CONCEPTIONS OF USING SOCIAL NETWORKING SITES AS A TOOL TO FACILITATE LEARNING: A PHENOMENOGRAPHIC STUDY OF UNIVERSITY STUDENTS' AND FACULTY MEMBERS' PERSPECTIVES

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I certify that the work of this thesis has not previously been submitted for a degree nor has it been submitted as part of the requirements for a degree except as part of the collaborative doctoral degree and/or fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and in the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in this thesis.

Signature of student:

Date: 03/10/2017

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Luthra, P. & Chung, A (2014). "Facebook, can it be a Tool to transform Pedagogical Practice in Higher Education among Asian Generation Y Students? Challenging Expectations." 6th Asian Conference on Education, Osaka, 28 October – 2 November 2014

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ABSTRACT

This study used a phenomenographic approach to identify various ways of understanding the experience of using social networking sites as a tool to facilitate learning and engagement from the perspective of students and faculty members. The research question posed was, "What are the different ways students and faculty members experience the use of social networking sites as a means of facilitating learning and engagement?"

Three different undergraduate classes from a university in Singapore participated in this study from January to May 2014. Facebook was used to supplement classroom learning for these three classes. One hundred and seventy volunteer undergraduate students participated in the survey questionnaire and 15 of them joined the focus group discussions. Additionally, the three faculty members who conducted the classes also shared their views in individual interviews. The quantitative data obtained from the survey questionnaire showed that most of the students claimed Facebook as a useful tool to facilitate learning and engagement but did not use it frequently for their classes. Other variables were believed to explain this phenomenon. The qualitative data from the individual interviews provided further insights, as well as a complete picture of the different ways that university students and faculty members experienced using Facebook for learning. The researcher hopes that these results can contribute to knowledge about: the affordances and barriers of using Facebook as a tool for learning as perceived by students and faculty members; the skills and dispositions faculty members should have to facilitate learning and engagement via Facebook; and the perceived outcomes of using Facebook as a tool for learning. The results of this study demonstrate that using social networking sites for learning requires a high commitment from faculty members and students, a clear direction and a strong sense of the connection between classroom learning and learning via a social networking site and an organised and secure technology platform.

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CHAPTER ONE:
INTRODUCTION

This chapter outlines the background and overview of this study. The chapter begins with the background and rationale this study, followed by the scope of this study, the research objectives and the research questions, definitions of the terms used and the implications and limitations of the study.

1.1 Background of the study

The use of information technology, e.g., Web 2.0 technology, in education has shaped the way we learn (Bosch, 2009; Palfrey & Gasser, 2013; Ractham, Kaewkitipong & Firpo, 2012). Among the communication technologies, social networking sites have had a great impact on education as places where people can easily share information, ideas, messages, comments, videos, images and infographics (Cartledge, Miller & Phillips, 2013; Guraya, 2016).

The common use of social networking sites for academic-related purposes includes its role as a platform for discussions about assignments, lectures, tutorials, study notes or sharing information from academic sources outside their prescribed course materials (Jong, Lai, Hsia, Lin & Liao, 2014). Of the different social networking sites available, Facebook is currently the most popular and commonly used social networking site in the world, with a reported monthly active user count of 1.79 billion according to its Q3 2016 estimate (Facebook-Investor Relations, 2016)[1]. Several research studies focused on the experience of using Facebook for building interpersonal relationships as well as engaging

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[1] https://investor.fb.com/investor-events/event-details/2016/Facebook-Q3-2016-Earnings/default.aspx

student learning were conducted (Barczyk & Duncan, 2013; Li & Pitts, 2009, Ooi & Loh, 2010).

1.2 Rationale of the study

While existing studies have focused on exploring the advantages and disadvantages of using Facebook for learning from the students' point of view, little research has studied how educators' activities and the given structures of the site are able to influence the use of Facebook for academic purposes. Apart from the students' perspective, how educators use Facebook to facilitate students' learning? Therefore, more research should be done to explore the experience of using Facebook for learning in detail from both the students' and the educators' perspectives. This study can contribute to the elimination of the research gap by finding out both students' and educators' experiences.

Besides, when most existing studies have used a quantitative approach to investigate issues relating to social networking platforms, such as Facebook, this study uses both qualitative and quantitative methods. The approach selected for this study is phenomenography. Combining the results of qualitative and quantitative data can enhance comprehension of the research problem because of the potential it offers to enhance the validity of research findings. With these comprehensive data, the researcher will be able to detail the various ways of understanding the experience of using a social networking site as a tool to facilitate learning and engagement from the perspective of students and faculty members using Facebook as an exemplar.

The research findings of this study will also enhance the insights of the educators on the trends of using social network platforms for academic purposes as it will contribute significant understandings to faculty members to aware of their roles and adjust their pedagogies when technologies are used to facilitate students' learning.

Moreover, when most of the studies reviewed the experiences of using social network platform for learning from the Western context, e.g., the United States, this study investigates the experience from the Asian context, and specifically the Singapore's experience. Do Singapore students' and educators' experience of using Facebook for learning the same as those in the Western context? This study can widen the knowledge on this topic by understanding the Singapore's experience and fill the research gap in this area.

1.3 Scope of the study

This study took place between January and May 2014, and the context of this study is a university in Singapore. It is a technology-enabled campus, and blended learning is highly encouraged at this university. Three different courses from School of Business, School of Social Sciences and School of Law participated in this study. The three faculty members who were conducting the courses used Facebook as a tool to facilitate learning, with each creating an individual closed Facebook group and page for the course. Participation on Facebook was voluntary. Faculty members and students posted information and comments on the Facebook page throughout the semester. The researcher monitored and analysed the Facebook posts. The survey questionnaires, as well as the focus group discussion questions, were then administered to the students to achieve an understanding of the experiences from having used Facebook for learning and engagement. A total of 170 students, from 18-25 years old participated in the survey questionnaires, and 15 of them took part in the focus group discussions. Students who agreed to participate sent an invitation to their faculty member to gain access to the closed group. Additionally, the three faculty members who conducted the classes also shared their views in individual interviews.

1.4 Research objective

As stated before, most of the existing research in this area has relied on quantitative studies; few studies have investigated variations in experience from the participants' point of view. Therefore, this study expects to identify and understand the experiences that students and faculty members had when using a social networking site for learning, using Facebook as an exemplar. The intention is to identify their conceptions of this experience. The researcher expects the results of the analysis to bring some insights to the affordances and barriers of using Facebook as a tool for learning as perceived by students and faculty members; the skills and dispositions faculty members should have to facilitate learning and engagement via Facebook; and the perceived outcomes of using Facebook as a tool for learning.

1.5 Research questions

The aim of this study was to identify and understand the various ways that both students and educators experience Facebook when it is used for learning. To achieve this goal, the following research question was asked: What are the different ways students and faculty members experience the use of a social networking site as a tool for facilitating learning and engagement? To address this question, three sub-questions were proposed:

1. What are the differences among students in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?
2. What are the differences among faculty members in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?
3. What are the students' and faculty members' experiences of using Facebook to facilitate:
   i.   knowledge management?
   ii.   engagement?

1.6 Summary of the methodology

The design of this study applies both quantitative and qualitative methods. Combining the results of qualitative and quantitative data can enhance the comprehension of the research problem because of the potential it offers to enhance the validity of the research findings. Data were collected through individual surveys, focus group discussions, individual interviews and analysis of the activity documents on the Facebook pages of the course (Stamouli & Huggard, 2007).

The quantitative data were obtained through a self-administered structured online questionnaire that included questions about the students' demographic data and their use, perceptions and experiences of using Facebook for learning. This gave a background understanding of the usage and general perceptions of Facebook for learning before the focus group discussions and individual interviews. The qualitative data were derived by (1) engaging students in meaningful discussions through focus group discussions; (2) individual interviews with faculty members who participated in this study; and (3) observation and analysis of Facebook posts.

To identify the variances in the participants' experiences of the phenomenon, the interview data were repeatedly read. As the researcher familiarised herself with the meanings within the transcript, the data were grouped. Finally, the data were analysed, and the variations were identified (Marton & Booth, 1997). These variations were summarised into categories of description. The categories were then formed into hierarchies moving from basic to complex understandings (Stamouli & Huggard, 2007).

In this study, these categories of description are referred to as patterns of experience. They are based on the variations in patterns of meanings identified by the researcher. These patterns of experience are represented in an outcome space that indicates the structural relationship between patterns.

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1.7 Definition of terms

Community of Practice. A community of practice (CoP) is characterised as social participation involving people from a variety of social backgrounds, including the home, workplace or school (Duncan & Barczyk, 2013; Hung & Yuen, 2010). According to Rovai (2002b), a CoP has two defining characteristics. The first of these is connectedness between participants. The second characteristic is learning happens via a process in which community members actively construct meaning and acquire knowledge (Rovai, 2002b).

Connectivism. This is an emerging theory of learning that addresses learning in complex social networked environments. Under Connectivism, learning is "the process of creating [a] network", and there is an internal and external network. In his research article, Siemens presents connectivism as a model of learning and knowing that is aligned with society's needs today (Siemens, 2006).

Constructivism. Constructivism is a traditional theory to explain how people learn. It brings up ideas about humans generate knowledge and meaning from the interactions between their own experiences and their ideas. People construct their own understanding and knowledge via asking questions, taking actions and have self-reflections.

Engagement. According to Coates (2007), engagement is seen to comprise active and collaborative learning, participation in challenging academic activities, formative communication with academic staff, involvement in enriching educational experiences and feeling legitimated and supported by university learning communities. Engagement is related to behavioural involvement either inside or outside of class (behavioural engagement); social connectedness and relationships (social engagement) and intellectual activities like knowledge creation (cognitive engagement) (Krause & Coates, 2008; Skinner & Belmont, 1993).

Facebook. An online social media and social network site founded by Mark Zuckerberg in 2004. It was first started as a website for Harvard students and afterwards expanded widely to other parts of the United States and the rest of the world. Users can set up the personal page and add others as friends, as well as post status updates and comments on others' posts. Users can access their Facebook account via computers, mobile phones or tablets.

Knowledge management. Bassi (1997) defined knowledge management as the continuing process of creating, capturing and applying knowledge to enhance organisational performance, as well as using knowledge to attain a competitive advantage in the marketplace. Knowledge management can also be viewed as a process that helps to disseminate or share knowledge (Wenger, McDermott & Snyder, 2002).

Social Constructivism suggested that learners learn through interaction and communication with others. Through interaction and communication with others, learners engage in cognitive processes, such as integrating, elaborating and structuring knowledge (Pena-Shaff & Nicholls, 2004).

Social network refers to the practice of expanding knowledge by making connections with individuals of similar interests (Gunawardena et al., 2009) Social networks can be formal or informal connections between people that come together because of common interests (Hardison et al., 2009).

Social networking sites. Social networking sites are web-based services and can be considered as a form of social media (Kaplan & Haenlein, 2010). A social networking site functions as a dedicated website or application that enables its users to employ both text-based communication and visual-based communication to share information, ideas, messages, comments, videos, images and infographics (Cartledge et al., 2013; Garaya, 2016).

Web 2.0 refers to the World Wide Web (www), a term coined in 2004. It provides graphical interfaces and allows users to participate in and generate content, as well as interact and collaborate (Solomon & Schrum, 2007).

1.8 Organisation of this thesis

This chapter explains the background and objectives of this study and introduces the research questions. In Chapter 2, a wide-ranging literature review is presented to highlight the existing studies on using social networking sites for learning. In the latter part of that chapter, concepts like engagement and knowledge management are explored. Chapter 3 discusses the methodology and the phenomenographic research approach that is used in this study.

Chapter 4 presents the quantitative data and provides a background understanding of the phenomenon. Chapters 5 and 6 illustrate the qualitative data collected from interviews with students and faculty members. Categories of description and outcome spaces are also identified in these two chapters. Chapter 7 presents the data that responds to the research question and sub-questions. This chapter also provides the implications for theory and practice, followed by the limitations and recommendations for the future research. Chapter 7 ends with the conclusion of this thesis.

CHAPTER TWO:
LITERATURE REVIEW

This chapter begins with a general survey of the current thinking on issues relating to information technology and learning in the context of higher education. A discussion that uses existing research to develop definitions of social networking and social networking sites follows, with a particular focus on the findings that provide evidence for the real and potential impacts of Facebook on learning in tertiary institutions. Section 2.6 presents the background on the conceptual framework that was used to investigate further issues relating to these impacts. The relevance of the social constructivism and connectivism are argued as theoretical developments that can offer rigorous pedagogical guidance for establishing online learning platforms to achieve learning outcomes, such as greater engagement in learning. These two theories also provide a useful lens through which these issues can be researched. Thus, the concepts of a CoP and Facebook, engagement and knowledge management are also reviewed.

2.1 Information technology and learning

The literature on current developments in education provides clear evidence for the ways information technology has impacted teaching and learning. For example, the proliferation of Web 2.0 and Web 3.0 technologies have made it possible to realise scenarios where teaching and learning are no longer constrained by time and space. Many educational researchers posit that Web 2.0 technology has immense potential to shape the way we learn (Bosch, 2009; Ractham, Kaewkitipong & Firpo, 2012). The capacity and availability of the internet to link and layer information, and provide interactivity and support in multimedia formats, make it a valuable tool for developing and delivering quality learning programs (Hedberg & Corrent-Agostinho, 2000, Kim, Sin, & Yoo-Lee, 2014). Since students today rely heavily on information and communication technologies

in their personal and professional lives (Jones & Fox, 2009), their ways of thinking and interacting are affected (Palfrey & Gasser, 2013). Some authors have suggested that since the new generation of students has grown up with technology, they have developed different ways of thinking, behaving and learning and expect such technologies to be integrated into their education (Carr, 2016; Connaway, Radford & Williams, 2009; Hanny & Fretwell, 2011). Others feel that there are no generational differences regarding the use of information technology for learning (Bennett, Maton & Kervin, 2008; Bullen, Morgan & Qayyum, 2011).

Those who support the idea that information technology has impacted greatly on learning point to evidence showing that e-learning and the use of learning management systems have transformed the pedagogy of teaching and learning (Parisio, 2010; Scott, 2016). This evidence also demonstrates that students are no longer just knowledge receivers; they create knowledge using Web 2.0 and 3.0 technologies, too. For example, Web 2.0 tools, like Facebook, Myspace and LinkedIn, are better tools for promoting and publishing user-created content and stimulating social connectedness (Abdelmalak, 2016; Gunawardena et al., 2009). Further, "Web 2.0 technologies have changed the learning landscape such that the three pillars of learning theory (behaviourism, cognitivism and constructivism) are no longer adequate for describing how we learn with these tools" (Gunawardena et al., 2009, p. 5). Thus, information technology has not only changed the new generation's learning experience but has also impacted teaching pedagogies. Traditional learning theories like behaviourism, cognitivism and constructivism commonly understand learning to be an internal process and that learning in the digital age is fully transferable from the outside. It is also believed that connectivism provides insights into learning the skills and tasks needed for learners to flourish in a digital era (Siemens, 2005). A focus on pedagogies such as social constructivism and connectivism combined with developments in convergence and improved functionalities in information technology have led many to look more closely at the potential of social networking sites (Hodgson,

McConnell & Dirckinck-Holmfeld, 2012). The definitions of social networking and social networking sites are described in the next section. In addition, findings that highlight evidence for the potential impact of Facebook on learning in higher education are also explored.

2.2 Social networking

Originally, the concept of social networking referred to the practice of expanding knowledge by making connections with individuals of similar interests (Gunawardena et al., 2009). Social networks are formal or informal networks where people come together to share common interests (Hardison et al., 2009). Nowadays, information technology enables social networking through the use of Web 2.0 technologies – web-based platforms focused on user-generated content, usability and interoperability with other systems (Bicen & Cavus, 2011). The development of Web 2.0 technologies has provided a new means of interacting with others and creating and sharing content, e.g., individual and collective publishing; sharing images, audio and videos (Bennett, Bishop, Dalgarno, Waycott & Kennedy, 2012). Due to its perceived ease of use, social networking empowers even those users who may be less technologically savvy to use the web to engage in social interactions, share their information and expertise and manifest their creativity (Schlenkrich & Sewry, 2012).

2.3 Social networking sites

Social networking sites are web-based services that can be considered as a form of social media (Kaplan & Haenlein, 2010). A social networking site functions as a dedicated website or application that enables its users to employ both text and visual communication to share information, ideas, messages, comments, videos, images and infographics (Cartledge et.al., 2013; Garaya 2016). Users register with a particular social networking site. Users typically construct a public profile (Boyd & Ellison, 2010) and are given

access to participate in social interactions and share information with their friends, family members, colleagues and even strangers on the same site (Hung & Yuen, 2010). With growing concerns regarding privacy, most sites offer users the option of customising their privacy settings for the selective disclosure of information to different audiences.

Social networking sites provide a rich environment for content by allowing users to create content in a shared space. The space is frequently updated as users can produce and create materials by co-writing content (Hardison et al., 2009). Content creation is no longer one-way, thereby closing the knowledge gap (Parameswaran & Whinston, 2007). Social networking sites also help to increase productivity. They allow fast communication between users, saving time for more productive work. Moreover, these sites enable users to tap into the networks of other users to access relevant information and expertise in the shortest possible time (Parameswaran & Whinston, 2007). In this sense, social networking technology can be described as tools that engage participants in a common goal and facilitate collective intelligence through social interaction (Gunawardena et al., 2009).

Although social networking sites are commonly used for social and entertainment purposes – to network, collect information, relieve stress and record events in one's history – educators are now turning to Web 2.0 platforms for academic purposes (Childs, 2015; Kim, Shim & Ahn, 2011). Interaction and collaboration are now recognised as important features of "deep learning" (Biggs, 1999), and it has become clear to many that the use of social networking can facilitate these activities both inside and outside the classroom (McLoughlin & Lee, 2008). Educators have drawn on the abilities of these types of sites to create, collaborate and share content to assist in generating and disseminating academic knowledge. This behaviour can be seen, for example, in the description of the virtual learning environments (VLEs) provided by Cartledge et al. (2013). These authors detail the way in which some medical educators have established

VLEs which incorporate the interactive aspects of social networking sites into their own learning structures with very positive feedback from students. This work, and several others, also highlighted the potential benefits of using social networking sites in tertiary education, including useful technical support and interfaces for student collaboration, greater student-generated content and peer communication and the personalisation and socialisation of student learning (Gray, Annabell & Kennedy, 2010).

The common uses of social networking sites for academic purposes include serving as a platform for discussion about assignments, lectures, tutorials, study notes and sharing information from academic sources outside the prescribed course materials (Jong et al., 2014). In addition, such sites can also be used to host events and debates, provide a platform for discussing ideas, gather feedback or elicit informal consultation from educators or peers (Schlenkrich & Sewry, 2012). They also provide opportunities for educators and students to nurture better relationships (Mazer, Murphy & Simonds, 2007). Some research has shown that using social networking sites at secondary education level leads to better academic performance in terms of attaining higher test scores and student achievements (Klein, 2008). Social networking sites can also help students develop relationships and adapt to university culture, both of which play important roles in shaping their learning outcomes (Yu, Tian, Vogel & Kwok, 2010). Morrow (1999) showed that university students with greater engagement on social networking sites are likely to have better health, more effective development and greater academic success. Of the various sites available, Facebook is currently the most popular and most commonly used social networking site in the world, with a reported monthly active user count of 1.79 billion according to its Q3 2016 estimate (Facebook-Investor Relations, 2016)[2].

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[2] https://investor.fb.com/investor-events/event-details/2016/Facebook-Q3-2016-Earnings/default.aspx

Facebook is frequently used for communication, social networking and interaction. The experience of using Facebook for learning is explored in this study.

2.4 Facebook features

When creating a Facebook account, users set up their profile page and provide some background information: gender, date of birth, interests and hobbies, schools and occupations, etc. Others can access this personal information, but users can adjust their privacy settings to determine the level of information shown to the public and their friends.

When logging into Facebook, users see all the updates and comments from their friends and can set viewing priorities by filtering the most recent or popular stories. They can also like and leave comments about messages from friends or send a private message to a person via Facebook Messenger. Users can post text messages, videos, photos, links, and so on to update their status and choose the audience for their messages.

Moreover, users can create open or closed groups, as well as private or public pages, and invite others to join. As mentioned, Facebook is primarily used for communication and social networking but has also been extended to other uses, such as marketing, gaming and education.

2.5 Using Facebook for academic purposes

The original designers of Facebook did not consider that the site would be used for educational purposes. Rather, they were more focused on creating a social platform that would enable friends to interact via a virtual environment. Eteokleous and his colleagues used a mixed method to investigate the educational role of Facebook. 232 questionnaires were completed and 3 focus groups were conducted. This study suggested that Facebook's numerous features, such as email, bulletin boards, instant messaging, video

and picture posting and applications, have great potential to serve educational functions, including communication, collaboration and sharing between students and faculty (Eteokleous, Ktoridou, Stavrides & Michaelidis, 2012). While student use of Facebook for academic matters is often not a primary function, it does include discussing assignments, lectures, study notes and sharing information about research resources with their peers (Jong et al., 2014). The use of Facebook in learning allows students to attach links, share photos and videos and even send private messages. Barczyk and Duncan (2013) studied the effectiveness of using Facebook in a course. The instructors blended Facebook and offline learning materials to encourage students to collaborate on written assignments. Towards the end of the experiment, students were comfortable sharing information and answers, as well as independently facilitating discussions via Facebook. Other factors that may motivate students to adopt Facebook for educational purposes include social contact with people who share a common interest (Deng & Tavares, 2013; Sánchez, Cortijo & Javed, 2014).

It is also possible to relate the conceptual use of Facebook in higher education with Bartlett-Bragg's (2013) ideas about using weblogs in learning. It is believed that there are two perspectives regarding the social aspects of Facebook: the individual perspective, which centres on curation and creation; and the network perspective with its four C's – connection, conversation, community and collaboration. Learning outcomes surrounding knowledge and its management, acquisition, creation and sharing, along with learning engagement were investigated in this study.

In the following section, the literature on the advantages, disadvantages and challenges of using Facebook for learning are reviewed to gain a better understanding of their use for academic purposes.

2.5.1 Advantages of using Facebook for learning

One of the advantages of Facebook is its open architecture, which makes it quite easy for teachers and students to post their comments and enhance the learning process. Students who use Facebook for academic purposes report that the immediacy of learning from what teachers post on the site, the convenience of sharing educational resources and the interactivity it provides makes Facebook superior to existing online learning platforms, such as e-learning and Moodle (Jong et al., 2014). As mentioned, Barczyk and Duncan (2013) studied the effectiveness of using Facebook within a course in a setting where the instructors blended Facebook and offline learning materials to encourage students to collaborate on written assignments. 158 students enrolled in the courses and contributed to the learning materials on Facebook, commented, shared information and 106 students completed the survey questionnaire. The results reflected that students preferred the communication functions of Facebook to Blackboard, which was not user-friendly. Towards the end of the experiment, students were comfortable sharing information and answers, as well as independently facilitating discussions when Facebook facilitated students' sense of community and connectedness.

From a survey of the current literature, it appears that using Facebook for academic purposes has three key advantages. It fosters communication and collaboration because users are offered the chance to voice and discuss their opinions in a non-threatening environment that promotes sharing and content building (Mazer et al., 2007). The interactive nature of social networking sites means users can easily create, edit and share information (Barczyk & Duncan, 2013; Smith 2016). And, the informal exchange of ideas and opinions can facilitate brainstorming and the exploration of ideas, which can, in turn, drive the evolution of ideas by allowing users to draw inspiration from a social network of information and people who are outside their traditional social circles (Rozwell, 2008).

This student-to-student connection is important in creating a learning community that is vital to student education (Baker, 1999).

Educators also view Facebook as a way to motivate and engage students to take ownership and be actively involved in their learning, particularly those in higher education. Comments posted by students on a social networking site may provoke meaningful discussions (Schlenkrich & Sewry, 2012). Educators can respond to these comments and interact casually with students, allowing them to shift from being authoritative deliverers of knowledge to facilitators of exploration and collaborators in learning. In this way, learning becomes a self-driven process instead of a passive one (Barcayk & Duncan, 2013). Students may also feel more comfortable interacting with educators who have communicated with them on Facebook (Lipka, 2007).

