computer (A. H. K. Yuen & Ma, 2002, p. 378). Concerning gender difference in adopting computer, A. H. K. Yuen and Ma (2002) suggested that perceived easiness of adopting computer could have more impact on males's perceived usefulness of adopting computer. Besides, females were inclined to be influenced more by perceived usefulness of the technology. In addition, females were also likely to be shaped by perceived easiness in using technology (A. H. K. Yuen & Ma, 2002, pp. 377-379). A. H. K. Yuen and Ma (2002) study was relevant to my study that they pointed out gender difference could be an issue in adopting information and communication technology. This study reminded me that TAM could be related to other issues such as gender and the likes and that I could not undermine other factors when considering how students perceived and felt towards CMS.

M. K. O. Lee et al. (2005) employed TAM and studied on willingness to use the Internet learning platform among university students in Hong Kong. On one hand, this study proclaimed that there were external and internal factors that could shape students' willingness to use the platform. For M. K. O. Lee et al. (2005), external factors were the perceived usefulness of technology and perceived easiness in using technology while internal factor was perceived enjoyment from using the technology (pp. 1097-1099). On the other hand, findings from M. K. O. Lee et al. (2005) further revealed that while perceived usefulness of technology and perceived enjoyment could shape students' willingness in adopting the Internet learning platform, perceived easiness in using technology failed to do so (p. 1102). The study could be one of the reference points for my research.

E. Y. M. Cheung and Sachs (2006b) used TAM and proposed behavioural and affective perspectives to measure willingness in using one of CMSs, Blackboard, among pre-service female teachers in Hong Kong. E. Y. M. Cheung and Sachs (2006b) regarded perceived usefulness of technology and perceived

easiness in using technology as behavioural perspective while self-efficacy in using Blackboard as an affective perspective (p. 696). Results from E. Y. M. Cheung and Sachs (2006b) suggested that self-efficacy perspective was more powerful than behavioural perspective in shaping students' willingness in using Blackboard (p. 699). E. Y. M. Cheung and Sachs (2006a) also conducted similar research and study on the willingness of using Blackboard within pre-service female teachers in Hong Kong by analyzing the relationship among perceived easiness of using technology, students' experiences in using a computer and their emotions in adopting Blackboard. Data from E. Y. M. Cheung and Sachs (2006a) proposed that if students worried about, rather than enjoyed, using Blackboard, their experiences in using a computer would shape their perceived easiness of using technology, that was, Blackboard (pp. 137, 139). These two studies suggested that on one hand, besides perceived usefulness of technology and perceived easiness in using technology, emotion could be one of the other factors that able to predict and describe students' adopting of information and communication technology. On the other hand, these two studies also illustrated a point that TAM should not be deployed into my study without modification. Based on different literatures, modification of TAM was needed in my research.

By adding technical support in TAM, Ngai et al. (2007) probed into an adoption of another CMS, WebCT, among students at different universities in Hong Kong. Findings of the study pinpointed that technical support could shape students' perceived usefulness of technology and perceived easiness in using technology (Ngai et al., 2007, p. 262). Despite the results, the study also implied that a direct application of TAM into my study was undesirable as there could be other factors that were able to shape or mediate perceived usefulness of technology and perceived easiness in using technology.

Proclaiming important attitudes of teachers in determining whether educational technology would become a part of pedagogy or not, A. H. K. Yuen and Ma (2008) made use of TAM to study the willingness of adopting educational technology among in-service teachers who attended an educational training course in a university in Hong Kong. Besides perceived usefulness of technology and perceived easiness in using technology, the aim of using

technology, computer efficacy, and subjective norms were also included into the analysis (A. H. K. Yuen & Ma, 2008, p. 232). Inconsistency with previous researches, this study showed that perceived usefulness of technology failed to explain for the adoption of educational technology among in-service teachers. On the other hand, perceived easiness in using technology, subjective norms, and computer efficacy were major factors that could motivate the in-service teachers to adopt educational technology (A. H. K. Yuen & Ma, 2008, pp. 237-239). This study demonstrated that perceived usefulness of technology and perceived easiness in using technology were not the only two factors that were able to shape one intention in using information and communication technology.

Employing TAM as a part of an analytical tool, V. Cho et al. (2009) looked into the willingness of university students in Hong Kong in keep using a learning system with a particular design of the interface. The study discovered that students' satisfaction and perceived usefulness of technology were vital in shaping their willingness to keep using the learning system (V. Cho et al., 2009, p. 224). In line with the suggestions from other researches, this study showed that perceived usefulness of technology and perceived easiness in using technology were not the only two factors that were able to shape one intention in using information and communication technology.

Arguing that it was significant to understand the rationale behind students for adopting certain educational technology in their learning activities, Lai et al. (2012) looked into the issues that shape the decisions among university students in Hong Kong. It found out that there were five factors that shaped students decisions in adopting educational technology, namely perceived usefulness of the technology, attitudes on the technology, computer efficacy, students' learning style and the surrounding environments of the students (Lai et al., 2012, p. 574). This study further suggested an important role of teachers and peers play in encouraging students to use educational technology for their learning (Lai et al., 2012, p. 576). This point was valid to my study, especially about the role of peers in influencing the use of educational technology of their classmates. Students were not living alone and their perceptions of and attitudes could be formed and mediated from interacting with others, including their classmates. Thus, how

students perceived and felt CMS were not just their own feelings but also due to their interactions with others. Also, such perceptions of and attitudes towards CMS not only reflected students own self but also to a certain extent mirrors the environment, beliefs of surrounding peoples and the socially desirable behaviours in society.

Serving as a part of the analytical tool, R. Cheung and Vogel (2013) used TAM to explore the willingness of adoption in using an online collaborative application among university students in Hong Kong. Besides confirming an importance of perceived usefulness of technology and perceived easiness in using technology, findings from R. Cheung and Vogel (2013) further denoted that other factors such as subjective norms and willingness to share and work with others were also critical in shaping students' willingness in adopting an online collaborative application (p. 171). In other words, this study showed that perceived usefulness of technology and perceived easiness in using technology were just two of the many factors that able to shape one's willingness to adopt information and communication technology. Researchers had to bear it in mind when adopting TAM into their studies.

Cheng (2014) made use of TAM and tried to build up a connection between learning approaches with the willingness to adopt second life at the Internet platform as a learning environment among university students in Hong Kong. Results from Cheng (2014) suggested that those students who picked up active learning approach were more willingly to experience a second life Internet learning environment as their perceived usefulness of technology and perceived easiness in using technology were also higher than other students (pp. 111-112). The finding of this study suggested that it was possible to establish a linkage between different characteristics backgrounds of students and their willingness to adopt information and communication technology. Engineered from the findings of this study, in my study, I could also try to establish some linkages, say, between university students' perceptions of and attitudes towards CMS with their particular social characteristics.

Pow and Li (2015) studied on the mechanism used by undergraduate students in Hong Kong on selecting online materials for learning purpose.

Modified the concept from TAM, Pow and Li (2015) looked into the relationship between perceived usefulness and perceived easiness of use of the online materials by students and the actual usefulness and actual easiness of use of the online materials (p. 442). This study indicated that students' perceived usefulness and perceived easiness of use of the online materials were related to the actual usefulness and actual easiness of use of the online materials. What is more, while gender made no difference in perceived usefulness and perceived easiness of use of the online materials, this study also showed that students from arts and social sciences tended to have lower level of perceived usefulness of the online materials than students from other disciplines (Pow & Li, 2015, pp. 453-454). On one hand, this study revealed the mechanism behind students in selecting online materials. On the other hand, this study also unveiled that disciplinary background could make a difference in how students perceive online materials. This could be a meaningful implication for my research. When understanding students' perceptions of and attitudes towards CMS, I needed to put their background of disciplines into consideration.

After discussing the dichotomy of digital natives and digital immigrants and TAM, the latter was chosen as a theoretical framework of this study. When compared with the former, apart from receiving fewer criticisms, the latter has been widely adopted as a simple and an effective way to look into perceptions of and attitudes towards technology and therefore it was more appropriate and relevant to this study.

Perspectives of perceived easiness and perceived usefulness in using technology from TAM were particularly helpful in contributing to a better understanding of the research participants in my study. Even though students in PolyU enjoyed no autonomy in using CMS, TAM was particularly helful in explaining their continuous usages of CMS (Stafford et al., 2004, p. 265). Under this setting, the way of how students perceived of and felt towards CMS would further shape their usages of CMS. In return, students' perceptions and attitudes were mediated by their perceived easiness and usefulness in using CMS. However, perceptions and attitudes were veiled from direct exposures. As will be explained in later parts of this thesis, qualitative research approach was thus a

sound choice for this study. With a view of having a better understanding on students' perceived easiness and usefulness in using CMS, I had to directly contact, interpret, learn, interact and construct with students. Through having conversations and interactions with students, qualitative reserarch approach provided in-depth understandings and constructed with more sociological imaginations not only over students' perceived easiness and usefulness in using CMS but also over their perceptions of and attitudes towards it. Empowered by the two perspectives, this study exploited TAM to mine, extract, distillate and condense students' perceptions of and attitudes towards CMS. For instance, students' perceptions of CMS could be mediated by the difficulties encountered from their previous experiences in using CMS. In addition, their attitudes towards CMS could be shaped by the accomplishments and acquisitions obtained from their previous usages. Through probing into students' perceived easiness and usefulness in using CMS, their perceptions of and attitudes towards CMS were unveiled to this study.

2.7.3 Operationalizing TAM

From above denotations, TAM was adopted as the theoretical framework of this study as its perspectives on perceived easiness and perceived usefulness in using technology were relevant to studying students' perceptions of and attitudes towards CMS. As suggested in Chapter 1, perceptions are one's interpretation of the surrounding after an experience while attitudes are one's taken behaviours after judging from one's perceptions. TAM's perspectives on perceived easiness and perceived usefulness in using technology could mediate the way of students in experiencing and feeling towards CMS. To operationalize TAM, in this study, perceived easiness was referred to students' perceived difficulties in using CMS while perceived usefulness was translated to students' perceived supports for their learnings after using CMS.

What is more, TAM was further operationalized when setting research question and data collection method. For instance, perceived easiness and perceived usefulness were incorporated into the research question and embedded during data collection. Relevant discussions on these two areas can be found in later parts of this thesis.

2.8 How my study addresses the gaps

CMS has been developed for a few decades and there were a lot of tremendous researches on it. However, most of the past major studies on CMS departed from the influences on teaching and learning practice and outcome or organizational perspective. Besides, although many types of research on students' perceptions of and attitudes towards CMS had been conducted, most of them stressed on students' preference on CMS and its relationship with learning outcomes (Drysdale et al., 2013, pp. 95-96). Study on how students perceive CMS itself as pedagogy, especially understandings on how the perceptions and attitudes are formed and how they are shaped and mediated, also deserve attention (Baydas et al., 2015, pp. 715-716). Selwyn (2010) further argued that there was a need to study on the rationale behind the way of how educational technology was adopted (p. 66). By conducting this research, this study has bridged the aforementioned academic gap by offering more understanding and insight behind students' perceptions of and attitudes towards CMS. McLuhan (1964) suggested that medium was message saying that we projected our beliefs on a certain medium (p. 9). He further proclaimed that media were "extensions of man" and "extension of our own bodies" (Norden, 1969, pp. 55-56). Bradbrook et al. (2008) also stressed that surrounding could affect one on how to perceive the world and how to utilize his available resources (p. 28). This suggests that students can be affected by their surroundings which in turn will shape their perceptions of and attitudes towards CMS. In this regard, the ways of how university students perceive and feel towards CMS are actually reflecting and mirroring themselves in responding to their surroundings. In other words, as McLuhan (1964) proposed, medium of CMS has become extensions of university students which is embedding and delivering certain messages on how they are mutually shaped by their surroundings. By researching students' perceptions of and attitudes towards CMS, this study has helped to explore and establish certain linkage and relationship among adoption of educational technology, pedagogy and society.

This study has unveiled the linkage is attributed by the social influence including socially desirable behavior, and because of that university students have certain perceptions of and attitudes towards CMS. Such perceptions and attitudes, however, can increase negative burden, unnecessary stress among students and, in the long term, lead the society towards utilitarianism. In other words, this study has disclosed negative social influence on students and its future impact on education policymakers. With a view of reducing students' stress and shaping a brighter society, something must be done on the social influence first. Particularly education policymakers should review and implement appropriate educational reforms in primary and secondary school curriculums and overall educational objectives for next generations in Hong Kong to create a favorable environment and instil students with reflexivity on certain socially desirable behaviors like qualification, success, and life. In addition, as Cook-Sather (2002) proposed, education policymakers could also take into consideration on how students perceived CMS when adopting it as educational technology. Rather than regarding CMS as an independent and single element in teaching and learning activities, education policymakers can embed it with students' living environment. Students are being shaped by its surrounding environments and, as this study has proposed, CMS can be one of them. In the interest of students, education policymakers should adjust the allocation of resources on CMS so that educationists can acquire reasonable spaces in achieving educational targets.

Because students needed to respond to the socially desirable behavior, this study has also demonstrated the rationale behind their perceptions of and attitudes towards CMS. Weber (2013) categorized individual actions into four types, namely "affectual", "traditional", "value-rational" and "instrumentally rational" (pp. 24-25). Briefly speaking, "affectual" actions are those driven by emotion. "Traditional" actions are those driven by custom. "Value-rational" actions are those driven by individual belief that can achieve maximizing return. "Instrumentally rational" actions are those optimal choices made by individual under particular settings or limitations (Bailey & Gayle, 2003a, p. 185; Ritzer, 2010a, pp. 33-34; Weber, 2013, pp. 25-26). In this regard, finding of this study has not only confirmed "instrumentally rational" actions mediated students'

perceptions of and attitudes towards CMS but also provided academia an alternative but a breakthrough contribution in bridging shortcomings of previous two major approaches in using dichotomy of digital natives and digital immigrants and TAM to understand relationship among perceptions, attitudes, and CMS. On one hand, the dichotomy of digital natives and digital immigrants is not in a position to approach the research question as it is questioned for associating age group with the usage of digital media, including CMS. The notion of digital wisdom is also cast doubt on its performance in explaining the formulation of students' perceptions of educational technology. On the other hand, the capability of TAM in highlighting social influence in shaping students' perceptions and attitudes are subjected to examination. Embedding the categorization of individual actions with TAM, this study has not only allowed academia to understand how students perceive and feel towards CMS as pedagogy but also produced a rationale behind the adoption of CMS as educational technology. As the data was collected in PolyU, this study further has constituted a special, unique, significant and humble position in echoing, suggesting and contributing to an accomplishment of one of the strategic goals of PolyU in the coming six years especially in an area of reviewing the role of CMS in satisfying and fulfilling of her various teaching and learning desires (The Hong Kong Polytechnic University, 2018e, p. 17).

2.9 Scope of study and research question

To fill in the academic gap as aforementioned, a study directed with an appropriate theoretical approach and research method on adoptions of educational technology is proposed. With a view of understanding these issues, the scope of the study and the research question will be outlined.

I called forth the study should focus on university students' perceptions of and attitudes towards CMS. As mentioned, educationists have transformed various technologies into educational technology. Despite that, previous studies on its adoption at the tertiary educational level in Hong Kong have shown that considerations on how students can really benefit from the adoption of

educational technology are not enough. Based on my experiences as students and teaching assistant, I like to argue that the current way of adopting CMS does not have much benefit to university students in Hong Kong. As an individual, our experiences can shape how we perceive and feel of educational technology and that in return shape what sort of educational technology and how it can be adopted and embedded with pedagogy appropriately. Just like attempting and answering examination questions mechanically and strategically, some of the university students in Hong Kong just cope with educational technology based on their experiences. To them, educational technology is not a learning aid or something that can enhance their learning motivations or experiences but just a part of the course requirement that they have to fulfill before meeting graduation requirement.

This phenomenon has nothing to do with educational technology itself but partly relate to how it is adopted. Nevertheless, this will involve a lot of discussions on administrative and policy issues. As students are at the main core of education, I narrowed the focus of my attention on how experiences shape university students' perceptions of and attitudes towards CMS. I believe it is of equal importance to understand the rationales behind the adoption rather than how people cope with it passively. What is more, through understanding how experiences shape students' perceptions of and attitudes towards CMS, education policymakers and educationists can take a fresh appreciation on the ways of how to adopt and embed educational technology such as CMS with students' developments.

Experiences of students play a significant role here. Dilthey (1985) suggested that experiences were "there-for-me" (p. 233). van Manen (2014) proclaimed experiences as "life as we live it" (p. 39). In other words, experiences are almost everything that closes to us. Experiences are associated with students' consciousness towards their surroundings (Kordeš, 2012, p. 226). Probing into students' experiences allows researchers to establish an insight based on a justified ground to appreciate and interpret the consciousness of students and the natural constructed feelings and attitudes towards their surroundings (Halling, 2012, p. 1; Heavey et al., 2012, p. 763; Kordeš, 2012, p. 226; Larkin et al., 2011,

p. 325). Students' experiences mediate their feelings, attitudes and how they perceive of surroundings in different ways. It applies in tangible environment and through this study I pointed out that this was also applicable to an intangible circumstance like online setting. We are now living in the society being affected by technology and using technology becomes almost inevitable. With the transformation of information technologies into educational technology, pedagogy such as blended learning is on the trend. University students in Hong Kong have no autonomy in deciding to use educational technology or not as this is decided by their professors. As our experiences in daily life shape our attitudes and even behaviors when facing different people or issue in various manners, it is likely that all students will not perceive the same type of educational technology in a unique manner. Under this context, will experiences shape students in using CMS as it does in tangible environment? Will experiences shape students' perceptions of and attitudes towards CMS? If so, how that happens?

Many universities in Hong Kong have adopted CMS. It is impossible for me to cover all of them in my study. Since PolyU has adopted CMS in teaching and learning activities. I propose to study her students' perceptions of and attitudes towards CMS (The Hong Kong Polytechnic University, 2017b, p. 72). McLuhan (1964) proposed that people projected their beliefs on medium. He further illustrated the media were "extensions of man" and "extension of our own bodies" (Norden, 1969, pp. 55-56). In this regard, being influenced by their experiences, students will regard CMS as an instrument so that they can achieve their goals. In other words, understanding students' experiences enable us to probe into students' perceptions of and attitudes towards CMS.

As suggested, past major literatures had proposed a lot of merits in adopting CMS. For instance, the adoption of CMS could enhance students' learning experiences (Ioannou & Hannafin, 2008, pp. 46-47). Nonetheless, the usages of CMS were not desirable. My sensibleness suggested that discrepancy occurred between expectations and actual depictions. Students used CMS with their own agenda. Based on the afore-denotations and my experiences and observations, a research question was set as follows:

1. How students perceived and used CMS?

TAM was operationalized in this research question as how students perceived and used CMS, in return, were shaped by their perceived easiness and perceived usefulness. The question enabled this study to understand the way of shaping students' perceptions of and attitudes towards CMS. This study has shown that, rather than regarding it as a way of supporting their success in learning, students perceived CMS as their duty, their pawn and an extra only. Such perceptions and attitudes, in return, could be mediated by students' experiences and TAM. Therefore, the research question not only helped the study to explore the rationale behind students' perceptions and attitudes but also provided a threshold to probe whether application of TAM was appropriate and suitable in studying CMS.

The coming chapters will disclose university students' perceptions of CMS as disconnected and not so useful while they just had the attitudes of pawn towards CMS. Besides, students experienced the expectation from socially desirable behavior and that did mediate their perceptions of and attitudes towards CMS, no matter they were in line with the desired behavior or not. In addition, while students perceived CMS easy to use, most of them did not think it was useful to enhance their learning experiences. The study has further proclaimed that it is not appropriate and suitable to directly apply TAM in studying CMS. Instead, TAM should be embedded with the categorization of individual actions from Weber (2013) when it is applied in studying CMS.

As outlined from the aforementioned denotations, there is no objective description of how students perceive surrounding. Since everyone perceives and responds surrounding in a different manner, general description on how students perceive and feel towards CMS is not applicable. Existing major literature on CMS suggest that different students perceive and feel CMS in a different manner. As students are all independent from each other, there will be no standardized students' understanding of CMS. It also suggests that etic epistemological approach such as quantitative research method is inappropriate for my study. Nonetheless, when adopting a qualitative research method, a proper research methodology has to be employed.

Chapter 3

Methodology

3.1 Research approach

Driven by my ontological position, I believed that objective meaning does not exist, and thus quantitative research approach was not suitable to my study. On the contrary, qualitative research approach enriched my sociological imaginations. It equipped me with a thick description on several areas like students impressions, feelings, and experiences in using CMS, their computer skills and habits, their expectations on learning and university study and the likes, which in return could inform my study. In addition, employment of TAM as a theoretical framework of this study was needed. It required me to adopt a research approach that could directly contact, interact, learn and interpret with students with perceived easiness and usefulness in using CMS, which were subjective and shaped by personal experience. In other words, this study demanded a data collection method, which is flexible in accommodating for the captioned requirements and capability to probe into students with concealed perceived easiness and usefulness in using CMS. The above scenes therefore shepherded and escorted this study to collect data mainly through semi-structured interviews.

The adoption of semi-structured interviews as the substantial data collection method would not only allow me to have further contacts, understandings, and interactions with different individuals at the micro level, but also enabled me to look into students with obscured perceived easiness and usefulness in using CMS, and explore, learn and interpret the ways that shaped their perceptions of and attitudes towards CMS in their own wordings. The semi-structured interview is a flexible tool and is suitable for research topics related to perceptions and feelings. Employment of semi-structured interview as the data collection method empowered this study to directly contact with different students and established an interactive, inestimable, and irreplaceable channel

with them, so as to interpret and construct their personal experiences in using CMS. With a view of dismantling and elucidating the curtains of students' perceptions of and attitudes towards CMS, two perspectives of TAM, namely, perceived easiness and perceived usefulness in using technology, were then converted into different directional questions under three major parts of the interview guides, which covered students' previous experiences in using CMS, their level of computer literacy and their expectations on learning and higher education. The followings are a brief account on how data were collected and handled in this study.

3.2 Data collection method

Enlightened by the major previous literatures on CMS and empowered by the appropriate theoretical approach, this study was well equipped and munition with solid and robust rhizomes. Nonetheless, further propagations of the shrubs had to be nurtured and fostered by feasible, appropriate and proper research method before this study has reached a better sociological imagination on students' perceptions of and attitudes towards CMS. In the followings, therefore, the rationale in adopting a qualitative research method and its corresponding data collection method, namely semi-structured interview, in this study was explained. The number of interviews, the ways of approaching informants and some of the directional questions for the interviews were suggested. Lastly, data analysis was proposed as well.

3.2.1 Qualitative research approach

Qualitative research approach was purposively selected as an appropriate and suitable research method for this study. Using TAM as a theoretical framework, this study has probed into university students' perceptions of and attitudes towards CMS. Perceptions of and attitudes towards CMS, however, could be both personal and subjective. The assortment of propositions and beliefs was thus expected by different students. When reading their viewpoints, various interpretations were required which in turn could generate a lot of distinctive understandings and considerations. Owing to unique nature of this study,

appropriate research approach should not only allow revealing of the researched topic at an individual level, but also need to grant a possible path for further developing and understanding on the reason behind informants feedbacks. Qualitative research approach was proposed as it was more appropriate and suitable for this study. Even though students may have different perceptions of and attitudes towards CMS, adopting a qualitative research approach gives this study a much better position to look into their differences and the rationales behind them.

3.2.2 Semi-structured interview

After discerning, accrediting and endorsing quality research approach for this study, ripeness of the fruitages of the research findings was guarded and sustained by relevant and pertinent data collection method. In responding to the research area in this research, the semi-structured interview could provide a befitting and judgmatical option. Byrne (2012) mentioned that the interview was a powerful and elastic tool for the researcher to understand one's belief and judgement in his own wordings (p. 209). Semi-structured interview offered flexibility for researcher to follow-up informants' respond while allowing informants to express and further construct the researched area (Bryman, 2016, p. 468; Dearnley, 2005, p. 22; Galletta & Cross, 2013, p. 24; Kallio et al., 2016, p. 2955; Rowley et al., 2012, p. 95; Small et al., 2013, p. 288). The semi-structured interview was especially suitable for this study as it was a recommended measure in understanding studied phenomenon and experience of informants (Frey & Fontana, 1991, p. 184; Galletta & Cross, 2013, p. 24). With a view of better understanding students' perceptions of and attitudes towards CMS, it was more suitable to probe into the issue by directly engaging and interacting with them. The semi-structured interview offered more than just an opportunity for dialogue but a valuable channel in which both researcher and informants could work together to probe into, solicit, reflect and de-construct mutually on the perceptions of and attitudes towards CMS. In addition, as suggested, semi-structured interview empowered this study by offering capability and adroitness in reaching, relishing, reflecting and remunerating research data at an individual level rather than at a collective perspective. This advantage brought by semi-

structured interview was vital since this study has focused on perceptions and attitudes that could be both subjective and personal. On the contrary, other data collection methods such as follow-up case study were not appropriate, as they failed to collect the necessary data, aroused ethical consideration and possible negative impact on the study through the Hawthorne Effect which altered informants natural behaviors in using CMS due to the existence of the researcher (Blaxter et al., 2010, p. 193).

With the above cogitation, the number of students to be interviewed in this study has to be resolved. An acceptable method for deciding an exact number of a qualitative interview is not yet established (Yin, 2016, p. 95). One of the guidelines for deciding the number of interviews need to be conducted is a principle of saturation during data collection (Roller & Lavrakas, 2015, p. 74). When new data cannot be generated from more informants, the number of interviews should be adequate (Seale, 2012a, p. 394). However, indictor for saturation is hard to define. In view of this, Hennink et al. (2017) proposed to employ code and meaning as the indictors for saturation. Under the suggestion, saturation has begun to emerge after interviewing 26 research participants and, as will be indicated in the later part of this chapter, no interview was further conducted after interviewing 35 research participants.

3.2.3 Informed consents

I obtained informed consents from all the informants and ensured that their participations into my research were nothing but solely at their own willingness. A page of type-written English and Traditional Chinese consent form, in duplicate, listing the purpose of the research and explaining issues such as confidentiality was prepared to the students during invitations for the interviews. Besides me, those students who accepted the invitations were asked to sign the form. They could keep a copy of the signed form when they wish. During the invitations, all the invited students were told, through both verbal and in a written manner that their identities would be kept anonymous and would not be disclosed in any circumstances. In addition, the invited informants were told that, whether they would participate in the interview or not was totally at their

own decisions, and that would not affect them in anyways. To set students' minds at ease, I further reminded their right of withdrawal from the research at any time, even after signing on the consent form (S. Webster et al., 2014, p. 92). However, informants never exercised their right of withdrawal from this study. The consent form not only satisfied the ethical requirement by the university but also safeguarded participants' interests by ensuring that their participation in the research were at their own willingness. To further comply with ethical standards, protect the interests and safeguard vulnerability of the participants, I only targeted at those participants at least 18 years old (Human Subjects Ethics Sub-committee, 2012, p. 7; The Hong Kong Polytechnic University, 2017b, p. 12). For the need of verifications of securing informed consents in the future, all the collected consent forms were well documented and filed in a secure and confidential manner (S. Webster et al., 2014, p. 91).

3.2.4 Directional questions

After securing informed consents from the participants, considerations had to be made before the semi-structured interviews could be conducted smoothly and useful data could be collected. With a view of having fruitful results, I well prepared for the interviews and set a list of guiding questions which can inform me on students' perceptions of and attitudes towards using CMS. TAM was operationalized in the questions. The list of the directional questions asked in the semi-structured interviews can be found in Appendix 1. Some questions concerning perceived easiness of using technology were: Do you think Blackboard is difficult to use? Could you please share with me your experiences in teaching or recommending (learning) Blackboard to (from) your classmates? How would you describe your computing skills level? And some questions on perceived usefulness in using technology were: How you describe your feelings of working with your classmates in Blackboard? Could you describe and explain the image or picture come up in your mind when you heard Blackboard? How you describe the course requiring you to share your views with your classmates in Blackboard? In addition, other directional questions were, could you let me know your expectations on how Blackboard can help you study? Based on your understanding, what is the expectation of your family

towards your graduation? With a view of encouraging informants to freely and naturally express their perceptions of and attitudes towards CMS, all the semi-structured interviews were conducted in their comfortable mother tongue, Cantonese. Flexibility, sensitivity, and humbleness were three guidelines when conducting the interviews so as to maximize the understanding on students (Glesne, 2016, p. 134; G. Scott & Garner, 2013, pp. 60-61).

3.2.5 Observations as triangulation

In order to achieve methodological and data triangulation, observation was also employed as another data collection method in this study. Observation not only allows researcher to collect rather natural data by minimizing an occurrence of the Hawthorne effect but also enables the researcher to perceive the way of informants in understandings over the researched topic beyond the moment of interviews (Agerskov et al., 2015, pp. 2259-2260; Maeng, 2017, p. 1079; Uribe-Jongbloed, 2014, p. 137). What is more, observation offers the researcher with data that can be hardly collected through other channels (Adama et al., 2018, p. 3381). One of the advantages in using observation as a supplement for semi-structured interview is that, while semi-structured interview proposes to the study with a construction on how informants perceive certain research topic, observation provides another treasurable and irreplaceable perspective to the researcher through approaching and immersing with informants and directly realize, comprehend and interpret primitive understandings from their actual behaviors related to the researched area under a rather natural setting (Clarke, 2009b, p. 414; Dahlke et al., 2015, p. 1118; Hammersley & Atkinson, 2007, p. 178; Mulhall, 2003, p. 307; Silverman, 2014, p. 230; Walshe et al., 2012, pp. 1048-1049). What is more, observation can reveal some insights that are not fully aware of or being covered in the entire process of research, including during the semi-structured interviews (Geraghty, 2012, p. 287; T. L. Williams, 2018, p. 227). Since observation works along with the semi-structured interview, a combination of these two data collection methods in this study has helped the researcher to establish rapport with the informants (Clarke, 2009a, p. 364; Denzin & Lincoln, 2000, pp. 655-656). Previous literatures on perceptions such as from Fassier et al. (2015), Ferreira et

al. (2016), Gudyanga and Kurup (2017), Gündoğdu and Aygün (2018), Ilyushin and Azbel (2017), López-Entrambasaguas et al. (2013) and Moser et al. (2018) also employed semi-structured interview and observation as their data collection methods. Therefore, with a view of securing data and methodological triangulations, apart from adopting semi-structured interview, students' usages of CMS were observed in the undergraduate courses at PolyU where the author assumed the role as a teaching assistant (Seale, 2012b, p. 535; Walsh, 2012, p. 250). The courses lasted for one semester and the medium of instructions was English. Lasting for around 13 weeks, students enrolled in the courses were required to attend a 3-hour lecture every week. Majority in the courses were Cantonese-speaking local undergraduate students with the disciplinary backgrounds of the Department of Applied Social Sciences (APSS) and beyond. One of CMS, Blackboard, was employed in PolyU. Most of the observations were conducted inside classrooms. With a view of minimizing the Hawthorne Effect, fieldnotes were taken immediately after the end of the lessons.

3.3 Fieldwork and sampling

As known, this study was on university students' perceptions of and attitudes towards CMS. Without APSS and PolyU, this study would not be possible. APSS and PolyU not only provided me this precious and invaluable research opportunity, but also offered me professional guidance with magnanimous financial and spiritual supports. Around 20 registered undergraduate Cantonese-speaking local students from APSS were thus targeted as the major research participants in this study, in order to incorporate this study with special connotations and unique implications to both APSS and PolyU. Therefore, most of the informants in this study were APSS students even though non-APSS students were also recruited for the purpose of potential contrasting.

3.3.1 APSS research participants

Recruitment of research participants commenced at around February 2018. Recognizing an inefficiency and passiveness of promotional flyer and classroom promotion, a more direct and active recruiting strategy was adopted.

With a view of better locating and contacting with APSS students, I went to staff and student common room. The room, which was tiny and comfortable, was restricted to authorized APSS staff and students. I could gain access to the room due to my student status. When I started showing up in the common room, the first thing that I had to plan for my coming fieldwork was how to position myself and how to approach the potential informants. With a view of humbling the differences between outsider and insider, and stranger and non-stranger, I had to establish some relationship and trust with students in the common room before they were willing to share their insights with me (H. A. Robinson, 1994, p. 61). Therefore, my measures to blur the differentiations were to spend some time with my fellow APSS students in the common room so that they would cope with my presence. My continuous presence also aimed at undermining their possible resistance on me. With a view of better understanding my potential informants, as shown from the photo below, I usually sat at the round table which was roughly around the centre of the room, and observed while preparing something with my laptop. Apart from facilitating me in using a laptop, the position was so open that it not only allowed me to do observations but also make myself visible in front of them. I believed that it was one of the approaches in gesturing my goodwill to students as my deeds in the room could not be any mysterious to them.

Photo 1: Staff and student common room

Recruitment of research participants in the room was basically based on convenience and snowball sampling. Convenience sampling was suitable for this study as the major targeted research participants could be representatively, easily, quickly, cost-effectively and ethically accessed in the room (Hedt & Pagano, 2011, p. 560; Hu & Qin, 2018, p. 2875; Jiang & Kim, 2015, p. 317; Kivunja, 2015, p. 8; Walker et al., 2011, p. 1359). As students knew each other, representativeness and number of research participants in this study has further increased through snow-ball sampling (Boohene & Peprah, 2012, p. 32; Goicolea et al., 2018, p. 5; Martinez et al., 2017, p. 582). With a view of securing a higher chance of successful invitations, I needed to employ a safe and conservative strategy so that I would not cause many inconveniences to the students. In order to minimize the disturbance on them, I tended not to approach a student who was engaged or was accompanied by others at that moment. Whenever the right moments came, I then sought permission if I could have a few words with the possible targets first before making an invitation. No matter students agreed to participate in my research or not, I also asked them if they could refer me of their classmates who might have interests in my study. Some research participants were recruited through this snow-ball process.

Apart from recruiting APSS students from the common room, I also made use of my role as a teaching assistant. In second semester of 2018, I was responsible for guiding one session of the seminar. I did not cover up my background to my students. From my email address on course outline, students from day one already knew that I was a student in PolyU. When I met students in the first lesson of the seminar, I also told them that I am a PhD candidate in the department. Even though I had the intention to recruit research participants from students in my session, I never pleased them. To comply with ethical considerations, I never mentioned my intention and made any invitations to my students only until after the end of the last seminar. When I made invitations, I explicitly told my students that they enjoyed absolute autonomous to make decisions, and whether or not they participated would not affect their assessments in the seminar in any ways. Meanwhile, through the help of the lecturer and other seminar teachers, I also made invitations in other two sessions of the seminar. Similar practices and guidelines were strictly employed during invitations.

3.3.2 Non-APSS research participants

On top of recruiting APSS students, for the purpose of potential contrasting, around 10 registered undergraduate Cantonese-speaking local non-APSS students were also recruited as research participants in this study. I mainly went to the library and various computer rooms to make invitations as those places were restricted to PolyU students only. When approaching the targeted non-APSS participants, I took a similar strategy as I practiced previously in the common room. Overall speaking, I tended not to disturb the potential participant if he or she was accompanied by others or engaged. Snowball sampling was also employed.

This study has managed to recruit 35 students to attend semi-structured interviews. Some of them were referred by other students and informants. However, one of the interview data was not further processed as it was discovered during the interview that the informant was actually a higher diploma student, and he would be admitted to an undergraduate programme in coming semester. For the rest of 34 research participants, 23 came from APSS, 18 were females and 10 were part-time students. Besides taking notes, all the interviews were audio-recorded with informed consent from the informants and were conducted within the university campus. Only three of them were conducted over telephones upon requests. Durations of all the interviews lasted from around 50 minutes to 2 hours. Some general backgrounds information on the 34 research participants, such as their majored disciplines and mode of their studies, can be found at the followings Table 1.

Table 1: Profiles of research participants

No.	Names in pseudonym	Sex	Year	FT / PT	Department of
1	Peter	M	2	FT	APSS
2	Stephen	M	3	FT	APSS
3	John	M	4	FT	APSS
4	Benson	M	3	FT	APSS
5	May	F	2	PT	APSS
6	Derek	M	2	FT	APSS
7	Agnes	F	2	PT	APSS

8	Kenneth	M	2	PT	APSS
9	Carman	F	2	FT	APSS
10	Elaine	F	4	FT	APSS
11	Pauline	F	3	FT	APSS
12	Ada	F	2	PT	APSS
13	Jerry	M	2	PT	APSS
14	Rosemary	F	4	FT	APSS
15	Nathan	M	1	PT	APSS
16	Tiffany	F	2	PT	APSS
17	Jackson	M	3	FT	APSS
18	Darwin	M	2	FT	APSS
19	Fanny	F	1	FT	Land Surveying and Geo-Informatics
20	Ida	F	4	FT	Applied Biology and Chemical
21	Edith	F	1	FT	APSS
22	Sally	F	1	PT	Building Services Engineering
23	Albert	M	4	FT	Computing
24	Leon	M	1	FT	APSS
25	Gamila	F	1	FT	Institute of Textiles and Clothing
26	Gordon	M	4	FT	Institute of Textiles and Clothing
27	Jocelyn	F	2	FT	Health Technology and Informatics
28	Daniel	M	4	PT	Mechanical Engineering
29	Robert	M	1	FT	APSS
30	Daisy	F	4	FT	APSS
31	Samantha	F	4	FT	Land Surveying and Geo-Informatics
32	Immanuel	M	2	FT	Land Surveying and Geo-Informatics
33	Maggie	F	2	PT	APSS
34	Veronica	F	1	FT	Health Technology and Informatics

3.4 Handling data

All collected data were fully transcribed from Cantonese to English by the author alone. Through the process of self-transcribing the data, the author re-connected and re-affiliated an intangible, interactive, invaluable, non-substitutable and privileged channel in unveiling participants' various experiences with them. Transcribing the data by own efforts was so fruitful and vigorous that one of the generated remunerations was on enlightenment and revelation for data analysis.

For the need of analysis, as suggested, all informants were told that the interviews would be audio-recorded. Asking students for the questions as aforementioned enabled me to unveil how students perceived and felt towards

CMS and even the true meaning of acquiring qualification for them. After transcribing the interview scripts, collected data was coded. Coding helped the later-on analysis process by unearthing, reducing, appraising and pinpointing the amount of data needed for further proceeding (Ganapathy, 2016, p.107). Through coding, data could be organized under different meanings or patterns, which further helped me to generate certain themes from them (Ganapathy, 2016, pp. 107-108; Ryan & Bernard, 2003, p. 85).

In this study, data was coded with at least two stages. Stage one of coding provided raw, basic, drift and directional ideas on classifying the scripts data, while stage two excavated, conveyed and connected hidden and abstract data (Saldaña, 2016, pp. 68-69; Schrøder et al., 2003, pp. 98-99). For stage one, usually, I thoroughly listened to the whole audio records first while carefully studying my notes that were taken during the interviews. Based on informants' propositions, different initial codes gradually emerged. As shown in Appendix 2, for instances, informants mentioned various reasons to study university: the need to satisfy the demands from their parents, secondary school teachers, and the society that university qualification was important. These were initially coded as "obligations", "expectations", "hopes" and "social stresses". Besides, informants talked about distributing their enjoyment of university life as they needed to complete and upload assignments on time to Blackboard through its supporting service of Turnitin out of fearing in losing marks. These were coded as "homework", "marks" and "pragmatic". In addition, when informants expressed their preferences over social media and commented discussion forum in CMS as nothing but just saving lecturer time, these were coded as "connection" and "disconnection". After surfacing these initial coding, I perused the whole transcripts and cross checked with the interview notes time and again. These initial codings were then further proceeded to stage two of coding, classified and tapered into more specific and concrete coding according to their relevance to this study. For example, initial coding of "obligations", "expectations", "hopes" and "social stresses" were further coded as "duty". Similarly, "homework", "marks" and "pragmatic" were further coded as "pawn" while "connection" and "disconnection" were further coded as "extra". Stemming from the aforementioned coding procedures, "CMS as duty", "CMS as pawn" and "CMS

as extra" crystallized as the titles of Chapter 4, Chapter 5 and Chapter 6 respectively.

As Rapley (2001) proposes, with a view of gaining more chances and visions to go further and have a much closer and deeper understanding on students' perceptions and feelings towards CMS, instead of focusing the surface meaning of the scripts, textual analysis, and discourses analysis approach were employed. Both single case analysis and cross-case comparison were conducted (Silverman, 2010, p. 224). One of the advantages to do so is that it facilitated me to identify potential themes from the scripts (Lewis et al., 2014, p. 360). Another advantage is that, by contrasting data from different scripts, it helped me to locate special or even unique data from a particular informant which could inspire for further analytical stimulation (Lewis et al., 2014, p. 360; Seale, 2012b, p. 536).

In short, adopted research methods should work with the theoretical approach in this study. To comply with research ethics, research methods should be carefully designed aiming at not only facilitating data collection but also minimizing mistakes and protecting the rights of informants. By doing so, understandings on students' perceptions of and attitudes towards CMS could be achieved. For instance, rather than being assumed to enhance their learning experiences, university students thought that using CMS was just a duty for them to perform.

Chapter 4

CMS as duty

4.1 Socially desirable behaviour

Having transcribing data scripts from 34 semi-structured interviews, the sociological imaginations generated by this study was that, those students' perceptions of and attitudes towards CMS were associated with and mediated by a socially desirable behavior of gaining a university qualification. This chapter is going to suggest that the influence from the socially desirable behavior on students were so tremendous and overwhelming that students had no alternative but have to follow the path, regardless willingly or not. In addition, students' perceptions of and attitudes towards CMS were formed under this setting when realizing that they could not get rid of the CMS that was easy to use but disconnected from their daily life. In this regard, TAM alone was not appropriate in offering a better understanding of students' perceptions of and attitudes towards CMS. Students' rational choice under the particular setting had to be put into consideration as well.

4.1.1 Knowledge society and credential society

Students in Hong Kong are now living in a knowledge society and credential society in which people are valued and judged mostly by qualifications. According to the United Nations, knowledge society is basically referred to a society where citizens can, under the protection of laws and orders and mutual respect, make use of, and make available of, the massive updated knowledge for the sake of economic and social development (United Nations Educational Scientific and Cultural Organization, 2005, pp. 17-20). Drucker (1969) proposed a concept of “knowledge society” in the 20th century. Drucker (1959) also named those who make use of knowledge as their major asset for economical purpose as “knowledge workers”. Davenport et al. (2002) and Yigitcanlar et al. (2007) pointed out that knowledge workers are vital for the

economic development of knowledge society. As knowledge workers usually use information technology to analyze, consolidate and make decision based on various types of knowledge, Cooper (2006), Lucas (1998), Mathur (1999), Organization for Economic Co-operation and Development (2001) and Serrat (2010) suggested that knowledge workers are likely to be well educated. This not only implies that knowledge society is closely associated with credential society but also suggests that qualification is vital. As Collins (1979) proclaimed, "(e)ducation is the most important determinant yet discovered of how far one will go in today's world" (p. 3). On one hand, it is arguable that, as Gaddis (2015) and M. Pittinsky (2015) suggested, there could be some other considerations such as gender, ethnics, skills, experiences and the likes. On the other hand, even though qualification is not the sole or utmost decisive attribute in knowledge society and credential society, magnitude of qualification is so impressive that almost no one in society, especially those young generations without much experiences or expertise, can afford to neglect it.

4.1.2 Competition of studying university

Because of the mentioned expectation on qualification, as K. W. Chan and Lai (2006), Chen and Wong (2015a), Chen and Wong (2015b), Ho and Hau (2008), W. O. Lee (1991), Watkins (2009) and Y. L. Wong (2017) suggested, pursuing university qualification has become a socially desirable behavior in Hong Kong. After completing twelve years of free education, a majority of students choose to sit for the Hong Kong Diploma for Secondary Education Examination (HKDSE) before pursuing their further studies at the post-secondary schools in Hong Kong, mainly including public-funded universities, private universities, non-public-funded tertiary institutes, the Vocational Training Council, different providers of Associate Degree, Pre-Associated Degree and Diploma Yi Jin. Owing to the phenomenon of academic inflation, most of Hong Kong secondary school students target for a bachelor degree and believe that the qualification is a minimal requirement for job seeking in the future (Chiu & Zhang, 2017; Su, 2018). Because of the considerations such as tuition fees and recognition, students generally prefer pursuing a bachelor degree at public-funded universities to non-public-funded universities. In Hong Kong, as at

September 2019, there are eight public-funded universities, besides PolyU, namely The Chinese University of Hong Kong, City University of Hong Kong, The Education University of Hong Kong, Hong Kong Baptist University, The Hong Kong University of Science and Technology, Lingnan University and The University of Hong Kong (The University Grants Committee, 2017). Nonetheless, the total number of year one undergraduate admission offered by the eight public-funded universities is always far less than the number of the HKDSE candidates. In accordance with the Hong Kong Examinations and Assessment Authority, there were over 59,000 candidates attempting the HKDSE in 2018. Among them, 21,543 candidates managed to meet the basic admission requirements of the public-funded universities in Hong Kong (Hong Kong Examinations and Assessment Authority, 2018, pp. 1, 10). Owing to financial and other constraints, public-funded universities, however, could only admit around 15,000 new undergraduate students every year (Education Bureau, 2017). However, only 12,494 HKDSE candidates were admitted to first year undergraduate programme at the public-funded universities in the academic year 2017 to 2018 (The University Grants Committee, 2018). Because of fierce competition, only those candidates who achieved an outstanding performance in the HKDSE can scramble for a chance to study a bachelor degree at one of the public-funded universities in Hong Kong. Partly because of that, having a university qualification has been considered as a sort of socially desirable behavior. Credential society emerges when society values university qualification.

4.1.3 Qualification for filial piety

When the competition is fierce, the status of university qualification is upheld so importantly in society that, even those who have no capability to earn it by themselves also desire their beloved ones to acquire it. It happens especially on parents' expectations of their children. As Chen (2016), Chen and Wong (2014), C. K. Cheung and Rudowicz (2003), Hau and Ho (2008), Shek and Chan (1999) and Y. L. Wong (2018) suggested, students pursuing university study was also deemed to be interpreted as an embodying of filial piety not only to glory and honour family clans, but also to act as a remuneration of the sorrow and

melancholy that they had suffered, especially of their parents. In this regard, students pursuing university qualification are more than just meeting desirable behavior from society in general. At the same time, the action also serves for desirable behavior of filial piety by gratifying parents' expectations on them.