Second, the use of Facebook for academic purposes can boost student motivation and cultivate a positive class climate. Students under a self-disclosing educator who shared large amounts of information on Facebook reported higher levels of motivation and effective learning and were more likely to perceive the teacher to be effective in explaining course materials (Imlawi, Gregg & Karimi, 2015; Mazer et al., 2007).

Third, the use of Facebook as an education tool can serve as a plausible solution to increase student-educator interaction in reading and course-related materials, despite a finite amount of in-class time. Facebook facilitates the accumulation of social capital – that is, the resources accumulated through building relationships among people – by lowering the barriers to participation using a social networking platform as an online extension of the classroom. Students who may be too nervous to start communication are encouraged to do so by participating in discussions held on social networking sites (Schlenkrich & Sewry, 2012).

2.5.2 Disadvantages of using Facebook for learning

Despite the numerous benefits of using Facebook for academic purposes, there is little evidence that uptake of social networking sites by educators is significant (Crook, 2008). Some of the reasons for low uptake include the workload required by educators in addition to traditional classroom teaching; the additional workload required by students; and limitations in the quality of interaction among students and educators and uncertainties regarding ownership of content in public or collaborative spaces (Schroeder, Minocha & Schneider, 2010).

Mazer et al. (2007) suggested that a perceived lack of professionalism may be one of the contributing factors to the limited uptake of Facebook by academia. Since Facebook is used primarily for social and entertainment purposes, students may post information they do not necessarily want their teachers to see. Likewise, teachers may face credibility issues if they are unable to effectively manage their personal content (Mazer et al., 2007).

Another possible disadvantage might be attributed to the challenges associated with managing personal and professional time (Schlenkrich & Sewry, 2012). Wang, Woo, Quek, Yang, and Liu (2012) investigated students' perceptions of using Facebook in formal educational settings in Singapore (n=28), and the results showed that students preferred using Facebook for social interaction but not for formal learning. Students may be distracted by activities in their other social networks, especially when the nature of their learning is not collaborative or there is no social norm that recognises the importance of social networking for academic purposes (Bradley, 2007, Wang, et al., 2012). It may become a compulsive habit to visit social networking sites to constantly check for updates, diverting the student's attention from work that needs to be done (Schuck, Aubusson & Kearney, 2010). Consequently, social networking can negatively impact student productivity and their work-life balance (Bradley, 2007).

Lastly, there may be concerns regarding privacy and network security (Parameswaran & Whinston, 2007; Smith, 2016). Although users may restrict access to their personal data, image, or information shared on social networks by changing their privacy settings, the information shared online is, nonetheless, at the mercy of hackers.

2.5.3 Challenges of using Facebook for learning

Research also suggests that students prefer using social networking sites as an educational tool in informal learning contexts, not formal ones (Goodband, Solomon & Samuels, 2012). Gettman and Cortijo (2015) showed that students (n=245) were reluctant to integrate Facebook into the college coursework. This study purposes that the preference of using Facebook for learning may be shaped by the experiences students have had with how educators are currently using social networking to supplement learning (Gettman & Cortijo, 2015). Additionally, while open publishing – where students upload their academic work online for other students to review and respond to – has had positive implications, such as fostering a cooperative learning environment and providing opportunities for students to develop critical thinking through reviewing their peer's work, some students are hesitant to publish their work in fear that others may copy it (Waycott et al., 2010). Thus, educators need to be sensitive to the concerns of their students.

There are also concerns about the ethical implications of having students publish their work on social networks. Students need to be both cautious and comfortable with the content that they are posting, even when the Facebook group used for class discussion is private (Waycott et al., 2010). Furthermore, it is difficult for educators to check the legitimacy of content published by students (Schroeder et al., 2010), and publishing illegitimate content may affect the institution's credibility. The use of Facebook takes away the option for students who do not feel comfortable with being identified as the author of a piece to publish their work anonymously.

Hughes (2010) found that when learners experience incongruity – when they do not perceive themselves as part of the group – and when they do not get any response from other users, they are less likely to engage fully with the learning community. Thus, while social networking sites may facilitate the dissemination of learner-generated content, it does not necessarily encourage the challenging of ideas or reconstruction of those ideas into novel knowledge (Hughes, 2010).

The difficulties of integrating social networking into the suite of educational tools include a lack of willingness and/or knowledge by the educator to adopt technology for learning purposes (Browning, Gerlich & Westermann, 2011; Moran, Seaman & Tinti-Kane, 2011; Roblyer, McDaniel, Webb, Herman & Witty, 2010). In terms of usage, there seems to be a discrepancy between educator and student attitudes towards using Facebook in the classroom. Schroeder et al. (2010) pointed out that educators faced similar problems when social networking sites were introduced for academic use. For example, their workload increased, and they were uncertain about appropriate methods for assessing individual student performance in these types of collaborative environments. Roblyer et al. (2010) found that, compared to faculty, students are much more likely to use Facebook and are significantly more open to the possibility of using Facebook and similar technologies to support classroom work. They also found that faculty members are more likely to use more 'traditional' technologies, such as email. In a recent study, Prescott (2014) found that educators tend to use Facebook in their social lives, but few use Facebook within teaching. She also found that those who do use Facebook in their teaching predominantly use it for communicating and sharing information and resources with their students, rather than for formalised learning. It seems as though educator-motivated Facebook use is based on individual differences, such as the educator's predisposition for using technology in their classroom (Crook, 2008) or their interest in integrating social media, wikis, blogs, YouTube and social virtual worlds into the learning process (Duncan & Barczyk, 2013; Holotescu & Grosseck, 2009). Imlawi et al. (2015) suggested that

educators can increase students' engagement, motivation and satisfaction by communicating with students via course-based online social networks. Since the educator's personal beliefs and preferences significantly affect the adoption of new technologies, educators must first understand and use social networking sites effectively before successfully integrating them into their teaching strategies (Vie, 2008).

While existing studies have reviewed the advantages and disadvantages of using social networking sites for learning, they were mainly from the western context. Although a few studies have reviewed the general experience of using Facebook in Singapore context (Hew & Cheung, 2012; Lim, Der Thanq & Liang, 2013; Wang et al., 2012), they mostly focused on the independently-motivated or self-organised use of Facebook: i.e., the student's experience. Little research has examined how the educator and course structure can motivate the use of Facebook for academic purposes in Singapore context. However, educators, not just students, can also shape the use and utility of Facebook in the classroom. Thus, more detailed local research should be done to explore the experience of using Facebook for learning from both the students' and the educators' perspectives. In this sense, this study tried to fill this research gap, attempted to identify and describe the various ways that both students and educators have experienced social networking sites, and particularly Facebook, as a tool for learning in Singapore context.

2.6 Conceptual framework

Given consideration to current literature on the educational use of social networking sites and the way in which the development of Web 2.0 tools have impacted current ideas around learning, this section clarifies the conceptual framework that was developed for this research, as well as the conceptualisation of learning that forms the basis of this framework. This conceptual framework also guides the discussion in Chapter 7.

Related learning theories are examined to gain pedagogical guidance to understand how and what students and educators are experiencing while they are using social networking sites for learning. Learning theories are theoretical frameworks that illustrate how information is grasped, processed and recalled during learning (Schunk, 1996) and how they impact teaching and learning styles. Reviewing these learning theories can help to determine how they meet the needs of today's learners and provide insights into the needs of future learners. Some educators consider that constructivism is highly compatible with the use of Web 2.0 tools, while others have started to look beyond and have raised the idea of connectivism (Rennie & Morrison, 2013). The next section explores both social constructivism and connectivism and the wide use of these two perspectives in previous research. While it is true that they both share similar concepts for learning and knowledge construction, they can also complement each other in understanding learning in collaborative and networked environments.

2.6.1 Constructivism and social constructivism

Constructivism is a traditional theory that raises ideas about how humans generate knowledge and meaning from the interaction between their experiences and their ideas. Vygotsky's work forms the main component of constructivism. Vygotsky's (1978) social development theory posits that social learning precedes development and argues that socialisation and social behaviour create consciousness and cognition. In other words, learners learn through interaction and communication with others. The dialogue then serves as an instrument for thinking because, through interaction and communication with others, learners engage in cognitive processes, such as integrating, elaborating and structuring knowledge (Pena-Shaff & Nicholls, 2004). Therefore, educators should create a learning environment to scaffold the learner's learning and maximises the learner's ability to interact with others through discussion, collaboration and feedback. Knowledge constructions involve student-student and student-educator collaboration in tackling real-

world problems that build on each participant's language, skills and cultural experiences (Vygotsky, 1978). Such instructional strategies help to foster a collaborative community of learners.

Similarly, social constructivist theory views learning as a social construction of meaning. Consequently, learning environments that encourage active participation, interaction and dialogue are thought to provide the necessary opportunities to engage in the process of knowledge construction as they attempt to create meaning from new experiences (Jonassen, Davidson, Collins, Campbell & Haag, 1995). Characteristics of a good learning environment include providing activities and opportunities for students to articulate and reflect on the content under study, to reflect on the meaning of the content with others and the self, and to apply the knowledge learned in real life situations (Pena-Shaff & Nicholls, 2004). In this manner, learning is viewed as an active process, characterised by the transmission, negotiation and transformation of meaning and ideas between individuals to create new knowledge (Salomon, 1993). This process of learning can be more impactful when communication among peers is done in written form because writing, without the immediate feedback of another person as in face-to-face communication, requires more detailed elaboration to convey ideas and arguments successfully (Koschmann, Kelson, Feltovich & Barrows, 1996).

In applying social constructivist theory to the academic use of Facebook, Ferdig (2007) posits that social networking sites, such as Facebook, promote social interaction between individuals with the likelihood of supporting active and social learning and the construction of knowledge within a student-centred constructivist environment. Thus, students can leverage this platform to tap into the expertise of more skilled peers or the educator to optimise their learning (Ferdig, 2007).

A study on the patterns of construction of knowledge in a synchronous open-ended, small-group, computer-mediated classroom discussion found that the discussion messages

posted online shared patterns consistent with the construction of knowledge (Idris & Ghani, 2012). Specifically, computer-mediated communication helped to foster reflective thinking and knowledge construction as participants engaged in purposeful discussion, reflection, creative thinking, persistence and collaboration, which are crucial for the process of knowledge construction (Idris & Ghani, 2012). The interaction between existing knowledge and the knowledge generated by discussions leads to greater learning and production of novel knowledge. Thus, social constructivism states that communities and groups play a critical role in knowledge construction.

2.6.2 Connectivism

In a research article by Gunawardena et al. (2009), researchers found that "Web 2.0 technologies have changed the learning landscape such that the three pillars of learning theory (behaviourism, cognitivism and constructivism) are no longer adequate for describing how we learn with these tools" (p. 5). Therefore, connectivism is currently a learning theory that explains the use of information technology and addresses learning in social, complex, networked environments. Siemens (2006) states that learning is "the process of creating a network", and there is an internal and external network. In this research article, Siemens presents connectivism as a model of learning and knowing that is aligned with society's needs today. He also hypothesised that today's youth performs tasks and solves problems through technology. He claims that "classrooms and courses" fail where "ecologies and networks" succeed in addressing the growing needs of digitally-connected learners; continual networking processes guide their daily learning. His article further refutes the old metaphors, such as "our mind is a black box", "our mind is like a computer," and "our mind constructs our reality," (p. 26) in place of neuro-scientific research that proves that our mind is itself a network of knowledge distribution (Siemens, 2006). Thus, when learners can understand and connect both ideas and knowledge in their thinking, an internal network is created; whereas, when the learning occurs outside an

individual's thinking, and with the connection with other people, groups and systems, an external network is created that can be understood as a social network. Hence, connectivism explains the use of information technology, especially the use of social networks, for learning. Some examples of the use of social media to develop learning communities outside the classroom include the use of social media to merge connections between different learning levels within the learning environment, and the formation of extensive networks of experience and information that can be readily shared.

One strength of Siemens' (2006) research article is the use of e-portfolio and learning management systems to drive how learners will learn. This point highlights the authority of technological tools in education, and how the learner and their knowledge communities should not be controlled by tools, but rather be guided by them to fulfil pedagogical objectives instead.

Hodgson et al. (2012) also suggest the need for learners to acquire social, as well as digital, literacy. The authors believe that skills, literacies and competencies are important in creating an impact beyond a small group of heavy web users. They emphasise the importance of these literacies in a world that is quickly turning towards collaborative and shared ways of working. What is most striking about their paper is that it transfers the competitive and individualistic nature of student learning into networked learning. This idea resonates with Solomon and Schrum's (2007) writings: "Intellectually, Web 2.0 signals a transition from isolation to interconnectedness. ... these tools allow multiple users to participate: editing, commenting and polishing a document collaboratively rather than working alone". As such, the learning process becomes extremely cyclical because learners can connect to a network to share and find new information. Learners that are engaged in networked and collaborative learning often share knowledge and create solutions. This helps to modify their beliefs based on new learning.

Later, Siemens and Conole (2011) offered a similar judgement on the theory of connectivism by suggesting that developers of e-learning have increased the influence of the Internet and the online connectedness of people. This belief will have great implications for educational practice. Typical of Facebook, Siemens and Conole (2011) predicted that the theory of connectivism would revamp the learning experience, in the sense that the learner would be at the centre of the learning process, not the teacher. He said that learners would become instrumental in determining the content of the learning in addition to deciding the level of communication of the individuals who may participate in the learning process (Kop & Hill, 2008). Indeed, Siemens and Conole (2011) clearly showed that the model of connectivism has become the face of the digital age because learners on Facebook can determine who can be part of their discussions by confirming or rejecting friendship requests. All in all, through the connectivism model, learning is considered to be a knowledge creation process, rather than a knowledge consumption process. This is true in the practice of Facebook, as learners can critique the knowledge that has been posted. In the end, the learners can create new ideas.

Taken together, these previous studies indicate that networked learning plays a significant role in 21st-century education (Hodgson et al., 2012; Kop & Hill, 2008; Siemens, 2006). Learners that are engaged in networked and collaborative learning often share knowledge and create solutions. It can be assumed from these three studies that connectivism is a relevant learning theory that influences the digital age and that students display a different style of coping with the academic stress resulting from rigid educational frameworks and institutional requirements. However, it is important to monitor and understand the actual thought processes of individuals with different coping styles for several years after the onset of networked learning. Also, the educators and society members who play a major role in the networked learners' lives should be considered in these understandings. This includes not just the effectiveness of the technological design of education, but how the learners learn as well. Thus, the current study focused on what these processes were and

how they were used when the students and faculty members used a social networking site, for example, Facebook, for learning.

2.6.3 Social constructivism and connectivism

There is an alignment between social constructivism and connectivism in the formation of complex social networks that encourage the changing format of knowledge, social behaviour and function. Hogan and Tudge (1999) explain that the individual is just as important in collaboration as the interactions between peers. This implies that social and cognitive processes are not separate entities, rather they are interdependent; individual and collective work are equally important to encourage successful collaboration.

What this means for connectivism is that, as a learning theory, connectivism needs to encapsulate the individual as well as the social in understanding learning and knowledge creation. In fact, according to Hogan and Tudge (1999), there seems to be a synonymy between Vygotsky's theories of learning and how connectivism creates knowledge networks. This notion is mainly emphasised by Vygotsky's position that 'knowledge is first social and later individual'. In other words, social environments create platforms that encourage connectivism. Under connectivism, the social is a broader concept in digitally connected environments, and the importance of collaborative learning is emphasised. As mentioned in the previous section, information technology and social networking sites enable learners to contribute to and cement their learning. Learning is not only a process of knowledge acquisition and identification of the relationship between facts and ideas (Hara, 2008), it also requires both social and intellectual interactions, supported through various interactive media, to accomplish learning goals (Dede, 1996). Learning is then perceived as a collaborative event involving learners who come together to intentionally foster the creation of knowledge (Shea, 2006). Under connectivism, Siemens (2014) says that learning will exist via communities of practice and personal social networks. As one of the pillars of communities of practice, social constructionist theory has been used to

analyse the use of Web 2.0 technologies for community building. In this theory, great emphasis is placed on the fact that the world is shaped by dialogue and discourse among different people. Therefore, social networking tools, like Facebook, can be used to build virtual communities through dialogue and conversations (Fang & Chiu, 2010; Gunawardena et al., 2009). From the literature review, it is apparent that more studies should be done to analyse the use of online communities or social networking sites in the knowledge construction process. In this study, Facebook was used as a tool to facilitate student learning. Students and educators were connected to create 'feeds' and 'comments' under their class Facebook page. Collaborative learning existed in this process, and it facilitated the development of a CoP. Their communities, on the other hand, also encouraged participation and managed knowledge.

2.7 Facebook as a community of practice

Having explored the concepts of learning and knowledge construction from a social constructivist and a connectivist perspective, this chapter will now focus on the topic of communities of practice. As stated, within the overall framework of social constructivism, it is also possible to see Facebook in terms of a CoP. Indeed, seeing Facebook in this way can help to explain many of the aspects of participation and interaction on the platform. According to McMillan and Chavis (1986), a community is "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (p. 9). Members of a stronger community will have feelings of togetherness, and such a community can exist independently from geography, physical neighbourhoods and campuses (Wellman, 1999).

A CoP is termed as social participation involving people from a diverse range of social backgrounds, including the home, workplace or school (Duncan & Barczyk, 2013; Hung & Yuen, 2010) A CoP is created by people who participate in collective learning in a

shared domain of endeavour, such as a group of students studying the same course (Wenger, 2011). It helps to understand these communities as a group of people who are mutually engaged in sharing ideas, resources and information and are working together to develop and maintain knowledge through a common platform. (Solomon & Schrum, 2007)

According to Rovai (2002b), a CoP has two defining characteristics. The first of these is connectedness between participants. This sense of emotional connectedness may provide support for students to complete a course and facilitate greater learning (Rovai, 2002b). Summers and Svinicki (2007) found that students in cooperative learning classrooms had higher motivation to accomplish goals and a stronger sense of community compared with those in non-cooperative learning classrooms. Thus, the presence of a CoP affected the students' sense of community and helped to facilitate effective learning. The second characteristic identified by Rovai (2002b) is learning, meaning a process in which community members actively construct meaning and acquire knowledge (Rovai, 2002b).

The concept of virtual communities of practice (VCoPs) emerges from these foundations, as social networking sites become a more common platform for discussion groups. These VCoPs share the same characteristics as their traditional counterparts in many ways. It is believed that a sense of community and strong social ties can be built through electronic media and online environments (Baym, 1995; Reid, 1995; Rovai, 2002a).

For example, Gunawardena et al. (2009) state that communities are created by the dialogue and discourse we have with one another. They supplement this notion with the idea that social networking tools like "wikis and blogs help to build community through dialogue and conversation" – in other words, a virtual CoP. Further, as they become more secure and more comfortable with sharing, the growing feeling of community encourages them to become connected also improves the virtual CoP within the classroom. Rovai

(2002a) concurs that an online sense of community increases the sense of emotional connectedness, and this emotional support can assist class performance.

Gunawardena et al. (2009) added that "social networking applications as collective intelligence tools are utilised to develop a product or solutions to a problem". This suggests that Web 2.0 tools like Facebook, Myspace and LinkedIn are better than Web 1.0 tools at promoting social connectedness, as well as user creation and publication of content. Thus, Facebook helps to enhance connectedness and learning by providing a platform for students to understand each other on a personal level and share information in a supportive, non-threatening environment (Hurt, Moss & Bradley et al., 2012).

In another research article on the use of social networking technology, mainly in higher education settings (Hung & Yuen, 2010), the researchers hypothesised that social networking increases a sense of community and promotes classroom communities of practice. The research focuses on how face-to-face learning, when supplemented with e-learning, actually increases a sense of community amongst learners.

As stated, Barczyk and Duncan (2013) conducted a further study in which they attempted to identify how Facebook enhances higher education courses, and how it can be used to manage social media in the classroom. The study examines Facebook as a supplement to face-to-face courses, with a focus on student attitudes, communities of practice and a sense of classroom community. Their study, along with Hung and Yuen's (2010) research, both discuss the creation of communities of practice and students' perceptions of incorporating social networking into certain university courses. Barczyk and Duncan (2013) examined the impact of demographics such as age, gender and prior online experiences with social networking in a classroom. While they found very few differences between age, gender and learning style preference, there were some marginal differences. For example, females tend to feel a stronger sense of learning in a community than males, whereas older students (age 26 or more) who are new to social networking are more

receptive than traditional students (age 18-25). In terms of prior online experiences, students who had high success rates in previous online courses had better experiences than those who had mixed successes and non-successes. It was also notable that those who had at least one successful online course experience were likely to have decreased learning barriers in another online course than those who did not. Barczyk and Duncan (2013) also found that the comments feature offered by Facebook was the most effective in facilitating learner-centred activities and collaborative learning opportunities. This finding indicates that engaging in a discussion by commenting on posts enables the development of communities of practice.

Therefore, given Facebook's popularity as a social media platform, and students' familiarity with it as a site, it has the potential to be adapted as an educational tool (Barczyk & Duncan, 2013). For these reasons, Facebook was used in this current study to explore the experiences of using a social networking site for learning from both the students' and educators' perspectives.

Through an understanding of the concepts of communities of practice presented in this section, learning outcomes, such as engagement and knowledge management in learning, were also explored when an online learning platform is used collaboratively – Facebook, in the case of this study.

2.8 Engagement

This section focuses on the possible learning outcomes that can be developed when Facebook is used for academic purposes. Engagement was one of the outcomes studied in this research. According to Coates (2007), "engagement is seen to comprise active and collaborative learning, participation in challenging academic activities, formative communication with academic staff, involvement in enriching educational experiences and feeling legitimated and supported by university learning communities." As this list

suggests, "engagement is a broad construct intended to encompass salient academic as well as certain non-academic aspects of the student experience" (p. 122).

Several other authors have tried to define student engagement. For example, Skinner and Belmont (1993) assert that engagement has three areas: cognitive, behavioural and affective. However, Krause and Coates (2008) explain that engagement can be studied in three aspects: social, academic and intellectual. Both definitions share the idea that engagement is related to behavioural involvement either inside or outside of class (behavioural engagement); social connectedness and relationships (social engagement) and intellectual activities like knowledge creation (cognitive engagement).

It is reasonably clear to those who have examined the application of Facebook in tertiary teaching and learning contexts that students (and teachers) will use Facebook in different ways, depending on a range of circumstances. 'Using' Facebook means that students engage with the site and respond to the multimodal material they see there. Some may interact in obvious ways through their multimodal posts. Others, however, may be more circumspect but may still be active curators of the knowledge they identify as important to them. To gain a better understanding of these procedures, it is necessary to examine current thinking about issues, such as engagement and knowledge management, in the specific context of using online social networking sites in teaching and learning.

To explore how social networking technology can be used to develop a student's sense of community and engagement, Hung and Yuen (2010) recalled Wenger's 1998 statement to emphasise the importance of social interaction. According to these authors, people will learn and become who they are while they are engaging with each other.

Engagement theory is a conceptual framework for technology-based teaching and learning. Engagement theory postulates that meaningful learning occurs when students are engaged in learning activities through interaction with others and meaningful tasks (Kearsley & Shneiderman, 1998). According to Kearsley and Shneiderman (1998), the

process of collaboration forces students to clarify and verbalise their problems, thereby facilitating the thought processes used to arrive at plausible solutions. Working on project-based assignments in teams is thought to facilitate the development of an understanding of diversity and multiple perspectives as students work with others from different backgrounds. Consequently, such an approach results in learning that is creative, meaningful, and authentic (Kearsley & Shneiderman, 1998). Similarly, Natriello (1984) also considered that student engagement is their participation in activities that are part of the school programs and that students with high engagement will put more time and effort into participating in school-related activities.

Engagement theory proposes that students must be significantly engaged in learning activities through interaction with others and valuable tasks. According to Gagne (1984), the basic learning principle underlying engagement theory is that all student learning has to involve active cognitive processes, such as creating, problem-solving, reasoning, decision-making and evaluation. Most important is the fact that students should always be intrinsically motivated to learn. One can, therefore, say that the engagement theory is applied to ensure full participation of the students and teachers in the learning environment.

There are three pillars of engagement theory. Learning activities, as defined by the theory, have to be: project-based, have an outside focus and must always occur in a group context (Wang, Woo, Quek, Yang & Liu, 2012). These learning processes are equivalent to the ones used on Facebook, where a community of friends interacts. The aspect of having an outside focus appears when students can interact with individuals outside the normal classroom situation. This action makes student learning more interactive in nature. The presence of mobile devices, e.g., laptops and smartphones, has ensured that students can interact with other students through Facebook. It can enrich the learning process and allow students to gain an in-depth understanding of the course content.

The theory of engagement is notable because the use of computers in education is acknowledged as a communication tool rather than a media delivery service (Alavi, 1994). Engagement theory has therefore emphasised the role of technology to ensure ease of interactions between participants; it acknowledges the use of the web and how technology facilitates learning and teaching. Teachers, for instance, have been able to use the Internet to deliver course content to their students through various digital approaches. Students no longer solely rely on face-to-face methods of instruction; they use the web, hybrids of the web and face-to-face interaction (Chen, Lambert & Guidry, 2010). Since existing research has seldom studied the significance of Facebook in the engagement process, there is a gap for this study to investigate further.

As a whole, the literature highlights that networked learning plays a key role in 21st century education (Hodgson et al., 2012; Kop & Hill, 2008; Siemens, 2005, 2006). Learners that are engaged in networked and collaborative learning often share knowledge and create solutions, and these are fast becoming the preferred modes of learning. The current literature provides a framework for this study to explore and understand the experience of using a social networking site for learning in the area of facilitating engagement.

2.9 Knowledge management and education

As mentioned in the previous section, a knowledge management framework combined with the theory of engagement is a very useful lens to examine the passive and active interactions on social networking sites. Knowledge is the process through which a person, or group of people, acquire a situated understanding within a social context. This understanding can be constructed either individually or collectively (Hara, 2008). It is a valuable strategic resource, but it has to be continuously reviewed, renewed and revitalised (Kulkarni, 2013). When social networking sites like Facebook are used to

share and store knowledge, its curatorial potential should be emphasised. The concept of knowledge management can provide a better understanding of this potential.

Bassi (1997) defines knowledge management as the ongoing process of creating, capturing and using knowledge to enhance organisational performance or gain a competitive advantage in the marketplace. Knowledge management can also be viewed as a process that helps to disseminate or share knowledge (Wenger et al., 2002). The current literature offers two views of knowledge management. From a technological perspective, knowledge management's primary function is to assist in knowledge *dissemination*. However, where knowledge management is embedded in a social context, knowledge *sharing* takes place within a community of learners. In many knowledge management efforts, the focus is placed on implementing technologies that are designed to capture and store knowledge without recognising the need for human intervention to keep the materials accessible and relevant (Kulkarni, 2013).

Goddard (1998) posits that higher educational institutions should be regarded as knowledge businesses because higher education deals primarily with knowledge production, storage and sharing. Knowledge management can be thought of as an array of practices used by institutions to identify higher level innovations, capture the knowledge and allocate it for the improvement of education (Kulkarni, 2013). As knowledge is accumulated at faster rates, the focus for studying knowledge management processes have shifted to how social networking sites can be used to curate collective and collaborative knowledge (Dai et al., 2013). There is growing recognition that knowledge management can facilitate the evolution of higher education to become highly interactive and dynamic (Robson, Norris, Lefrere, Collier & Mason, 2003). A study conducted by the Centre for Workforce Development indicates that most actual learning is frequently accomplished via informal means, such as student-faculty interactions, mentoring programmes and peer-to-peer discussions (Kulkarni, 2013). Through engaging in

knowledge management, higher educational institutions can be perceived as a source of original knowledge created by students who have been placed in appropriate social contexts to facilitate the creation and sharing of knowledge (Masłowska-Pietrzak, 2011).

According to Biasutti and Heba (2012), knowledge management serves five functions. They are knowledge acquisition, knowledge internalisation, knowledge creation, knowledge sharing, knowledge application and innovation processes (Biasutti & Heba 2012). Knowledge acquisition refers to the methods, strategies and tools that may be used to find information, including search engines and databases. Knowledge internalisation refers to the process of linking the found information to existing information to be organised and stored. Knowledge creation is the process of organising and clustering similar information to transform tacit knowledge into explicit knowledge. Pena-Shaff & Nicholls' study pointed out that the knowledge creation process depends on clarification, elaboration and interpretation (Pena-Shaff & Nicholls, 2004). This finding is important to the current research as it shows how effective asynchronous online learning might be used for knowledge creation processes.

Knowledge sharing brings to attention the social aspects of knowledge management, through establishing communities of practice whereby members share information, knowledge and experiences. The act of sharing by members is a form of sense-making of their experiences. Lastly, knowledge application and innovation processes occur when there is an immediate transfer of the learnt knowledge to an actual situation.

All knowledge management functions relate directly to the functions of higher education – knowledge creation through academic research, knowledge dissemination through education itself and the transfer of academic knowledge to society (Biasutti & Heba, 2012; Masłowska-Pietrzak, 2011). Among these five functions, this current study focused on the participants' experiences in knowledge creation and sharing, as these functions

together with engagement are the significant elements selected by faculty members when they choose to use Facebook as a tool to facilitate learning and engagement.

From the survey of literature conducted for this research, it is clear that Web 2.0 tools, e.g., wikis, have been used in the education sector for a wide range of collaborative activities at all levels of the educational spectrum. Wikis provide an online avenue for informal interactions to take place between peers and faculty members and involve students in the process of active construction of personal and collective knowledge within the group (Boulos, Maramba & Wheeler, 2006). Raman, Ryan and Olfman (2005) found that wikis facilitate collaborative knowledge creation and sharing amongst students. They determined that the level of facilitation is dependent on the participants' familiarity with wikis; however, careful implementation planning based on classroom use, class size and the motivations of students are also important factors for engagement. Moreover, since students may be integrating pre-existing web content from multiple sources, there is a need to explore how this content is controlled and managed over time (Waycott et al., 2010).

These ideas served as a reference for when and where Facebook could be used in the current study. The aim was to review whether Facebook could facilitate collaborative creation and sharing, and students' and educators' experiences were explored to gain more insights into using social networking sites for learning through Facebook.

2.10 Summary of the chapter

The above review of the existing studies on the use of social networking sites for learning reveals that students are spending an increasing amount of their time on social networking sites, such as Facebook (Bicen & Cavus, 2011). It should be noted that much of this time has little to do with academic purposes; Facebook is primarily used for social and entertainment reasons (Madge, Meek, Wellens & Hooley, 2009). Users of social

networking services are often motivated by the need to network, collect information, relieve stress, or record one's history (Kim et al., 2011). Nevertheless, students still spend a proportion of their time on Facebook for academic purposes to discuss assignments, lectures and study notes or share information about research resources with their peers (Jong et al., 2014) Extant research has also found that students do not want to use Facebook for formalised teaching-and-learning-related discussions or for liaising with instructors (Madge et al., 2009); however, they do wish to establish or maintain contact with the people who share common educational interests (Sánchez et al., 2014). At an institutional level, institutional control and cultural factors affect the implementation of Web 2.0 technologies, such as Facebook, in the classroom (Case & King, 2013). For example, a lack of web capability or strict beliefs in a formalised education may impede the uptake of Facebook as an educational tool.

Moreover, much of the extant research is focused on the independently-motivated or the self-organised use of Facebook: the student's experience. Studies seldom examine how educators and course structures can stimulate the use of Facebook or shape its utility for academic purposes. Educators are beginning to acknowledge Facebook as a legitimate education tool, and the academic use of Facebook for course-related purposes is growing fast among tertiary faculties (Junco, 2012). The advent of Web 2.0 technology is believed to have great potential to influence how people learn because these platforms invite users to interact with site content (Bosch, 2009; Ractham et al., 2012). Despite this growing attitude, some educators continue to display an unwillingness to incorporate Facebook into their courses or the classroom (Moran et al., 2011; Roblyer et al., 2010). In terms of uptake, there seems to be an imbalance between educator and student attitudes towards using Facebook as a learning tool. To articulate the potential of social networking sites in higher education teaching and learning contexts, further research is required to map all aspects of current experiences of using these tools with particular reference to the perceptions of students and teachers of their value. Thus, the aim of this study was to

explore the experience of using Facebook for learning from both students and educator's point of views. Most previous research is quantitative in nature; therefore, this current study used a mixed methods approach to focus more on the qualitative differences in the students' and educators' experiences – to explore their unique experiences of using Facebook for learning and, more importantly, to identify what might be improved if Facebook is used for academic purposes in the future.

This chapter also provided an exposition of the conceptual frameworks that underpin the research in this thesis. The next chapter discusses the methodology and the phenomenographic research approach that has been used in this study.

CHAPTER THREE: METHODOLOGY

The previous chapter focused on a review of the literature most relevant to this study. This review was organised around various topics relating to the deployment of social networking sites as a tool to facilitate learning and engagement. The main message gained from this review was that more studies need to be done to reach an in-depth understanding of the users' and, in particular, the faculty members' perspectives on using a social networking site as a tool in education. Therefore, the main purpose of the current study is to gain a deeper understanding of the experiences of staff and students using a social networking site for learning. In this research, the focus was on the use of Facebook as a tool to facilitate learning and engagement in a university context. This was examined closely from the perspective of both students and faculty members, with the aim of making an important contribution to the knowledge base around the variables associated with the educational use of social networking site in university teaching.

The existing literature was found to rely predominantly on quantitative analysis, and much of it failed to deal with the phenomena that are crucial to the users' experiences. To study the differences between these phenomena from the perspective of students and faculty members, a mixed methods approach that includes both quantitative and qualitative data are the best option because it provides a much deeper comprehension of the research problem. Phenomenography was selected for this study, as it was judged that this approach would enable a comprehensive picture of the user experience in using social networking sites, in this case, Facebook, as a learning tool. The quantitative data from the survey questionnaires provided a background understanding of the usage of Facebook as a learning tool. Afterwards, by collecting and analysing the qualitative data from the interviews with students and faculty members, an outcome space was developed that represents their experiences of the phenomenon. It furthermore addresses the research

gap identified in the previous chapter. This chapter includes an overview of the background for the choice of case study and the phenomenographic approach. It also outlines the context of the study, data collection and data analysis process. An overview of the key ethics issues is also described.

3.1 Case study

This section explains the rationale for selecting the case study as the overall framework for the current study.

In a definition that emphasises the bounded nature of case studies, Miles and Huberman (1994) refer to a case as a phenomenon in a defined context. According to Brewer and Hunter (1989), a case can be an individual; the characteristics of individuals; actions and interactions; remains of behaviour; settings, incidents and events; or collectivities.

A case study is often an example of qualitative research, and case study researchers tend to focus on an in-depth exploration of the case (Creswell, 2012). Creswell (2012) defines case study as a single illustration of a confined system, such as a child, a class, or a community that the researcher explores in depth. Cases are confined by activity and time, and Creswell (2013) states that researchers undertake a range of data collection procedures to collect data during these periods. According to Creswell (2012), data can be collected via interviews, pictures, videotapes, emails, etc. and the typology he develops refers to case studies as either intrinsic, instrumental, or collective.

Applying these notions to the current research enables the processes, phenomena, activities and events within specific courses at one university to be both explored and explained. Careful consideration of the subjective meanings that people bring to their situation (Creswell, 2012) is integral to the research design. The focus of this case study is to explore a specific group and the behaviour of that particular group. Robson (2002) believes that because a case study looks at a case or phenomenon in its real-life context,

it can provide a unique example of real people in real situations and present it to the audience with clear ideas rather than abstract theories or concepts. A case study can help readers understand how ideas and abstract theories can fit together (Yin, 2013). Yin (2013) also comments that a case study is an empirical enquiry that explores an existing phenomenon within its real-life context. This author identifies three types of case study: exploratory, descriptive and explanatory. The current study can be placed within the category of descriptive case studies, as it seeks to describe aspects of the current use of Facebook as a social networking site in teaching and learning to gain insights that will contribute to improving practice and future research.

As pointed out by Cohen, Manion and Morrison (2013), a researcher can, and indeed should, use more than one tool for data collection in a case study, and both quantitative and qualitative tools can be deployed. This way of working maximises the opportunity to provide a full account of the phenomena being researched. Thus, in the current study, a mixed methods approach to data collection was used. Data were collected via interviews with students and faculty members; survey questionnaires by students, and Facebook posts that included pictures, links to videos or news, etc. The rationale for this method is explained later in this chapter.

3.2 Phenomenography as a methodology

As stated above, some authors have pointed out that a case study is a practical method for investigating an existing phenomenon in its real-life context (Creswell, 2012; Robson, 2002; Yin, 2013). Phenomenography has been selected for this study to gain an in-depth understanding of an individual's experience of a phenomenon. In this case, that phenomenon is using a social networking site as a tool to facilitate learning and engagement. This method can highlight the subjective meanings people bring to their situation to gain a full understanding of their implications for the effective use of social networking sites in education.

Phenomenography is a qualitative research approach that was developed by a group of Swedish researchers in the 1970s (Barnard, McCosker & Gerber, 1999). Marton (1981) explains that he started his first phenomenographic study with mathematics students with the intention of finding out whether different ways of teaching maths-related concepts correlated to various understandings of its practical application, i.e., to understand how individual students understood math concepts differently. As a research approach, phenomenography originally emerged from a strongly empirical, rather than theoretical or philosophical, basis (Åkerlind, 2012). It is driven by the researcher's attempt to replace abstract and "empirically unverifiable" concepts – for example, the learning process through which people store information (Entwistle, 1997). Phenomenographers intend to address the question, "What is a way of experiencing a phenomenon?" within a framework of conscious awareness (Given, 2008). A way of experiencing or being aware of something establishes the research unit in phenomenography, and it is viewed in the relationship between a person and a specific phenomenon under study (Marton & Pong, 2005). It assumes that individuals do not report similar experiences for a similar phenomenon. Individual experiences and understandings of a phenomenon present one aspect of a phenomenon at one point of time.

Thus, phenomenography can be seen to focus on understanding people's ideas about the world or their experience of it (Marton, 1981) and highlight the different elements of a phenomenon (Marton, 1993). It aims to describe, analyse and understand the experiences of phenomena, as well as to map the variations in human experiences of these phenomena (Marton, 1981, 1986). The phenomenon is studied through the eyes of the participant, not the researcher. Hence, in this study, phenomenography was used to look from the viewpoints of the students and faculty members, rather than from the researcher's point of view.

Marton and Booth (1997) mentioned that "there is only one world, but it is a world that we experience, a world in which we live" (p.13) From Marton and Booth's (1997) point of view, experiences include an internal relationship between the subject and the world, not solely the subject or the world. Phenomenography looks at the variations, investigates the different thoughts and experiences of people and highlights the differences in the way people described, analysed and understood their experiences. It is believed that identifying a finite set of variances in the experience of a phenomenon allows one to describe those variations and how they were constructed so as to define the phenomena (Marton & Booth, 1997).

There are five variations of context types in phenomenography: experimental, discursive, naturalistic, hermeneutic and phenomenological (Hasselgren & Beach, 1997). In experimental phenomenography, researchers study how students approach a learning task and the outcomes of learning through the use of quantitative measures of retention. For example, Marton (1975) studied 30 students' responses to a contemporary reform in Swedish universities. He found that students approached the task using either surface level processing or deep level processing. In discursive phenomenography, researchers' conceptions are obtained through a five-step process consisting of conversation, transcription, compilation, analysis and, finally, conception formulation. Discursive phenomenography examines phenomena by mapping general conceptions without clear rules for analysis (Hasselgren & Beach, 1997). Naturalistic phenomenography records and examines what happens in a given situation without any involvement from the researcher. The key objective of naturalistic phenomenography is to observe 'natural' occurrences as part of the routine interactions of a particular context or setting and assumes that such interactions are representative of similar such settings (Hasselgren & Beach, 1997). In hermeneutic phenomenography, the researcher and object of interpretation must achieve the same level of understanding. This means that both parties must form a mutual understanding of how meaning is derived and made explicit to those

who interpret the data. Finally, in phenomenological phenomenography, researchers focus on "questions directed towards experiences," for example, the experience of learning in a particular context. In the current study, experimental phenomenography is used to discover how students and faculty members approach a learning task using Facebook within their course, and how this process affects the outcomes of learning. The aim is to identify various ways of understanding the experience of using a social networking site as a tool to facilitate learning and engagement from the perspective of students and faculty members, using Facebook as an exemplar.

According to Marton (1994), the relationship between the individual and their understanding of the world is known as a conception; it is a way of representing experience from an individual's perspective. There are two frameworks to understand the structure of conception. The first one is aimed to gain understandings of intentionality and divides the conceptions into 'what' and 'how' aspects, and another framework focuses on the understandings of awareness and highlights the referential and structural aspects of the conceptions (Marton & Booth, 1997). The researcher will further describe these two frameworks in the later part of this chapter.

The range of ways of understanding a particular phenomenon from the researcher's perspective can be captured by "categories of description," which are then analysed in terms of factors, such as their comprehensiveness and captured understanding (Stamouli & Huggard, 2007). Creswell (2012) elaborates on this idea and states that identifying common themes from variances in the individual experience of a phenomenon and summarising them into categories of description generate patterns of meaning. Since difference, or variation, is the key to understanding the phenomenon, this methodological approach focuses on the various ways in which people experience a phenomenon. Categories of description (or patterns of experience) are developed by considering the variance in meanings across a group of transcriptions, rather than by individual

transcriptions (Marton & Booth, 1997). It is a collective viewpoint. The aim of the analysis is to depict the participant's understanding or conceptions identified within context – to detect the meaning of phenomena from the participants' experiences (Entwistle, 1997). Thus, researchers seek the totality of ways in which people experience, or are capable of experiencing, the object of interest and interpret them in terms of distinctly different categories that capture the essence of the variation. The resulting set of descriptive categories forms a second-order perspective (Marton & Booth, 1997). A second-order perspective means that the researcher understands the phenomenon from the participants' viewpoint rather than his or her own (Gerber, 1993; Marton, 1981).

Since phenomenography is a non-dualist research approach with a second-order perspective, the focus of phenomenographic study places emphasis on different ways of experiencing the world, or the phenomenon, and tries to identify the various ways people view these experiences (Ashworth & Lucas, 2000; Marton & Booth, 1997). Phenomenography puts the variations in human experiences of a phenomenon into the different categories or conceptions that best represent it. It focuses on differences rather than similarities and illustrates the structure and meaning of the collective instead of the individual experience of a phenomenon (Marton & Booth, 1997).

Within the project that forms the basis for the current study, this means that by using the second-order perspective, the focus is on gathering, analysing and understanding the various ways students and faculty members experience using a social networking site as a tool to facilitate learning and engagement. 15 students and 3 faculty members from the same university participated in the interviews. The data from the interviews with these participants were used to build the categories of description. These categories were then applied to understand the various experiences of the university students and faculty members. It seems clear from the survey of literature undertaken for this project, that existing research has not focused much on the variations among students' and faculty

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members' experiences of using a social networking site for learning, or what qualitative variances in their understanding of using a social networking site for learning might mean with regard to achieving an effective use of social networking sites to facilitate learning. Therefore, this study serves to cover this research gap. The categories of description were derived from the data and represent the various ways that university students and faculty members used Facebook as a tool to facilitate learning and engagement and what contributed to their experience. Consideration of the different ways in which students and faculty members experienced using this particular social networking site for learning is then important in developing insights and recommendations for future implementation of social networking sites for educational proposes. This is especially true in a teaching and learning environment that is undergoing something of a digital revolution. The researcher believes that the comprehensive framework of phenomenography can provide a diverse set of data and in-depth understanding of the participants' experiences.

Furthermore, it is also true that the different categories of description derived from the first analysis of the data are all related to one another (Åkerlind, 2012), and that there is a structural and logical relationship between differences in ways of experiencing. The representation of these relationships and their collective variations are referred to as an outcome space (Marton & Booth, 1997). Marton (1994) mentioned that there are usually five to six categories of description that can be used to form the outcome space of a phenomenon. Marton and Booth (1997) commented that the outcome space is formed by distinctive categories of description and the categories would present in hierarchies. While Marton (1994) and Marton and Booth (1997) believed that the categories would show in hierarchies, other phenomenographers (Akerlind, Bowden & Green, 2005; Sjostrom & Dahlgren, 2002) argued that the outcome space can be formed by categories of description when they are logically related but not necessarily in hierarchical order. In

this study, the outcome space representing all the categories is hierarchically structured. The categories were distinctive but not necessarily the dominant view.

Nevertheless, the ultimate goal of the phenomenographic study is to identify all categories of description to form an outcome space. Thus, the focus of the research that forms the basis of this thesis is on students' and faculty members' perspectives of their experiences of using Facebook, as an example of a social networking site, for learning. This study recognises and describes the variances in students' and faculty members' experiences of using Facebook in teaching and learning as a pattern of experience. First, common themes are identified to set up a data pool. Afterwards, pools of various meaning are used to form categories of description. These patterns of experience are represented in an outcome space, which indicates the structural relationship between patterns. According to Åkerlind (2002), an outcome space represents "all possible ways of experiencing the phenomenon in question, at this particular point in time, for the population represented by the sample group" (p. 2). The categories are then placed in a hierarchical structure according to specific criteria or by the level of complexity (Marton, 1994)

In looking at the perceptions of using social networking sites for learning, it is necessary to look closely at the ways in which these perspectives are realised regarding the way the sites are used. As mentioned before, the experience of learning could be presented as the 'what' and 'how' aspects of the experience (Marton & Booth, 1997). Stamouli and Huggard further posited that the 'what' aspect forms the direct focus of learning – the meaning and the content of the idea that is to be learned. In other words, the phenomenon is the main focus (Stamouli & Huggard, 2007). The 'how' aspect reflects the learner's approach to accomplishing a learning task. It investigates how the learner goes about understanding and learning the construct in question. The 'how' aspect can be further broken down into the act of learning and the indirect object of learning (Stamouli & Huggard, 2007). Thus, the act of learning refers to the experience of the way in which the

act of learning is carried out, and the indirect object of learning refers to the goals that the learner is trying to achieve (Stamouli & Huggard, 2007). In this study, data are separated into the 'what' and 'how' aspects. The 'what' aspect refers to the experience of using Facebook as a tool to facilitate learning and engagement, and the 'how' aspect refers to how Facebook was used as a tool to facilitate learning and engagement?

Marton and Booth (1997) also highlight another framework, comprised of two aspects: referential and structural. According to Marton and Booth, the structural aspect of a way of experiencing something is thus twofold: discernment of the whole from the context on the one hand and discernment of the parts and their relationships within the whole on the other. Moreover, intimately intertwined with the structural aspects of the experience is the referential aspect, the meaning. (p. 87)

The referential aspect refers to the pattern of meanings of the experience, similar to the idea of the 'what' aspect (Kirk, 2002); whereas, the structural aspect represents the relationship among aspects contributing to the meaning divided into internal and external horizons (Marton, 1993). The structural aspect is connected to the 'how' aspect (Reid & Petocz, 2004), which focuses on 'how' an individual conceptualises meaning (Kirk, 2002). Marton and Booth (1997) stated that the internal horizon means "the parts and their relationship together with the contours of the phenomenon" (p. 87) and the external horizon refers to "the ways in which the phenomenon we experience in a certain way is discerned from its context, and to be more precise we should add, how it is related to its context as well" (p. 89). Figure 3.1 is based on the diagram of conceptions of learning from Marton and Booth (1997, p.91) to illustrate how these frameworks are used in this study; it covers the 'what' and 'how' aspects, as well as the referential and structural aspects. It is a comprehensive framework to analyse various aspects of the participants' conceptions.