> "(T)hey (my parents) want me to study (university). That is, I know they don't want to give me a lot of stress. But I understand it is their wishes. At that time my elder sister… My elder sister was student in the first cohort of DSE. She studied associate degree as she could not be directly promoted to university. Then, it was me sitting for DSE. So, actually, even they (my parents) don't explicitly tell me something like you must study university, or you must do this and do that, but I know they want me to do so. After all, they are delighted and proud of their daughter to study university… Because… my father… had lost his chance to study university despite his results were capable to do so. It was unfortunate and he went to Hong Kong for earning a living. My mother's educational attainment is not high… They (my parents) believe that if (I) can study university, I can learn more and earn a qualification, it is their thoughts, and that will help for (my) future." (Elaine)

For the sake of their future, the informant knew that her parents wanted their children to study university. Given that her elder sister failed to satisfy their dreams, the informant believed that she could gratify her parents when she could pursue university study. In line with Kember (2010), the informant suggested that pursuing university qualification not only helped her to achieve a possible better future, but also fulfilled most likely an eternal dream from her parents. Studying university not only gratifies parents' expectations but also contributes to fame-building process among kinship. In return, it can be understood as another form of filial piety, by glorifying their parents in "successfully" parentings their children to be persons of achievement.

> "Actually, society (tends to) demands qualification. Sometimes, your credential is more important than yourself as it is used to evaluate your superiority. Indeed, maybe in some areas you may have more chances if you have a university qualification. Even in the field of social work, some positions like school social worker must be filled up by someone with a university qualification. Yes, the society expects you to study university. About family, actually I am a single child. My parents hope their offspring can graduate from university. I want to satisfy their dreams… As some offspring from relatives graduated from university. When they took graduation photos, actually they (my parents) were very envied on our relatives… My parents will be very happy if their son can also study university. Of course, they (my parents) do not strongly demand me from doing this. It is not a must for me to graduate from university. Because their point is that they themselves could not study university, they have no reason to push their son to study university. But if he can study university, that is better." (Nathan)

4.1.4 Qualification for an easier life

Through studying university, the informant believed that he could help to build up some pleasures, reputations, identities, and accomplishments for his parents as they no longer needed to envy children of their relatives. Thus, students' pursuit of university qualification can be regarded as gratifying desirable behaviour from parents. Nonetheless, based on my experiences and observations, the rationale behind the parents' desirable behaviour is largely mediated by socially desirable behaviour in general as well. Basically, the rationale is that livelihood and career prospect can be guaranteed after acquiring a university qualification. A similar belief was also widely reflected by the informants,

suggested that university qualification could help their job searching and promote their career securities and prospects. In other words, when compared with non-degree holders, university qualification could offer them a comparative advantage in society. The distinction between a degree holder and non-degree holder was so massively and intensively widespread among the society that such insignia had moulded in students' minds.

> "I think it is an ideological question and a norm in Hong Kong. In Hong Kong, if you never study university, it seems that you have a limited future... And this is also related to social expectation and parents' expectation... That is, you must study university if you are capable to do so. That is a normal mindset among parents... Even though credential may not be able to reflect your personal ability, it makes a difference if you don't have the certificate. At least it has a different impression toward the employer. Two persons, one graduate from associate degree and another one graduate from a bachelor's degree. If the person graduated from associate degree does not have a higher ability or joined a lot of activities and achieved flying results, frankly, I will select the one with a bachelor's degree." (Stephen)

By outlining the difference of his perceived treatments between the non-degree holder and degree holder, the informant offered an explanation for the rationale behind his parents' expectation on him in earning university qualification. The word "frankly" further highlighted that the informant was so deeply convinced by socially desirable behaviour of acquiring university qualification that he already took it as his personal conviction. The conviction, however, not only indoctrinated by parents but also reinforced by different significant others of the informants. For instance, partly for the sake of their students, secondary school teachers always framed a sentiment of pursuing university qualification among the senior form of their students and sketching

them with many visualized anticipations of university life and the afterward prospects after graduation.

> "The road will be very tough when you graduated from F.6. You have to work very hard. I may even need to study a high diploma or associate degree and the path will become very indirect. It may waste you a lot of time before achieving the goal. But studying university offers a stable and safer path... If you compare the one who works after graduation from F.6 and another fresh university graduate, their developments can be quite different. Studying university is a rather stable road and it is easier for you to get a better job... Sometimes my family indoctrinates me that if I cannot study university, my future will be very tough as I can't earn a living. For teachers… they will indoctrinate this thinking (too)... Because the atmosphere at that time was that we were all talking about university was like this and that. If you chose this subject, you could study which major in university and then you could do a certain job after graduation. The atmosphere makes you feel that it is a must for you to study university and after (university) graduation you can do this and that." (Gamila)

Because of the common belief that non-degree holders were likely to encounter many difficulties, the student would try to secure almost every possible channel to study university. From my previous experiences and observations, this was especially so when some of them were impeded by the HKDSE. Fearing of the expected negative consequences of not having a bachelor degree and aiming at a better career prospect, whenever possible, those students would be willing to spend a lot of money, time and efforts in targeting at university qualification through studying sub-degree programmes first and then top-up degree programmes afterward.

> "Because… reason for studying this programme is to get the certificate (degree) and able to graduate successfully. Basically, it may also be the reason why I have paid so much money for the study and study part-time mode. So, I value on having a pass... Because it is for job searching. Yes, searching job is rather… rather important. Because if you have the qualification, the chance of (successfully) searching job increase. Later on, in term of salary adjustment, you will also have a bigger bargaining power as you have a university qualification. As I graduated from higher diploma, the reason for me to study this top-up degree programme is also want to update (upgrade) my qualification so that I can have a bit much smooth career planning in the future." (Nathan)

The informant clearly suggested that the reason for him to spend so much time, effort and money to pursue university education was that he desperately needed it as a strategy to increase his opportunity to be hired. By mentioning the previous record of his studying, the informant tended to be convinced by his past experiences that possessing a higher diploma or equivalent academic qualification was not enough for him to survive in the credential society. Most likely, the informant was acknowledged from his past experiences that the society was expecting, at least on him, a higher qualification such as bachelor degree. Because of the motivation from socially desirable behavior of earning university qualification, with a view of securing a better prospect and career development, he needed to pursue a university degree regardless the classification of honour he earned at last. Under dogmatism of the socially desirable behavior, informants were indoctrinated that their opportunities and developments would be much hindered if they did not possess university qualification. Based on my experiences and observations, the propaganda of the socially desirable behavior from the society including their parents was so comprehensive and so influential that many of them were even convinced that pursuing university qualification had already become their natural expeditions and that they ought to comply and achieve it.

> "… Because I believe that parents always wish their children to have achievement. No one wants their son performs poor in his study and that is the natural attitudes... When I told them (my parents) I was admitted to the university, naturally, they were very happy... They just felt very happy when their son was admitted to the university. In most of the cases, parents in Hong Kong also think in the same manner. To a certain extent, it is a trend in society. Because in Hong Kong nowadays, more and more people are able to study university. Naturally, many people will perceive that you are inferior if you are not able to study university. Fearing their children lagging behind, many parents want their sons or daughters to study university so as to follow the path of the society. I think it is something like this... Because it is the reality that I am noticing now. Actually, many people in Hong Kong now are able to study university." (Leon)

4.1.5 Compliance

With a view of not falling behind the others, some informants were convinced to be in line with and acted accordingly with the socially desirable behavior to earn university qualification. Even some informants did not cast their votes on the socially desirable behavior, the atmosphere of demanding university qualification was just too powerful to resist, and that they still chose to comply with it. Apart from pragmatic reason, one of the strong motivations in pushing informants to act willingly against their personal desires is their parents.

> "It is a phenomenon created by the majority of people in society. I feel that society has been promoting different young people from different generations to study hard... (T)his trend makes people believe that it is not acceptable if they do not study, especially all the job nowadays require

> university graduation. Even parents have the tendency that if their son doesn't study, he will end up working in construction sites, working some jobs that are only able to support lower living conditions... You have to move upward and support parents. And that also promote you to have this idea... I don't agree... But now for the sake of parents, to get the entrance ticket, you have to force yourself to allocate some time in it (studying) only... I really prefer, say, travel aboard and learn more, learn something about life. That is even better." (Jerry)

Even though the informant did not agree with the socially desirable behavior in stressing university qualification, the informant had no other alternative but had to comply with it as its influence was too powerful for him to resist it. The words "really prefer" and "even better" already effectively implied incapability and helplessness of the informant in compromising, surrendering and sacrificing his personal desires to comply with the socially desirable behavior of pursuing university qualification for the sake of gratifying his parents.

So far, the picture generated from the above denotations is that because of the influence of the socially desirable behavior of pursuing university qualification, students are eager to study university, willingly or unwillingly. Because of that, after enrolling into university, graduating from university almost become an utmost important mission to be accomplished. Meanwhile, as outlined in Chapter 2, PolyU has adopted Blackboard as CMS for her teaching and learning activities. As lecturers would adopt CMS, students were compelled to use it. If they did not use CMS, they could not access to the course materials and would fail in the course. And in return they may not be able to graduate from the university. In other words, under the above settings, the informants in this study could not get rid of CMS. When experiencing CMS, however, informants found that it was easy to use but not useful for them.

4.2 Perceived easiness of CMS

4.2.1 On cooperation

After discussing the influence of the socially desirable behaviors of pursuing university qualification and how students were compelled to use CMS, it is better to interrogate TAM whether it is capable to offer a better understanding for us on how students perceive and feel towards CMS. As outlined before, Davis (1986) proposed TAM by suggesting that one's view in using certain technology depended on one's perceived easiness and perceived usefulness in using that technology. With regard to perceived easiness in using CMS, some informants pointed out their concerns. Their considerations mainly focused on its system, discussion forum, and its arrangement. Concerning the system of Blackboard, some informants expressed that it failed to facilitate the cooperative works among classmates.

> "Blackboard… I can't say it is difficult, I can't say it is difficult to use but I think it is not user friendly... For example, it does not support when we want to share some files or want to edit a document at the same time... If we do cooperation, we want Google Docs. We can trace the parts that classmates edited, and we can even leave comments at the margins. Based on my understanding, Blackboard does not support these. Once a file is uploaded to Blackboard, you need to download it before editing. You can't just edit it (the file) online. I think it is inconvenient." (John)

> "The font is very small... And with so many Times font styles. That is font style of Times New Roman in Word... Also, it has many small fonts, small fonts compressing each other. Very tough." (Tiffany)

> "I have used Blackboard for more than 2 years... And every time I use it I need to spend a long time to search... Because you can see the interface, its layout is horizontal... Sometimes… the content or others … Are there several places to store notes? I can't remember that. Then, you need to spend efforts on finding it. Let's say lecture 1, lecture 2 and lecture 3. When I press the interface, it shows a new page with lecture handout and supplementary notes... (I)t changes to another interface. If I need to find lecture 2, I have to press the previous page and find lecture 2. And then, lecture 2 changes to another interface showing different lecture handout and supplementary notes... It is quite a trouble." (Tiffany)

It is the design of the system such as font sizes, interface, and layout that hindered the above informants in using CMS easily and smoothly. The informants encountered undesirable experiences not only when they accessed CMS via their computer devices but also through their mobile phones.

> "Even though it is user-friendly and easy to see, sometimes... how to say… The interface at the left-hand side, when your mouse is pointing to the button, it will further show the sub-catalogue... Sometimes, the catalogue closes so quick that you are not able to click the content inside... Because for the phone, it may be the bug of the design…" (Daniel)

The informant illustrated that it was the system bug of CMS that made his usage of CMS not that easy. Besides the system of CMS, some functions in CMS also made informants find CMS difficult to use.

With regard to the experience in using discussion forum in Blackboard, some informants indicated that it is not user-friendly enough. Two informants

indicated that it was the complicated and annoying procedures that turned their usages of CMS into not easy experiences.

> "The one (forum) in Blackboard is not that easy to use. Because the interface of the forum in Blackboard is not that user friendly." (Darwin)

> "That makes students think that posting a message in a discussion already spend a lot of effort on that, already feel… very difficult and annoying. Not user friendly, in my opinion... Students always ask, how to post? They have no idea to open the post even when the discussion topic is here. The button is at the top right-hand corner, but it is not obvious. After clicking (the button), the second thing you need to do is to choose the target (of response), whether it is responding to the big question or small question. You need to make a selection before clicking it. That makes a difference. You don't know where your mouse (cursor) should point at to make different responses. Then… I think this already make students have no idea…. So, I think sometimes students post wrongly and feel annoying. (They) always click this and that and still have no idea." (John)

On top of launching complaints on the irritating and unfriendly experiences of using discussion forum in CMS, one of the informants further pinpointed a limitation of the function by prosecuting its incapability and incompatibility in facilitating sharing and cooperation among students. CMS focused on unidirectional dissemination of information especially from lecturers to students. For instance, students accessed course materials in Blackboard that uploaded by their lecturers. Unlike some of the online applications well supporting in, peer cooperation, sharing and even discussion among classmates were under established in CMS, and that hindered students when they involved into a group project.

> "I did try to explore Blackboard and I think it is not that useful… not user friendly. Another point I think is that Blackboard is a bit unidirectional. I think it is more suitable for one-way… delivery. For example, a teacher can make an announcement for the course. It is easy to be delivered and we can easily see it. And then, he (the teacher) uploads materials (to the Blackboard) and we download it. That is ok. We will not change the teacher's materials, say course outline. We will not edit it together. So, at this level, it is no problem. But when talking about mutual cooperation or exchange, the problem occurs which is… Interface of the discussion really is not friendly. Also, the way of cooperation is missing as no file can be shared. It can't meet requirement today as we are always talking about small group cooperation. You can see seating in some classrooms have changed to small group setting. It (Blackboard) can't (help students to work as) small group. It remains superficial. That is a comment. Sometimes, in my opinion, it is not user friendly to such a stage that some students even do not know how to open (create) the discussion question (topic). Its (discussion in Blackboard) interface is rather complicated... You also don't know which button you need to click when you want to directly respond to the comment. Actually, it (discussion in Blackboard) offers the function but (you) don't know where to locate it... So, sometimes I teach classmates on this because this is coursework. They have to know it. But I… really don't recommend them to use this for discussion… Recommend them to use OneDrive, Google Drive and the likes." (John)

The above voicing suggested that the discussion forum in CMS failed to meet the current demands of effective cooperation and teamwork among

students. Because CMS could not make his cooperative work with other classmates much easier, the informant even recommended other software or platforms to his classmates and avoided using the function in CMS.

4.2.2 On arrangements

While complaining about the system and discussion forum, informants also drew their attentions on the arrangements of learning materials in CMS. Some informants expressed that it was poor classification and arrangements organized by their lecturers, which made them feel strange, confusing and troubles when using Blackboard.

> "It (Blackboard) is easy to use. But sometimes maybe in one of the courses, it has the arrangement of the tutorial, laboratory, and lecture. Then, in Blackboard, it shows the programme code, that is course code… and then A, B, and C. Sometimes you need to click A and find out that nothing there. And then you click B and find out something there... That means that he (the tutor) opens one for the tutorial, one for lecture notes and then one for laboratory. Sometimes, you have no idea which one you should click before you can find the information that you want... Sometimes, you see A, B, and C. Once you click them, it makes me feel frustrated. That is, which one I should click." (Gordon)

> "I think Blackboard… it is really depending on whether the lecturer knows how to use it or not... Most of them are ok. Few are experts. Also, few need a lot of improvement... Actually, its (materials in Blackboard) current positioning is already very good. But rather, I hope lecturers can have a standardized structure. Because requirements in every course and mindset of the lecturers are different. In most of

> the times, some lecturers directly open a file (folder) called learning materials and uploads all the PowerPoint there, even sort with date. Some (lecturers) uploads (PowerPoint) to a file (folder) called learning materials inside course information. When you click into there, he opens files (folders) for each lesson. In the files, there may have worksheet and PowerPoint. But actually, it is very troublesome when you download them. You need to click every button and download (PowerPoint) one by one... It is painful... That is very nasty, very trouble. Because you need to spend a very long time to find the document." (Veronica)

The informants explicitly stated that hindrances were attributed to the organization and arrangement made by their lecturers. The informants complained that the lecturers filed learning materials in CMS without a systematic and logical manner that cost them a lot of extra times and unnecessary efforts. In other words, the difficulties in using CMS were not due to its internal matters such as interface or design but contributed by the lecturers that made the usages of CMS more complicated than supposed to be. Some informants, however, proposed similar recommendations to improve the situation:

> "Why can't you open a (folder called) "learning materials" containing one worksheet and one "PowerPoint" and upload everything there. For students who have many things to download like me, I think having a standardized structure is much convenient." (Veronica)

> "Why don't… I think this problem can be solved. That is, you just open one. In this one, when you see the lecture, there is a file. One file for laboratory and one file for tutorial information. Why he (the tutor) can't do it in this way? That is, why can't concentrate the information and then… Because the lecturer and the tutor of the tutorial may

> not be the same... But a tutor can pass his tutorial information to the lecturer or three of them share the authority in uploading materials to Blackboard and place them in the same area. Why can't make it in this way?" (Gordon)

The informants pointed out that having a standardized structure and organization of the learning materials in CMS could help improve the captioned difficulties that they encountered. This could be done through better arrangement and management made by the lecturers. The captioned demand for a good organization of the CMS echo with Nijhuis and Collis (2003) for their called forth of better management and structure of CMS. It is the way of lecturers in composing and framing CMS that are partly responsible for shaping and mediating of students' perceived easiness of CMS.

4.2.3 Overall

Despite some criticisms over CMS, in general, no matter whether informants had experiences in using Blackboard or similar platforms before, this study has suggested that majority of them found Blackboard not difficult and even easy to use. Some of the informants said that functions of Blackboard were so centrally located that they needed not to click many buttons before getting what they wanted.

> "Easy to use… Interface is simple... It does not have many buttons. When you access it (Blackboard), all the courses are here. You click the course that you want to access. And it has a function, a function located at the right-hand corner, notification. When you directly click it, you can see all the notifications or announcements. You need not click every course to check its announcement. It is convenient as you can read all of the unread announcements at the same time. Or, you can directly read all… There are some functions,

> maybe your grade. Maybe about your grade, if it is updated and when you click at the right-hand corner, it shows the latest grade for a particular course. You don't need to click every course." (Robert)

> "I think it is ok. It is rather easy to use... I believe Blackboard has many hidden functions. But maybe I am not able to explore them, I may not have time to explore them. Rather easy to use… I think Blackboard can be regarded as simple and easy to use. And it (Blackboard) is very good. When you click it, click a certain place, seems located at the top right-hand corner… all the courses will be displayed. Basically, these are the materials relating to your courses... I think it is simple and quick... You don't need to find other options. It shows all of them. Just click the course that you want to select, click it and it is already very comprehensive." (May)

The simple interface of CMS helps provide a user-friendly environment for the above informants so that they found it easy to use. Their perceived easiness in using CMS, as proposed by TAM, was partly because of their competencies in using information and communication technologies, but it could also partly result from the way of lecturers use it. As will be suggested in Chapter 5, almost all the lecturers made use of Blackboard as a media to make announcements and disseminate teaching and learning materials such as lecture notes, PowerPoints, course outlines and so on. Usually, this information and materials could easily be found at designated areas in Blackboard, and in general, it did not require students with much computer competency in locating and accessing them. In this regard, regardless of previous experiences in using Blackboard or similar platforms, most of informants expressed few difficulties or even easy in using it.

> "I don't think it (Blackboard) is very difficult to use… Because the functions that I need to use are rather few. Actually, (I just need) to see lecturer's message, and download (notes)." (Ada)

> "It is very easy to handle Blackboard... You just always (need to) use a few buttons only, such as announcement and messages. You click the message and then click the course. At the interface of the course, you will find the announcement. On the whole, you (just need to) click announcement, grades, or assessment. Basically, nothing more besides these three buttons." (Peter)

> "Blackboard… Maybe the scope that I contact with is rather small; actually, I think it is rather easy to use... Because after all, you read lecture notes or PowerPoint in Blackboard and use them to do your revision. Basically, it is very simple, you just click a few buttons and these (notes, PowerPoint) can be opened." (Derek)

Since informants just needed to click a few buttons before they could access the learning materials that they wanted, it does not require them any sophisticated or technical skills. Because of that, the majority of informants pinpointed that it was easy to use Blackboard. Some of them even assigned a score to demonstrate the way of their perceived easiness in using CMS.

> "Easy to use... Easy. If I need to assign it a mark, 1 to 5. I think it (gets) 4 marks." (Daisy)

> "Rather easy. I will give... I will give 7 marks to 8 marks out of 10 marks." (Darwin)

Overall speaking, the above voicings assembled a picture of informants' satisfactions on easiness in using CMS, thus they assigned rather high scores to it. Nonetheless, instead of TAM's expectation, students' perceived easiness in using CMS failed to directly attribute to its high frequency voluntary usages. Suggestion from two informants deserved our attention as they suggested that their usages of CMS were not because of its easiness but they were compelled to do so.

> "I feel convenient (in using Blackboard) at this moment. But whether it can increase my frequency of usage…, frankly not necessary. It won't. I feel convenient when I have to use it... Letting behind the factor whether the interface is clear or not, I have to use it, I am being forced to use it... That is because you can't get the information if you don't access it. You need to print lecture notes to attend lessons... If you don't access Blackboard, the lecturer may not print teaching materials to you. So, I have to access Blackboard and download them by myself." (Kenneth)

> "Because basically, if we are not downloading notes, submitting homework or checking results, we will not access Blackboard… You know that you must use this channel to get your notes, except they are distributed in the lesson and the tutor does not upload (notes) to Blackboard. Even you need to wait for a long time (to access Blackboard) and make your emotion irritable and unhappy, you can't help but download (notes) earlier next time. You can't help. I think." (Gordon)

One thing from the above informants' suggestions capture for advertence. They expressed that even though they found Blackboard was easy to use, it was not the reason for them to use it more frequently. They also did not develop a sense of positive perceptions of and attitudes towards CMS because of its

perceived easiness. This was inconsistent with TAM. The informants suggested that whatever the design of the interface was and whether it was easy to use or not, he had to use CMS as it was the only media or channel through which he could access to the learning materials. As suggested, learning materials were important for them to graduate and earn university qualification. Since PolyU has adopted CMS, informants could not get rid of it. That explained the reason why informants explicitly stated that they were “forced” or “can’t help” but had to use Blackboard because they needed to access teaching and learning materials through this media only. As the materials were vital for them, they had to access Blackboard. The informant would still somehow reluctantly use CMS for accessing learning materials no matter how frustrated, disappointed and discontented they had experienced when those necessary materials were not available on time. If there were without any needs of accessing learning materials from CMS, a student even suggested that he would not have used it anyway. These cases illustrate that perceived easiness in using CMS not only does not directly associate with high frequency in using CMS voluntarily but also does not help to mediate positive perceptions of and attitudes towards it.

Despite some accusations on using Blackboard, overall speaking, the majority of informants suggested that it was easy for them to use Blackboard. No informant explicitly stated that Blackboard was very difficult to use. On the contrary, most of the informants could use Blackboard on their own without any guidance. For the rest, they just needed a little piece of advice or sharing from their classmates before managing to figure out the way to accomplish what they wanted in Blackboard. In this regard, perceived easiness in using CMS among informants in this study was rather high. Nonetheless, perceived easiness in using CMS did not contribute to voluntary usages and informants, as aforementioned, were still compelled to use it for the sake of earning university qualification. Students' perceived easiness in using CMS, however, is just one aspect of imagination in this study which has to be puzzled with another jigsaw from TAM as well, namely, students' perceived usefulness of CMS.