Figure 3.1   The structure of concepts of using Facebook as a tool to facilitate learning and engagement

How was learning via Facebook facilitated?

Learning via Facebook

What was the experience of using Facebook for learning?

Structural   Referential   Structural   Referential   Structural   Referential

External   Internal   External   Internal   External   Internal

Act of learning   Indirect object of learning   Direct object of learning
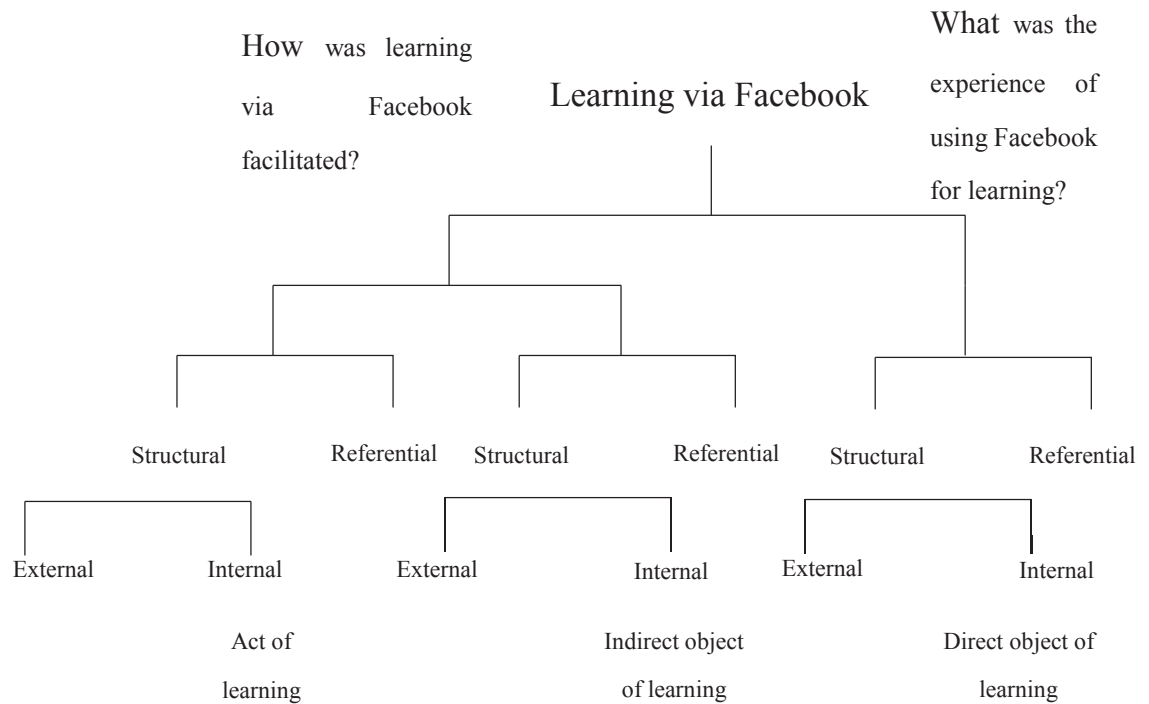
Marton and Booth (1997) also mention that there are two objects of learning – direct and indirect. The "direct object is the content that is being learned, [the] indirect object refers to the quality of the act (Act of learning) and what the art of learning aims at (indirect object of learning)" (p. 85).

To summarise, a comprehensive framework was applied to analyse various aspects of the participants' conceptions in this study. This means that the meanings that students and faculty members attribute to their experiences (the referential aspect) were highlighted to pinpoint the relationships among them (the structural aspect) and identify the direct and indirect objects (Marton & Booth, 1997). Categories of description were captured to present their experience as an outcome space. In the current study, every category under

the 'what' and 'how' aspects are covered and elaborated upon. Details are discussed further in Chapters 5 and 6.

As mentioned in the literature review, it was noted that current research has not placed much focus on the actual variations among students' and faculty members' experiences of using a social networking site, e.g., Facebook, for learning or what qualitative variances in their understanding of using social networking sites for learning might mean with regard to achieving an effective use of social networking sites to facilitate learning. Moreover, current studies in using social networking sites for learning have neglected the unique experiences of faculty members in using social networking sites for teaching.

Therefore, qualitatively considering the different ways in which students and faculty members experience using a social networking site for learning is critical to exploring the affordances, acquired skills and knowledge from faculty members to address the needs of an increasingly complex higher education demographic. Thus, the current study attempted to understand the experience of using Facebook as a social networking tool to facilitate learning and engagement in university.

3.2.1 The strengths of phenomenography

Phenomenography continues to be a fruitful way for empirical research to relate the variation in experiences of a particular phenomenon (Given, 2008). It also offers a holistic perspective of the studied phenomena by collecting descriptions of the variations in human experiences to provide more elaborate insights (Limberg, 2000). Phenomenography has been used in numerous studies to understand the relationships between the way students approach their study, the quality of their learning outcomes and the context in which learning occurs (Biggs, 1989; Marton & Säljö, 1976; Prosser, 1993). Consequently, phenomenographic research has resulted in the development of approaches to improve student learning. More importantly, phenomenographic findings have allowed new features of phenomena to emerge (Given, 2008). In the current study,

this method not only highlights the various experiences of the phenomena from the participants' perspectives but also provides insights for future applications of Facebook for learning.

3.2.2 The limitations of phenomenography

Critics have voiced concerns that phenomenography does not take context into account, which leads to the risk that the interviewer and interviewees may not be referring to the same phenomenon during interviews (Given, 2008). Entwistle (1997) also commented that it is difficult for the researcher to remain objective during the process. To eliminate this risk, this study was conducted in situ using actual processes and situations involving the participants. Great care was taken to ensure that the questions were posed in a way that enabled the student to elaborate or explain their actions within a mutually agreed frame of reference, instead of one imposed by the researcher (Entwistle, 1997). All students were studying a course where faculty members were using Facebook for academic purposes, and each participant understood the phenomenon under study. Face-to-face interviews and discussions were also conducted to provide participants with the opportunity to clarify questions and key terms.

Since phenomenography is a form of qualitative research, it is important to recognise that such research is primarily interpretative (Entwistle, 1997). Although the established categories aimed to fairly reflect the responses made by students, there is a possibility that gender and individual differences affected the identification of the categories. According to Hazel, Conrad and Martin (1997), female thinking has been traditionally characterised as being contextual and narrative, which makes phenomenography a better tool for studying women's experiences compared to their less narrative male counterparts. Hence, these categories may remain somewhat subjective and may be challenged by further research.

3.3 Phenomenography, teaching and learning

In the current study, differences in experiences between students' and faculty members' perspectives are studied with the aim of establishing collective descriptions from both parties to guide future use of social networking sites for learning and teaching.

As indicated above, phenomenography has been widely used in higher education to develop a conceptual understanding of student learning processes. It was developed in the 1970s by Marton & Säljö to understand how students learn differently by requesting them to browse an article and then respond to some questions (Marton, 1981). The goal of phenomenography in educational contexts is often to establish and analyse the variations in student's learning experiences (Marton, 1981). Since phenomenographic analysis is based on a second-order perspective and is focused on understanding as well as interpreting the participant's experience, rather than breaking down data according to pre-existing technical terms or theories, the analyses are often easier to comprehend (Entwistle, 1997). Past research has indicated that this method encourages participants to reflect on their learning experiences. It gathers comprehensive data that cannot be obtained from a quantitative study.

Moreover, phenomenography views the process of learning as relational, adopting the perspective that learning takes place through interactions between the educator, the context or learning environment and the student himself (Biggs, 1993). For example, Åkerlind (2004) studied the experience of teaching and listed four focuses experienced by teachers: 1) teacher transmission; 2) teacher-student relationships; 3) student engagement; and 4) student learning focused experience.

3.4 Research questions

As previously mentioned, most of the existing research in this area has relied on quantitative studies; few studies have investigated the variation of experience from the

participants' points of view. Thus, to fill this research gap, this study aimed to qualitatively identify and understand the experiences that students and faculty members had when using a social networking site for learning by collecting and analysing data from surveys about their use of Facebook in academic courses. Furthermore, it is hoped these results can contribute to knowledge on: the affordances and barriers of using Facebook as a tool for learning as perceived by students and faculty members; the skills and dispositions faculty members should have to facilitate learning and engagement via Facebook; and the perceived outcomes of using Facebook as a tool for learning.

To achieve this purpose, the following research question was asked: What are the different ways students and faculty members experience the use of Facebook as a means of facilitating learning and engagement? Three sub-questions were proposed to address this question.

1. What are the differences among students in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?
2. What are the differences among faculty members in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?
3. What are students' and faculty members' experiences of using Facebook to facilitate:
   i.   knowledge management?
   ii.   engagement?

As stated, phenomenography is intended to illustrate a way of experiencing or being aware of something and is focused on highlighting the relationship between a person and a specific phenomenon under study (Marton & Pong, 2005).

3.5 Research methods

3.5.1 Participants and sampling

This study took place between January and May 2014, and this was the second semester of the academic year 2013-2014. In this study, purposeful sampling (Creswell, 2007) was used to recruit 3 faculty members (School of Business, School of Social Sciences and School of Law) and their respective classes from one of the universities in Singapore. Each faculty member taught a different course and had used Facebook as a tool to facilitate learning and engagement in that course. Each has a different teaching style and field of expertise. This arrangement is aligned with Bowden's (1995, 1996) idea that diversity across the sample of participants can maximise the chances of obtaining different views from various groups.

The selected faculty members were contacted by the researcher directly and consented to the use of their courses as the focus of this study. 200 undergraduate students from these courses consented to be involved in this study. Participation on Facebook was voluntary. Students who were willing to participate sent an invitation to their faculty member to gain access to the closed group. Faculty members and students posted information and comments on the Facebook page throughout the semester. Both students and faculty members agreed to allow Facebook posts on their course pages to be observed by the researcher during the period of the research. The survey questionnaires, as well as the focus group discussion questions, were then administered to the students to achieve an understanding of the experiences from having used Facebook for learning and engagement. Eventually, a total of 170 students, from 18-25 years old participated in the survey questionnaires, and 15 of them took part in the focus group discussions. The researcher also explored the faculty members' experiences in engaging with their students using Facebook through individual interviews.

A hard copy of the consent form, together with the background of the study, was provided to the participants at the beginning of the study (see Appendix A – consent form). Participants were clearly informed that their participation was voluntary, and they could cease at any time without penalty. All participants were guaranteed anonymity, and a code was assigned to replace their identity, e.g., Student 1: DD/MM/YY_ AM session.

3.5.2 Data collection

The design of this study applies both quantitative and qualitative methods. Conjoining the results of qualitative and quantitative data can enhance the comprehension of the research problem because of the potential it offers to enhance the validity of the research findings. Qualitative data were gathered to understand individual experiences of participants along with data from survey questionnaires to measure the frequency and reasons for using Facebook for learning. These two sets of data were validated against each other to arrive at a complete picture of the participants' experiences.

Data were collected through individual surveys, focus group discussions, individual interviews and analysis of the Facebook page's activities and posts for each course (Stamouli & Huggard, 2007).

Quantitative data were obtained through a structured, self-administered online questionnaire that queried the students' demographic data and their usage, perceptions and experiences in using Facebook in learning. These data provided a background understanding of the use and general perceptions of Facebook for learning before the focus group discussions and individual interviews.

The qualitative data were derived from (1) engaging students in meaningful discussions through focus groups; (2) individual interviews with faculty members who participated in this study; and (3) observation and analysis of Facebook posts.

Figure 3.2 presents the data collection processes that were used to capture the students'
and faculty members' perspectives on using Facebook as a tool to facilitate learning and
engagement by analysing quantitative and qualitative data and summarising the variations
in their experience.

Figure 3.2   Data Collection Processes
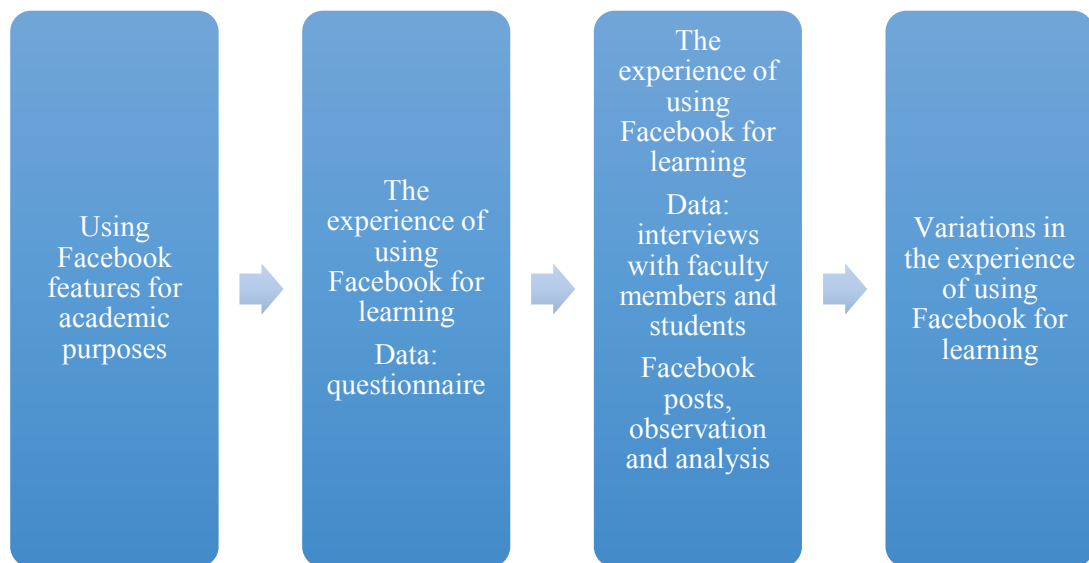
3.5.3   Research instruments

3.5.3.1 Questionnaire

In phenomenography, survey questions are usually phrased to gather student perceptions,
understandings and experiences, although the interviewer may deviate to probe from
other angles (Stamouli & Huggard, 2007). The researcher developed the questionnaire to
find out the information on participants' age, gender, the time using Facebook for the
course each day, the purpose of using Facebook for the course and concerns about using
Facebook for learning.

The questionnaire was a mixture of multi-choice, rating scales (7-point Likert scale) and
open-ended questions. The purpose was to gain a basic understanding of students' use of

Facebook, including frequency, reasons, activities and concerns, before conducting the interviews.

Questions 1-6 were used to determine the frequency of Facebook use. Questions 7-14 explored the students' reasons, activities and concerns about using Facebook in their courses. Questions 15-19 queried their behaviours on Facebook for academic purposes, followed by questions 20-38, which focused on their attitudes towards using Facebook in the classroom. The final set of questions, 39-45, was designed to gather information on the students' profile characteristics (e.g., age, gender, nationality and enrolled courses). The questionnaire was administered online; the specific questions can be found in Appendix B – Survey questionnaire.

3.5.3.2 Interviews

Interviews have been shown to be a very useful method for gaining an understanding of the experience of the people involved in education (Seidman, 2013). The prerequisites, of course, are that the 'right' questions are being posed and that the analysis is able to capture the nuances of meaning that are present. During a phenomenographic interview, a researcher can develop an appreciation of a participant's experience through their interactions (Åkerlind, 2005) and, participants are given the opportunity to reflect on, and articulate, their experiences in a state of "meta-awareness", that is, "being aware of his awareness of something" (Marton & Booth, 1997). The aim of the interviews in this project was to document these processes and combine analysis of these data with data from other sources to build to an outcome space where the variations in the experience of the faculty and students could be presented.

In this study, the focus group discussions with students were conducted first. Fifteen students participated in these discussions from April to May 2014. Each focus group discussion lasted for 1 hour with the aim of developing an understanding of the context of these students' experiences with using Facebook as a learning platform in their courses.

In addition, more probing questions were asked about the meaning and their conceptions of these experiences (Seidman, 2013).

Three individual interviews were then conducted with the faculty members. Each lasted for 45 minutes. It was noted at the outset that each of these faculty members has a particular teaching style and knowledge expertise. The purpose of the interview was to guide the faculty members to think about, and reflect on, their experience of a particular phenomenon (Given, 2008) when using Facebook as a tool to facilitate students' learning and engagement under the current study. Semi-structured, open-ended questions were developed by the researcher (see Appendix C – interview questions), following Patton's (1990) idea that the interview questions should focus on behaviour/experiences, opinions, feelings, knowledge, sensory input and demographic data. The focus of this study was on their experiences and opinions. In this study, all interviews were semi-structured. Major questions were explored further using follow-up and probing questions to facilitate the gathering of comprehensive content. The participants were free to describe anything related to the topic. This established an open communication environment for the researcher to be receptive to the varying experiences that may be encountered during the interviews (Marton, 1986). To retain a second-order perspective during the interview, words and phrases the participants had mentioned were used instead of the researcher's own words. All interviews were audio recorded, and the transcripts were checked to ensure accuracy. The data were then coded and analysed.

3.5.3.3 Observations and analysis of Facebook posts

Observation has a long tradition in social sciences and, today, observers are in a position to observe both visual and audio behaviour (Punch, 2013). Observers should not control or intervene the behaviour that they are observing; they should be purely describing and analysing their observations (Punch, 2013). In the current study, the researcher acted as an observer to witness the online communications in the virtual spaces.

As such, in this study, the researcher joined the Facebook groups for each course. Students were aware of the researcher's presence but were assured that the researcher would not make any comments or feedback on their Facebook posts. The researcher could see all conversations and inputs on the course Facebook pages. The data from the Facebook pages were recorded under different items and then analysed. The aim of these observations was to obtain objective facts, e.g., the number and content of the Facebook posts, to verify the opinions of the participants or to understand the relationships between the posts and the overall learning outcomes (engagement and knowledge management).

Table 3.1 summarises the research methods and research questions of this study and demonstrates the relationships to the sub-questions:

Table 3.1   Summary of sub-questions and research methods

What do I want to know (sub-questions)?	Why?	How (research method)?
What are the differences among students in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?	To identify and understand the phenomenon of interest from a student perspective; to explain the relationship between various categories of description related to using Facebook as a tool for learning	Questionnaire Interview Facebook posts observation and analysis
What are the differences among faculty members in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?	To identify and understand the phenomenon of interest from a faculty member perspective; to explain the relationship between various categories of description related to using Facebook as a tool for learning	Interview Facebook posts observation and analysis
What are students' and faculty members' experiences of using Facebook to facilitate knowledge management and engagement?	To understand how Facebook has been used to facilitate learning and engagement	Questionnaire Interview Facebook posts observation and analysis

As previously mentioned, the researcher hopes that the analysis of the data can provide insights on: the affordances and barriers of using Facebook as a tool for learning as perceived by students and faculty members; the skills and dispositions faculty members should have to facilitate learning and engagement via Facebook; and the perceived outcomes of using Facebook as a tool for learning.

3.5.4 Time-scale for data collection

As stated, this study took place between January and May 2014. Firstly, students signed the consent form in January 2014 that allowed the researcher to observe their Facebook posts on the class's page from January to April 2014. Afterwards, the researcher conducted semi-structured focus group discussions with students in April to May 2014 and followed by semi-structured interviews with faculty members in May 2014.

3.5.5 Data analysis

In the current study, data analysis involved both the quantitative analysis of the tracking data from Facebook posts and data from survey questionnaires, as well as qualitative data analysis from the interviews. This combination provided for a complete understanding of the research problem.

This section provides a brief introduction to the data analysis procedure. A more detailed explanation of the analysis procedure and findings is provided in the next few chapters.

Analysis of the survey answers from 170 student participants provided a background understanding of their experiences in using Facebook in their course. After analysing the quantitative data from the questionnaires and Facebook posts, the qualitative interview data were analysed to develop a comprehensive picture of the different ways that 15 university students and 3 faculty members think about using Facebook as a tool to facilitate learning.

In phenomenography, a researcher interacts with participants through interviews and seeks to inductively identify common themes from the variances in the participants' experiences of the phenomenon. Interview data are repeatedly read and, as the researcher becomes familiar with the meanings in the transcripts, the data are grouped and analysed to identify these variations (Marton & Booth, 1997). The variations are summarised into categories of description, which are then formed into hierarchies that represent basic to complex understandings (Stamouli & Huggard, 2007). This was the procedure that was followed in this study. As mentioned before, phenomenography is aimed to illustrate a way of experiencing or being aware of something and is focused on highlighting the relationship between a person and a specific phenomenon under study (Marton & Pong, 2005). It focuses on the varieties of experience instead of the majority view or the similarities of the experience.

In this study, categories of description are referred to as patterns of experience based on the variation in patterns of meaning identified by the researcher. The variances in students' and faculty members' experiences of using social networking sites in teaching and learning were identified and described by combining and examining both quantitative and qualitative data. These patterns of experience were then represented in an outcome space to demonstrate the structural relationships between the patterns, and the researcher will explain the data analysis process in detail in Chapters 5 and 6.

3.5.5.1 Analysis of Facebook posts

In addition to collecting objective facts, e.g., the number and mode of the Facebook posts, representative Facebook posts, e.g., images of photos, videos or texts, were chosen to represent and support the quotes or meanings revealed by the participants. Although multimodality analysis was not a part of this study, the researcher believes that visual material, sound and film, etc. can be important in digital environments as they can draw an audience's attention (Rowsell, 2013). In this case, these types of digital data were

collected to illustrate the relationships between posts, for example, how participants shared content and their overall learning outcomes (engagement and knowledge management).

3.5.5.2 Analysis of questionnaires

A total of 200 students consented to participate in this study and 170 questionnaires were completed. The aim of the questionnaire was to gain a background understanding of the students' experiences of using Facebook in their course. Analysing quantitative data from the survey questions allowed exploration of the findings from the qualitative data to develop a comprehensive picture of the different ways that university students think about using Facebook as a tool to facilitate learning. The combination of these two sets of data were used to answer Sub-question 1 of this study.

The data collected via questionnaires was analysed using a quantitative data analysis method. Statistical Package for Service Solution (SPSS) software was used to analyse responses from the questionnaires.

3.5.5.3 Analysis of interviews

As stated, the aim of the current study is to identify the variances in the participants' experience of using Facebook for learning.

To become familiar with the data, the audio recordings of all the interviews were reviewed, and all data were transcribed. First, a general impression of the data and its relationship to the research questions was formed. The focus was not only targeted on the words the participants used but also the meanings they were trying to convey. During this process, possible codes or meanings were noted. Different pools of meaning were identified, as they represent the various experiences of students and faculty members when using Facebook as a tool to facilitate learning and engagement. These experiences were clustered to construct categories based on the similarities and differences in their

meanings. The primary objective of creating categories of description was to convey consolidated messages reflecting the participants' perspectives. The categories were refined and formed into hierarchies from basic to complex understandings (Stamouli & Huggard, 2007).

This hierarchical set of categories is known as the outcome space. It represents the qualitative differences in the experiences of the phenomenon. In the current study, the categories of description were identified from the interviews, and these data were combined and analysed with the quantitative data from the questionnaires and Facebook posts. The data represents the various ways in which students and faculty members experienced using Facebook as a tool for learning. A detailed description of the outcome space and its categories of description is provided in the next few chapters.

3.5.6   Ethics and risk considerations

Ethical clearance was obtained from the Human Research Ethics Committee from the University of Technology Sydney (Appendix D). Access to documentation, such as survey results, audio recordings and depersonalised transcripts is restricted to the researcher. The researcher was the only person to interview the participants and is the only person able to access, transcribe and analyse the data. The data files will be deleted after the completion of the EdD Study.

An important ethical consideration was that of informed consent, where participants were fully aware of the nature of the research and fully agreed to participate in the study. Participants who were willing to participate on the Facebook page and in the surveys and focus group discussions signed a consent form. Participation in the study was voluntary, and participants were free to withdraw at any time without penalty. Participants were informed that the focus group discussions and individual interviews would be audio recorded and that transcripts of the interview would be generated as part of the data corpus for analysis. The audio recordings are confidential, and the researcher has sole access.

Only data from students and faculty members who had signed the consent form were used for further analysis. Informed consent was shared with the participants before the commencement of the project, both verbally and in written form. The confidentiality of the collected interview information has been preserved. All identifiable data in the transcripts and the Facebook posts of the participants has been removed.