4.3 Perceived usefulness in using CMS

4.3.1 Disconnection from daily life

TAM suggests that perceived easiness and perceived usefulness of technology shape one's acceptance in using a certain technology. After examining students' perceived easiness in using CMS, the focus is now shifted to their perceived usefulness in using it. Contradictory to researchers including Black (2010), Carstens and Beck (2005), Papastergiou (2007), Skiba and Barton (2006), Werth and Werth (2011) and Wyld (2009) who called forth of using technologies that surrounding students in teaching and learning activities such as games, the Internet and online platform of CMS as an effective and useful media to enhance students' learning experience, this study has shown that some informants pinpointed that CMS was not perceived useful for them as it was not the technology that they needed and was separated from their daily life.

> "So, I think it doesn't mean much. For example, say, Google Drive. We use it (in daily life). For example, you may use Google's services every day, open Google Drive and see if classmates update PowerPoint today or if some new materials have been uploaded. Since you need to use every day, you need to use the service of Google Drive, no matter for working and private, you will think it is not a problem when university uses it as well. It is just an additional thing. After all, I already use it every day... But Blackboard is not the case.... Basically, it is not useful for your work. And you don't have private usage in there. So, it is rather indirect to check the information from Blackboard. Only when it is necessary, like when we are on transportation and we suddenly want to check somethings in Blackboard, I will download the Apps and see what is available in Blackboard. Maybe new notes or updates. Only then I read it." (Jerry)

The informant explicitly mentioned that CMS was not the technology that he needed and used in his daily life. He accessed to CMS most likely out of the need to locate learning materials. Other than that, the informant found CMS had no connection with his life and thus he would not access Blackboard beyond learning needs. The informant further elaborated his idea by arguing that some of the interactive functions in Blackboard such as discussion forum and voting were not practical to him:

> "No (discussion with classmates in Blackboard). Absolutely none... Discussion or voting can be done in my WhatsApp group or we can have a face-to-face discussion after the lesson. There is no need to use these things (functions in Blackboard). Second, these are not the things that you will use in daily life." (Jerry)

By proclaiming "these are not the things that you will use in daily life", the informant already crystalized the perceptions of CMS in his mind. Such perceptions are inconsistent with previous studies that promoted interactive functions in CMS such as Abdel-Jaber (2017), Chou et al. (2010), Liaw and Huang (2013), J. N. Sun and Hsu (2013) and Wei et al. (2015). Even though CMS was constituted by other commonly used technology in daily life such as the Internet, CMS failed to connect with the informant as the technology that he used in his daily life. One of the possible reasons for the disconnection is that CMS lacks practicality of certain functions. As suggested by the informant, the function of voting in CMS was useless for him as he did not need to cast voting in daily life. The function of voting in CMS, therefore, became useless, meaningless, and disconnected from the informant.

4.3.2 CMS and other technologies

On top of practicality, those functions in CMS were disconnected from informants as they had already been replaced by other technologies that already surrounded informants in their daily life.

> "But we will not always check Blackboard. WhatsApp has notification and you can see it instantly." (Ida)

> "Because we have already…. we have already got WhatsApp and email. Usually, we simply WhatsApp each other and talk to each other already. Also, we seldom use Blackboard. There is no need to use this stuff (Blackboard) to discuss... On the other hand, WhatsApp is much faster. We open a group (in WhatsApp) and just discuss the issue." (Jerry)

By directly comparing CMS with other technologies like WhatsApp and pointing out its performance was slower, the informant suggested that it was one of the reasons for him to use CMS rarely and that in return contributed to a disconnection from his daily life. By claiming "we seldom to use", the informant further suggested that disconnection of CMS from his daily life was associated with his lifestyle or living habit. Here, lifestyle tends to offer us another perspective in understanding the rationale behind the disconnection of CMS. The informant actually verified Stern and Willits (2011) on an interesting discussion on CMS and social media. CMS just failed to satisfy informants the ways of convenience and functionalities that social media provided to them.

> "I think it is ok (for us to use Blackboard to discuss at home) but it is not that convenience. Because, first of all, according to our habit, we are used to using Apps to do discussion and it's already able to replace this function in Blackboard. And then it is not that convenience indeed. Because if we do discussion over there (Blackboard), sometimes we can only type texts. But if you are using other websites, phone or Apps, we can just make a call to be able to communicate. Speed of discussion is faster. In term of convenience, Blackboard is comparably weak

> indeed... WhatsApp… I think this is the most common one... Sometimes, during a discussion, we may upload some documents. I think Blackboard can do it. But the most important thing affecting me whether using Blackboard or not is on… to the people like me who do not use texts for discussion, (Blackboard) is not convenient... (W)hen we are doing the project, we all use WhatsApp to communicate, from dividing job to the final product. During the whole process, we basically use WhatsApp to communicate. Yes. Maybe more people use it (WhatsApp). I also use WhatsApp to communicate with them. It is rather fast." (Immanuel)

The informant stated that it was his habit to use WhatsApp for discussion even though he would also be willing to discuss in CMS as he was required by the lecturer. While his comment reflected his helplessness in using CMS, it also suggested that WhatsApp is common technologies between him and others which facilitated the whole discussion process. To some informants, lifestyle was linked with their habits. Once a particular type of technologies has constituted part of informants' habits, their lifestyle would be connected with the technologies and that it would not be so easy to change it.

> "Because WhatsApp has already occupied your 100% live. Because after all, once you wake up, you open WhatsApp and check your daily schedule or the things that need to handle every day. We can contact our classmates anytime through WhatsApp. I don't need to wait for them to login Blackboard... Email is solely for rich content or with attachment. Especially when we are working now, we use email more. Normally when we are studying in school, actually we rarely use email. If possible, we may even use Facebook to communicate. It is not difficult to open a group to discuss (with each other)... These internet tools

> already exist in your life and you are already using them. Yes. What you need to do is to open a group or chat there and discuss with classmate only... It does not have much impact on your daily life. But for Blackboard, first of all, you have to learn how to use it first. Or, I need my classmates to have the Apps (Blackboard Apps) first. Or I need him to remember the website, URL (of Blackboard). Need to remember the account (Blackboard) before you can use it. But WhatsApp is different. I use it already. Once I know your phone number or your email address, then I can use it. The requirements are much less." (Jerry)

Because other technologies like WhatsApp were so convenient and so useful that it has already penetrated into almost every single aspect of his daily life. And that similar thing also happened surrounding him, such as on his boss, friends, colleagues, and classmates. Gradually, WhatsApp has become a common media to facilitate the informant's communication with others for various purposes. By doing so, the convenience turns to form a part of the lifestyle that the informant was coping with comfortably. As the informant was so adapted to the lifestyle and CMS was so disconnected with his daily life that he had little motivation to make any changes in his lifestyle.

> "These things are already existing in my life and I don't think it is necessary to add one more thing in my life which (I) seldom use. Sometimes, in life, it… is not talking about energy saving… resources saving, but just want to make it much simpler and much convenient and that is common to all of us. In the past, maybe we were prevalent to open Facebook and discussed homework together. We even met and worked together and prepared PowerPoint. Later on, maybe it is replaced by Google Drive because you can preview PowerPoint and do editing immediately. You can then work online. I think we are all pursuing convenience.

> We need not to explicitly open a website and explicitly install an App to use." (Jerry)

The informant suggested another lemma that cannot afford to be neglected. The informant, and most likely other students as well, was looking for convenient and flexible connection with the technologies adopted in his daily life. According to his confession, the technology such as WhatsApp can satisfy what he needs. As WhatsApp is so successful in meeting his desires, it is almost indispensable to his daily life. On the contrary, CMS failed to provide convenience to students. Besides the issue of practicality, CMS did also generate some annoyances and irritations to the informant as both the web version and mobile version required users to log in every time. This requirement was considered as inconvenience and inflexibility, and that can further disconnect the informants from frequently using CMS. This view was also shared by other informants, especially those valued much on timesaving and convenience like those part-time students.

> "(F)or example, to discuss homework with classmate, basically you can add a group in WhatsApp and that is very quick. However, I will not intentionally access Blackboard and then discuss there even though their (WhatsApp and discussion in Blackboard) functions are the same." (Agnes)

> "If it is only our group, then we can talk in WhatsApp… You can open (a group in) WhatsApp and discuss with the lecturer. It is trouble to login password and else." (Tiffany)

As suggested above, unlike CMS, WhatsApp provides convenience to the informants for accessing the information because it does not require them to explicitly login every time. In other words, WhatsApp saves their efforts and offers them with convenience. They are already able to attract informants to keep it connect with their daily life. On top of that, WhatsApp also has the capability in offering and facilitating instantaneous communications and connections among

informants which cannot be done in CMS.

> "I think WhatsApp is better. That is, there is a message (notification) in WhatsApp and you know when it comes. But for Blackboard, maybe you need to check (the notification) by yourself. And you don't know when you will get the response. Also, (groupmates of discussion in) Blackboard are usually not familiar with (each other)... But for (groupmates of discussion in) WhatsApp, because you already know them and that is why you form a group with them and do the project. So, my feeling (towards WhatsApp) is better." (Jocelyn)

> "Whatever questions you have, you can instantly share with others. I don't think Blackboard has any voice (functions). Maybe usually I like to use voice more than to type. For people like me, if we need to discuss in Blackboard, I think it is not that convenient..." (Immanuel)

By offering instant notification and sharing without requiring informants to log in every time, WhatsApp was thus considered by the informants as more powerful and more useful for daily usages than CMS. When asked for the choice between the two if CMS could provide similar functions, one informant preferred WhatsApp to CMS because of its convenience:

> "WhatsApp has audio-call. That is, it supports audio-recording. It also supports photo-taking. It is better than Blackboard as you can just do typing in there. It may take you a long time to upload a photo in Blackboard. You cannot instantly edit the photo (in Blackboard). If I use WhatsApp, when I don't understand a question, I can take a photo, edit it and mark down the point that I don't understand. Then, I can send it to others instantly. They can

> see it and know what I don't understand... (WhatsApp) also allows voice message. Much more convenient... Maybe still prefer to use WhatsApp... Because you need to login to Blackboard... But for WhatsApp, you just click one button and that's all required." (Sally)

4.3.3 CMS and impression management

CMS required informants to log in every time, which did trouble them a lot. Because of that, the issue of convenience plays a significant role in mediating the informants' preference of the usages between WhatsApp and CMS. Nonetheless, while WhatsApp was generally regarded by informants as convenient and more connected with their daily life, one informant unintentionally suggested an advantage of CMS that could outperform WhatsApp. Students' identifiable behaviours and messages in CMS could all be recorded and available for lecturers. While lecturers could make use of these data to trace and evaluate students' performances, students could also try to construct and even manipulate their preferred images to their lecturers through the same channels as well. On the contrary, it was not easy for students to perform the similar thing in WhatsApp, unless the lecturers were also in the group.

> "Why we must use Blackboard? There are many tools for communication. That means, will the lecturer review all the content of our discussions? If not, basically, I think you can open a group in WhatsApp... Because basically we mainly use WhatsApp... Because I think most of the classmates must have WhatsApp. And we all unanimously think that WhatsApp is convenient... (U)sually we, for example, when we form a group to do the project, we must open a group in WhatsApp and discuss with each other. During the process of doing (the project), there are a lot of discussions in there (WhatsApp)." (Ada)

Even though the informant preferred discussion in WhatsApp, her statements unveiled her calculation and pragmatic objective in using CMS. By proclaiming "will the lecturer review all the content of our discussions", the informant considered doing discussion in CMS could offer a front stage, as Goffman (1959) proposed, for her to impress not only her classmates but most important at all her lecturer. This high profiled performance could only be available at and supported by CMS. On the contrary, WhatsApp offered a low profiled backstage to other informants. Such a low profiled backstage, however, could be a comfortable zone for them.

> "From the student perspective, if we really want to discuss this thing, basically, after lesson say when doing our revisions, we will use a general method to discuss with classmates through WhatsApp in our handheld phone. As there is a study group for each 5 to 6 students, questions can be asked in there. Because after all, it is the most convenient platform for us... If we need to access a website and complete an activity that not only carries marks but also monitored by the tutors, we will feel embarrassing. We feel nervous when we know it (an activity) carries marks." (Gordon)

Technologies surrounding informants like WhatsApp not only offer flexibility and convenience to them but also provide them with some form of privacies, which help them avoid or minimize the shamefacedness when doing discussion in Blackboard. By providing a backstage and installing some invisible curtains to separate between students and lecturer, these technologies have become useful communicative and cooperative media and thus able to incorporate into informants' daily life. On the contrary, CMS is unlikely to assume such roles for the informants. As CMS was disconnected with their daily life, some of the informants perceived that it was not useful for them.

4.3.4 CMS as an academic-oriented platform

Informants thought CMS failed to establish a connection with their daily life, besides, they also did not perceive CMS itself much useful for their studies and learning. To some informants, CMS was just an ordinary platform without many specialities. Most of functions or services found in there could be substituted by other technologies.

> "Actually, I think things that Blackboard is able to help is not much different from other media. Actually, it (Blackboard) just opens a space for us to access the materials. Actually, he (teacher) can send it (materials) to us via Facebook. Blackboard is just an academic-oriented website only allowing us to access something. It just specialized in doing this. Frankly speaking, if a teacher opens a group on Facebook, adds all of the students in the class, and then uploads materials over there, let put Turnitin aside, homework and materials can be sent to us via group on Facebook. So, I don't think it (Blackboard) has a special role. Actually, it can be replaced easily. It (Blackboard) does not have a unique function. Its uniqueness is, in my opinion, put Turnitin aside, actually nothing... (Blackboard) solely has (offered) space for me to access materials. It (Blackboard) does not have a special impact on my learning experience. That is, if he (teacher) gives them (materials) to me via Facebook, I can still access the same materials. Nothing special." (Stephen)

To the informant, other than its nature of academic orientation, CMS was not much different from other technologies. The informant stated that CMS just acted as the platform for him to download learning materials. Lacking uniqueness makes the informant believe that CMS was not much useful to him

and could be easily replaced by other technologies like Facebook that surrounding him every day. By saying so, the informant even suggested that Facebook was more useful to him than CMS. As the informant believed that the role of CMS could easily be replaced by others, he did not find it useful for him. While the role of CMS was being questioned, its functions were also challenged as a further accusation of lacking usefulness. Especially, some of the informants interrogated usefulness of discussion forum in CMS. It may not be able to serve its function and may not be useful for an informant when the feedbacks generated there were underappreciated.

> "Frankly speaking, I think the discussion in Blackboard is not important to me... I don't care, basically. Frankly speaking, how others response will not hurt me, that is, it will not affect me. About homework, personally… Even if it carries a lot of marks, I will not pay much attention to it if I don't want to do it... (E)specially towards this thing (discussion in Blackboard). To me, discussion in Blackboard does not have much meaning. I will not spend much effort on it. Thus, when I read someone responses, or some responses to me, I may click and read it. After reading, I may reply 1 to 2 sentences if it is needed. If not, then that is all after reading (the response)." (Stephen)

The informant mentioned that he did not think discussion forum having any meaning to him and thus he did not regard it as useful. He even suggested that his attitudes would not change even if the activity of doing discussion in CMS accounted for a large percentage of assessment in the course. Instead of departing from personal preference, a discussion forum in CMS was not useful because it only generated some superficial ideas. Discussion time was too short, and the scope of discussion was not wide and deep enough to construct perceived meaningful knowledge to concretely facilitate and contribute to informants' learnings.

> "Actually… I think the effectiveness (of discussing with classmates in Blackboard) is not that big. Because it has a deadline, it requires you to complete (the activity) within a certain period. Maybe not everyone remembers to do it. Also, the scope of discussion is rather narrow. Because after all (the discussion) focuses on learning within a university and that makes the scope of discussion not wide enough. (Content of) discussion is more or less the same... Actually, I think the effectiveness is also not big. Because after all it (the discussion) still focuses on the same topic. Our learnings can cover many areas, scopes, and topics. If the discussion focuses on a single topic only, actually it cannot help learning for the whole course." (Derek)

> "This online platform I think is not particularly attractive... In the online discussion, we may be able to read some supplement information that we may not consider in the lesson. And that contributes to so-called a bit more knowledge. But… I don't think the so-called knowledge is so important that I have learned a lot after participating in the (online) discussion. Yes, I don't have that feeling... I know more viewpoints from others, but I will not explicitly follow them up." (Carman)

During the given time slot, the discussion in CMS failed to provide informants with perceived valuable ideas or suggestions. As the two informants thought that discussion forum in CMS had its limitation and could not offer much assistance to advance their learning experiences, they did not interpret it as useful for them. Meanwhile, another informant indicated that the discussion forum was not useful because of its nature. Instead of mutually exchanging opinions and even challenging among each classmate with a view of promoting an academic advancement, the way of practicing discussion in CMS was perceived as students answering certain questions at an online platform for the sake of fulfilling course requirement only.

> "But the nature of the discussion is not that strong. After all, it is just like answering a question. It is not really a discussion. (We do it) just for the sake of (earning) marks. To fulfil its (the course) requirement, thus (we) answer somethings and give some comments. Nature of discussion is not strong… Not so useful because it (online discussion in Blackboard) cannot really facilitate our mutual interaction or discussion. Students just response 1 to 2 times in a slack manner because of the marks. So-called having read some materials and then give some little response. But it (the course) does not require you to respond to others' questions. You are just required to comment on an issue and type somethings over there (Blackboard)... After all, you are not meeting others or involving any conversations but just solely type something over there. It is difficult to achieve a discussion with quality... My description is that it is not a discussion. It is just solely answering the question. We answer (the question) on their own and in their own ways. We are just based on its (the course) requirement and answer the question. I will not describe it as discussion… Frankly speaking, I think this, discussion over Blackboard, to me is not important... To me, discussion in Blackboard does not have much meaning." (Stephen)

Instead of perceiving the discussion forum in CMS as an interactive learning experience, the informant just interpreted its nature as unidirectional, unimportant and even meaningless. The informant pointed out that discussion did not exist at all as students just individually and separately answered the question at the same time so as to meet course requirement only. Because of failure in identifying any discussion or interactive elements in the activity, the informant chose to regard the discussion form in CMS as not useful for him. Perceived usefulness of discussion forum in CMS, however, could be mediated

not only by the student himself but his classmates as well. For instance, the way how the classmates practiced and responded in the discussion forum also shaped informant's perceived usefulness of discussion forum in CMS.

> "My original expectation is that (through this activity) I can realize my shortcomings from other students and know how I can improve. Even though the presentation is over and basically the result of this seminar is largely finalized, I think I can still learn something from reading these (comments) to improve my presentation skill... But so far maybe classmates are really very nice. The comments that they left are rather positive, how good and how well it is. And that makes me unable to read the things that I am expecting for. In this case, I pass those comments very quickly and just have a glimpse only... (F)rankly, the help is not that big. The comment is rather unidirectional. We have completely no response when students give us comments. No interaction exists and actually… the learning effect is actually not that big and not that obvious... If more interaction exists, actually it can serve the purpose of learning. But the discussion becomes rather unidirectional and formalization. When we just regard it as homework, its effect cannot be unleashed." (Nathan)

The informant found the discussion forum in CMS not useful for him as he noted that classmates preferred the forum as a source of delivering encouragement and as a way of maintaining friendship rather than as an activity of learning through challenging each other. Because of the disparity of the expected consequence resulted from friends' attitudes and practices, discussion forum in CMS turned out to be not useful for the informant. While the aforementioned preference and attitudes could be part of the reasons explaining for interrogating usefulness of CMS, another possible argument also be based on the belief that the discussion forum did not fit with their learning strategies.

Rather than conducting online discussion, some informants prefer having a discussion with classmates in person. In addition, some informant believed that, instead of cooperation with classmates, working alone was the most suitable learning strategy for him.

> "I think if a discussion is needed, I prefer face-to-face rather than online discussion. I think the efficiency of (online discussion) is not that big... But if it is not a face-to-face discussion, I will not search so many materials just for typing a few sentences. To me, it is not worth to do so. It also depends on whether I am interested in the topic. If it (the course) assigns a topic that I am not interested in, I am not going to search so many materials for that." (Stephen)

> "I prefer working alone for presentation, PowerPoint presentation, and information searching. Because I think the best way of learning is to find materials by yourself and then upload it. That is the happiest way. If you are targeting at exchanging ideas, I don't have time when you have so many assessments. And I also have no sentiment to do so." (Peter)

4.3.5 CMS as hypocrisy

The above two informants did not find discussion forum in CMS useful for them because it did not match with their learning strategies. They believed that their own learning strategies were much better to enhance their learning experiences and even academic outcomes. While both of them holding similar disapproval towards the discussion forum in CMS, one of the informants took further disapprobation by charging it as hypocrisy. By pointing out that examination and PowerPoint already constituted effective measures in facilitating learning and assessment, adoption of the discussion forum in CMS

was regarded as an excuse or even an affectation of the lecturers in saving their times only.

> "I think the whole thing is meaningless. I think the basic form of assessment like PowerPoint and examination already helps the most in learning. The examination can (motivate you to) study. (Doing stuff) like a forum is, actually, just copy this and copy that. Sometimes you read a paper, copy this, copy that and (your posting) is just copied (from others). It is trouble if you asked me to find some ideas and form scholarly viewpoints... As mentioned earlier, I don't think I learned some new knowledge on psychology after participating in the forum activity, typing something over there. I also don't think I learned some new knowledge on technology. So, I think it (forum) is pretended to be innovative, pretended to follow the trend. But frankly speaking, if you want to test my knowledge, examination or group discussion can do the job. You have a forum of online discussion and require us to do it at home. It may save lecturer's time. Maybe the lecturer can't do many things in lesson and want us to do more. So (lecturer) ask you to (do) forum discussion or examination during (your) free time. But to me as a student, I of course think that it is troublesome and wastes me a lot of time." (Peter)

The informant pinpointed that the discussion forum was not useful and wasted his time and effort. He thought it was just a hypocritical performance showing to students or even to the university that the lecturer was willing to adopt advanced technologies in teaching and learning activities with a view of enhancing their learning experiences. This study has discovered some inconsistency between the original intention of lecturer in using CMS and how students actually perceived and thought about it.

4.3.6 CMS as learning

Worse still, consistency with Jafari et al. (2006), some students indicated that Blackboard was not that useful for them because of its design of interface and functions. Blackboard was more suitable for the lecturers unidirectionally disseminate course materials or information rather than accommodating students to work cooperatively in there.

> "I think it is more suitable for one-way… delivery. For example, … he (the teacher) uploads materials (to the Blackboard) and we download it. That is ok. We will not change the teacher's materials, say course outline. We will not edit it together. So, at this level, it is not a problem. But when talking about mutual cooperation or exchange, the problem occurs which is… Interface of the discussion really is not friendly. Also, the way of cooperation is missing as no file can be shared. It can't meet requirement today as we are always talking about small group cooperation... It (Blackboard) can't (help students to work as) small group." (John)

From above, it shows that while the informant satisfied with some of the unidirectional functions in CMS like making an announcement, providing feedback, downloading learning materials and accessing relevant information, his perceived usefulness of CMS was hindered because of its unsatisfactory layout and capabilities. In other words, CMS was perceived as not useful because it failed to facilitate cooperation among students.