To assure students that their participation/non-participation in the survey or focus group would not affect their grades for the course, the faculty member was not present during the administration of the questionnaire and focus group discussions. These were coordinated and conducted by the researcher.

3.6 Summary of the chapter

This chapter provided an overview of the background of the case study and the phenomenographic approach. Phenomenography was chosen because it is a suitable approach that allows researchers to explore and identify the variations in experiences from data obtained from the participants under study. This chapter also summarised the context of the study, along with the data collection and data analysis processes.

Moving forward, Chapter 4 explores the students' experiences by analysing quantitative data. Chapters 5 and 6 present the findings of this research from a second-order perspective, the findings are discussed, and quotations taken directly from the transcripts are offered as supporting evidence to show the variations in experience from the students' and faculty members' points of view.

CHAPTER FOUR: ANALYSIS OF QUANTITATIVE DATA

As previously explained, the purpose of this study was to gain a deeper understanding of the experiences of staff and students using a social networking site for learning, i.e., Facebook. To address this overarching question, three sub-questions were proposed:

1. What are the differences among students in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?

2. What are the differences among faculty members in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?

3. What are the students' and faculty members' experiences of using Facebook to facilitate:
   i. knowledge management?
   ii. engagement?

As stated in Chapter 3, both quantitative and qualitative methods were used in this study. The data were analysed using the methods and procedures outlined in the previous chapter. It is believed that combining the concepts of qualitative and quantitative data can enhance the validity of research findings.

This chapter begins by presenting the quantitative data analysis, which was drawn from the survey questionnaires prior to the qualitative analysis of the interviews with students and faculty members. In phenomenography, survey questions are usually phrased to gather student perceptions, understandings and experiences (Stamouli & Huggard, 2007). The quantitative data were obtained through a self-administered structured online questionnaire, which included questions regarding the students' demographic data, their usage and perceptions and experiences of using Facebook for learning. These data provided a background understanding of the usage and general perceptions of Facebook for learning before the focus group discussions and individual interviews.

4.1 Quantitative data analysis: the survey questionnaire

A total of 170 students responded to the survey questionnaire. They came from three different courses (Courses A, B and C), which were run by three faculty members (Faculty Members A, B and C). Among the 170 respondents, 86 students came from Course A, 72 came from Course B, and 12 came from Course C. Of the total group, 86 students were male, and 84 were female. Year 1 students comprised 26% of the respondents, 38% were in Year 2, 18% were in Year 3, 15% were in Year 4, and 4% were overseas students from an exchange program. Their age range from 18 to 25. All of them have used Facebook for more than 24 months. The survey questionnaire was completed in April 2014, one week before the end of the semester. Students completed the questionnaire online, and the data were analysed using Statistical Package for the Social Sciences (SPSS) software. The researcher analysed the data with statistical tools such as Pearson's correlation, Pearson's chi-square test and cross tabulation.

As mentioned in Chapter 3, questions 1-6 of the questionnaire were intended to find out the frequency of Facebook use by students. The second section (questions 7-14) was aimed at exploring their reasons for using Facebook, the kinds of activities they engaged in and any concerns they might have in relation to using Facebook for a course. The next section (questions 15-19) asked about their behaviours on Facebook for academic purposes, followed by questions relating to their attitude towards the use of Facebook in the classroom (questions 20-38). The last section (questions 39-45) aimed to gather information on the students' profile characteristics (e.g., their age, gender, nationality and the courses they were enrolled in). This quantitative data were needed to provide a background understanding of the usage and general perceptions of Facebook for learning before the focus group discussions and individual interviews. The questionnaire was a mixture of multiple choice, rating scales (on a 7-point Likert scale) and open-ended questions.

To assess the students' perceptions of Facebook as a tool for learning, the analysis commenced with comparing the students' reported frequency of Facebook use and their perceived attitudes towards Facebook as a tool for learning. The comparison is shown in Table 4.1.

Table 4.1   Comparison between the reported frequency of Facebook use by students and their attitude towards Facebook as a learning tool

Reported frequency of Facebook usage	Perceived attitude towards Facebook as a tool for learning
Q15 to 19 "You use Facebook frequently in …" Reports the frequency of Facebook use and the use for specific purposes.	Q29 "You prefer using Facebook compared to other alternative technologies for classroom tool." Reports attitudes towards Facebook as a classroom tool in comparison to other platforms.
Q38 "In the future, you will use Facebook as a study tool." Reports the predicted use of Facebook in the future.	Q30 to 37 "… you feel Facebook is a good tool for …" Reports attitudes towards Facebook as a tool for specific purposes.
	Q 20 to 27 "Facebook is an effective tool for…" Reports attitudes towards Facebook as an effective tool for specific purposes.

Overall, (N=170), it was observed that the reported frequency of Facebook use was lower than the perceived attitude towards Facebook as a tool for learning. This can be seen in Table 4.2.

Table 4.2   Averages for the reported frequency of Facebook use and perceived attitudes towards Facebook as a learning tool

	Mean	Std. Deviation
Q15 "You use Facebook frequently in communicating amongst team members"	3.50	1.785
Q16 "You use Facebook frequently in building networks/social ties with other course mates"	4.17	1.741
Q17 "You use Facebook frequently in raising enquiries"	3.45	1.747
Q18 "You use Facebook frequently in discussing ideas"	3.69	1.775
Q19 "You use Facebook frequently in sharing of related and relevant articles/videos/information"	4.32	1.831
Q38 "In the future, you will use Facebook as a study tool"	4.51	1.543

1 represents strongly disagree; 7 represents strongly agree

The table above lists the reported frequency of Facebook use for questions 15-19. The calculated mean for these questions borders around the middle at 3.94 on a range of 1 to 7, where 1 denotes strongly disagree, 7 denotes strongly agree, and 4 denotes neither agree nor disagree. This suggests that students are ambivalent about the frequency of Facebook usage, but with a higher reported frequency of use for sharing related and relevant articles/videos/information, and a lower reported frequency of use for raising enquiries.

In particular, their reported use of Facebook as a study tool in the future had the highest mean, which suggests that students might prefer using Facebook as a study tool in the future as compared to today's study environment.

Table 4.3 presents the questions (Q20-37), which depict the perceived attitude towards Facebook as a tool for learning. Overall, the calculated means for these questions were higher than the reported frequency of Facebook use. The average of the calculated means for these questions was 4.96, compared to 3.94 in the previous table.

Table 4.3   Averages for the perceived attitudes towards Facebook as a learning tool

	Mean	Std. Deviation
Q20 "Facebook is an effective tool for communication between classmates"	4.92	1.264
Q21 "Facebook is an effective tool for building networks/social ties with other course mates"	5.12	1.265
Q22 "Facebook is an effective tool for communication of course-related enquiries"	4.55	1.464
Q23 "Facebook is an effective tool for communication of course related information"	4.73	1.446
Q24 "Facebook is an effective tool for developing new course-related knowledge"	4.96	1.284
Q25 "Facebook is an effective tool for collaboration in group projects"	4.61	1.448
Q26 "Facebook is an effective tool for discussion of ideas in a course"	5.05	1.392
Q27 "Facebook is an effective tool for sharing material/information"	5.48	1.251
Q29 "You prefer using Facebook compared to other alternative technologies for classroom tool"	4.27	1.568
Q30 "Overall, you feel Facebook is a good tool for communication"	5.11	1.261
Q31 "Overall, you feel Facebook is a good tool for building networks/ social ties with other course mates"	5.12	1.282
Q32 "Overall, you feel Facebook is a good tool for discussing of ideas"	5.12	1.249
Q33 "Overall, you feel Facebook is a good tool for sharing of materials"	5.45	1.211
Q34 "Overall, you feel Facebook is an easy and convenient alternative platform for you to participate in the course outside of class"	5.16	1.334
Q35 "Overall, you feel Facebook is a useful source of additional course information that benefits your class performance"	4.97	1.391
Q36 "Overall, you feel the use of Facebook in this course increase your enjoyment in learning"	4.82	1.458
Q37 "Overall, you feel it is appropriate to use Facebook as part of teaching and learning"	4.86	1.481

It could be predicted that a positive attitude towards Facebook as a tool for learning would result in a higher reported frequency of Facebook usage; however, as suggested by the tables above, while the perceived attitude (Q20-37) towards Facebook was somewhat positive, the reported frequency of Facebook usage (Q15-19) was only in the ambivalent range, which **suggests an inconsistency between the students' attitudes towards Facebook and how often they used it for learning.** To better examine the relationship between their reported frequency of Facebook use and their perceived attitudes towards Facebook as a learning tool, questions from these themes were paired with their reasons for using Facebook as shown in Table 4.4. Only questions that were deemed suitable were paired.

Table 4.4   Paired questions

Purpose	Reported frequency of Facebook usage	Perceived attitude towards Facebook as a tool for learning
Communication	Q15 "You use Facebook frequently in Communicating amongst team members"	Q20 "Facebook is an effective tool for communication between classmates" Q30 "Overall, you feel Facebook is a good tool for communication"
Building networks / social ties	Q16 "You use Facebook frequently in building networks/social ties with other course mates"	Q21 "Facebook is an effective tool for building networks/social ties with other course mates" Q31 "Overall, you feel Facebook is a good tool for building networks/social ties with other course mates"
Raising enquiries	Q17 "You use Facebook frequently in raising enquiries"	Q22 "Facebook is an effective tool for communication of course-related enquiries"

Discussing ideas	Q18 "You use Facebook frequently in discussing ideas"	Q26 "Facebook is an effective tool for discussion of ideas in a course" Q32 "Overall, you feel Facebook is a good tool for sharing of material"
Sharing related and relevant articles/videos/information	Q19 "You use Facebook frequently in sharing of related and relevant articles/videos/information"	Q23 "Facebook is an effective tool for communication of course-related information" Q27 "Facebook is an effective tool for sharing material/information" Q33 "Overall, you feel Facebook is a good tool for sharing of material"

The correlations between these pairings were examined to better understand the relationship between the students' reported frequency of Facebook usage and their perceived attitudes towards Facebook as a tool for learning. If the assumption that a positive attitude towards Facebook as a tool for learning results in a higher reported frequency of Facebook usage holds true, all the pairings should result in a strong positive correlation. Tables 4.5 and 4.6 show the correlations between the questions relevant to Facebook as a tool for communication (Q15, 20 and 30).

There was a strong positive correlation between questions 20 and 30 [$r = .555$, $n = 170$, $p = .01$]. This suggests that an increase in their perceived effectiveness of Facebook as a tool for communication is correlated with an increase in their experiences with Facebook as a tool for communication and vice versa. This also suggests that the students were responding consistently with their perceived attitudes towards Facebook as a tool for communication.

Table 4.5   Averages for the perceived effectiveness of Facebook as a communications tool

	Mean	Std. Deviation	N
Q15 "You use Facebook frequently in Communicating amongst team members"	3.50	1.785	170
Q20 "Facebook is an effective tool for communication between course mates"	4.92	1.264	170
Q30 "Overall, you feel Facebook is a good tool for communication"	5.11	1.261	170

Table 4.6   Correlation

		Q15	Q20	Q30
Q15	Pearson Correlation	1	.460**	.280**
	Sig. (2-tailed)		.000	.000
	N	170	170	170
Q20	Pearson Correlation	.460**	1	.555**
	Sig. (2-tailed)	.000		.000
	N	170	170	170
Q30	Pearson Correlation	.280**	.555**	1
	Sig. (2-tailed)	.000	.000	
	N	170	170	170

**. Correlation is significant at the 0.01 level (2-tailed).*

There was a weak to moderate correlation between their reported frequency of Facebook use and their perceived attitude towards Facebook as a tool for communication [r = .460, n = 170, p = .01] and [r = .280, n = 170, p = .01].

A paired samples t-test was conducted to determine if the reported means were significantly different from each other. As shown in Table 4.7, the mean for their reported frequency of Facebook usage (Q15) was significantly different from the mean for their perceived attitudes towards Facebook (Q20 and 30), t (169) = -11.281 and t (169) = -11.206, where p < 0.01.

The questions about their perceived attitudes (Q20 and 30) were compared and found to be insignificant at the 0.01 level, p=.041. This suggests that the responses to these questions did not significantly differ, and the students were responding consistently.

Table 4.7   Paired samples test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Q15 - Q20	-1.424	1.645	.126	-1.673	-1.174	-11.281	169	.000
Pair 2	Q15 - Q30	-1.612	1.875	.144	-1.896	-1.328	-11.206	169	.000
Pair 3	Q20 - Q30	-.188	1.192	.091	-.369	-.008	-2.060	169	.041

Tables 4.8 and 4.9 show the level of correlation between the questions relevant to Facebook as a tool for building networks/social ties (Q16, 21 and 31).

There was a strong positive correlation between questions 21 and 31 [r = .772, n = 170, p = .01]. This suggests that an increase in their perceived effectiveness of Facebook as a tool for building networks/social ties is correlated with an increase in their experiences with Facebook as a tool for building networks/social ties and vice versa. This also suggests that students were responding consistently with their perceived attitudes towards Facebook as a tool for building networks/social ties.

Table 4.8   Averages for the perceived effectiveness of Facebook as a tool for building networks/social ties

	Mean	Std. Deviation	N
Q16 "You use Facebook frequently in building networks/social ties with other course mates"	4.17	1.741	170
Q21 "Facebook is an effective tool for building networks/ social ties with other course mates"	5.12	1.265	170
Q31 "Overall, you feel Facebook is a good tool for building networks/ social ties with other course mates"	5.12	1.282	170

Table 4.9   Correlations

		Q16	Q21	Q31
Q16	Pearson Correlation	1	.477**	.407**
	Sig. (2-tailed)		.000	.000
	N	170	170	170
Q21	Pearson Correlation	.477**	1	.772**
	Sig. (2-tailed)	.000		.000
	N	170	170	170
Q31	Pearson Correlation	.407**	.772**	1
	Sig. (2-tailed)	.000	.000	
	N	170	170	170

**. Correlation is significant at the 0.01 level (2-tailed).

The data show a moderate correlation between their reported frequency of Facebook use and their perceived attitudes towards Facebook as a tool for building networks/social ties [r = .477, n = 170, p = .01] and [r = .407, n = 170, p = .01]. A paired samples t-test was conducted to determine if the reported means were significantly different from each other. As shown in Table 4.10, the mean for their reported frequency of Facebook use (Q16) was significantly different from the reported mean for their perceived attitude towards Facebook (Q21 and 31), t (169) = -7.811 and t (169) = -7.308, where p < 0.01.

The questions about their perceived attitudes (Q21 and 31) were compared and found to be insignificant at the 0.01 level, p=.929. This suggests that the responses to these questions did not significantly differ, and the students were responding consistently.

Table 4.10   Paired samples test

| | | Paired Differences | | | | | | | |
| | | | | | 95% Confidence Interval of the Difference | | | | Sig. (2-tailed) |
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	Q16 - Q21	-.953	1.591	.122	-1.194	-.712	-7.811	169	.000
Pair 2	Q16 - Q31	-.947	1.690	.130	-1.203	-.691	-7.308	169	.000
Pair 3	Q21 - Q31	.006	.860	.066	-.124	.136	.089	169	.929

Tables 4.11 and 4.12 show the correlations between the questions relevant to Facebook as a tool for raising enquiries (Q17 and 22).

There was a strong correlation between their reported frequency of Facebook use and their perceived attitudes towards Facebook as a tool for raising enquiries [r = .552, n = 170, p = .01].

Table 4.11   Averages for the perceived effectiveness of Facebook as a tool for raising enquiries

	Mean	Std. Deviation	N
Q17 "You use Facebook frequently in raising enquiries"	3.45	1.747	170
Q22 "Facebook is an effective tool for communication of course-related enquiries"	4.55	1.464	170

Table 4.12   Correlations

		Q17	Q22
Q17	Pearson Correlation	1	.552**
	Sig. (2-tailed)		.000
	N	170	170
Q22	Pearson Correlation	.552**	1
	Sig. (2-tailed)	.000	
	N	170	170

**. Correlation is significant at the 0.01 level (2-tailed).

A paired samples t-test was conducted to determine if the reported means were significantly different from each other. As shown in Table 4.13, the mean for their reported frequency of Facebook use (Q17) was significantly different from the mean for their perceived attitudes towards Facebook (Q22), t (169) = -9.307, where p < 0.01.

Table 4.13   Paired samples test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Q17 - Q22	-1.100	1.541	.118	-1.333	-.867	-9.307	169	.000

Tables 4.14 and 4.15 show the correlations between the questions relevant to Facebook as a tool for discussing ideas (Q18, 26 and 32).

There was a strong positive correlation between questions 26 and 32 [r = .623, n = 170, p = .01]. This suggests that an increase in their perceived effectiveness of Facebook as a tool for discussing ideas is correlated with an increase in their experiences with Facebook as a tool for discussing ideas and vice versa. This also suggests that students were

responding consistently with their perceived attitudes towards Facebook as a tool for discussing ideas.

There was a moderate correlation between their reported frequency of Facebook use and their perceived attitudes towards Facebook as a tool for discussing ideas [r = .497, n = 170, p = .01] and [r = .473, n = 170, p = .01].

Table 4.14   Averages for the perceived effectiveness of Facebook as a tool for discussing ideas

	Mean	Std. Deviation	N
Q18 "You use Facebook frequently in discussing ideas"	3.69	1.775	170
Q26 "Facebook is an effective tool for discussion of ideas in a course"	5.05	1.392	170
Q32 "Overall, you feel Facebook is a good tool for discussing of ideas"	5.12	1.249	170

Table 4.15   Correlations

		Q18	Q26	Q32
Q18	Pearson Correlation	1	.497**	.473**
	Sig. (2-tailed)		.000	.000
	N	170	170	170
Q26	Pearson Correlation	.497**	1	.623**
	Sig. (2-tailed)	.000		.000
	N	170	170	170
Q32	Pearson Correlation	.473**	.623**	1
	Sig. (2-tailed)	.000	.000	
	N	170	170	170

**. Correlation is significant at the 0.01 level (2-tailed).

A paired samples t-test was conducted to determine if the reported means were significantly different from each other. As shown in Table 4.16, the mean for their reported frequency of Facebook usage (Q18) was significantly different from the mean for their perceived attitudes towards Facebook (Q26 and 32), t (169) = -10.917 and t (169)

= -11.529, where p < 0.01. The questions about their perceived attitudes (Q26 and 32) were compared and found to be insignificant at the 0.01 level, p=.426. This suggests that their responses to these questions did not significantly differ, and the students were responding consistently.

Table 4.16   Paired samples test

		Paired Differences					T	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Q18 - Q26	-1.359	1.623	.124	-1.605	-1.113	-10.917	169	.000
Pair 2	Q18 - Q32	-1.429	1.617	.124	-1.674	-1.185	-11.529	169	.000
Pair 3	Q26 - Q32	-.071	1.154	.089	-.245	.104	-.797	169	.426

Tables 4.17 and 4.18 show the correlations between the questions relevant to their use of Facebook as a tool for the sharing of related and relevant articles/video/information (Q19, 27 and 33).

There was a strong positive correlation between questions 27 and 33 [r = .686, n = 170, p = .01]. This suggests that an increase in their perceived effectiveness of Facebook as a tool for sharing related and relevant articles/video/information is correlated with an increase in their experiences with Facebook as a tool for sharing related and relevant articles/video/information and vice versa. This also suggests that students were responding consistently with their perceived attitude towards Facebook as a tool for sharing related and relevant articles/video/information.

Table 4.17 **Averages for the perceived effectiveness of Facebook as a tool for sharing relevant information**

	Mean	Std. Deviation	N
Q19 "You use Facebook frequently in sharing of related and relevant articles/ videos/ information"	4.32	1.831	170
Q27 "You use Facebook frequently in sharing of related and relevant articles/ videos/ information"	5.48	1.251	170
Q33 "Overall, you feel Facebook is a good tool for sharing of materials"	5.45	1.211	170

Table 4.18 **Correlations**

		Q19	Q27	Q33
Q19	Pearson Correlation	1	.380**	.336**
	Sig. (2-tailed)		.000	.000
	N	170	170	170
Q27	Pearson Correlation	.380**	1	.686**
	Sig. (2-tailed)	.000		.000
	N	170	170	170
Q33	Pearson Correlation	.336**	.686**	1
	Sig. (2-tailed)	.000	.000	
	N	170	170	170

**. Correlation is significant at the 0.01 level (2-tailed).

The data reflect a moderate correlation between their reported frequency of Facebook use and their perceived attitudes towards Facebook as a tool for sharing related and relevant articles/video/information [$r = .380$, $n = 170$, $p = .01$] and [$r = .336$, $n = 170$, $p = .01$].

A paired samples t-test was conducted to determine whether the means were significantly different from each other. As shown in Table 4.19, the mean for the reported frequency of Facebook usage (Q19) was significantly different from the means for their perceived attitudes towards Facebook (Q27 and 33), $t(169) = -8.478$ and $t(169) = -8.067$, where $p < 0.01$.

The questions about their perceived attitudes towards Facebook (Q27 and 33) were compared and found to be insignificant at the 0.01 level, p=.695. This suggests that their responses to these questions did not significantly differ, and the students were responding consistently.

Table 4.19   Paired samples test

| | | Paired Differences | | | | | | | |
| | | | | | 95% Confidence Interval of the Difference | | | | Sig. (2-tailed) |
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	Q19 - Q27	-1.159	1.782	.137	-1.429	-.889	-8.478	169	.000
Pair 2	Q19 - Q33	-1.129	1.825	.140	-1.406	-.853	-8.067	169	.000
Pair 3	Q27 - Q33	.029	.976	.075	-.118	.177	.393	169	.695

Further, the survey results[3] showed that a lack of competency (Q9) in using Facebook's functions did not seem to be a barrier to its use as a tool for learning. The majority of students reported their competency level to be above neutral, with 55% reporting total competence and 32% reporting to be somewhat competent in using Facebook. Although this does not rule out competency issues entirely, in today's world where social media has such a big influence, it is commonly assumed that students can navigate Facebook with ease, especially if they are using it daily. Also, 49% of respondents reported having used Facebook in a previous class at this university[4] (Q10).

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[3] Question 9: Please rate your level of competence in using the various features (e.g., commenting, posting photos) on Facebook.

[4] Question 10: Have you used Facebook for any of your classes in this university?

Moreover, the researcher also asked participants to report the amount of time they spent on Facebook per day[5] (Q5) along with the amount of time they spent on Facebook per day for their course[6] (Q6). The majority of respondents (39%) reported spending 30 to 60 minutes a day on Facebook, 26% reported spending less than 30 minutes and 25% of the respondents spent 60 to 120 minutes. This is contrasted by the amount of time they reported spending on Facebook for their course. The majority (67%) reported spending less than 30 minutes on Facebook per day for their course, 13% spent 30 to 60 minutes, and 12% of the respondents spent no time at all.

The cross-tabulation in Table 4.20 below shows the distribution of the students' time spent on Facebook against their time spent on Facebook for their course. From the chi-square test, the time spent on Facebook and the time spent on Facebook for their course were significantly related to each other ($p < .01$). This is to be expected as more time spent on Facebook in total would allow for more time spent on Facebook for their course.

Table 4.20   Q6 * Q5 Cross tabulation

Time in minutes		**0**	**< 30**	**30 < 60**	**60 < 120**	**120 < 180**	**> 180**	**Total**
					Q5			
0	Count	1	11	2	6	0	0	20
	% within Q6	5.0%	55.0%	10.0%	30.0%	0.0%	0.0%	100.0%
	% within Q5	50.0%	25.0%	3.0%	14.0%	0.0%	0.0%	11.8%
< 30	Count	1	29	51	24	5	4	114
	% within Q6	0.9%	25.4%	44.7%	21.1%	4.4%	3.5%	100.0%
	% within Q5	50.0%	65.9%	76.1%	55.8%	62.5%	66.7%	67.1%
30 < 60	Count	0	2	10	8	2	0	22
	% within Q6	0.0%	9.1%	45.5%	36.4%	9.1%	0.0%	100.0%
	% within Q5	0.0%	4.5%	14.9%	18.6%	25.0%	0.0%	12.9%
60 < 120	Count	0	2	4	3	0	1	10
	% within Q6	0.0%	20.0%	40.0%	30.0%	0.0%	10.0%	100.0%

Note: The leftmost column header "Q6" spans all the category rows (0, < 30, 30 < 60, 60 < 120).