Apart from these disapprovals, however, the interactive functions in CMS also tended to be unsuccessful in drawing students interests and perceiving it as useful for them. Only a few informants indicated that interactive function in CMS, such as the discussion forum, was useful for them as it could inspire their ideas.

> "It is difficult to conduct discussion (in a lesson). Even if the teacher wants to discuss a certain topic with you, he can't. Rather, he puts it on the Blackboard. For example, asking you to think of what has happen in your life that is related to the theories of psychology. That is the discussion. I think this kind of discussion is quite good. It can reflect how others think and how I think. But I think for a large-scale class, I think this (discussion in Blackboard) is very useful when no discussion (in a lesson) can be conducted... It helps. Because we emphasize on application." (John)

> "Because sometimes the topic is a little bit difficult and I also do not fully understand that. Sometimes, when you see comments from others, you can learn from others' viewpoints and I think I can have more understanding of the topic." (Carman)

> "I think the discussion is good. Because it consolidates the learning. I need to explicitly access the Internet and find the keywords and its meaning. Because the course is about psychology, terms may be rather difficult. I need to find (the meaning of) the terms one by one. Each term may include many negative and positive ideas. (Through discussion), I can better distinguish their differences. Also, I have difficulty in understanding without example. During the progress of discussion, I can read other examples and that consolidate my understanding... I also think it is helpful." (Edith)

4.3.7 CMS as an ancillary

The above listed negative views of the discussion forum in CMS is in conformity with the previous study from Singh et al. (2010). Informants mainly

suggest that discussing in CMS could not enrich their learning experiences and motivations. Despite many accusations on the disconnection and perceived useless of CMS, it does serve at least one pragmatic role to informants. As will be suggested in the next chapter, most of the students expressed that they accessed the course information and learning materials through Blackboard. In this regard, CMS was useful to students as it helped them to store and organize the learning materials that they needed for the course. Some of the informants employed the followings metaphors to portray their perceived usefulness towards CMS:

> "It likes a library. That is when you want to find relevant information; I can search it directly in Blackboard." (Leon)

> "(I)t (Blackboard) likes an online drive. It saved all the required information for lessons which are provided by lecturer." (Rosemary)

> "It is my almighty little secretary… Not only helps me to store a lot of documents, but it also helps me to upload important times (teaching schedule) over there." (Veronica)

By analogizing CMS as "library", "online drive" and "almighty little secretary", these metaphors from the three informants enable us to understand the usefulness of CMS to students. CMS silently assisted them to store, manage and organize the learning materials that they needed in a low profiled manner. Nonetheless, CMS just performed a supporting role to enhance students' learning experience only like communication and accessing information.

> "I think it is an auxiliary… Basically, a rather important communication bridge. The tutor sends materials to students via Blackboard. Yes, these 2 to 3 roles... Auxiliary role. For example, sometimes when I want to know some comments on me or communicate with tutors, I can use

> Blackboard to do so. We can also use Blackboard to express our opinion towards classmates' presentation. I think these are auxiliary roles." (Nathan)

> "(Blackboard) helps me to copy the points that lecturer uses in PowerPoint.... Sometimes, the lecturer will introduce some theories... some points or important ideas when commenting on some issues. I will access Blackboard, download the PowerPoint, copy the main points, put them into my essay and see how to interpret them." (Kenneth)

Instead of performing an expectation from the institution and the lecturers in using CMS to enhance students learning experiences, the above saying suggested that, in the mind of students, CMS failed to serve her intended goal. Instead, CMS could only assume an ancillary role by helping students to manage and organize their learning materials. Since most of the informants perceived CMS as boring and not useful other than assuming an ancillary role, informant even suggested that he did not have any expectations on it.

> "I think (discussion forum is) a rather interesting tool inside a very boring platform... Yes, a rather interesting tool. That is, usually for online activity, in the past, I just think it was about test, quiz and the likes, that is, you don't have the interest to do these. But for discussion, maybe I did not think of it before. It can facilitate the exchange of our ideas. But of course, using text to exchange our ideas is very rigid. It is not as interactive and interesting as the discussion in the seminar... But it (discussion) is already an interesting tool in such an icy platform (Blackboard)... Because it (Blackboard) can only do these things. And you know that it can't have a breakthrough in the foreseeable futures... When you always do these things, you will not have any expectation for the platform." (Benson)

Students' perceived usefulness of CMS can also be unveiled from their behaviour that I observed when I acted as a teaching assistant of some undergraduate courses at PolyU. For instance, in one of the courses, the lecturer adopted pedagogy of blended learning, which can be interpreted as "combine face-to-face instruction with computer-mediated instruction" (Graham, 2006, p. 5). In other words, conventional lecturing mode of teaching is integrated with computer activities within and beyond classroom environment, with an aim of enriching learning experiences and motivations of students. For the course, apart from attending regular 3-hour lecture per week, students were requested to write their comments and responds in around 300 words on weekly question that was available after each lesson, and then upload their writings to Blackboard before next lesson as "reflective journal". One of the main purposes of doing so was to facilitate peer learning among classmates. Even though the activity of reflective journal was constituted as a part of assessment criteria, most students showed a lack of incentive to learn from the activity. Based on my experiences, observations and informal chatting with some students, like aforementioned, students did not really engage much with the journal writing. They spent very few time and efforts to prepare for the journal, and did not bother to read or respond to others' writings. Some of them even just completed all the writings at the end of the semester by using less than half an hour. While the finding from my observation was in inconsistency with Mezzanotte (2017), the above suggested that students' participation in the activity was basically driven by academic performance.

As suggested, while the majority of informants perceived CMS easy to use, they did not use it more because of this reason. Meanwhile, most informants perceived CMS not useful for them as it failed to connect and help them directly acquire what they wanted. Nonetheless, students had no autonomy in using CMS. Under this circumstance of being compelled to use easy but not useful CMS, students' perceptions of and attitudes towards CMS could not be fully explained by TAM, and their rational behaviour under the aforementioned setting had to be taken into consideration. As students were living under the influence of socially desirable behaviour of pursuing university qualification, their perceptions of and attitudes towards CMS tended to regard it as an unwillingly compromised and

feasible media for them to achieve their targets of graduation only when it could be deployed, utilized and exploited to do so. In other words, CMS was treated by students as their pawn. Students would access CMS only when they found it could help them to secure a bachelor degree, and vice versa. Even at the time when CMS could be taken advantage of, students also tried to minimize their time and efforts over there by adopting the strategy of not to do.

Chapter 5

CMS as pawn

5.1 CMS as a path

Influenced by socially desirable behaviour, students were eager to have a university qualification and that largely explained the reason why they pursued university study. As PolyU opted CMS for her teaching and learning activities, students had no autonomy in using it, for instance, when the lecturers chose to use CMS to disseminate course materials. However, CMS itself was not appealing to students. Even though students found it easy to use, it was not useful for them as it was disconnected from their daily life. Under such circumstance, this study has argued that students' perceptions of CMS cannot be fully explained by TAM but can be mediated by some pragmatic considerations. Subjected to the subjugation from the socially desirable behaviour and constraint of the university learning, this study has discovered that students treated CMS as their pawn and utilized it to achieve their longing pragmatic considerations. In this chapter, those pragmatic considerations can be further categorized and presented as regarding CMS as a path to more marks, better academic performance, (better) qualification and fulfil socially desirable behaviour. Meanwhile, students also adopted the strategy of not to do when using CMS as a form of passive resistance and opposition.

5.2 Perceived CMS

5.2.1 Path to more marks

Even though perceived CMS not useful for them as it was disconnected with their daily life and was not motivated to frequently using it even it was easy to use, students had no autonomy but were compelled to use CMS under current setting of teaching and learning arrangement. Under such circumstance, students'

usages of CMS were out of necessary and pragmatic motivations. One of the motivations in attaching students with CMS was earning more marks. Earning marks tends to be a vivid and important consideration in pushing students using CMS, no matter how it was disconnected from their daily life. It was comparatively rather an easy and secure way for students to earn marks through participating activities in CMS than in other parts of assessment criteria such as sitting for examination or writing assignment.

> "Because I don't need to spend so much time to do revision or do the assignment and then I can earn marks easily and achieve the passing requirement in the course. I think it is ok." (Sally)

To the informant, participated in activities in CMS like discussion forum probably was not mainly for learning purpose but aimed at securing marks for meeting graduation requirement. CMS thus provided a clear and feasible path for the informant to earn marks that she earnestly needed. Even though the informant could also earn marks through sitting for examination and writing assignment, she had to bear more risks and spend more efforts and time to do so when compared with participating activities in CMS. No matter how much effort the informant exercised, it was possible that she scored a poor grade in the examination. Probably, she also needed to spend a lot of time in searching for relevant information before writing a paper with quality. However, when compared with examination and assignment, earning marks in CMS was not that difficult. In other words, CMS provided her a lower-risk opportunity to earn marks in an effort-saving manner. Because of that, the informant was passively willing to participating in activities in CMS even though it was disconnected with her daily life. Through gradually and steadily earning more marks in CMS, informants could also achieve a better academic performance.

> "When the length is longer, the content is richer. When it is richer, it is much easier for you to earn marks... Important.

> It is important. Because it carries 20 marks. It is already 1/5 (of the course) … But if you perform better in the discussion, it is easier for you to earn marks than in quiz. So, you will be more active or enthusiastic to answer more... Maybe when semester commences, you set a goal of having a high GPA, over 3. When you have this grade, you will feel very satisfied. You will think you make it and has a sense of accomplishment as you already achieved your goal. For the course that I do discussion forum, it is one of the courses that I get B+, not just B but B+. The course is on psychology. It is the only course that I get B+." (Robert)

By explicitly highlighting "I get B+, not just B but B+" and "(i)t is the only course that I get B+", the informant felt proud of his strategy and achievement in transforming CMS into his own piggy bank which not only accumulated marks in the course but also helped to contribute a better GPA result that he treasured of. The path of CMS in helping to earn more marks was so vital to the informant that it will affect him whether or not he participated in activities in CMS.

> "Because marks are the motivation for participating in the forum. If you do not have any rewards after responding, that is without concrete rewards, you will not make respond. You may want some knowledge enrichment with more spaces for imaginations. But it is not the time to pursue these things. If I cannot earn marks, I will not participate." (Robert)

The above demonstrates that earning marks can be one of the elements in motivating students in participating activities in CMS. In addition, earning mark not only can make a difference in students' participation but also could make students having different attitudes towards the activities. Activity in CMS that had more percentage of marks could make students work more seriously.

> "Because once it carries marks, I think the whole thing becomes very serious. It seems that the discussion is… the feeling is quite different from having serious in-class discussion. It seems that you have to submit something with good quality. When you have time to do research and find information, it seems that you can't submit something and discuss it perfunctorily... You may need to find all supporting evidences before it is done... After all, I must participate in the discussion when it is compulsory but does not carry marks, but students participate just because it is compulsory. They just write something perfunctorily as it does not carry marks." (Leon)

> "Because students just do it perfunctorily. This is my views. Yes, (students) just do it perfunctorily and that is, without asking what kind of question I should think of... I think students nowadays are rather realistic. They will think that… if it carries marks, naturally I will do it better. If it does not carry marks, why should I spend so much effort to do that?… Once fulfilling the requirement, that all." (Jackson)

The two informants expressed similar attitudes and positions over earning marks. They would exercise more efforts when the activity carried more mark; otherwise, they just took perfunctory attitudes in satisfying the requirements only. Here, being compelled to use CMS played an important role in shaping informants to think in this way. As suggested, informants already felt CMS disconnected with them. When students could not get rid of CMS, percentage of marks could make a difference for students to consider if CMS was deserved to be exploited as a pawn by them to achieve their goal of graduation. If it did, even CMS was perceived as not useful for them, students still passively spent more efforts and time in there. Otherwise, students just used minimal efforts and time

to complete the required tasks in CMS without any extra contributions and personal attachments. For students, the nature of earning marks already changed. Earning marks no longer reflected their learning performances but just served for their pragmatic goal of ensuring their graduation from university and earning university qualification. Influenced by the socially desirable behaviour of earning university qualification, students became more pragmatic especially when they were compelled to use CMS. Without marks, some informants even had no motivation to use CMS. In other words, whether the activities in CMS carried attractive marks or not could make a difference on students' participation.

> "If that (activity) does not count any marks, it is meaningless for me to do so... If I have to read others, I can read papers from Google Scholars and it is better than reading the so-called opinions from those classmates." (Peter)

> "…… after all (I) need to work or (I have) other things to do. I am not that willing to learn... There is a social norm saying that university life is not for studying. These 4 years are for enjoyment. Under the mediation of this social norm, (I) may not be willing to finish this assignment or work especially (when) the topic is rather boring. To me, I may not have much motivation leading me to do this." (Derek)

> "Basically, we all want to graduate, we all want to get a pass. If the interaction becomes a must (compulsory), carries many marks, of course, we will do this... We need to get a pass." (Nathan)

To the informants, earning marks tended to be the sole and vital motivation for their participation in the activities as it helped for their graduation. Without marks, the informants would choose not to participate at all. The term

"so-called opinions" not only further unveiled informant's attitudes towards the activity but also was likely to disclose his position towards learning and even his perceived value of his classmates in his learning process. Influenced by the pragmatic environment, even when student planned to show her contribution to the activities in CMS, she would regard her efforts as useless and meaningless and that made her give up her plan.

> "I access discussion zone because of the marks... I think it is the problem of the atmosphere. Because in the past, I went overseas and exchanged there. They used Canvas, a system like Blackboard. But the atmosphere at that time seemed that they were used to discuss. If someone missed a note, he or she may ask others to share notes through the discussion zone. Or, before mid-term, I didn't understand this question, and someone would answer it. Then, no matter it was lecturer or student, the response was very active and helpful. Based on my overseas experience, the information that I got from the discussion zone was rather more, very useful and beneficial to my learning. About learning atmosphere in Hong Kong, I think when it does not carry marks, no one will leave a message in the discussion zone. Even when I am interested in using discussion zone, it cannot serve its purpose (as no one replies me). Thus, it makes me believe that when (the activity) does not carry marks, I will not access it (discussion zone) at all. If I do not need to submit some assignments and I am not mandatorily required to leave comments in the discussion zone, I will not take initiative to access there (discussion zone)." (Samantha)

As suggested, under the influence of pragmatic environment and being compelled to use CMS, activities in CMS like discussion forum failed to achieve

its intended functions. Instead of engaging students to work cooperatively and enriching students' learning experiences, students just perceived those activities in CMS as one of the many treasurable opportunities of earning marks in the entire university study that could eventually help them acquire a bachelor degree. Such pragmatic function of activities in CMS was so appealing to students that they could not afford to miss it. Meanwhile, because of having different priority ranking between earning marks and learning, some students not only treated activities in CMS as homework but also wished to spend as fewer efforts as they could.

> "Personally, I think… part of it (discussion in Blackboard) is quite meaningless. Because for example, the discussion is associated with marks. Obviously, some students participate in the discussion because of the marks. The discussion itself maybe malnutrition. I remembered a professor because I study IT, a professor posts a question asking which operating system we like and the reason behind that. We all post our answers, say I like Mac OS, I like Windows and so on. They say 1 to 2 sentences on that. Actually, I can see we just unidirectional respond. We are not really discussing... Malnutrition occupies more... I guess it occupies 80%." (Albert)

With a view of fulfilling the requirement and earning the marks, my experiences and observations suggested that students tended to exercise minimal efforts out of pragmatic strategy. While earning marks becomes a driving force of completing activities, percentage of mark earned from the activities personated and converted as either an explicit or implicit indicator for students in reckoning, judging and apportioning the amount of time and efforts spending on them. The attitudes, in return, associated with the general pragmatic practices and concepts in society.

> "I think it is related to the atmosphere. For example, current lecturing style or the whole curriculum style is that when the semester commences, in the first lesson, you already have the course outline telling you the distribution of marks. Students will then calculate how many marks they need to get in certain tasks before getting a pass (in the course) and how many marks they need to earn in an examination before getting a pass (in the course). Actually, the whole thing is driven by marks. It is not difficult to imagine extending (this idea to) the discussion in Blackboard. If it carries marks, students can earn marks from there. Because the course itself demands you to earn marks." (Sally)

The informant explained that reason for students to stress on earning marks was that they had to comply with all the academic requirements and fulfil them. As the course demanded students to earn marks by completing certain activities or assignments, they had no alternative but to strictly follow it. Earning marks thus became their survival strategies in getting a pass or achieving a flying result in the course. Since almost every course in all university were practiced in a similar manner, this practice gradually mediated students' attitudes of marks in their studies. On one hand, the informant actually proposed an interesting argument and phenomenon that students were innocent victims in society as they were told, required and moulded by the setting in which they were situated at to place a high priority on pursuing academic outcomes such as marks. In return, academic outcomes were then translated and interpreted as performances both academically, and more important, individually. On the other hand, under this context, TAM's perceived usefulness failed to offer an adequate understanding of students' perceptions of and attitudes towards CMS.

5.2.2 Path to better academic performance

In a society like Hong Kong, because of the concerns over accountability and transparency, values and performances are always converted into a quantified

statement. In other words, almost everything is and has to be measurable. With regard to tertiary education, for instance, universities in Hong Kong are said to stress on university rankings (Holmes, 2017; O'Sullivan, 2016, pp. 135-137; PTU News Reporter, 2015; Soh & Ho, 2014, pp. 783-784; Stack, 2016, p. 41). In addition, similar with the practices in other universities, one of the criteria for evaluating teaching quality in PolyU is through Student Feedback Questionnaire, in which certain scores will be generated as an indicator for teaching performance (Educational Development Centre, 2013d). All these figures tend to implicitly assign certain performance, value, judgement and even label behind the involved institutions or persons. In the same vein, students' learning performance in courses is also measured, quantified and presented in term of the grading system. Students' performances in various assessments are converted to certain grades to "illustrate" their academic outcomes in the courses (The Hong Kong Polytechnic University, 2018g, pp. 101-102). As students, for the sake of graduation, they have no other option but to comply with the grading system. In return, that shaped students' perceptions of and attitudes towards grading system.

> "Apart from some design courses, you have courses requiring memorization and examination. Actually, they even have better criteria in evaluation …… When you sit for the examination, if you know these ranges (of knowledge), you may be able to get a certain grade. It is then able to evaluate the knowledge that you learned. GPA is thus able to reflect the knowledge that you learned in this year. Of course, it will not be accurate. But say if you get 3, which mean you worked hard in this year. Your performance is ok. You are able to absorb the knowledge that you learned." (Gamila)

The informant stated that the grade that he received became a measurement of the effort he put in before. No matter how the informant went through his learning experiences, he needed to be comforted and asserted by the grade. The assertiveness and the value of grade could occupy such a high

position in the mind of the informant that it could even outcaste learning.

> "I think it may because the whole society values mark a lot. Lecturer wants to give you higher marks and teach you the most knowledge in a limited period of time. Time is inadequate to do a discussion or to further elaborate the core concept. Because of over valuing on mark and achievement, (lecturer) just focuses on indoctrinating stuff to students and thus emerge this pedagogy." (Samantha)

The informant believed that, with a view of earning marks and achieving a better grade, indoctrination and memorization could be feasible at the expense of understanding and academic advancement. The informant's believed on better grade, however, could also be mediated by his parents and the society he was living at.

> "Sometimes it is the expectation from the society or the stress from the peer. No matter (from) teachers and family, they always think that if you can earn higher marks or get a rather decent job, it is something equivalent to success. I do not want to let them down. On the other hand, when classmates around you eager a lot on mark or studying, you have a feeling of lagging behind if you don't work hard... In academic field especially in university, when we meet our classmates, especially those who are not close to us, most of the time our conversation is limited to learning, results or the project that we are responsible for. If I do not prepare well in this area, or turn out my result is not good enough, my feeling is that we don't have a topic for our conversation." (Samantha)

By linking mark and achievement, the informant suggested that it was not only about his personal performance in the course but also associated with

the expectation from his parents and even the socially desirable behaviours from the society as well.

5.2.3 Path to (better) qualification

Earning mark not only important to students in reflecting their academic outcomes in the courses but also carries a vital message to both students and the society. Marks can affect whether a student can graduate or not.

> "(S)ome students just type it perfunctorily... it does not carry a lot of marks... If you earn higher marks in other parts (of assessment), say you score higher marks in examination and quizzes, it helps (to improve) your grade... Because I wish I can graduate." (Jocelyn)

From above, the informant suggests that she needs to secure certain marks before he can meet the graduation requirement. Like practices in other universities in Hong Kong, in PolyU, marks are represented in grade and then converted to GPA (The Hong Kong Polytechnic University, 2018g, pp. 101-102). Students, in general, cannot graduate if their GPA is below 2 (The Hong Kong Polytechnic University, 2018f, pp. 4, 53). Therefore, mark itself was more than just merely reflecting her learning outcome in a course but also affecting whether she could graduate or not and which academic honour she could get. Academic honour could have a lot of influences on many areas, including the possibility of further study.

> "I think an inference is in this way. If you are affected by the grade, actually, it also affects your overall GPA... Then, GPA also affects your honour (title). ……. Actually, honour (title) is quite important to students indeed. For instance, a difference already exists between 1st honour (title) and 2nd up (honour title)... (G)enerally people think that if you get a higher honour (title), you are able to find a

> better job, or it can facilitate your future study. When applying for a Master (Degree), a person with 1st honour (title) and another person with 2nd up (honour title), it seems that the person with 1st honour (title) has a bit of advantage... (N)o matter studying or working, it seems that having a higher honour (title) is a bit of advantage to me... In general, I also think about it in this way." (Jackson)

The informant believed that GPA was one of the significant factors in deciding whether he could have a chance to study a postgraduate programme in the future. GPA thus became a tool to help the informant to gain competitive advantages over others. What is more, having a high GPA result not only could fulfil the demand for admission requirement for postgraduate study but also could manage self-impression over others.

> "Actually, I am not keen on having (second) up or (second) down. … (I)t is ok when you reach the standard that we generally accept... When you go to work, despite qualification is basic, it is no good to be very low (result). Level of second honour can manage most of the demands in society... First, when you attend the interview, your impression will not be very bad. Because you are belonging to that level (good result). Second, if you earn second honour and if you are interested in further study in the future, when you apply for Master, as I heard the sharing from my friends, it seems that it is very difficult to further study in Master (Degree) for those titles lower than second honour." (Kenneth)

Even the informant himself did not concern much between the classification of second up honour and second low honour; he was convinced that GPA did make a difference by establishing goodwill when looking for a job or applying for further study. Having a better GPA could thus help him to stand

out among other candidates and secure a chance of interview. Because of that consideration, GPA had become a pragmatic tool for managing self-impression over others. What is more, GPA could also be made use of to impress and satisfy the expectation from the society. It was necessary especially when searching job.

> "I think why you study university is actually for the final GPA... (Y)ou work so hard for your homework because you just target at the mark. The final mark is one of the requirements for searching job... Because I heard others saying that …. he could not find a job. One of the reasons is that his GPA was not high, and his CV was poor. And so, I think this (high GPA) is one of the things that must be possessed. Others are also important, but I think GPA cannot be neglected." (Fanny)

Through proclaiming "I think why you study university is actually for the final GPA", the informant linked marks, GPA and job searching together. The proclamation tends to suggest that driving reason for the informant to pursue university education was to facilitate her to look for a better job in society. Without an outstanding GPA, the whole process of job searching would be hindered and become a difficult one. While such belief was in return be impelled by the socially desirable behaviour of acquiring university qualification, it also shaped the ways of the informants in utilizing and exploiting CMS. Again, TAM does not take social context in which an individual is situating at into consideration.

5.3 Usages of CMS

After reviewing students perceptions of CMS, similar with the finding from Chow et al. (2018) and A. Yuen, Fox, et al. (2009), this study has discovered that most of the students tended to use CMS mainly for accessing

learning materials, announcements and feedback from the lecturer, participating in assigned learning activities such as discussion forum and online test and uploading assignments to the lecturer. No matter what functions or supporting services in CMS students used, students were compelled to use them. Students had no alternative but must use CMS when the lecturers adopted it in teaching and learning activities. Under this situation, their usages of CMS were in line with their attitudes towards CMS as their pawn in helping them to acquire university qualification. The followings are a brief account.

5.3.1 Learning materials

Accessing learning materials was the most popular usage of CMS among students. This is consistent with findings from previous studies such as Back et al. (2016), Carvalho et al. (2011), Machajewski et al. (2018), Malikowski (2008) and Vovides et al. (2007). All informants told me that their lecturers would upload learning materials such as course outlines, assessment criteria, lecture notes, reading lists and the likes to Blackboard. For various reasons, students always needed to access learning materials. Besides using a desktop computer, some informants connected Blackboard with their information and communication devices such as laptop, tablets and even smart phones to access those learning materials when they were attending lessons, preparing presentations and assignments or doing revisions. Some of them directly marked notes on their devices. On the contrary, some informants preferred to print out the learning materials before the lessons. In this case, however, most of them chose to print the learning materials almost at the last minute before the lessons, arguing that their lecturers either always uploaded the learning materials late or frequently amended the materials. Because of the frequency of using CMS to disseminate learning materials, imaginations among some informants already equivalented main purpose of CMS as a form of channel or media in distributing and storage of learning materials such as requirement of assignments and lecture notes.

> "(Blackboard likes a) pile of assignments... Because most of the time when (we) access Blackboard, (we) print notes and read assignments' requirements. So, when talking about Blackboard, I will remember (associate with) assignments." (Pauline)

> "(Blackboard sounds like) a list of piled notes... because it lists all the information and PowerPoint that we need for a lesson... Every time when we access (Blackboard), the main reason is that our lecturer uploaded some notes, updated information or some essential readings for our assignments or notes that we need to print before the lesson... Blackboard, this kind of notes platform." (Kenneth)

By delineating it as "a list of piled notes" and a "pile of assignments", the above two informants already varnished and visualized the status of CMS in their minds. These portraits were likely to constitute informants' perceptions of CMS as a "notes platform" that fruitfully contained many learning materials and assignments. Locating those contents probably was the major reason for the informants to access CMS because they were important not only for attending the lesson but also vital in earning marks from assignments and examinations.

> "I already try to wreck my brain to think of how Blackboard helps my study... But I still think it is just a platform to get materials." (Benson)

> "My experience and mind are that it is just for downloading lecture notes and a tool for submitting homework." (May)
> "Because actually all… most of the lecturers upload lecturer notes, PowerPoint or even homework submission is also through Blackboard... Usually before the lesson... (t)o

> download new lecture notes, PowerPoint and the likes." (Ada)
>
> "I think it is just a platform for me to download the stuff (learning materials) to read." (Fanny)
>
> "Because in my perceptions, the main purpose of using Blackboard is to get notes." (Gordon)
>
> "Solely upload PowerPoint, upload lecture (notes), upload materials" (Stephen)

As suggested above, the informants indicated that they did access lecture notes, PowerPoint and the likes from CMS especially before attending lessons or preparing assignments. In fact, the image of CMS in accommodating learning materials and assignments was so strongly consolidated and deeply rooted in the mind of informants that some of them even confessed it as a stereotype.

> "Because Blackboard already stereotyped by me for accessing these lecture notes, outline, information on the study." (Benson)

As students could access CMS and locate the learning materials almost at any times in any places, the role of CMS in the mind of some students served as a cloud platform or online storage to save and manage the course materials they needed while relieving their attentions on them. Some of the informants expressed as follows:

> "Because many teaching materials can be found over there (Blackboard). (I)n many cases lecturers usually do not print PowerPoint or prepare hard copies for us. We need to print or access them by ourselves. Or they (lecturers) upload some teaching materials other than PowerPoint over there

> (Blockboard) and let us read... To my learning, it is a rich place... Maybe actually it (Blackboard) is just a place for reading and getting notes... It is the notes that help me... But it (Blackboard) is the place of storage." (Elaine)
>
> "(I)t (Blackboard) likes an online drive. It saved all the required information for lessons which are provided by lecturers... It saved all the official requirements, and… It likes a drive... At most, it is a drive with notification." (Rosemary)
>
> "It likes a library. That is when you want to find relevant information. I can search it directly in Blackboard. Actually, it is very convenient. But to me, as suggested, the so-called ……. doing tasks and doing assignments, these tools are not useful for me. The role of Blackboard to me is a library where it stores somethings... Sometimes after downloading (lecture notes), I directly print them out as hard copies. Even when you lose it, you are still able to find them in Blackboard... Information stays in Blackboard for a long time... Even you already studied the course, you are still able to access it... If you want to review, you can read relevant information in Blackboard... I think it is quite convenient." (Leon)

By using the word "storage", "online drive" and "library", the informants not only pointed out their reasons to access CMS was to locate learning materials but also suggested that CMS was actually be treated and deployed by them as an easy and convenient way to store and retrieve materials whenever necessary. Whenever CMS could be utilized as a pawn and helped informants to earn marks, informants would then access to CMS and perceived her to assume the captioned roles for them.

5.3.2 Submitting assignments

Besides accessing learning materials, submitting assignments was another common service supported by Blackboard that most used by the informants. Usually, students were required by the lecturers to submit their written assignments, and in most of the case, it was their term essays, to Blackboard through its supporting service of Turnitin. Students were told that they had to upload soft copies of their assignments before the designated due date or they would not able to submit their assignments or mark penalties would be levied. When submitting their assignments, students could receive a similarity report generated from Turnitin which was generally interpreted as an indicator to accuse committing plagiarism. Depending on the desires of the lecturers, in some cases, students could base on the similarity reports to revise their assignments and resubmitted them to Turnitin again. Thus, to some informants, Turnitin was associated with a due date and similarity reports.

> "(W)hen submitting (homework) to Turnitin, actually, the time (open for submission) is limited. A deadline is set. We work very hard as we need to meet the deadline. It is also a kind of memory... For example, (I) need to submit homework. In most of the time, (the deadline) is set at 11:59 pm, we called it 2359. In many cases, I completed the homework 1 hour to 2 hours before the deadline. Some students may even complete the homework 10 minutes before the deadline. It was close to mark deduction." (Jackson)

> "……. (T)he first thing that I can think of about Blackboard is that it has course information and Turnitin. And then the percentage... (t)hat is a similarity." (Tiffany)

Some informants, especially those part-time students, showed their tendencies and preferences of submitting their assignments through Turnitin as it could save their efforts and travelling time while allowing them to have more time to prepare the assignments.

> "In my perceptions, Blackboard is homework submission. Sometimes (through) Turnitin... We submit homework in Blackboard... I can submit homework through the channel of Turnitin and I do not need to go out to submit homework." (Nathan)

On one hand, the captioned sayings show the ways of how CMS helped students. Owing to various reasons, completing and submitting an assignment on time was a challenge to some students. Students would struggle to the last minute before winding up their works. Even when students finished their assignments well before the due date, it was inconvenient for some of them to travel back to the campus just for submitting their works, particularly for those part-time students. The supporting service of Turnitin in CMS thus facilitated students to submit their assignments to the lecturers by offering them with a more efficient, effort-saving and economical channel. On the other hand, the above denotations also disclosed students' value in submitting assignments on time. In return, that could be associated with their concerns on earning marks. After all, when they submitted their assignments late, their academic outcomes would be affected and that would also affect their graduation.

Despite the preference, submitting assignments through Turnitin could also generate some concerns among students. The concern, however, was associated with something other than the due date, like administrative arrangement.

> "In the past, we submit (our homework) there and lecturer read it himself even though it (Turnitin) would tell us how many percentages we had in plagiarism or something like that. But we were surprised by the homework that we submitted yesterday. Because the lecturer said, after we

> submitted the homework in Turnitin, we had to email him. But when we refer to the guideline, that is the guideline on submitting homework, it requires us to generate a Turnitin… don't know the name of the report… Because we never alert of that report in the past. So, there is some difficulty in here… The report should be… We submit homework to Turnitin. Then in its interface, the left-hand side is your homework while the right-hand side (showing) different percentages telling you that this paragraph comes from certain places, that is the sources. And then how many percentages of plagiarism... And this report is, at the bottom of the right-hand corner of the interface, suddenly it has a place saying that a text-only report can be generated… Yes. After generating the report, … (t)he lecturer requires us to send the text-only report to him through email... This was a breaking news, indeed. Because in the past, some lecturers required us to use Turnitin but did not ask for the report. Yesterday course was the only exception… Classmates said we had to submit this report. We then explored on how to generate the report." (Ada)

The informant suggested that the concern mainly came from the exploration in locating and generating the report that she had to hand in together with her assignment. Nonetheless, even though some concerns could occasionally arouse, generally there were not many difficulties for students to submit assignments through CMS.

5.3.3 Announcements or feedback

In addition, checking lecturers' announcements or feedback was another common usage among informants. When there were some important announcements such as change of classroom venue, cancellation of the lesson, modification in certain course arrangements and the likes, lecturers usually

disseminated the messages to the students through the function of announcements in Blackboard. When accessing Blackboard, students would be alerted on the announcements as there was a red signal prompting up. On top of making announcements, some lecturers would also provide feedback to students. In some cases when students post their messages or submit their assignments to Blackboard, lecturers will give feedback to students directly in Blackboard. The feedbacks could be either personal or available to the whole class.

> "(Lecturer) uses announcement when there is some news, for instance, the lesson has some changes... Seating plan of midterm also makes available to us through the announcement." (Peter)

> "Lecturer has some important announcements, and he announces them in Blackboard. Say, a certain lesson has to be cancelled. He announces it in Blackboard." (Rosemary)

> "Sometimes, when the tutor wants to reflect his opinion on homework, the tutor also goes through Blackboard and tells us how to improve and make it better." (Nathan)

> "(S)ometimes you need to check the special arrangement of lecturer, maybe postponement in submitting the paper, or other announcements. We can see it in Blackboard." (Jackson)

> "We wrote essays and then he (the lecturer) gave feedback. He then uploaded the feedback records (to Blackboard)." (Fanny)

From the above descriptions, attention should be shed on students particularly showed their interests and concerns on those announcements or feedback that were directly related to either arrangement of their learning activities or their academic performances and assessments in the courses. One of the possible explanations was that these announcements or feedbacks, in return,

could affect students in earning marks. In other words, students' interests and concerns on those announcements or feedbacks were also driven by pragmatic motivation and that CMS was exploited as a pawn to satisfy this purpose.

5.3.4 Discussions

What is more, some students used Blackboard for discussing purpose. Detailed arrangement varies in different courses. However, generally speaking, their lecturers made use of the discussion forum in Blackboard and opened a post there. Then, with a view of enhancing students' learning experiences and consolidating their learnings, the lecturers would post some topics that were relevant to the subject contents. In some cases, some readings were assigned for students in advance whilst in other cases, students were supposed to engage in some information searching before participating in the discussion. Students were required to post messages and respond to other classmates, either individually or as a group, beyond lessons.

> "Actually, the lecturer uploaded questions we discussed in the lesson to Blackboard and let us read them again... After the presentation in the seminar, we had an online discussion on the topic of the seminar. The lecturer opened a discussion forum, online platform... In Blackboard, we read the lecturer's materials and then discussed instantly. Later on, we gave our feedback on Blackboard and shared with others." (Elaine)

> "At that time, the discussion was on the topic of operation condition. We exchanged opinions and discussed on how we can apply (operation condition) that we learn from university education or learning in daily life. Then, I extend my idea based on others' views." (Derek)

> “After attending the seminar, he asked us to have a discussion on the topic of that lesson and then we gave our comments and replied to others.” (Carman)

> “Lecturer posts questions there and asks us to discuss and then replies. The lecturer also encourages us to post our questions and discuss with classmates.” (Albert)

When students participated in discussion as a group, usually they did not have autonomy in forming groups by themselves. Instead, mainly for the sake of administrative reason and timesaving, a number of the groups and its group members were assigned by their lecturers in advance. As a result, it was possible that some of the group members never knew each other or met in a lesson, especially for those courses with a large class size and offered to students from different disciplines.

> “(The format of) discussion is that the lecturer divides students into different groups. Students within the same group may come from different classes... An issue or materials will be given to a group. Then you have to comment based on the issue, around 1 to 2 times. When other groups respond to you, you need to make further comments 1 to 2 times.” (Stephen)

> “Many questions have been set by the lecturer. In the beginning, he allows us to choose three preferences for the questions. Later, according to our preferences, he assigns one question to us. Then, it is grouping. If students in the same group are having the same question, it has a forum... You need to discuss the question in the forum. You may need to search for information or examples online to support you... You can make respond when other people say something.” (Ida)

> "It has a group discussion forum and you can discuss a question with students. Because the lecturer already divided us into different groups before. Yes... Divided into groups and then discussed a question... You can write your opinion and your comment on the question." (Robert)

Discussion forum in CMS was partly supposed to enhance students' learning experience. However, like forming the group, students also had no absolute autonomy when performing discussion. Since most of the time the activity of forum discussion in Blackboard constituted as a part of assessment criteria, usually there were some rules on the frequency of participation and the number of wordings of students' posting and respond. In certain cases, the quality of the posting would also be assessed. Students' failures in either participating or having meaningful contributions to the discussions would affect their academic performances in the courses.

> "Through the system, the course assigned you to a certain group. Just like the Internet forum, you needed to discuss with other students in forum and exchange ideas on psychological topic. We never met other students in the whole progress. We had no idea how others looked like. I just used a computer to type a piece of document and uploaded it to the group forum in Blackboard. And then other students read my opinions and typed something to challenge or support me. The whole progress kept going. Tutor graded us based on our writings." (Peter)

> "There are many discussion sessions in this course. The lecturer divides the whole class into different groups. Each group has a discussion board. You need to type something and discuss with other students over there... Because it

> carries marks... Once you participate in the discussion, you earn marks. If you don't, your marks are deducted." (Leon)

> "Discussion is set up in Blackboard... It also counts marks. We have to leave comments and make responses. We have to leave comments before we can earn marks. We express our viewpoint on a certain topic, and then comment on others." (Benson)

It is worthwhile to note that some students indicated that their participation in the discussion forum in Blackboard were motivated by assessment. However, students, as argued in this paper, exploited CMS as a pawn which could help them to gain marks and earn university qualification, while passively and even unwillingly, satisfying assessment requirement that they could not get rid of. As compelled, students adopted different strategies in fulfilling the assessment requirement. The adopted strategies, in return, were based on students' understanding of the assessment requirement. Some students tended to exercise a lot of effort in the discussion not because they were attracted by the activities but because of their fear of not able to earn marks as they had no clear concepts on the instruction of the discussion.

> "Actually, I don't know. The lecturer does not state how to calculate the marks... He just tells us to do it. But the discussion accounts for… 20% of the course... But he does not state how to calculate the marks. So, students just do it very hard as we don't know how the marks are calculated... For example, because there are, I can't remember, it seems 8 to 10 students in a group. Then, normally you write something about your opinion. But what it means by doing it very hard is that you reply to every message... Yes, you reply to the previous message. For example, he says this student opinion is very correct. And then he bases on this idea and adds his discourse. Something like that." (Edith)

The above informant tended to have no clear idea on the detailed requirements of the discussion in CMS. With a view of ensuring CMS could still be his pawn in helping him to earn marks, the informant thus just engaged in the discussion as many as possible. Having identified the activity of discussion in CMS as an opportunity of earning marks, some students tended to adopt another form of a rather safe manner in the discussion activities.

> "Because I think students' comments can make me respond further. When I read the comments, I think there are chances for me to earn marks. So, I make respond... (I)t shows your understanding of the topic... When someone comments on my response, I want to respond to others as well... have a chance to earn marks." (Robert)

> "… I heard from most of my classmates that you have to comment at least 4 times... I comment 5 times... To play safe, I do 1 time more. So, 5 times... We are just having attitudes of earning marks, just doing for 4 to 5 times and earn 20 marks. For us, we don't have much intention to bring more from what we have learned in the lessons. We do it just because we have to do it. For most of the students, the meaning of this discussion exists in this way." (Leon)

Students did not perceive the discussion forum in CMS as a way of enhancing their learning experiences. Instead, they were "just having the attitudes of earning the marks" through satisfying the course requirement. As they understood the requirement of the activity, they tended to adopt a rather safe approach by completing a bit more than the requirement. By doing so, they needed not to exercise a lot of efforts in the activity which they were compelled to do and would still achieve what they wanted. Meanwhile, some students even paid minimal efforts in the discussion activities.

> "Because of the need to earn marks, students have to response 1 to 2 times in a slack manner. So-called having read some materials and then giving some little response. But it (the course) does not require you to respond to others' question. It just comments on an issue and types in over there (Blackboard)... because its mark is not high… I will not spend a lot of time in a task that carries such a small proportion of marks." (Stephen)

Since the activity of discussion in CMS just accounted for a small part of the assessment in the course, the informant explicitly stated that he just regarded it as a task that he was forced to complete. He thus spent minimal effort in completing the task as he believed that it was not worth for him to spend a lot of efforts and time in doing it. No matter what strategies students adopted in participating discussion in CMS, however, it showed that students just treated CMS as their pawn to earn marks and acquire university qualification.

The above denotations on doing discussion activity in CMS suggest that students did develop certain strategies in coping with course requirement. Such a strategy not only reflected the students on how to perceive the activity itself but also unveiled their perceptions of and attitudes towards CMS. Similar usage of CMS and students' adopted strategy could also be found in the previous courses that I performed as a teaching assistant.

5.3.5 My observations

In general, usages of CMS found in this study is consistent with the observations from the courses that I performed as a teaching assistant. In all of the courses that I was the teaching assistant, students had to access learning materials such as course outlines, PowerPoints, assessment rubrics and so on from Blackboard. Based on my observations, some students preferred to print the lecture notes in advance and bring the hardcopies to the lesson. On the other hand, some chose to locate the notes through accessing Blackboard during the lesson. In addition, some lecturers required students to submit their assignments

through supporting service of Turnitin in Blackboard. However, I was not able to further perceive how students actually used the function as the due date of the assignments were beyond regular lesson times. Based on my experiences as a teaching assistant in the course, I had a general idea from Blackboard that, the majority of the students did submit their assignments on time, and late submission was rarely found. Reason for these has to be further explored, but I tend to believe that it was at least partly attributed to students' obedience and their fear of having any negative influences on their academic performances. Again, the issue of earning marks played a role here. In addition, similar with the usages of CMS found in this study, lecturers in the courses that I acted as a teaching assistant also made announcements in Blackboard to disseminate important messages about the courses and provided feedback to students. For instance, the announcement of class cancellation was made and disseminated to students in Blackboard after typhoon signal number 8 was hoisted. Nonetheless, as in the case of supporting service of Turnitin, I was not able to have more understanding on how students actually use the functions of announcements and feedbacks in Blackboard as students could always access these functions beyond lessons.

From my experiences as a teaching assistant, even though no course used discussion forum in Blackboard, a similar activity was found in one of the undergraduate courses. The course was on general study offering to non-majored students. Apart from attending three-hour lecture every week, there was a weekly question and students gave their answers in Blackboard. Because of an intention for sharing and peer learning among classmates, in theory, students could read and respond to other postings. As a teaching assistant in the course, I did keep a look at students' participation in the activity. Based on my observations, overall speaking, the participation was not particularly encouraging as only some of the students kept uploading their answers to Blackboard every week. While I was not in a position to comment on the quality of those responses, I engaged in a casual conversation with one student. Similar to what this study has suggested, the student indicated that he solely regarded the activity as a part of the assessment that had to be fulfilled.

> "There is a function allowing students to make responses. However, students usually do not make any response... As requested by the professor, usually we just complete it (the activity) as an assignment. Unlike Facebook, if you type something over there, maybe others will make response. They will tell you about their views. But these are two different things. Because in term of teaching, if it requires you to participate in online discussion, usually it is homework or an assignment and you have to do it. Maybe students think that they just finish it once and for all. And thus they will complete it as fast as possible so that they can do another assignment. Its nature is totally different from an online forum. We do read and respond (in an online forum)... I think it is not my initial wish to post my argument (answer) to the web (Blackboard). It is solely required by the subject, you can't help but have to do it." (Ringo)

The above saying proposes that the student participated in the activity in CMS merely driven by his need to fulfil a course requirement. He even explicitly stated that his participation was against his wish. While the student did not want to participate in the activity in CMS, my observations in the course suggest another story. As mentioned, participation in the activity was not that keen as many students posted nothing in CMS. Based on my observations, the participation rate could be explained as most of the students were not aware that the activity constituted as part of the assessment in the course. Both stories delivered the same message. Inconsistency with Mezzanotte (2017), students in my teaching assistant course did not want to or even were compelled to participate in the activity in CMS that claimed to enhance their learning experiences. Instead, it was their awareness of the activity in CMS in contributing to their academic outcomes that made a difference in their participations. And that was in consistent with the proclamation in this study that students just exploited CMS as their pawn in helping them to acquire university qualification. In

addition, TAM's perceived usefulness failed to offer an adequate understanding of students' perceptions of and attitudes towards CMS and requires further interpretation. Chapter 6 will have more discussions on this issue.

The descriptions so far outline an interesting but a rather contradicting phenomenon about the adoption of CMS. On one hand, at least in theory and at conventional pedagogical consideration, it is one of the desires of the institution and lecturer to apply CMS as a mean to enhance students' learning experiences. Because of that, CMS was employed by lecturers in teaching and learning activities for various purposes, including dissemination of learning materials, making announcements, providing feedback, submitting assignments and conducting online discussion. On the other hand, consistency with Löfström and Nevgi (2007), in reality, this study has shown that, students' actual usages of CMS tends to propose that they had their own perceptions which were probably not in line with the institution or lecturers. Rather than enhancing students' learning experiences, this study has proclaimed that CMS was actually deployed by students not only as their pawn in helping them to acquire university qualification but also as their strategy of resistance towards the setting in which they were situated at.

5.4 Resistance for survival

5.4.1 Strategy of not-to-do

As suggested, the employment of CMS was regarded by the institution and lecturer as a channel to enrich students' learning experiences. Nonetheless, students tended to have other thoughts. Under the influence of the socially desirable behaviour of pursuing university qualification, when students were compelled to use CMS, instead of regarding it as a partner of their learning, most likely they would regard it not only as a pawn to achieve bachelor degree but also as a form of resistant tool for their survival in the university. The idea of resistance, however, can be extended from political gesture to daily application

(J. C. Scott, 1985, pp. xv-xvi). Daily resistance can happen beyond tangible environment such as online world (Chin & Mittelman, 1997, p. 35; Johansson & Vinthagen, 2014, p. 425). An online platform like CMS can thus also become one of the battlefields for their resistance. For instance, when being compelled to participate in the discussion forum in CMS, students tended to exercise minimal efforts to fulfil the course requirement. Such minimal efforts, in return, can not only be interpreted as unattached attitudes and pragmatic considerations, but also be understood as a gesture in disapproving and resisting the course requirement.