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[5] Question 5: The amount of time (in minutes) you spend on Facebook in a day is

[6] Question 6: The amount of time (in minutes) you spend on Facebook (for this course) in a day is

	% within Q5	0.0%	4.5%	6.0%	7.0%	0.0%	16.7%	5.9%
120 < 180	Count	0	0	0	2	1	0	3
	% within Q6	0.0%	0.0%	0.0%	66.7%	33.3%	0.0%	100.0%
	% within Q5	0.0%	0.0%	0.0%	4.7%	12.5%	0.0%	1.8%
> 180	Count	0	0	0	0	0	1	1
	% within Q6	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	% within Q5	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.6%
Total	Count	2	44	67	43	8	6	170
	% within Q6	1.2%	25.9%	39.4%	25.3%	4.7%	3.5%	100.0%
	% within Q5	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.21   Chi-square tests

	Value	df	Asymp. Sig. (2-sided)
Pearson chi-square	61.285[a]	25	.000
Likelihood Ratio	41.597	25	.020
Linear-by-linear association	15.089	1	.000
N of valid cases	170		

26 cells (72.2%) have expected count less than 5. The minimum expected count is .01.

When asked to list the top three reasons for using Facebook[7] (Q7), respondents listed social purposes (48.2% of students ranked this as first) and leisure purposes (24.1% ranked this as first) as the top reasons. This suggests that students spent only a small proportion of their time on Facebook participating in their course page and the majority of their time on Facebook in social and leisure activities. This claim found further supported when students were asked to select their top three activities on Facebook[8] (Q8). The majority selected 'checking friends' status updates as their top activity (40.6% of students ranked this first), with posting and/or looking at photos as second (20.6% of

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[7] Question 7: In general, your reasons for using Facebook. Please select Three items from the lists that are most applicable to you and rank them in order of importance (1 being Most important, 3 being least important)

[8] Question 8: In general, your participation in Facebook activities. Please select Three items from the lists that are most applicable to you and rank them in order of frequency (1 being Most frequent, 3 being least frequent)

students ranked this as first) and Facebook chat as third (17.1% ranked this as first). Educational purposes were only ranked as first by 2.4% of students.

These results can be explained by the assumption that Facebook is viewed as a platform for leisure or personal content and is not suitable to be mixed with work or academic matters even though Facebook integrates work and leisure and aids communication and collaboration. There was also mention of keeping work and leisure separate due to personal preference or issues like privacy and judgment. From the survey, when students were asked to identify their top three concerns about using Facebook in the classroom[9] (Q11), distraction (45.3% of students ranked this as first), lack of privacy (16.5% ranked this as first) and lack of security (11.2% ranked this as first) came out on top. Again, this phenomenon would be further discussed in the interviews.

4.2 Summary of the chapter

In total, 170 students responded to the survey questionnaire, and most were from Years 1 and 2. The results showed a higher reported frequency of use for sharing related and relevant articles/videos/information, and a lower reported frequency of use for raising enquiries when Facebook is used as a tool for learning.

The majority of respondents (39%) reported spending 30 to 60 minutes a day on Facebook, with the majority (67%) reporting less than 30 minutes a day on Facebook in for their course. The majority of their time on Facebook was devoted to social and leisure activities (48.2%). This suggests that students spent only a small proportion of their time on Facebook participating in their course page.

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[9] Question 11: What are your concerns regarding Facebook being used in the classroom? Please select Three items from the lists that are most applicable to you and rank them in order of importance (1 being Most important, 3 being least important)

More importantly, although there were moderate correlations between their reported frequency of Facebook use for learning and their perceived attitudes towards Facebook as a tool for learning, the results are not consistent with the differences in their reported means as seen by the t-tests. This suggests that the students reported Facebook as an effective tool for learning, but their frequency of use for learning did not match their attitudes. This indicates that other variables may be moderating the relationship between how often they use Facebook and their attitudes towards Facebook as a tool for learning. These variables could be related to their concerns about using Facebook, the involvement of faculty members or the role of students in learning. All these possibilities were explored in the qualitative analysis presented in subsequent chapters.

In conclusion, this chapter presented the quantitative data analysis, which was drawn from survey questions. The data from the questionnaire provided a background understanding of the students' use and general perceptions about Facebook for learning before the focus group discussions and individual interviews. Analysing the quantitative data from the survey underscored the importance conducting further investigations into the students' experiences, and these results also confirmed the shape and direction of this deeper investigation. Thus, the interview participants were asked to recall their experiences of using Facebook for their course and what their perceptions were, **especially their perceptions of the factors that contributed to their experiences.** The qualitative data were derived by: (1) engaging students in meaningful interviews through focus group discussions; (2) individual interviews with the faculty members who participated in this study; and (3) observation and analysis of the Facebook posts. Chapters 5 and 6 present the analysis of the qualitative data to develop a complete understanding of the different experiences that the university students and faculty members had when Facebook was used to facilitate their learning and engagement.

CHAPTER FIVE:
ANALYSIS OF THE QUALITATIVE DATA
(THE STUDENTS' PERSPECTIVES)

As explained, the purpose of this study was to gain a deeper understanding of the experiences of staff and students using a social networking site for teaching and learning. Chapter 3 describes the quantitative and qualitative methods used in this study. This combination provided for a complete understanding of the research problem. In Chapter 4, the analysis of the questionnaire results provided some background understanding of the students' experiences in using Facebook within their courses and their general perceptions of Facebook for learning before the focus group discussions and individual interviews. The analysis of the quantitative data from the survey underscored the importance of conducting further investigations into their experiences. Thus, this chapter and the next explore the findings from the qualitative data to develop a comprehensive picture of the different ways that university students and faculty members think about using Facebook as a tool to facilitate learning. The participants were asked to recall their experiences and perceptions of using Facebook as part of their course, especially their perceptions on the factors that contributed to their experiences. The qualitative data were derived from: (1) engaging students in meaningful discussions through focus groups; (2) individual interviews with the faculty members who participated in this study; and (3) observation and analysis of the Facebook posts.

Therefore, the focus in this chapter is placed on analysing the data that was gathered to address Subquestion 1: What are the differences among students in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?

As stated, a phenomenographic approach was used in this study, and the procedures undertaken in gathering, questioning and analysing the qualitative data aligned with this approach. During the interviews, discussions were facilitated by making a statement or

asking a question and asking for the participants' responses and perceptions. The researcher conducted all interviews to ensure consistency was maintained. The interview data were recorded and then transcribed verbatim. First, the researcher generated a pattern of meaning by identifying the common themes from variances in the participants' experiences of the phenomenon (Creswell, 2012). Second, the themes were summarised into categories of description. Last, these patterns of experience were represented in an outcome space indicating the structural relationship between the patterns. Examples of the Facebook posts are used to support the category descriptions. This procedure is further explained in the coming sections.

To understand the students' perceptions of using a social networking site for learning and to analyse the data for Sub-question 1, it was necessary to look closely at the ways in which these perspectives were realised in terms of the ways that the site was used. Data are presented under the 'what' and 'how' aspects. As mentioned in Chapter 3, the 'what' aspect refers to "the experience of using a social networking site, i.e., Facebook, as a tool to facilitate learning and engagement". The 'how' aspect refers to "how learning was facilitated using Facebook". The meanings that students and faculty members attributed to their experiences (the referential aspect) are also highlighted, and the relationships among and between them (the structural aspect) are determined (Marton & Booth, 1997).

Inspired by the work in Harris (2006), this chapter and the next study each category description according to its 'what' and 'how' aspects. This chapter presents the students' perspectives; the next chapter presents the faculty members' perspectives.

5.1 Qualitative variations of experience

5.1.1 Identifying the common theme

According to Marton and Booth (1997), a researcher's main aim should be to find out, to the greatest extent possible, the way in which people experience a particular phenomenon. The varieties of experience are highlighted in this study, but not the majority or dominating views. Marton and Booth (1997) also suggest that data analysis is an on-going process even at the data collection stage, and, in light of this, a researcher may need to adjust the direction of the interviews based on what was learned from previous interviews. In the current study, ongoing attention was given to the data in the collection stage, but no major changes in direction were deemed necessary. From the nine interviews with students, 47,423 words were transcribed.

The transcripts were read many times to identify the data relating to the questions underlying this study. The data from the focus group discussions and the survey questionnaires were reviewed to determine the initial pools of meaning or common themes relating to Sub-question 1 (Creswell, 2012). Material relating to both the individual and collective perspectives was taken into account (Marton & Booth, 1997). The themes participants repeatedly alluded to are highlighted. Some data shared similar meanings, and these data were merged to form pools of meaning. In this study, themes such as 'the students' perceive Facebook as user-friendly', 'a leisure versus work platform', 'privacy concerns' and 'Facebook's advantages and disadvantages' were all considered as part of Facebook's interface or functions.

5.1.2 Categories of description

After identifying the common themes, the themes relating to the questions being addressed were selected (Marton, 1986). These themes were then organised into categories by analysing the various ways of understanding the phenomenon. According

to Marton and Booth (1997), a high-quality category of description should meet several criteria, e.g., "individual categories should each stand clear in relation to the phenomenon of the investigation so that each category tells us something distinct about a particular way of experiencing the phenomenon; the categories have to stand in a logical relationship with one another, a relationship that is frequently hierarchical; the system should be parsimonious, meaning that as few categories should be explicated as is feasible and reasonable for capturing the critical variation in the data" (p. 125). In the current study, this set of categories of description represented the various qualitative ways that university students and faculty members think about using Facebook as a tool to facilitate learning and engagement, and what contributed to their experience. For example, the categories ranged from Facebook's interface and functions to the students' intrinsic motivation and represented a range of ways of understanding the phenomenon. The categories were distinctive but do not necessarily represent the dominant views. Detailed explanations are provided in the coming sections, and quotes from participants are used to illustrate the categories.

In addition, conceptions can be divided into two aspects – the 'what' and the 'how' – based on Marton and Booth's (1997) framework as mentioned in Chapter 3. The 'what' aspect has a **direct object**. It is the outcome of a study and remains constant. In this study, the direct object refers to the academic use of Facebook as a tool to facilitate learning and engagement and was the focus of the interviews. The 'how' aspect consists of two parts: the act and the indirect object (Marton & Booth, 1997). Here, the act includes the students' perceptions on how to facilitate learning and engagement via Facebook (the direct object). The indirect object refers to the quality of the act (the act of learning) and the aim of the act of learning aims (indirect object of learning) (Marton & Booth, 1997 p.85).

Marton and Booth (1997) also proposed another framework and two more concepts within their framework: the **referential** and **structural** aspects. In the current study, the referential aspect refers to the pattern of **meanings** in the experiences, while the structural aspect represents **the relationship among the aspects that contributes to the meaning** and is divided into an internal and external horizon (Marton, 1993). Marton and Booth (1997) state that the internal horizon means "the parts and their relationship together with the contours of the phenomenon" (p. 87), which includes **all parts related to the students' conceptions of what the academic use of Facebook is, as well as the relationships** these parts have with one another. The external horizon refers to "the ways in which the phenomenon we experience in a certain way is discerned from its context, and to be more precise we should add, how it is related to its context as well" (p. 89). This can be understood as addressing the question of how Facebook **creates a physical context to facilitate learning and engagement.** Figure 3.1 demonstrates the structure of these concepts.

Figure 3.1   The structure of concepts of using Facebook as a tool to facilitate learning and engagement
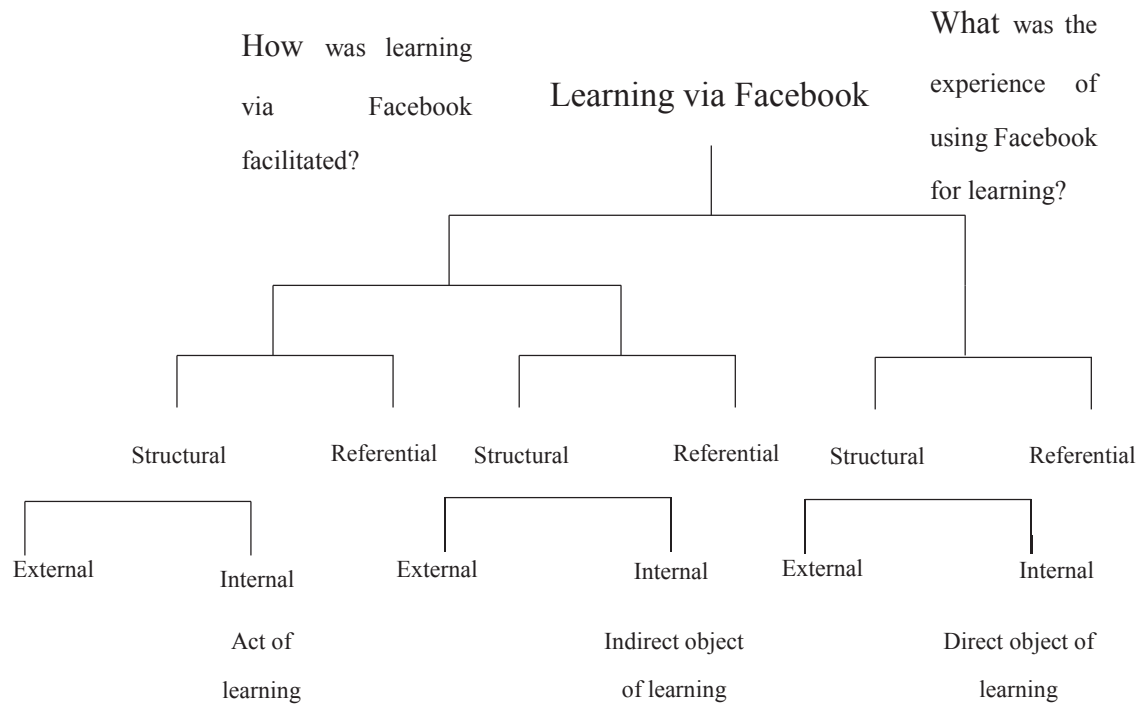
*Each of these aspects consists of a number of categories that are described in the following sections.

Following this structure, the meanings that students and faculty members attributed to their experiences (referential aspect) have been highlighted in this study, pinpointing the relationships among them (the structural aspect) (Marton & Booth, 1997). Guided by the previous work of Harris (2006), the coming sections present each category of description under the broad meanings of 'what' and 'how' together with details about the internal and external horizon. Each is explained with a direct (and representative) quote by the participants from the focus group discussions or selected Facebook posts from the courses Facebook pages. The 'what' aspect is explored first.

5.1.3   The 'what' aspect – the students' perspectives

There are five categories under the 'what' aspect, each representing variations in the students' experiences of using Facebook for learning, and especially their perceptions

with regard to the factors that contributed to these experiences. The categories are placed in a logical and hierarchical relationship to one another.

5.1.3.1 Category 1: Facebook's interface and functions

5.1.3.1a The referential aspect

The referential aspect refers to the pattern of meanings of the experience. In this category, most of the students mentioned that the interface and functions of Facebook affected their level of activities when Facebook was used to facilitate learning and engagement.

Throughout the focus group interviews, there was a recurring mention of Facebook as a platform mostly for leisure. Some participants preferred Facebook to be free of work-related content and focused solely on leisure. For instance, "On the Facebook page, we have a personal newsfeed and a class newsfeed together. It is very hard to differentiate the work and personal stuff on Facebook." (Student 3, 140402_PM session)

> Because it must have very clear… as in no one knows exactly where the line is. That is another reason why I created another account because I want a clear line. Ok, my Facebook is my personal thing, for fun. I do not have to see all the things related to the course at the left sidebar and the notification I get from it. (Student 2, 140402_PM session)

Students considered it to be important to separate their work and personal life and some of them felt that Facebook should only be for fun. Furthermore, some students were concerned about their privacy. Because of these views, some students either set up a separate Facebook account for academic purposes or chose not to participate in the Facebook discussions.

> I would think privacy concerns. Because personally I created a separate account, even though I knew it would not be affected but I still created the same account just to give that extra distance. I think privacy is a very big issue now. I do not know, I

am just sort of afraid even though there is nothing to hide. I still want that distance. (Student 2, 140402_PM session)

Conversely, those who did not mind using Facebook for learning pointed out some useful work-related functions on the Facebook page, e.g., academic-related notifications and notifications for content that came from the course Facebook page. They could stay informed about other students sharing articles and posting comments and could also easily post related materials and questions to their classmates. They felt these functions could be used for academic purposes. For example, two participants said:

For me, I also think it is a good platform for discussion, Course A especially. It is very active, and I am also on Facebook quite often, so it always appears on my notifications. I can just click on the link. So, as long as there is something interesting, I will just go and view it. And we are always sharing links. We can share links easily through Facebook and stuff. (Student 1, 140404_AM session)

Facebook is more user-friendly. If a faculty member asks me a question, then I just reply to the faculty member, but you can see everybody's views. For example, if I reply to a post on E-learn, maybe I read a thread of 10 comments, and I want to reply to 3 of them. If I am supposed to do that on E-learn, I have to go find those posts and then reply individually. Whereas on Facebook, I can type one comment and tag those three people. (Student 2, 140404_AM session)

Similarly, some participants indicated that Facebook could assist academic-related communication and collaboration because it provided a platform to link up with almost anyone – having a Facebook account has become the norm today. As a platform that integrates work and leisure, some participants felt that Facebook also allows for easy collaboration with acquaintances or strangers. The leisure aspect of Facebook means more people frequently access the platform to stay informed about their friends' activities. Merging their social life with work, by simply adding someone as a friend or sending

them a Facebook message, is enough to engage them in potential communication and collaboration. Communication is further supported by Facebook's "integrated services", which allows people to chat with each other while sharing attachments, like pictures and videos, to facilitate understanding.

The following quotations highlight Facebook's dual potential as a means of communication and collaboration, as well as being a platform that serves both leisure and work purposes:

> I am trying to achieve something else for my group project, but it requires me to meet someone who is not in my class, then I will try to find the person on Facebook and see what they are up to. If I am trying to collaborate with a project that they are doing, probably they are quite active, like trying to promote their project on Facebook. We approached this guy who is a lawyer with a Facebook page. Of course, he did not reveal confidential information but he is active on his Facebook page to reach out to people he is communicating with. (Student 1, 140402_AM session)

> I think that on Facebook you can bring in a lot of people easily. You know you can go like, "Oh, they are talking about this, what do you think." Maybe friends who see what is going on your wall just self-invite to join the conversation and make comments. It is great because you can have discussions with people you do not actually know. You are just joined by mutual friends. Maybe you have friends who posted something, and people respond to it. (Student 1, 140409_PM session)

Even though Facebook started off solely as a platform for connecting people, today Facebook is being used as a platform for work as well. Various functions, like chat groups and sending attachments, have been added that facilitate Facebook's potential to serve as a tool for work. Consistent with both the above quotes, a few participants also pointed out that some of Facebook's functions enabled them to have more discussions with people

they might not be familiar with, e.g., adding friends, invitations and Facebook messaging. This kind of accessibility allows them to collaborate with people with similar experiences even though they have not met each other in person.

A couple of students also raised the issue that Facebook can be, and is, used to supplement class discussions. For example, Student 1, from the 2 April morning interview, shared that he had used Facebook to continue his dialogue outside class because Facebook enabled him to contact classmates and put his views online to further his discussions. He said,

> I think in class we do not have time to cover a lot of things that is also what the faculty member said to us. But I think she said that she sees the Facebook channel as a way to supplement whatever we have learned in class. So, for us when we catch up on our stuff, we will go to the Facebook page and see what others say about certain things. Or like we find articles to further support, I mean you also use Facebook page to back up certain things in class, like if I disagree with my friends and then I put this article as evidence that I disagree with you. So, it is not so much like sharing but more like a channel for the faculty member to cover what she did not cover in class with articles, and for us to add on to our class discussion. (Student 1, 140402_AM session)

In this category, most of the participants focused on Facebook's functions and interface when they shared their experiences. Most of them considered Facebook as something mainly for personal use. Also, Facebook was seen as too superficial a tool for learning as many students found it challenging to have in-depth discussions on Facebook. Because of this perception, activity on Facebook was affected. For example, one of the participants said, "It is useful to introduce new ideas that you come across outside of class. But whether the discussion goes in-depth is the question, which I think the depth part is lacking in Facebook." (Student 1, 140402_AM session)

Within the referential aspect, most students pointed out the pros and cons of Facebook's interface and functions, and they mentioned that these characteristics affected their level of activity when Facebook was used to facilitate learning and engagement. This relationship is further explained in the 'how' aspect of the coming sections.

5.1.3.1b (i) The structural aspect: internal horizon

Marton and Booth (1997) mentioned that the internal horizon means "the parts and their relationship together with the contours of the phenomenon" (p. 87). That means the way of experiencing a phenomenon depends on how the parts of this phenomenon are differentiated and interrelated as a whole. In this case, the phenomenon is using Facebook as a tool to facilitate learning. Within this category, the student data were related to the level of learning and engagement when Facebook was used academically. The parts included learning preference and personality.

For example, two of the participants mentioned that personality or personal preference were factors contributing to their views. For example, they did not even use Facebook for personal communication; therefore, they did not have a tendency to use Facebook for learning. They stated, "I think it could be because of my personality as well. I do not really use social network very often. That may affect my opinion of it." (Student 3, 140402_PM session) and "I do not really know because my friends and I do not really talk about the Facebook page. Among my own conversations with my friends, we seldom talk about duty-related stuff out of class." (Student 1, 140507_AM session)

As mentioned in the referential aspect, some participants preferred to separate work and personal life. Facebook for them was a tool to use for their personal social life and was not used for class. This personal preference affected their opinions of the experience. For example:

I think work is work and you should focus solely on work. Social stuff should be another side as well. So, when there is too much overlap, I am not really for it, which is why I am not really for using Facebook for our class. I like to keep them separate. (Student 3, 140404_AM session)

For me, Facebook comes to represent, in a rather imperfect way, it is not work space, anything but work space. (Student 1, 140409_AM session)

Likewise, some also raised concerns about other people's reactions, which affected whether they would integrate Facebook for academic use.

I guess on Facebook it is a little bit harder to say something very controversial because it is so open, and the norm is like you worry that other people will see, people from other classes, even your friends, or friends of friends, they may take things out of context. If you say something controversial on Facebook, you are shaping your identity. This is my concern. (Student 1, 140409_PM session)

However, while many did not see social media as an effective learning platform for their particular learning preferences, several students indicated that those who were shy to participate in class might benefit more from sharing on the course Facebook page as it was more detached. For example, one of the participants mentioned,

The reason my class Facebook page is active is because it is an easy tool to use… Those people who are shy in class, or cannot think on the spot, can have the opportunity to do it on Facebook. That's why I notice also a lot of people who don't say anything in class do say something on Facebook. So, I think people perceive it as a good tool. (Student 2, 140410_PM session)

Thus, within the internal horizon of the structural aspect, the students' personality, personal preferences and concerns were associated with their level of learning and engagement when Facebook was used academically.