> "Some people will repeat their arguments. Or… just do it perfunctorily... You need not watch all the videos before answering the questions... They will think it is acceptable as long as they meet the requirements." (Leon)

Originally, students were supposed to learn something from watching some videos. However, the informant suggested that some of them chose to adopt not to learn strategy by deliberately not watching the video before expressing their comments. This "not to learn" strategy, as Kohl (1994) portrayed, embodied informant's resistance by revealing their disapproval attitudes and feeling towards learning and assessment method set by the lecturer. By adopting the strategy, it allowed the students to implicitly express their resistance towards the arrangement beyond lecturer's knowledge, while still enabled them to fulfil the assessment criteria. This also matches with an idea of resistance without being identified (Hollander & Einwohner, 2004, p. 539).

The strategy of not-to-do, however, could also be expressed as not-to-learn by refusing to learn from reading other posts on CMS. For instance, the informant could adopt a strategy of not-to-learn by refusing to follow, read and learn from other messages posted by his classmates on CMS.

> "(T)his stuff is not that helpful. It is because, at most of the time, frankly speaking, even though the course required you

> to respond, basically we just expressed ourselves one by one. In theory, the course wanted us to comment on others after someone responded. But most of the time we just wrote something and uploaded it. We would not specially read what others wrote. That is the main reason. Most of the time, after all, the forum was not the only activities in the course that counted marks. You also got a mid-term examination and I did not want to especially waste so much time to read others' postings. I just wrote and directly uploaded to the forum. I did not want to waste my time reading others' postings. So, when you are talking whether it is very helpful, I don't think the system can help." (Peter)

Students were supposed to engage in peer learning through reading the sharing posted by each other in CMS. Originally, the informant could follow the instruction set by his lecturer, and he could learn something from reading the sharing from his classmates. However, the informant resisted doing so by employing "not to learn" strategy. He just ignored other posts, completed his writing and then uploaded to CMS. His resistance could be regarded as an alternative and low-profile complaint toward the burden that loaded on him. In the other two cases, the informants used not to learn strategy by refusing to read an article and write a corresponding comment seriously.

> "There is an article... You may highlight it and then write down comments... I spent around half an hour to glimpse the article… Yes, just scanning... Less than 100... Because the tutor says it is a must (to do so), so I respond... I just read it... I will not waste time to think about it. If I am able to make respond, then I respond." (Gordon)

> "Frankly speaking, because its mark is not high, I am not serious in doing it... Maybe read materials once, then it may

> require us to respond 2 times... I just find some materials in a slack manner and respond to it. That is a very short passage, paragraph. It is rather short, but it (the course) does not require us to write a long one. Maybe around 30 to 50 words. So, it is absolutely not enough in term of the depth of the discussion. I am quite sure many of us are not serious in doing it as many around me all behave the same. First, the mark is low. Second, we all know that the discussion is not actually a discussion. It just a format of answering questions only. So, you will not be typically serious, finding many different articles and readings. You will not intentionally do it as the mark is low and I am also busy. I will not spend a lot of time in a task that carries such a small proportion of marks... I will not spend much effort in the discussion. When I see someone's response or response to me, I may click to read it, that is. After reading, I may reply 1 to 2 sentences if it is needed... Regard it as homework submission." (Stephen)

In both cases, the students were supposed to learn something seriously from reading articles. Nonetheless, the students resisted the teaching and learning activities set by his lecturer and adopted "not to learn" strategy by just reading the articles and writing the comments perfunctorily.

The above cases disclose the way of students' resistance towards lecturer's or institutional decision for them. It is the lecturer and the institute who can make the decision on the teaching and learning activities, assessment methods and criteria of students' learning. As mentioned, PolyU encourages adoption of educational technology in teaching and learning activities and CMS can be regarded as one of them. While this study has not explored much on the rationale behind the lecturer in using CMS in teaching and learning activities, the institutional position can be one of the considerations. When students were enrolled in the courses, all the teaching and learning activities and the assessment criteria were by and large already decided by the lecturers. In almost cases,

students were not advised on that and could not take part in the decision process. Foucault (1978) suggested that “(w)here there is power, there is resistance, and yet, or rather consequently, this resistance is never in a position of exteriority in relation to power” (p. 95). On one hand, with a view of getting a pass in the course, students have no choice but need to satisfy all the requirements, no matter they like it or not. On the other hand, during the progress, students can still exercise their resistances by adopting "not to learn" strategy as aforementioned. Meanwhile, as J. C. Scott (1985) depicted students still chose to live in and live with the predetermined setting of learning climate without intention to change it dramatically, students’ resistances could thus be regarded as their silent and low-profile disapprovals towards the setting that they were situated at (p. xv).

While the above denotations have demonstrated the rationale behind students who adopted a strategy of “not to learn” in resisting and voicing out their discontents towards the setting they were situated at, it is also important to understand that this picture was actually sketched by students’ perceptions of and attitudes towards CMS. In addition, as TAM tends not to offer a better understanding on the whole issue, students’ perceptions of and attitudes towards CMS could be better understood by associating it with students’ past experiences in going through socially desirable behaviours of pursuing university qualification.

Chapter 6

CMS as extra

6.1 Extra in teaching and learning

Previous chapters had outlined that students were compelled to use CMS and, under the influence of socially desirable behaviours of acquiring university qualification, they just regarded CMS as a pawn in earning a bachelor degree. This chapter will go on to probe into the possibility of the way lecturers treated and adopted CMS in mediating students' perceptions of and attitudes towards it. Before discussing the supplement of TAM when it failed to offer us a better understanding of the topic, students' perceptions of and attitudes towards CMS will be concluded. Lastly, an attempt will be made to answer the research question in this study.

6.1.1 CMS as a stage

Based on my experiences, observations and understanding from some academic staff working in various tertiary institutes in Hong Kong, certain academic staff tend to regarded CMS as a platform for their frontstage performances, as Goffman (1959) proclaims, so as to emancipate and empower themselves to devote much time and attention on the works that they perceive as more vital behind the curtains of backstage. The followings are a brief account.

Adopting CMS into pedagogy does not necessarily reflect that teachers believed in its contributions to teaching and learning activities. Some universities are particularly keen on promoting and propagating adoption of educational technology, such as CMS, into teaching and learning activities. It can be due to various reasons, such as constructing and imposing some advanced and active images as a way of promoting both local and international status. In practice, with a view of ensuring a smooth and thorough implementation of CMS under certain goal or direction, universities even set up some policies or regulations,

such as part of measuring criteria in performing contract reviewing exercise, so that almost all academic staff are advised to adopt educational technology, including CMS, into their teaching activities. Based on my experiences and observations, some academic staff will then naturally translate this advisory message from the top hierarchy of the university into an order regardless whether or not they personally believe in the effectiveness and the contributions of using CMS. For some, especially those who are employed under contract-based, the meaning of adopting CMS into part of their pedagogy is not for teaching and learning purpose or with an aim of enhancing and enriching students' learning experiences and learning motivations, but for securing their own sakes. They are afraid that the adoption of educational technology into their pedagogy, such as CMS, is one of the evaluation criteria in their contract renewal exercises, no matter the university states it explicitly or implicitly. Driven by such anxious and mindset of uncertainty, some academic staff tend to adopt CMS in their teaching and learning activities in order to act as a showcase or billboard to the university that they are desirable academic staff who deserve more supports from the university and earn another term of contract as they are willing to embrace with sophisticated educational technology and also willing to comply with university regulations and policies.

CMS has thus become a magnificent frontstage for their meticulous and splendid but compendious performances to the university rather than being utilized as a media or channel to facilitate teaching and learning activities. By having such a wonderful performances that are recognized by the university at the frontstage, academic staff can conceal themselves at the backstage, work industriously and concentrate their attentions on those quantifiable works that they have perceived more valuable for their position securing, academic future and even personal advancements such as scrambling for researches and publications, funding, community services, and the likes.

6.1.2 CMS as a survival instrument

To construct the hyperreality frontstage of performances as Baudrillard (2016) described, however, my experiences and observations suggested that

academic staff needed not to exercise a lot of efforts out of their already engaged commitments and schedules. Some academic staff can simply achieve their goals of performances if they regard and take advantage of CMS as an online platform of disseminating teaching and learning materials such as lecture notes and making announcements. By doing so, academic staff transform teaching and learning materials and the mode of its dissemination from tangible to intangible and physical to digital format. This attitude towards CMS can be a trend among academic staff when the university does not really provide any concrete supports for them with sound knowledge and solid hand-on experiences. Nonetheless, this attitude of practicing CMS can be even popular among academic staff under a culture of clinging quantification and ideologically correctness such as Hong Kong. While the above captioned usage of CMS can sometimes be argued as unidirectional and students cannot really be benefited from the adoption of CMS in teaching and learning activities, one of the significant rationales behind such usage of CMS is that it can become a bargaining tool for some academic staff to make use of during contract renewal exercise whenever necessary. In this regard, CMS is no longer being understood as an educational technology but just a survival instrument only.

6.2 Extra in lecturing

Even though the aforementioned denotation of practicing CMS can satisfy, and answer survival needs among some academic staff, it does not implicit in any ways that academic staff neglects pedagogy. Adoption of CMS can be separated from teaching and learning activities. Employment of CMS has almost no influence on academic staff in adopting pedagogy (Apedoe et al., 2009, p. 166; Cuban et al., 2001, p. 183). In other words, whether or not academic staff uses CMS will not constitute much change of the original and planned teaching and learning activities. When an academic staff employs a unidirectional pedagogy, his adoption of CMS is likely to be in line with that unidirectional teaching and learning approach such as using CMS as a platform for disseminating lecture notes and making course announcement. When an

academic staff use a rather interactive pedagogy, such pedagogy is also likely to be reflected in his way of using CMS.

6.2.1 Connection between CMS and lecturing

As different pedagogy caters for different teaching and learning concerns, and it is the professional judgement of academic staff in tailoring an appropriate pedagogy to suit for particular learning desire, the way of adoption of CMS in this study has tended to suggest a little connection between lecturing in classroom and CMS. Based on previous discussions and my observations, most of the lecturers just use Blackboard as an online platform to disseminate teaching and learning materials, collect assignments, provide feedback to students and deliver relevant announcements. These activities do not have much connection with lecturing in the classroom. For instance, after downloading the lecture notes from Blackboard, the bridge of Blackboard in linking learning experience between students and course almost disconnected. Students will logout Blackboard after downloading the learning materials and that Blackboard can no longer play a further role in students' learning experience in that course. Similar disconnections take place after students submitting assignments, reading feedback, grades, and announcements from Blackboard. Even though some lecturers have tried to extend and prolong the linkage and the influence of the classroom lecturing by making use of discussion forum in Blackboard, its effectiveness so far leaves much to be desired. In general, the current usages of Blackboard fail to play an important role in students' learning experiences.

As afore discussed, most students participated in the discussion activities were simply driven by marks. Even so, most of them were not willing to invest a lot of time in the discussion activities. For instance, they were seldom willing to search fruitful information or well prepared for the online discussion or sharing. They were not interested in reading comments or peer works from their classmates. Most of the students perceived the activity of discussion forum in Blackboard as another burden or homework for them. To them, the discussion activity in Blackboard was not a connection of linking their learning experiences with lecturing in the lesson. Instead, it was just an opportunity for them to grab

academic outcome, marks. Therefore, students preferred to complete the homework with minimal efforts. They managed to find many ways in participating in the forum. As discussed before, their participations could base on the response from their classmates. In addition, they could post something in the forum not only after recalling their memory from lecture notes, searching for some information from the Internet or library but also even making use of their common sense. In short, students found the discussion forum in Blackboard having a little connection with the lecturing in the lesson.

6.3 Students' perceptions of CMS

Overall speaking, only few informants considered CMS not that easy to use, as Gui and AuYeung (2013) and V. Ng et al. (2012) proposed, due to issues like design, interface and so on. Even though, as C. C. Chan et al. (2008) proposed, the majority of students felt CMS was easy to use, this reason alone was inadequate to drive them using CMS more. In addition, regardless the background of academic disciplines, most students believed that CMS was not useful for them, which probably attributed to their beliefs that CMS failed to establish a connection with students' daily life. What is more, contradictory with Shroff et al. (2008) but in line with V. Ng et al. (2012), some informants indicated that even the interactive functions in CMS like discussion forum failed to really created a bilateral learning environment or altered their daily practices in using it. Some students even thought that CMS could be replaced by other technologies such as WhatsApp, as they found it so disconnected from their daily life and lacking own paramount characteristics. Students' idea was related and close to the proclamation made by Tang and Yu (2018) on the students' preferences mobile application to Blackboard. Nonetheless, no matter how students' preference was, some students pointed out that they were being coerced to use CMS because of the arrangement of the courses. In this regard, the adoption of CMS was not well received by students. In term of enhancing students' learning experiences, this finding is in line with previous studies from White and Cheung (2006) and A. H. K. Yuen, Deng, et al. (2009) but inconsistent with Chung et al. (2005), Lin et al. (2009) and Tse and Lo (2008).

The way students perceived CMS, in return, also mediated their attitudes towards it.

6.4 Students' attitudes towards CMS

As captioned denotations, the current adoption of CMS is so disconnected from lecturing in the classroom that it is basically not embedded with teaching and learning activities, except with the forum discussion activities that constitute part of the assessment criteria. Under such setting, students' perceptions of and attitudes towards CMS are mediated. Students, and even academic staff regard CMS as a survival tool and thus do not willing to invest much of their times in it. For students, as suggested above, they tend to regard CMS as a survival tool.

Based on the above discussion, attitudes of students at PolyU towards CMS are that they generally perceive it as a survival tool. Such attitudes were shared by both APSS and non-APSS research participants. Students are now living in Hong Kong which belongs to knowledge society and credential society. As discussed in Chapter 5, qualification is so upholding by the society many parents, teachers, employers and even among employees believe it is almost equivalent with fundamental necessity that is indispensable for surviving in society. The belief of acquiring university qualification is so widespread and indestructible that it is already formed as a socially desirable behaviour. While not everyone is in line with this conviction, almost no one can ignore such demand. To most of the university students who lack experiences or skills, strictly complying with socially desirable behavior is their only available option. In this regard, no matter how students are discontent with their studies, they try to tolerate it as much as they can, because they need university qualification. During an entire of the learning process in university, experiences of using CMS cannot be got rid of. As suggested, students have no autonomy in choosing to use CMS as it is also a part of the curriculum. When the lecturer adopts CMS in teaching and learning activities, students have to use it, especially when those activities are part of the assessment criteria. Even when students dissatisfy with the learning activities, students choose to complete the activities regarding it as

chances to earn marks which in turn are important for them to earn qualification. In other words, CMS is being perceived by students as a tool for their survival in society.

Nonetheless, students do not always perceive CMS as their survival tool. To assume the mission of survival tool, CMS has to meet a prerequisite of providing an opportunity for students to earn desirable marks. When CMS offers chances like assignment submission, forum discussion and so on, CMS can be the survival tool, provided that students reckon it is remunerative for them to exercise efforts in earning those marks. On the contrary, if students consider it is not worthy to do so or even CMS does not offer any opportunities for students to earn marks, pragmatic locus of CMS among students vanishes. In other words, no matter how easiness and usefulness CMS is, students just take it as a pawn. Whenever CMS can satisfy students' pragmatic desires of earning marks, it is utilitarian to them and can be exploited as their survival tool. Otherwise, it can easily be neglected or even disregarded.

What is more, another common attitude towards CMS is that they generally made use of it as a way to express their silent discontent towards the system. As suggested, students had no autonomy in choosing to use CMS. Once the lecturer adopts CMS into teaching and learning activities, no matter how the activities are disconnected with lecturing in a lesson, students have to use CMS, especially when the activities constitute part of the assessment criteria. Nonetheless, it did not mean that students had no discontent over the teaching and learning activities, over the pedagogy, over the assessment criteria and even over the course itself. While students still used CMS for the sake of getting marks and earning university qualification, students found it as a way to voice out and channel their discontents. Thus, this study has found out that students tended to adopt resistance strategy of not-to-do.

6.5 TAM needs extra extension

Based on the above findings, this study has suggested that TAM was not totally suitable and adequate in helping us to explain students' perceptions of and attitudes towards CMS. As Davis (1986) proposed, TAM used ideas of perceived easiness and perceived usefulness to understand one's acceptance in using technology. While this study has suggested that perceived easiness offers not much help in understanding students' perceptions of and attitudes towards CMS, interpretations of students' perceived usefulness needs further extension.

6.5.1 On perceived easiness

Concerning the idea of perceived easiness, students in this study have generally expressed that they find it easy to use Blackboard. Even though the majority of students in this study has pinpointed that Blackboard was easy to use, they tended not to suggest that their perceptions of and attitudes towards CMS were shaped by their perceived easiness in using Blackboard. In other words, students were unlikely to develop neither positive nor negative perceptions towards CMS because of their perceived easiness in using Blackboard. In this regard, unlike TAM's proclamation, students' perceived easiness in using technology does not offer much help for us to understand students' perceptions of and attitudes towards CMS.

6.5.2 On perceived usefulness

On the other hand, perceived usefulness in using technology needs certain interpretations before it can help us to understand students' perceptions of and attitudes towards CMS. Originally, perceived usefulness of technology refers to one's expectation in improving performance after adopting the technology (Davis, 1986, p. 26). However, there are not many revelations from this study which indicated that students' perceptions of and attitudes towards CMS are mediated from this perspective. On the contrary, as suggested above, some of the informants even conveyed that, they did not find the teaching and learning activities in Blackboard useful for their learnings in the course. In this regard, the original interpretation of perceived usefulness of technology tends to be not

much helpful for us to understand students' perceptions of and attitudes towards CMS.

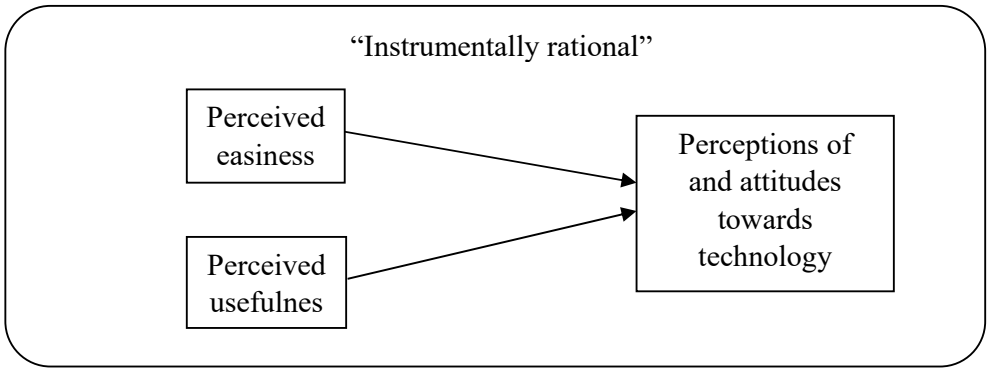
Nonetheless, as discussed above, even though the teaching and learning activities in Blackboard had little connection with lecturing in the lesson, students did participate into those activities, regarding those activities as opportunities for them to grab marks, which in turn were much useful for them to earn university qualification that they are fantasizing for. From this perspective, no matter how the teaching and learning activities were disconnected from lecturing in lesson and regardless of how students were discontent towards the course, CMS was still perceived to be useful for students to earn university qualification as they could reasonably anticipate that they could earn some marks after satisfactorily fulfilling certain assigned activities in Blackboard. In this regard, TAM needs an extra extension.

6.5.3 On "instrumentally rational"

As suggested, CMS was perceived to be useful among students not because it was useful for enhancing their learning experiences or improving their academic outcomes, but because it could help them to achieve what students were yearning for. CMS was no longer useful for students once this perceived usefulness was gone. For instance, after fulfilling the assigned discussion forum activities in Blackboard and gaining some marks for it, most of the students in this study have expressed that they did not participate the activities again or even show their interests in reading other posts from their classmates. This is because, for most of the students, after completing the discussion forum activities in the Blackboard, its perceived usefulness for them to gain mark was gone and that CMS no longer serve any pragmatic purposes or functions. As shown from above, some students even did not access Blackboard again as they were compelled to use it. CMS became a pawn for students. When CMS can help them to earn university qualification, it is perceived by students as useful and then they will participate in the teaching and learning activities there regardless how disconnected they are from the lecturing of the lesson. On the contrary, at the time when CMS cannot help them to achieve what they are longing for, it is no

longer be perceived as useful. It is this mindset of a pawn that dominates and direct students' perceptions of and attitudes towards CMS. Therefore, when adopting perceived usefulness in understanding one's acceptance of using technology, one's intention, strategy, and constraint behind using the technology have to be taken into considerations as well. Based on the above denotations, this study has called forth when adopting TAM, as suggested in Chapter 2, one of the categorizations on individual actions by Weber (2013), "instrumentally rational" action, is helpful for us to incorporate it with perceived usefulness so as to generate a more comprehensive understanding on one's perceptions of and attitudes towards CMS (p. 24).

Figure 2: Extended TAM



6.6 Answering research question

Based on the above denotations, the followings are the attempts to answer the research question of this study.

1. How students perceived and used CMS?

6.6.1 Perceptions of and attitudes towards CMS

It is because of students' perceptions of and attitudes towards CMS. Students' perceptions of CMS were as follows. First, it was not that useful for the enhancement of their learning experiences. Second, CMS was disconnected from their daily life. Third, because of failing in identifying special characteristics of

CMS and its linkage with them, some students believed that it could be easily be replaced. Concerning students' attitudes towards CMS, since most of the students just regard CMS as an online library or platform to store, manage and organize their learning materials and they just accessed it when necessary, students' attitudes towards CMS was likely to treat it as a pawn. In general, students' perceptions of and attitudes towards CMS can partially be explained by their perceived easiness and usefulness in using CMS. In addition, their past experiences also constituted another explanation.

Even though this study has found that most of the students perceived CMS as easy to use, they basically did not perceive CMS useful for their learning or could enhance their learning experiences. Perceived easiness of using CMS does not equivalent to frequently voluntary usages. In addition, findings from this study have also proposed that students' perceived easiness of using CMS did not really much impact in mediating their perceptions of and attitudes towards CMS. Concerning students perceived the usefulness of using CMS, as CMS was regarded as only able to provide a supporting or auxiliary role in disseminating learning materials and announcements, students perceived it disconnected from their daily life and found it not so useful for them. However, this study has also indicated that CMS did useful for students. No matter CMS was perceived useful or not, students had no autonomy but had to use CMS because of the requirement from the lecturer.

While the above called forth for an extra extension of TAM in offering a better understanding on students' perceptions of and attitudes towards CMS, this study has revealed that students found their ways to cope with it. First, as lecturer disseminated learning materials through CMS, some students thus relied on it as a platform to store and management their learning materials and saved their own efforts. Second, as students had to access CMS, most students perceived the participation of the activities in CMS as a chance for them to earn the mark that they desperately need for their ultimate goal of earning university qualification. Third, students had no other option but to strictly comply with all kinds of arrangements and requirements before they can earn the university qualification. To silently express their discontent and passive resistances towards the settings

that they were situated at, students also tended to adopt their resistant strategy of not to do in CMS by choosing not to completely follow the instruction or reluctant to participate those activities in CMS that did not directly contribute to any assessment criteria in the course. Most students only accessed to CMS when it was useful for them, such as when they needed to access learning materials. Beyond that, CMS was almost completely disconnected from students' daily life and would not play any roles on that. In this regard, driven by the pragmatical consideration, students generally developed attitudes of pawn towards CMS. The role of pragmatic in mediating the way of the students in perceiving CMS also suggested that TAM alone was not appropriate in explaining students' perceptions of and attitudes towards CMS. In return, students' past experiences offered another part of the explanation.