5.1.3.1b (ii) The structural aspect: external horizon

According to Marton and Booth (1997), the external horizon means "the ways in which the phenomenon we experience in a certain way is discerned from its context, and to be more precise we should add, how it is related to its context as well" (p. 89). Within the current study, this means to separate the experience of using Facebook for learning from the outer context. As revealed by the data, some students wanted to keep their work and personal life separate, and some students used Facebook for academic purposes simply because the functions and interface were helpful in their course. Some students might have chosen not to participate on the Facebook course page because they did not want to. In these cases, their preferences did affect the nature of the phenomenon. The characteristics stated in the internal horizon made some students feel it was easier to learn and engage via the Facebook course page. In contrast, learning and engagement might be easier in a traditional classroom setting for those who choose not to participate. All in all, the concerns about Facebook's interface and functions reflected one important point under this aspect: there is a need to have a clear boundary and structure. The majority of the participants preferred a clear boundary for their work, for example,

> I like to compartmentalise my life to different areas. If I am at home, I probably like to chill, talk to my siblings and my parents, not work. At work, I will work. If we bring everything together into one platform, the blurring of the lines makes me uncomfortable. (Student 3, 140404_AM session)

> I think I get quite distracted by everything else on my Facebook because everything is there. My personal life, school, outside volunteer, all kinds of activities. If there's a function that Facebook could add, I think it could be something like maybe a group is used for classroom or class discussion, maybe Facebook could add a feature that you can block the rest, so you can just focus on the content that is shared

on that page. So, you do not get distracted by the notifications and the messages that are being sent from whoever. (Student 2,140404_AM session)

While these two quotes from the participants highlighted the importance of having a clear boundary, so as to keep a clearer mind for learning, several students also pointed out the importance of having an organised learning environment. For instance,

The E-Learning platform is more structured. The structure plays a very important role in how much people get from it. When I look at e-Learning, I see the topic by week. You will see different viewpoints, and the quality of content you get from it is very substantial. Whereas for Facebook, it is not structured. I just see it to come and get a quick idea. I do not feel like I get the depth as compared to forums. (Student 1, 140402_AM session)

I think Facebook is just not organised enough to facilitate learning. It's very here and now. It's all about the present. It is not organised according to particular trains of thoughts, or particular ideas. It is just "Oh, at this point of time, I feel like this is interesting, and then you post." It will be at the top of the page. And if you want to find something, you have to scroll down. It is not like a forum where you can file things. (Student 1, 140410_PM session)

5.1.3.1c Summary of Category 1 – the 'what' aspect

In Category 1, students focused on the interface and functions of Facebook. Most participants considered Facebook as something for personal use, but some students acknowledged that some of its functions could be used for academic purposes. Facebook was also seen to be too superficial as a tool for learning. The internal horizon of this category included personality and personal preference, e.g., shy students may benefit from using Facebook to communicate with others. Their opinions on Facebook's functions and interface also infer their perceptions about the importance of having a clear

structural environment to support learning. This also forms an external horizon, which is the main physical context for students' learning and engagement. Within Category 2, students continued to perceive their learning and engagement via Facebook within the physical context, and these conceptions were moved from Facebook's functions to course-related factors, e.g., the class learning culture.

5.1.3.2 Category 2: Class learning culture

5.1.3.2a The referential aspect

In Category 2, students highlighted the learning culture of the class during the interviews. The students perceived that the class learning culture would affect whether they would use Facebook for learning.

For example, all participants from Course A mentioned a distinct culture on their course Facebook page. Some of the quotes are,

> Everyone is posting… I think he (Faculty Member A) makes the environment quite good, everyone is a friend to everyone. He cross-references people. We do not know each other, but at the end of the class, you roughly know everyone in the class. I think it is a different culture. (Student 1, 140402_PM session)

> He (Faculty Member A) encouraged us to read newspapers and all that. I think a lot people do not have the time to do that, so they do a lot of their readings on the Facebook page, because he posts a lot of interesting stuff that he comes by. So, I think when he gets this started, the more outspoken ones they will post more stuff also. And the people who are more active on Facebook and not in class, will also start to post. It starts as a culture, so everyone will post. (Student 1, 140402_PM session)

> In our course, the Faculty member (Faculty Member A) started by posting a lot. The TA will also post a lot at first. Then suddenly everyone will start posting when

they see what is supposed to be on the discussion page. (Student 1, 140404_AM session)

The quotes above demonstrated the learning culture of Course A, which was characterised by very active posting on the part of both the faculty member and the students. These quotes also underline the importance of involvement by faculty members, which is further discussed in the next category.

In contrast, students from Courses B and C commented that they were only active in the classroom, but not on the course Facebook page, as they tended not to use it for learning. Their interaction was quite different from Course A, and it affected what they experienced when Facebook was used for their course. Participants from Courses B and C thought,

Our Facebook page is not active at all. Nobody replies when the faculty member posts something online which are related to the course. Nobody questions anything either. It is just silent. I think it is because we have already talked in class. (Student 2 from Course B, 140402_AM session)

We need to participate on the e-learning platform. E-learn has a few people who spark a lot of debate. Maybe because it is already done there, we do not bother bringing it over to Facebook. (Student 1 from Course C, 140409_PM Session)

Figure 5.1　Low level of activity for Course C
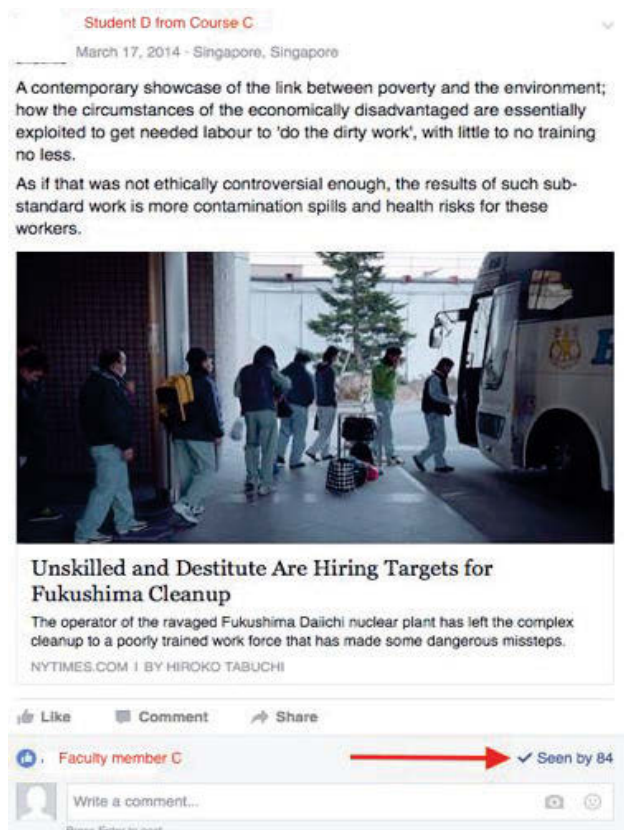
The researcher also observed that Courses B and C had a low level of activity on their Facebook pages. For example, Figure 5.1 shows the low level of activity for Course C. One of the students shared his views on an article but nobody responded to the post, and this frequently occurred on Course C's Facebook page.

A count of the number of posts among the three classes confirms that Course A had more posts and interactions than the other two classes. There were 777 posts from Course A, and only 150 from Course B and 26 from Course C. Students perceived that the distinct culture of Course A contributed to this phenomenon.

5.1.3.2b (i) The structural aspect: internal horizon

In terms of the internal horizon, some participants were aware that learning culture is associated with the norms and dynamic of their classes. For example, "I think because a

lot of people use it. And when a lot of people use it, it becomes a norm to communicate with each other via this Facebook page." (Student 2, 140410_PM session)

This student further explained how their norm was established and how he felt it enriched the learning process. He explained,

> At the start, I was a little hesitant because I thought it is a hassle to read through everything on the Facebook page. But when I sift through the content, people do engage, if you post something, they are going to react to it. It is easier for me to use it because I know people are going to share stuff, and react to what you have posted. This is the norm and this is encouraging. I think it is conducive for learning, because it's not one-sided. (Student 2, 140410_PM session)

Another student shared a similar idea:

> I think the level of activity is all depends on the class dynamics outside of the Facebook group. For example, if you can have 10 people who are very active and they just keep posting to each other, then it can be very active. (Student 1, 140506_AM session)

In addition, several participants also pointed out that their sense of community was related to the group culture, and that it would motivate them to participate in the Facebook discussion. For example, two participants recalled their experience from co-curricular activities (CCAs) outside the classroom, where students would post actively on the group Facebook page, possibly due to a sense of belonging. "It is the common interest I think. You feel a belonging in the CCA, and you want everyone to grow together and that is why we keep posting. That kind of thing." (Student 1, 140404_AM session) "I have a group of Filipino alumni, they post stuff about resumes, interview tips. It is sort of looking out for each other because we all share the same background." (Student 2, 140404_AM session)

In addition to the learning culture cultivated by the sense of belonging to a community, most students also felt that institutional factors, e.g., the nature of the course, would have impacts on the culture of the course Facebook page. They felt that the nature of the course was responsible for the differing activity levels across each of class Facebook pages. For instance,

> I think it has to do with the nature of the content. For our class (Course B), things are quite straightforward. For Course A, there is always room for argument. In a sense, there is a lot more room for discussion in Course A than B. (Student 1 from Course B, 140410_PM session)

> Yeah. And I think when the content is right, a lot of things hit close to home, or some viewpoints that are so rash and irrational that you disagree with, so… For Course B's content, it is more factual, and theoretical… For our class (Course A) it is more like things that happen in real-life situation that are very argumentative. (Student 2 from Course A, 140410_PM session)

The above quotes highlighted the perception that the nature of the course itself had an important impact on the levels of student engagement and learning. In this study, most of the students agreed that because of the topics covered in Course A, it was easy for them to search relevant materials online and the content of posts were more suitable for debate. Therefore, Course A had the highest activity on its Facebook page compared to the other two courses.

Likewise, some students observed that if the nature of the class is less theoretical and more interactive, they tend to use the course Facebook pages more.

Hence, in terms of the internal horizon of the structural aspect, participants considered that norms, the dynamic of the class and the nature of the course were all associated with the learning culture of the course.

5.1.3.2b (ii) The structural aspect: external horizon

Regarding the external horizon, students pointed out a wider physical context for their engagement and learning than for Category 1. The physical context was not limited to classroom learning; learning outside the classroom was also mentioned. Students recalled their experiences in co-curricular activities (CCAs) to indicate the importance of having a sense of community where learning and engagement were happening. For example,

> It is a very good source of information for like-minded people. For example, we have a Facebook page for people who like Indonesian movies. Recently, there is this new Indonesian movie coming out called "Great Redemption". It is like ancient film. And all of us just talked about it and shared the trailer. I think that one would get a sense of community I suppose. Being a part of it is something cool and it keeps us going. (Student 1, 140508_AM session)

The above quote highlighted the importance of having a sense of community, which was also a reflection of social engagement among the students. This point is further explained in the next chapter.

The perception of a sense of relevance on a Facebook page was not only applied to people (sense of community) but also pertained to the context of the course (relevance to their course) When students compared Course A with Course B or C, they identified the connection between the courses and the activities that occurred online on their Facebook pages.

> For Course A, I think, it is a more widespread kind of thing, so we can relate it to real-world situations. So, he posts interesting stuff and he posts stuff that is related to what he talked about in class as well. So, for us we have a wider scope and that's why we can use Facebook. (Student 1, 140402_AM session)

The topics posted on Course A's Facebook page were more widespread. Figure 5.2 depicts a cartoon by the student illustrating that Course A's related topics can indeed be found everywhere.

Figure 5.2   Course A's related topics can indeed be found everywhere

Conversely, when students from Courses B or C explained why they were not active on their Facebook pages, some mentioned that they could not see the connection between their course and their course Facebook page. For example,

> I cannot blame the faculty member. There is very little reason to use it (the course Facebook page) and to apply it outside the class settings. This course is very theoretical, rather than real-world-based. I think it needs our own initiatives to try and apply it to real-life situations and our own concerns. In a sense, people seldom use it. (Student 1 from Course C, 140507_AM session)

The above quote highlighted the importance of having relevance between the course and the course Facebook page. Thus, these participants suggested that students' learning and engagement occurs when the environment gives them a sense of relevance, which includes a sense of community or relevance to the course.

5.1.3.2c Summary of Category 2 – the 'what' aspect

In Category 2, the data reflected that some students had focused on the learning culture of the course. The learning culture of the course was said to have a direct impact on the level of learning and engagement via Facebook. In the internal horizon, some participants pointed out that students learned and engaged when they felt they were part of the community, or when the activities on Facebook could be related to their course. Thus, an environment that gives them a sense of relevance is the context for their learning and engagement and forms the external horizon. The difference between this category and the previous one is that this one focused more on the context and content of the courses rather the technical features of Facebook. In the next category, the participants highlighted a wider range of human factors, including the involvement of faculty members.

5.1.3.3 Category 3: Involvement by faculty members

5.1.3.3a The referential aspect

In Category 3, the students' experiences showed that their activities on the course Facebook page were related to their perceptions about faculty member involvement and raised the importance of human factors. Some participants shared that whether or not Facebook was used as a tool for learning depended on whether a faculty member was involved; if a faculty member was more involved, students would participate more.

Many participants perceived that when a faculty member actively participated on the Facebook page, students would recognise that the faculty member was putting in an effort on the course Facebook page and would reciprocate by participating more. This was

especially true when the faculty member initiated posts. Students from the three courses commented on the level of involvement by their faculty members, and they felt that the faculty members' involvement affected their own level of participation on Facebook. For example, all participants from Course A mentioned that Faculty Member A was highly involved on the Facebook page. His active participation and his encouragement for students to take responsibility for their education came across as a reason for students to be active and initiated a culture of active posting on the Facebook page, which was mentioned in Category 2.

For instance,

> Faculty Member A does encourage us and he makes sure that everyone participates, he makes everyone write a post like "I acknowledge…" Everyone promises to read the newspaper every day for 10 weeks. There are some other conditions, like write feeds, writing reflection after every class. It is not only about course requirement; it is more about learning in University. So, he makes sure that everyone learns. (Student 1 from Course A, 140402_PM session)

In contrast, students from Courses B and C had different views on their faculty member's involvement. They commented that their low level of activity on the Facebook page was related to the limited involvement of Faculty Members B and C:

> Because I remember the faculty member once mentioned that someone did post something there, and then occasionally there were one or two comments that may pop out. But the faculty member does not reply to the Facebook post itself. But she will reply to you in class, so what is the point of using the page? (Student 2 from Course B, 140402_PM session)

> We have less activity because I think the faculty member does not really emphasise what the Facebook page is for. It is more like "Oh, this is an additional avenue, if you want to join, you can join." So, you know it seems somewhat extra, rather than

people see it as something that is integrated closely to what they learn. But it is also different because Faculty Member C notes that he would rather use e-learning than Facebook. (Student 1 from Course C, 140402_AM session)

Their descriptions on the limited involvement of Faculty Members B and C were also aligned with the results from observations of the Facebook posts. A count of the number of posts that were initiated or commented on by the faculty members showed that Faculty Member A maintained the highest activity on his course Facebook page. For example, he posted 241 posts from a total of 777 for Course A. Students stated that they were more willing to learn and engage via Facebook when they saw their faculty member doing the same. One of the participants commented,

For Course A, especially for this faculty member, he wants his students to be very engaged, he puts very great importance on participation. So, I think people would really devote their time to this (Facebook page) when he is so active. (Student 2 from Course A, 140410_PM session)

Thus, regarding the referential aspect, most participants considered that students' learning and engagement is directly related to the level of involvement of the faculty members.

5.1.3.3b (i) The structural aspect: internal horizon

Within the internal horizon, students articulated an awareness that they were motivated to use Facebook for their learning and engagement when their faculty members were more involved. Among "the parts and their relationship together with the contours of the phenomenon" (Marton & Booth, 1997, p. 87), participants considered that setting a clear objective was an important part of their experience. For example, students felt that they were more likely to participate on their Facebook page when faculty members set objectives for postings and provided a clearly defined structure for the posts. The following quotes stated the reasons for posting and "setting the topics":

Let's say she (Faculty Member B) wants to hear some of the views from the classroom regarding the question on the course materials. So, after she posts the materials, she can post a question regarding a section of it, then asks the class to give their viewpoints. That means the faculty member has <u>to give an objective</u> for the class's Page. (Student 2, 140402_AM session)

I think our course page (Course A) is very active because he is very charismatic, he encouraged a lot of people to do it. When the class just started, he told us that learning is everywhere… something like <u>we were expecting</u> very mediocre education from the university, and <u>we should take the initiative</u> to make it a more wonderful experience for ourselves. So, he encouraged us to read newspapers and all that, post our views on Facebook. (Student 1, 140402_PM session)

Faculty Member A was active in posting his opinions, and he tended to ask students to give feedback on his questions. This is supported by observations of the course Facebook page. Figure 5.3 is one of the typical examples of Faculty Member A's post.

Figure 5.3   Typical example of Faculty Member A's post
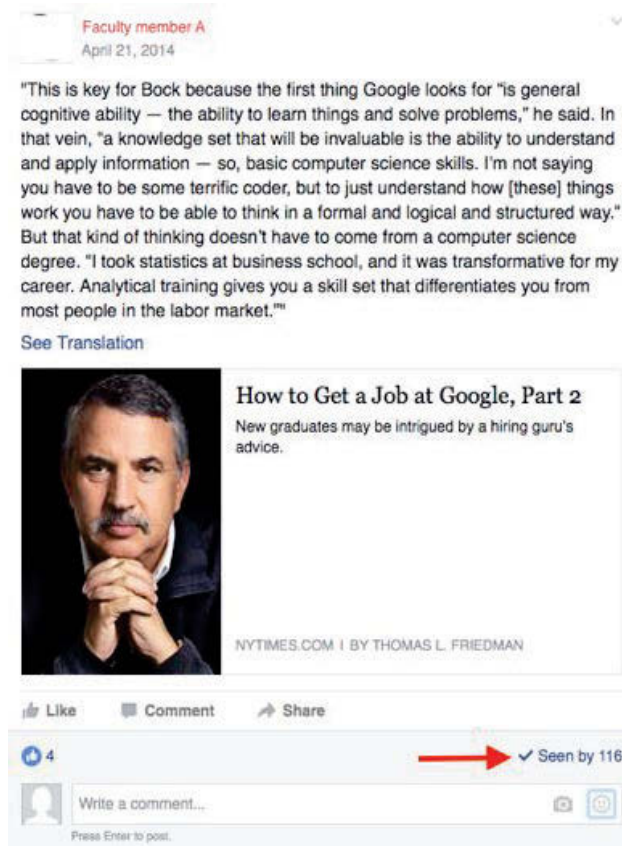
Both the above participants emphasised the importance of setting a clear objective when using the course Facebook page to facilitate learning. Similarly, a few other students said a clear direction was important. This view is associated with the ideas of Vygotsky (1978), who points out the importance of scaffolding and a collaborative student-educator experience in the learning process. "The faculty member has to promote more meaningful discussion on the Facebook page. Otherwise, without any objective or direction to post, it's just for us to read. Then it will not be an active discussion." (Student 2, 140402_AM session)

I would say maybe setting the topics. Because for example, in one day, there's so many topics that are posted, it's hard to follow through. I think when the faculty member says for this week, only post things about gay marriage, or something that's

easier to follow. So, the conversation does not really get lost because it has a direction. (Student 2, 140410_PM session)

Apart from setting objectives, several participants considered that the faculty member setting an "assessment criteria" could also provide guidance for the students as to what kind of articles to post or how to continue discussions. The faculty member providing feedback on the course Facebook page, through commenting or liking the posts, could also reinforce this. For example, one of the participants mentioned:

I really think the faculty member's involvement is crucial in framing and identifying how Facebook should be used, managing students throughout the course, such that they are involved, they are reminded, not forgetting about Facebook because there are so many assignments students have to deal with and keep in mind that participation counts as well. (Student 1, 140507_AM session)

As mentioned above, many students placed a great deal of emphasis on the faculty member's involvement in the Facebook page. Participants perceived that faculty member involvement included active participation and clear objectives, as well as specific guidance. The perception represented in these data were that guidance by faculty members could foster a learning culture that enabled Facebook to facilitate learning. As a form of guidance, participants were aware that faculty members, like Faculty Member A, promoted the discussion by starting the conversation and encouraging students to participate. Facilitation also included moderation and effort from faculty members, which could motivate students to participate more actively on the Facebook page. For example, moderating the posts and making statements that encouraged students to freely share their opinions without fear of being judged.

I think one good thing is, Faculty Member A says that this course is not about judging people. So, whatever you say in class, you are not judged. You are just

asking for the sake of your own curiosity so I think it is a different mindset. If people judge, so be it, if you do not feel hurt. (Student 1, 140402_PM session)

Thus, regarding the internal horizon, many participants pointed out several important elements relating to the broad theme of faculty member involvement. For example, it includes clear objectives, directions and assessment criteria, as well as facilitation and moderation by faculty members. All these elements are important for faculty members to provide to scaffold the structure and expectations of Facebook activity. Further explanation is provided more in the next chapter.

5.1.3.3b (ii) The structural aspect: external horizon

Within the external horizon, participants were aware that the Facebook page, as well as the traditional classroom with its clear structure and sense of relevance, formed the primary context for students' learning and engagement. Some participants were also aware that students must sense the involvement of the faculty members. More importantly, faculty members were perceived as developing an environment with a clear guidance and direction.

At first not a lot of people post. Only when the faculty member posts, then the teaching assistant (TA) posts. When the TAs post, people will be like "Oh, the students post". So, the outspoken people will post. And people who are more involved on Facebook will also post. Then you see all kinds of people posting. So, I think it takes the faculty member first, then the TAs. It takes a lot of commitment from the leaders who start the whole situation. (Student 1 from Course A, 140402_PM session)

Therefore, in this category, which focuses on the environment of the phenomenon, some participants considered that students were more engaged in an environment with a clear

guidance and direction, and most of them felt that faculty member involvement affected students' learning and engagement.

5.1.3.3c Summary of Category 3 – the 'what' aspect

This category extends Category 2 because it shifts the conceptions from external factors to people. From the students' perspectives, faculty member involvement can shape the learning culture of the course and the use of Facebook for learning. The internal horizon includes clear objectives, directions and assessment criteria from faculty members. While students' learning and engagement still occurs within a setting with a clear structure and a sense of relevance, great emphasis is placed on faculty member involvement. Participants pointed out that students were more engaged in an environment with a clear guidance and direction and this context forms the external horizon. In the next two categories (Categories 4 and 5), students discussed the factors relating to their extrinsic and intrinsic motivation. Category 4 presents data relating to the theme of extrinsic motivation, which shows the students' perceptions of the importance of extrinsic motivations to their use of Facebook for academic purposes.

5.1.3.4 Category 4: Extrinsic motivation

5.1.3.4a The referential aspect

In Category 4, the data showed that some students raised the importance of having extrinsic rewards during their participation on the course Facebook page across all focus group interviews. Extrinsic rewards would exist if the faculty members were to grade their posts. The following quotes represent their views.

So, the intrinsic and extrinsic motivation. The first one I am talking about is the intrinsic motivation. I already want to do it, and there is this avenue on Facebook that is available so I can do it. But the extrinsic motivation is the grade, so for me I

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am not intrinsically motivated <u>but when you put a grade there, I will do it</u>. (Student 1 from Course C, 140409_AM session)

I think for this course; the faculty member could assign a portion of the grade to the quality of the comments people put on Facebook. Because she also does not have a direction where she wants the discussion to head towards, then of course there will not be any discussion on the Facebook page. But if she attaches a grade, and assess the quality of work……the faculty member can show where she agrees or disagrees. You can see the quality of work. She can like the comment if the quality is good. If the comment is not good, and does not substantiate anything, then she can make mini-comments. It allows you to have mini-comments also…. So, I think for the Facebook page for module B, the faculty member should include a grade, because of the lack of a forum. (Student 1 from Course B, 140402_AM session)

These two participants suggested the importance of having rewards for their participation on their course Facebook page. Students from Course A thought that the Facebook activities were graded; thus, when they saw everyone was posting there, they posted too. They related this experience to grading and extrinsic reward. One of the participants mentioned this,

For Course A, especially for this faculty member, he wants his students to be very engaged. I think the biggest part is that it is also graded, it is part of your participation so people are sort of more willing to engage themselves in it. (Student 2 from Course A, 140410_PM session)

Extrinsic motivation to post was also subtly introduced when a faculty member or the other students realised they were contributing to a page by liking or replying to posts. Some participants felt that the positive response was a form of recognition for the student's effort and encouraged them to post more. For instance, "As in Facebook is something everyone can see, if you see someone very active on this page, you want to be

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active as well, so you do not lose out in some way or another." (Student 1. 140409_AM session)

> For me, other than the class participation thing, the fact that people respond to it, people are more incentivized in the way that you know someone is going to respond to what you say, you are more incentivized to contribute, because you know people are going to react to it, or give their opinions. (Student 2, 140410_AM session)

In this category, participants associated students' learning and engagement via the course Facebook page with the extrinsic motivation. Grades and recognition from others motivated them to participate in their course Facebook page.