Overall speaking, this study has suggested that students had basically two types of past experiences that mediated their perceptions of and attitudes towards CMS, namely past experiences in using other information and communication technology and past experiences in experiencing socially desirable behavior. The former has mainly mediated students' perceptions of CMS whilst the latter has mainly mediated students' attitudes towards CMS. The followings are a brief account.

6.6.2 Past experiences in using technology

With regard of the way of past experiences in using other information and communication technology in mediating students' perceptions of CMS, like other people in Hong Kong, students in this study were now being surrounded by and living with all sorts of information and communication technologies, ranging from desktops, laptops, tablets, smartphones to email, social networking platforms, mobile applications, and mobile networking. In most of the cases, students not only owned at least one of the mobile devices but also used it every day for various purposes including learning, entertaining, communicating and connecting with the world. Information and communication technologies had integrated and connected with students and had become part of their life. Because of that, for most of the students, the use of information and

communication technologies were not strange and difficult. Building upon information and communication technologies, the interface of and functions in CMS were similar to some information and communication technologies that students used daily. For instance, CMS allowed students to engage in discussion with their classmates. The function of the discussion forum in CMS, however, could also be found in other information and communication technologies that students used daily, such as WhatsApp and discussion forum on the Internet. Even though CMS was not difficult to use, as students already used these functions in their daily life, it still failed to provide an attraction for them and thus most of the students believed that was not useful for them.

Students' perceived usefulness of CMS also related to how the lecturers adopt it. As suggested, most of the lecturers just adopted CMS to disseminate course materials, making announcements, providing feedback and collecting assignment from students. On one hand, most of the students thought that such adoption of CMS could only provide a supporting and auxiliary role without much concrete contribution to enhance their learning experiences. On the other hand, unlike the information and communication technologies that students use daily, students have to login CMS before they can access those materials and information over there. Such requirement further discourages students to frequently access CMS as it could not offer the experiences of conveniences and flexibilities that they have already gained from those technologies that they daily use. Because of these, CMS further disconnected with students' daily life.

6.6.3 Past experiences on socially desirable behavior

Concerning the way of past experiences in experiencing socially desirable behavior in mediating students' attitudes towards CMS, this study has suggested that it is the socially desirable behavior that makes most of the students pragmatically perceive CMS as a pawn. Under an influence of credential society and academic inflation, the quest for knowledge is so intensive and thirsty that almost everything is tended to be presented in a measurable and quantifiable manner. It applies not only on things like policies and regulations but also on human as well. In many cases especially when someone is lack of experience and

special talent, people are evaluated and then differentiated not by their abilities or unique characters but by their academic qualification. While processing university qualification does not guarantee for a better prospect, without a university degree is generally translated as having a tougher and much difficult future. Identifying and recognizing the significance of qualification in helping one development, more and more people in society perceive university qualification as a mean of survival tool in society. When the majority of people in society share this belief, pursuing university qualification not only satisfy one's dream but also become a socially desirable behavior. Such socially desirable behavior was then under propaganda and indoctrinated by different members in society including parents and teachers to the next generations. Being instilled the desirable behavior in mind, most of the students in this study were in line with the idea and were convinced that having university qualification almost was a must for their survival in society.

Instead of having knowledge advancement, securing university qualification tends to be at a higher priority and concern among most of the students. Before they could earn the qualification, however, they needed to achieve a certain academic outcome by accumulating adequate marks first. With a view of securing the qualification, therefore, students seized every opportunity they have in earning marks. In this regard, activities in CMS, especially those constituted part of the assessment criteria, were regarded by most of the students in this study not for enhancing their learning experiences but for helping them to get a pass or even a flying result in the course. As the priority of most students in participating in the activities in CMS was to earn marks, they tended to spend minimal effort and time in CMS. For instance, as suggested before, some students would choose to ignore the instruction or skip the required readings before performing the activities in CMS. Besides, some of them did not participate in the activities in CMS that did not constitute as part of assessment criteria. In addition, as students regard CMS as an online platform to store and manage their learning materials, they just access CMS only when necessary. All these pragmatic approaches to CMS suggests that students treat CMS as their pawn only. When student find CMS offers something such as marks, learning materials that they valued for earning university qualification, CMS becomes

useful for them and they will access it. Without such pragmatic offer, students will not access CMS. In this regard, this study has suggested that CMS failed to enhance students' learning experience as what anticipated from the institute and lecturers.

Owing to the aforementioned explanations, despite all the advantages outlined in the literatures, CMS was used so little and so ineffectively. In short, instead of glorifying and expecting CMS in enhancing students' learning experiences, this study has unveiled that students developed their own perceptions of and attitudes towards CMS which were not in line with their lecturers and institute. Under the influence of the socially desirable behavior of acquiring university qualification, students regarded CMS as their pawn in helping them to achieve a bachelor degree. Despite suffering some limitations, this study can have huge theoretical and pedagogical contributions while education policymakers will also find it useful for their references. Because of this, future relevant researches on the topic should be conducted.

Chapter 7

Conclusion

7.1 Summary of thesis

To sum up, CMS was just a pawn for students. Students had no autonomy in choosing to use CMS as they were required by the lecturers to do so. Even though students found CMS easy to use, they also believed that it was just for learning purpose only. In addition, students tended to eager for a university qualification. Under the circumstances, students tended not to regard CMS as useful for them as it disconnected from their daily life. As they were compelled to use CMS, students just made use of CMS as a way to secure a university qualification that they wanted. Students' usages of CMS, in return, was a response and answer to their past experiences mediated by socially desirable behaviors. In this regard, students' usages of CMS could not be solely explained by its perceived easiness and usefulness but by their rational calculations in the setting that they were situated at.

7.2 Contributions and limitations of this study

7.2.1 University administrators

One of the significances of this study is on its theoretical contribution of unveiling a possible limitation of applying TAM to understand one's acceptance of using technology. While TAM proposes perceived easiness and perceived usefulness, and has been generally recognized as a simple and an effective way in reading one's acceptance of using technology, this study has suggested that its adoption should be supplemented and integrated with social contexts in which the person was situated at. The suggestion on the modification is hoped to

enhance and empower an applicability of TAM in understanding a person the way of perceiving and feeling toward technology, including CMS.

Another possible contribution from this study is that it revealed that social context can affect students' experiences in using CMS. In Hong Kong, students are likely to experience with their parents, teachers, and friends that acquiring a bachelor qualification is a basic requirement for their survivals after graduation. Students' experiences with social context can influence their attitudes and feelings towards their surroundings and that in return can shape their usages in CMS. The ways how students experience with social context and the ways how to alter socially desirable behaviors within the social context can be some of the potential areas for future studies.

As aforementioned, most previous studies on the application of educational technology in Hong Kong at tertiary educational level pay attentions on how university students feel educational technology and link them with learning outcomes (Drysdale et al., 2013, pp. 95-96). Focus rarely draws on how experiences shape students' attitudes and feelings in using educational technology. Even though TAM has been widely adopted in studying the usages of educational technology, including CMS, before, its capability in explaining the researched topic is debatable. In my opinion, a study on how students perceive educational technology itself as pedagogy, especially understandings on how the perceptions are formed, shaped and mediated, also deserve attention (Baydas et al., 2015, pp. 715-716). Selwyn (2010) further argues that there is a need to study on the rationale behind the way how the educational technology is adopted (p. 66). With a view of bridging the mentioned academic gaps and constructing a new horizon on the research scope of educational technology, I adopted TAM in my study to unveil the way how university students in Hong Kong formulate their attitudes and feelings towards CMS and how it reflects their response in their daily life. This study not only has shown how past experiences mediate students' perceptions of and attitudes towards CMS, but also suggests an extension of TAM to supplement its limitation. It is expected that the extended TAM not only allows academia to understand how students

perceive of and feel towards CMS as pedagogy but also produces a rationale behind adoption of CMS as educational technology.

7.2.2 Education policymakers

Concerning education policymakers, this study has also revealed that, due to experiencing social influence, university students would assign afore-mentioned perceptions of and attitudes towards CMS. Such attitudes, however, could increase negative burden and unnecessary stress among students. In the long term, lead the society towards utilitarianism. In other words, this study has disclosed negative social influence on students and its future implications to education policymakers. With a view of reducing students' stress and shaping a brighter society, something must be done on the social influence first. Particularly education policymakers should review and implement appropriate educational reforms in primary and secondary school curriculums and overall educational objectives for next generations in Hong Kong to create a favourable environment, and instil students with reflexivity on certain socially desirable behaviors like qualification, success and life. In addition, education policymakers can take into consideration on how students perceive and feel towards CMS when adopting it as educational technology. Rather than regarding CMS as an independent and single element in teaching and learning activities, education policymakers can embed and incorporate it with students' actual living environment. Students are being shaped by their experiences and, as this study has proposed, CMS can be one of them. For the sake of students' development, education policymakers should adjust the allocation of resources on CMS so that educationists can acquire reasonable spaces in achieving educational targets.

7.2.3 Educationists

For educationists, this study has disclosed the ways how students' perception and feelings towards CMS were related to the social setting that they were situated at. One of the important messages is that students basically were behaving and responding to the socially desirable behavior. Educationists can make use of the mindset and design certain teaching and learning activities

within the system to promote positive students' learning experiences and self-development through peer learnings and competitions. By doing so, this study can further contribute to educationists by unveiling a possible way of embedding the social background of students to motivate their learning desires.

In addition, with a view for better adoption and maximizing the enhancement of students' learning experiences, educationists have to consider the connection between students and the technology that intended to be adopted as educational technology. Nye (2006) proposes that technologies are inextricable with us (p. ix). As we are so connected with all sorts of technologies in our daily life, sometimes the line to distinguish the nature of particular technology is blurred. For instance, it is arguable whether smart phone is a communicative device, computing device or recording device. It is also disputable to define smart watch as a wristwatch or an instrument. In the same vein, most likely, we will find it complicated and even problematic too to define if the laptop is for personal entertainment, doing business or other purposes, because any of them can depend on how the user uses it. In this regard, while borrowing, embedding and transforming certain technology as educational technology, lecturer or institution should not constraint the nature of that educational technology, or that particular technology should be reviewed if it is suitable and appropriate to be an effective educational technology to enhance students' learning experiences. For instance, this study has suggested that WhatsApp is so connected with students that it has constituted part of their daily life. On the contrary, CMS was so disconnected with students' daily life that it not only discouraged students to frequently use it but also drove them to think CMS was not that useful in their learning experiences.

Finding of this study is in line with a proclamation that technology cannot directly influence the users but rather it is the interactive process among various issues such as economic, political and social factors that generate its effect to the society (Selwyn, 2008, p. 19; R. Williams, 1979, p. 13). The same idea is applicable to the adoption of educational technology including CMS. It should not be assumed that students' learning experiences can be enhanced because of adopting educational technology likes CMS. Adopting CMS itself cannot directly

enhance students' learning experience. Students' learning experiences, however, can be enhanced by the technology, only when it is interacted and connected with other areas such as students' daily life. In other words, the aforementioned discussions demonstrate that, when educationists select certain educational technology like CMS which can only perform one nature, with limited role in teaching and learning activities, and cannot really establish a connection with students' daily life, the effectiveness of that adopted educational technology in enhancing students' learning experiences is subjected to further consideration. Most probably, as this study has proposed, that adopted technology will likely be much utilized by students to attend their pragmatic goals rather than really for learning purposes. It is undeniable that we cannot predict how students use certain educational technology. Nonetheless, following similar suggestions from Bijker (1995), Kirkpatrick (2004) and F. Webster (2005), this study has called forth if educationists were able to connect educational technology more with students' daily life or even adopted the technology that has already constituted, connected and form a part of students' daily life as educational technology, students' perceptions of and attitudes towards that educational technology will likely shift to positive directions and that will have higher possibilities to facilitate the enhancement of students' learning experiences.

7.2.4 Limitations

Owing to the limitations of resources and times, this study has drawn its attention from students' accounts only and could not afford to look into the perceptions of and attitudes towards CMS from other perspectives such as lecturers and institutions. Besides, while identifying the effect of socially desirable behaviors on mediating students' perceptions of and attitudes towards CMS, the way of intervening the mediation need more works on that.

7.3 Outlook on desirable future studies

This study has focused its attention on the perceptions of and attitudes towards CMS among undergraduate students. While this study has proposed that students regarded CMS as a survival tool, input from other parties within education such as teachers and university should not be underestimated. On the contrary, successful adoption of CMS in teaching and learning activities has to take their views and positions into considerations. Since students have no autonomy in deciding to use CMS or not, as Al-Senaidi et al. (2009), Bain (2004), Choeda et al. (2016), Kilmon and Fagan (2007), Ndahi (1999), Rizvi et al. (2017), Rogers (2003) suggested, perceptions of and attitudes towards CMS as pedagogy itself among teachers could also be as significant as the need to concerns how students perceive it. What is more, Boulton et al. (2018), S. K. Cho and Berge (2002), Habib et al. (2012), Jarrahi (2010) and W. W. Porter and Graham (2016) further pointed out that the position of the university in adopting CMS was also vital. Therefore, further researches on how teachers and university administrators perceive and feel towards CMS are desirable.

Apart from pinpointing that students perceive CMS as a survival tool, this study has suggested that one of the reasons for students to perceive CMS as a survival tool was due to their response to the socially desirable behavior. No matter how we react to students' perceptions of and attitudes towards CMS, they are passive. Society upholds qualifications and our education system, and even university also responds accordingly. Bray et al. (2014), Bray and Kwok (2003), OECD (2014), Wang and Bray (2016) and Zhou and Wang (2015) proposed that teachers and parents were inclined to indoctrinate the advantages and importance of having university qualifications to their students and children. Besides, Hamlett (2017), A. Lee (2018), and Wu (2017) accused that educational system in Hong Kong tended to furnish more rewards and opportunities to those who already attained with higher educational outcome. In addition, Education Bureau (2018), M. H. Lee (2017), Lo et al. (2015), P. Ng and Galbraith (2016), Wan (2011) and P. Wong et al. (2016) suggested that universities in Hong Kong have been offering more and more self-finance programmes awarding different type of qualifications with various qualities which aim at not only generating more

financial income but also satisfying and even promoting the thirst of qualifications. What is more, because many jobs, typically those that do not demand for physical ability, required for university qualifications, as scholars like Finer (2001), Kember (2000), Rao et al. (2000), Tam and Ip (2017) and Tsoi (2015) suggested, earning university qualification was thus generally be regarded as having competitive advantage and being analogized as “admission ticket” for job searching or securing a position.

Under the above situation, students can do almost nothing to change or even challenge the phenomenon but have to comply with the climate. Students are even consciously or unconsciously in line with the mentality believing that securing university qualification is the best and the unique way for their survival in society. This is especially so when the majority of students lack required experiences and expertise. In this regard, students having particular perceptions of and attitudes towards CMS can be understood as both of their discontents and their survival strategies in echoing and reverberating the world. In terms of educational setting, students’ discontents and survival strategies, however, do not restrict to CMS, but can be stretched to other teaching and learning activities no matter what sort of educational technology and pedagogy is adopted. To address the issue properly and effectively, socially desirable behavior such as upholding university qualification should be prioritized. Without a cardinal change of the mindset in society, students are likely to keep similar perceptions of and attitudes towards CMS more or less unchanged for a certain period of time. Therefore, more researches on the areas such as changing socially desirable behavior, mindset changing, media and communication, ethical and value judgement, utilitarianism, capitalism, and the likes are desired.

Appendix 1

The interview guides

A) Icebreaking

- Are you busy recently? 您近來忙嗎? 忙什麼呢?

B) About Blackboard

1. Could you describe and explain the image or picture coming up in your mind when you hear "Blackboard"? 請您告訴及向我解釋當您聽到 "Blackboard" 時您腦海出現什麼畫像.
2. How often you login Blackboard? 您有幾時常登入 Blackboard 呢?
3. How would you describe the course requiring you to share your views with your classmates in Blackboard? 您怎樣形容一個要您在 Blackboard 與同學分享您意見的課程要求?
4. How would you describe your feelings of working with your classmates in Blackboard? 您怎樣形容在 Blackboard 內與同學一起合作的感覺?
5. How would you describe your learning experiences in a course that requires using Blackboard? 您怎樣形容您在一些要求使用 Blackboard 課程中的學習經歷?
6. Please describe your feelings before and after posting messages in Blackboard. 請形容您在 Blackboard 內刊登訊息前及刊登訊息後的感覺.
7. Before reading the message, please describe your feelings when you receive a system notice from Blackboard. 請您形容當您接收到 Blackboard 的系統通知而在讀取訊息前, 您的感覺是怎樣的?

8. Please describe your feelings and reactions after reading the messages posted by your classmates in Blackboard. 請您形容當您在 Blackboard 讀取由同學刊登的訊息後的感覺及反應.
9. Do you think Blackboard is difficult? Why (not)? 您覺得使用 Blackboard 困難嗎? 為什麼?
10. Could you please share with me your experiences in teaching or recommending (learning) Blackboard to (from) your classmates? 請您告訴我您在(被)教導或建議同學使用 Blackboard 的經驗.
11. Could you share with me on an unforgettable experience in using "Blackboard"? 請您與我分享一個使用 Blackboard 而令您難忘的經歷.
12. Could you share with me on the way of "Blackboard" in shaping your learning experience? 請您與我分享使用 Blackboard 怎樣塑造您的學習經歷.
13. Could you let me know your expectation on how Blackboard can help your study?請您告訴我您期望 Blackboard 在您學習方面能夠給予您什麼幫忙.
14. Could you share with me your previous experience in using platforms similar to Blackboard? 請您與我分享使用您之前使用類似 Blackboard 平台的經歷.
15. Could you share with me on the way of ICT in shaping your learning experience? 請您與我分享使用資訊科技怎樣塑造您的學習經歷.
16. Could you share with me on an unforgettable learning experience? 請您與我分享一個令您難忘的學習經歷.
17. Could you please share with me on what make you like or dislike a subject? 請您告訴我怎樣會令您喜歡或不喜歡一個課程.

C) <u>About computer skills</u>

18. Do you own a computer? For how long? 您擁有自己的電腦嗎? 擁有了多久?
19. How would you describe your computing skill level (with examples)? 您怎樣去形容您的電腦知識水平? 有例子可以分享嗎?
20. What do you use the computer for? 您使用電腦的目的是什麼?
21. What other ICTs (e.g. phone) do you use? 您還有使用什麼資訊科技產品(如手提電話)?
22. Do you access Blackboard on the computer or your phone? 您會使用手提電話或是電腦去瀏覽 Blackboard 呢?
23. Please share with me on which website you have set for the homepage of your browser and the applications that you have installed and keep using in your mobile devices. 請您告訴我您的瀏覽器主頁是設定在那一個網站, 以及您的移動裝置內常常開啟使用的程式.
24. Please share with me if you have bookmarked Blackboard or create a short-cut of Blackboard icon on the "frontpage" of your mobile devices. 請您告訴我您有沒有把 Blackboard 書籤起來或者把它在您的移動裝置首頁建立捷徑.
25. Please share with me on which website or applications in your mobile devices you use most on daily base / use when you wake up. 請您告訴我您每天都會瀏覽或使用在您的移動裝置內那一個網站及應用程式是什麼. 另外, 您每天起床後首個瀏覽或使用網站及應用程式是什麼?

D) <u>Others</u>

26. What is your majored area? 您選修是那一個專業範疇?

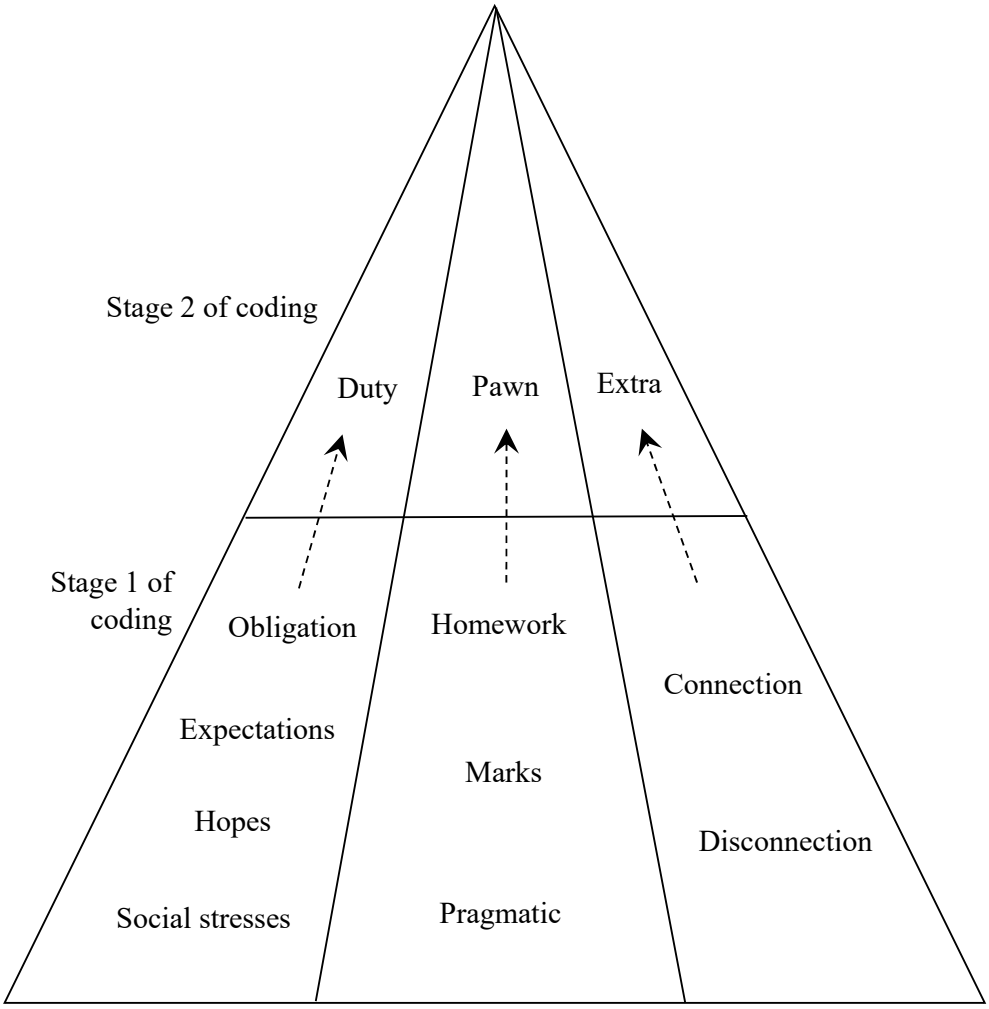
27. Why would you choose this majored area? 您為什麼選擇讀大學 / 選修這個專業?

28. What is your expectation after graduation? 您對畢業後的期望是什麼?

29. Based on your understanding, what is the expectation from your family towards your graduation? 您認為您家人對您畢業後的期望是什麼?

Appendix 2

Example of coding scheme



Examples of generated codes

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