5.1.3.4b (i) The structural aspect: internal horizon

In this aspect, some participants reflected the view that students were motivated to engage with Facebook as a class exercise through extrinsic rewards. They felt that a participation mark (grade) was an important part of students' learning and engagement. Several participants mentioned that students were unlikely to participate without an extrinsic reward, for example, "it is not really counted to the grade, so I do not have the motivation to go and search for what is extra." (Student 1, 140409_AM session)

> I know it sounds sad but I think for our classmates, if you really want them to get engaged, they need to have class participation marks. And you need to give them a very concrete reason. In the end, they might be going in just to clock in some comments, so they can get class participation marks. (Student 1, 140110_PM session)

> Many participants also mentioned that affirmation or acknowledgement from a faculty member or other classmates also played a role in motivating them to participate in their course Facebook page. For example, "if it is not graded and they

(other students) still post maybe because they want to impress the faculty member, or they want to impress their friends" (Student 1, 140409_AM session)

Thus, in this aspect, which focuses on the internal structure of the experience, extrinsic rewards like participation marks and acknowledgement from the faculty members and classmates were elements of their experience, and these formed the internal horizon.

5.1.3.4b (ii) The structural aspect: external horizon

Within the external horizon, the analysis revealed that some participants placed importance on the value of recognition from others. This highlighted student perceptions that their learning and engagement is enhanced by an encouraging and supportive environment. For example,

I think in class we always bring issues from outside of class. We are always encouraged to read outside and share our views. And we use that platform (the Facebook page) to share interesting things with other people. That motivates us to post even without a grade. (Student1, 140404_AM session)

It was clear from the data that a supportive environment could also be affirmed when students were not judgmental of others' views. When students experienced a non-judgmental attitude from their classmates, they were more likely to participate. For instance, "When you post one, you feel like it does not really hurt that much. People do not judge me, then you will be more active." (Student 1, 0140402_PM session)

The analysis shows that the students' perceptions about the role of an encouraging and supportive environment formed an important element within the external horizon.

5.1.3.4c Summary of Category 4 – the 'what' aspect

Beyond the aspects of extrinsic motivation students attributed to others, such as academic marks, faculty member involvement and recognition from others, data were also gathered

about their own intrinsic motivators. Most participants agreed that grades and recognition were important parts of student learning. The internal horizon contains rewards like participation marks and acknowledgement from the faculty member and classmates. An encouraging and supportive environment forms the external horizon. In the next category, the students' intrinsic desires to learn are further established. Students pointed out that their intrinsic motivation played a big part in their experiences when using Facebook as a tool to facilitate learning and engagement.

5.1.3.5 Category 5: intrinsic motivation

5.1.3.5a The referential aspect

Category 5 further shifts the focus from others to self where learning is oriented toward the student or learner.

In this category, a few students pointed out that intrinsic motivation was a critical factor affecting their experience. Intrinsic motivation to post was defined as when students held a mentality that learning was for their benefit, and that participating on the Facebook page was a form of learning for their own benefit. Students revealed that they wanted to participate because they wanted to contribute to and improve their knowledge. This had nothing to do with other people. For example, "I enjoy posting for the sake of my own knowledge, my own benefit. So, that's when I feel I am very comfortable posting." (Student 1, 140402_PM session)

This student further elaborated,

> You know, class is not the only place to learn everything. It is more like you want to have grades, you want to have that piece of degree. I think there is more than that. It is for your own learning. (Student 1, 140402_PM session)

Data gathered in this category related to student perceptions that Facebook's activity was affected by their intrinsic motivations to learn. A passion to learn more and initiate

discussion were revealed as playing a large part in the students' experiences of using Facebook for learning. Thus, these students valued their participation in the course Facebook page. This category advanced the weight of intrinsic motivation. Unlike the previous category, only a few participants highlighted that learning was for their own benefit to improve their own knowledge, suggesting that students would participate on Facebook even without extrinsic motivation. This category did not reflect the dominant view, but it was a distinctive view appearing in the data.

5.1.3.5b (i) The structural aspect: internal horizon

The internal horizon of this aspect related to students wanting to learn for their own benefit. These students directed their own learning, and they had their own purpose. For example,

> Maybe for me, and quite a lot of people in the school, we are quite active, we use Facebook to expand general knowledge, not just to see cute little comics. When people post articles, I actively take my time to read them and note for myself what they know, <u>because I want to expand my knowledge and look smarter</u>. (Student 2, 140402_AM session)

While this student considered that expanding knowledge was his goal in learning, another student in the same focus group shared the importance of developing critical thinking as the motivation for him to participate on the Facebook page. He said,

> To me, it is also a way to help me <u>reflect </u>on the posts. It is something he (Faculty Member A) has trained us to do, I think it is very helpful to make your arguments better and better. And you can <u>pick up key ideas from your posts better and engage</u> in it. It is a <u>learning experience</u>, in a sense it forces us to examine, consider and question some of the things in the posts. And when you look at your peer posts, you realise that everyone has a different view to it. There is a spectrum of views, and it

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makes <u>you rethink</u> what you have been thinking. I think that is very <u>invaluable</u> which is why people also want to post because they post for the sake of <u>introducing a new viewpoint</u>. (Student 1, 140402_AM session)

These quotes reflected that the students participated when they were motivated to take charge of their own learning. They valued their own participation on their course Facebook page when they could develop their knowledge and thinking, and this formed the internal horizon of the structural aspect.

5.1.3.5b (ii) The structural aspect: external horizon

Within the external horizon, the physical context of students' learning and engagement extends to outside the physical environment of university learning.

> It does not have to be graded. It is like a social reward, an extension of you being part of the group, part of a community. For example, setting up a page for professional groups, to include sharing and posting for your future professional members. So, it sounds like "This is the community of branding professional members". So, on this group page, I can say "Hey guys, anyone want to meet up for drinks?" Everyone knows that OK, we are meeting up for drinks because we are all branding professional members and engaging on that level. (Student 1, 140508_AM session)

This quote suggests that learning and engagement can occur anywhere. It can be in class, outside the classroom, or online, as long as the students are self-motivated to learn, participate and engage. This formed the external horizon of the structural aspect.

5.1.3.5c Summary of Category 5 – the 'what' aspect

In Category 5, the academic use of Facebook was linked to the students' intrinsic motivation to learn. A few participants highlighted that the students who participated more were those who were intrinsically motivated. The experience was determined by

their goal to learn more. Any setting can provide the context for students' learning and engagement within this external horizon because a student's desire to learn is the most important element.

5.1.3.6 Section summary

In conclusion, this section established the 'what' aspect of the students' conceptions of the experience of using Facebook as a tool to facilitate learning and engagement. It demonstrated the difference among students in terms of their perceptions of Facebook as a tool for learning (the first part of Sub-question 1).

Five categories were raised to explain the differences between the students' conceptions. All categories were hierarchically structured and represented the outcome space of their perspectives. Students perceived the academic use of Facebook was affected by:

1. Facebook's interface and functions
2. Class learning culture
3. Faculty member involvement
4. Extrinsic motivation
5. Intrinsic motivation

In the first two categories, the experience of using Facebook as a tool to facilitate learning and engagement were affected by context, ranging from tools (Facebook) to the atmosphere (the class learning culture) whereas in Categories 3 to 5, people, ranging from others to self, determined the experience of using Facebook as a tool to facilitate learning and engagement. The lower categories focused on external factors, e.g., the tools and the atmosphere; while the higher categories were centred on human factors. This is demonstrated below in Figure 5.4 and Table 5.1.

Figure 5.4   Using Facebook to facilitate learning: categories of conception for students

Self

People

Others

Atmosphere

Context   Tools

Category 5:
Intrinsic motivation

Category 4:
Extrinsic motivation

Category 3:
Faculty member's   involvement

The class learning culture

Category 1: Facebook's
interface and functions
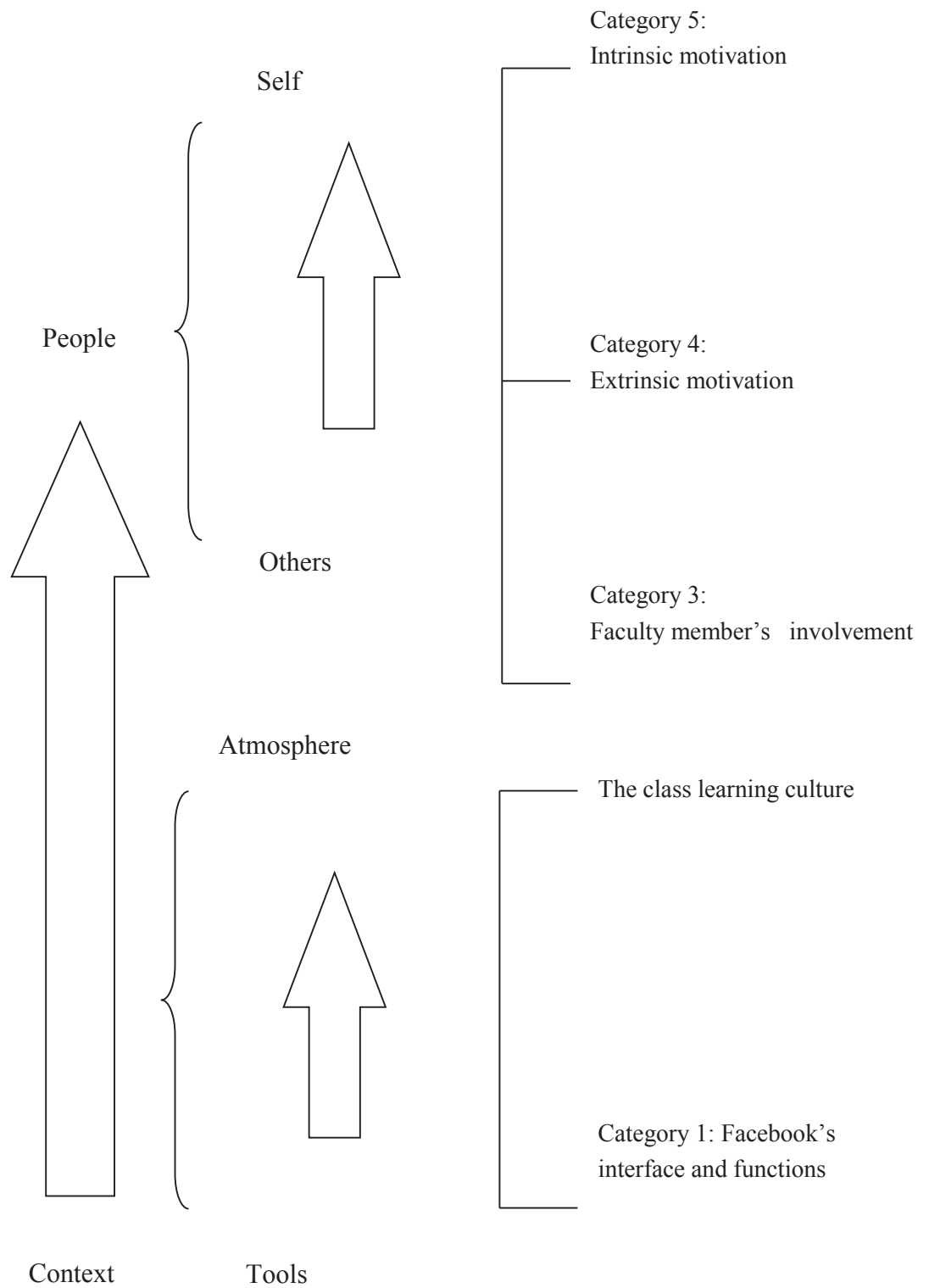
Table 5.1   The outcome space of the 'what' aspect for students

'What' aspect	Referential aspect	Structural Internal horizon	aspects External horizon
Category 1 Facebook's interface and function	Learning and engagement via Facebook is affected by Facebook's functions and interface.	The students' personality and preference.	Learning and engagement occurs in environments with a clear structure.
Category 2 The class learning culture	Learning and engagement via Facebook is affected by the class learning culture.	The students' dynamic, institutional factors, e.g., nature of the course.	Learning and engagement can occur in environments with a sense of relevance (course and people)
Category 3 Faculty member involvement	Learning and engagement via Facebook is affected by faculty member involvement.	Students need guidance and clear objectives from the faculty members.	Learning and engagement occurs in environments with guidance and clear direction.
Category 4 Extrinsic motivation	Learning and engagement via Facebook is affected by extrinsic rewards.	Students seek motivation from extrinsic rewards, e.g., participation marks and a positive image.	Learning and engagement occurs in an encouraging and supportive environment.
Category 5 Intrinsic motivation	Learning and engagement via Facebook is determined by the students' intrinsic motivation.	Students are intrinsically motivated and in charge of their own learning.	Learning and engagement can occur in all settings, formal and informal, face-to-face or online when students are intrinsically motivated.

This section explains the five categories of the 'what' aspect and shows the students' perceptions of the experience of using Facebook as a tool to facilitate learning and

engagement. Their differences in conceptions are manifested and related to 'how' students facilitate learning and engagement via social networking sites, such as Facebook. Within the 'how' aspect, variations in the students' preferences for using Facebook as a tool for learning can be identified.

In the next section, three categories are examined under the 'how' aspect to illustrate the second part of the Sub-question 1 (How are these differences manifested?) These data were also derived from focus group discussions and the posts from the course Facebook pages.

5.1.4   The 'how' aspect – the students' perspectives

After the previous section demonstrated categories of the 'what' aspect, this section shifts focus to the 'how' aspect, exploring students' perspectives on how learning and engagement via Facebook was facilitated. As mentioned in Chapter 3, the 'how' aspect consists of two parts: The act and the indirect object (Marton & Booth, 1997). The act includes the students' perception on how to facilitate learning and engagement via Facebook and the intention of the act. The indirect object refers to the goals that the student is trying to achieve (Stamouli & Huggard, 2007). In this section, three categories are examined under the 'how' aspect and, like the previous section, each category is explained.

5.1.4.1 Category 1: Reading

In Category 1 of the 'how' aspect, data were gathered that related to the students' conceptualisations that learning via Facebook was facilitated when they were there to observe and view the Facebook discussions. This category works hand in hand with Categories 1 and 2 of the 'what' aspect. The data here indicated that most students saw themselves as passive learners and their activities were governed by the functions of Facebook and the learning culture of the class.

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5.1.4.1a The referential aspect: act

Stamouli and Huggard (2007) point out that the act of learning is the experience of the way in which the act of learning is conveyed. In this category, as reflected by their Facebook page activity, only 52% of the posts from Course A, 29% of the posts from Course B and 19% of the posts from Course C had comments and discussions. Most of the students just viewed the posts and remained silent in the discussions.

Observations of the Facebook pages reveal that many of the students usually viewed the pages but did not leave any comments. For example, Figures 5.5 and 5.6 show that most of the students tended to view posts without leaving comments. There was no difference whether a student or a faculty member initiated the post:

Figure 5.5   A student from Course C posted a post, but nobody commented

Figure 5.6   Faculty Member C left a post, but no students commented

The following quotes are students' explanations of their actions relating to the functions of Facebook. They considered Facebook to be a venue to read extra materials and chose not to post or contribute ideas. For example, "I feel like I learn a lot from people. I read the articles that they post, but I do not go out and find my own articles to post." (Student 2, 140402_AM session)

He further explained,

> If I post, that means I actively go out to find something to post, but I feel I only read what people post. And if I realise something interesting, it is probably gotten from someone that had posted something. I do not go out of the Facebook to read different articles. I only read those already posted by someone on Facebook. (Student 2, 140402_AM session)

> If I saw any of the posts, it is probably because it appears on my notifications and if I am free at that point in time I will go and see. Maybe I saw the notification that

the faculty member posted it so I guess I should see it. I felt compelled to go and see it because the faculty member posted it. It might be important or something. (Student 2, 140404_AM session)

While some students perceived reading posts on the course Facebook page facilitated their learning, others explained that they chose to read because they did not have any ideas to post online. For instance, "To me, I view because sometimes I do not know what to post also. It is quite interesting to read." (Student 1, 140404_AM session)

Hence, most of the students chose to simply view the posts and remained silent in the discussions. Reading was the main act in this category. In Nonnecke and Preece's (2003) terms, the students were lurkers who "read but seldom if ever publicly contributes to an online group." (p. 110). In this case, most students felt that they learned via viewing the posts and seldom left any comments.

5.1.4.1b (i) The structural aspect: internal horizon of the act

In regard to the internal horizon of the act, the analysis suggested that a significant number of students tended to be observers instead of active participants because of their personal preferences. Some students felt more comfortable simply viewing posts. For example, "I think it could be because of my personality as well. I do not use social networks very often. That may affect my opinion of it and that is why I read only." (Student 3, 140402_AM session)

> I guess it also depends on the level. If you are talking about year 1 students, they do not have a lot of exposure. As a senior, we have a lot of things to share because we experience a lot of things and we bring in our internship experiences; but for year 1 students, they may feel more comfortable to just read the posts. (Student 1, 140402_AM session)

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A post from one of the course Facebook pages captures the sentiment that most students tended to view the Facebook posts and keep silent. Figure 5.7 is an example showing that Faculty Member B tried to invite students to answer her questions; however, nobody responded to her questions and students tended to read and keep silent.

Figure 5.7   Nobody responded to Faculty Member B's questions

In addition, some participants also pointed out that this act was related to the learning culture of their class. Some of them said,

When the faculty member posted something related to the theories online on our class page, nobody talked and nobody questions anything. It is just silent. I think like the bystander effect. You do not see a lot of people post on the Facebook page so you do not feel like posting as well. Then, we will just read at the end. (Student 2 from Course B, 140402_AM session)

I think for my class; we did not put as much emphasis on Facebook. So, it was more in-class discussion. (Student 1 from Course C, 140410_PM session)

These quotes highlight the fact that that most of the students followed what they saw as the culture of the class. Students felt more comfortable being observers and felt they had learned from just reading the posts. A concern for 'accuracy' was also articulated, meaning that students did not want to post anything which could be considered wrong. When they were not sure of their views, they chose not to post. For example, "When you post something on Facebook, you have to think twice: should I say this, should I say that? How should I phrase it properly? So, I chose not to post instead." (Student 2, 140402_PM session) and "Maybe I am not sure what to post sometimes. If you post, everybody is like watching and you don't know if you are posting the correct thing. So, to me, I feel it is interesting enough just to read." (Student 1, 140404_AM session)

Within this aspect, most students chose to participate in a passive way because they felt it was easier to be an observer and simply read posts by others. Facebook was perceived as another venue for them to view materials and students felt that they learned via reading the posts and others' discussions.

5.1.4.1b (ii) The structural aspect: external horizon of the act

Regarding the external horizon of the act, the level of students' learning and engagement on the Facebook page was related to the class learning culture. The setting is the class as a whole and students did not consider themselves to be involved in contributing ideas to the course Facebook page. For example, "Maybe because I feel like all the things I find interesting I already shared <u>in class</u>. So, to me I do not feel the need for additional action to post on Facebook, reading posts is enough." (Student 1, 140402_AM session)

Additionally, external factors, e.g., time constraints, also impacted their level of participation. Most students chose to read simply because they did not have time to post extra materials on the Facebook page. For instance,

I think I just pick a few, maybe different areas of focus. <u>Then I will just pick and read</u>. In class the faculty member has already asked the person to explain his/her post. So, for those who did not get the chance to speak, I will read their posts. The thing about this page is that <u>he encouraged us to comment or even rebut people who have different views from us. It shows that you are thinking</u> and are engaging with the topic. But I think not many people do that because people <u>do not have time to write extra as to rebut another person.</u> (Student 1, 140402_AM session)

I think because I do not <u>have time to find extra stuff</u> online to post. I am more caught up with the work that I have to finish. So, this one seems to me a bit extra, I do not have time to do it. (Student 1, 140409_AM session)

Thus, in this aspect, the class learning culture and time constraints stopped students from posting. Students chose not to post because they did not see others doing it or they did not have time to do it. Students conceptualised that learning via Facebook was facilitated when they observed Facebook discussions.

5.1.4.1c The indirect object

The indirect object of learning refers to the goals the learner is trying to accomplish (Stamouli & Huggard, 2007). Within this category, the act of reading posts was related to the students' intentions of maintaining minimal and passive participation on the Facebook page. As mentioned in the previous section, they only read and did not post because of time constraints, the limitations of Facebook's interface and the class's norms. Apart from these, their concerns over being judged by others also shaped their level of participation.

5.1.4.1c (i) The structural aspect: internal horizon of the indirect object

Inside the internal horizon of the indirect object are the students' expectations of their role and this reinforces their intentions. They saw themselves as part of the class, and,

therefore, they should follow its norms. They tended to keep a low profile because most participants felt that using Facebook permitted others to invade their privacy by allowing access to their personal Facebook page. They also felt that the posts would be seen as an extension of their identity and others would judge them. Also, since the contents on the Facebook page remain there by default, they worried this might invite people's judgement when others scroll through their previous posts. Thus, they were not active in posting, and they intended to maintain minimal participation on the course Facebook page. The following quotes are representative of the fact that most students have concerns about their privacy.

> I guess because on Facebook, you have friends that are not your classmates, and they could be your ex-colleagues, friends from another class, or relatives… that sort of things. You do not want to be seen or portrayed in a certain type of position. And whatever you say on Facebook, I do not think people in the future will … things like this. Generically speaking, what you post or say on Facebook could shape influence … maybe employers who look at your faculty members. Identity on Facebook is more permanent compared to in class. (Student 1, 140409_PM session)

> Privacy. One thing that a lot of people are concerned about, some of my friends did not sign up for it because if they engage in this, they feel like "Oh, everybody can just, with a click of a button on the member lists, they are able to see my Facebook page. Even though I hide certain things, you can still have access to me." Some people do not feel comfortable with that. Facebook is very personal, so it's better to not put your opinion there. (Student 1, 140410_PM session)

These quotes explain the students' concerns over their privacy and being judged, and their subsequent tendencies not to post their own opinion on the course Facebook page. Within this category, students appeared to be passive learners because they were trying to maintain minimal participation on the Facebook page.

5.1.4.1c (ii) The structural aspect: external horizon of the indirect object

The external horizon of the indirect object involves the physical environment where students' intentions of maintaining minimal participation (indirect object) are possible. As stated in the previous section on internal horizons, some participants mentioned that external factors, e.g., time constraints, meant that they did not have time to participate on Facebook. For example,

> I think a lot people <u>do not have the time to do extra reading</u>, so they do a lot of their readings on the Facebook page, because it is convenient. The faculty member has posted a lot of interesting stuff that he comes by and they learn from those readings. (Student 1, 140402_PM session)

> I just visit updates from Facebook whenever my friends post something and Facebook will tell me. I don't go through the whole content. It will take the whole day. I do not have time. Sifting through so much things, sometimes it is not so substantial, I do not really want to talk there. I do not talk for the sake of talking. And end up <u>spending too much time on the posts and not on anything else</u>. (Student 1, 140507_AM session)

Additionally, the limitation of Facebook's interface also raised concerns that their privacy would be compromised. The following quotes represent their thoughts. "Sometimes I think that physical distance gives you more security I guess. Because if you put things on your personal Facebook, people may go through and look at your pictures or other stuff." (Student 2, 140402_AM session)

> I feel that especially for Course A, your views would be reflecting your personality, so why should you put a view that you do not think people want to associate with you. It betrays a lot of who you are, so do you want people to judge you that way? (Student 1, 140507_AM session)

Within this category, students' learning and engagement remains passive. While participants considered the act of reading as a way to maintain minimal participation, they focused on passive participation, but not the contribution of ideas. The external horizon of the indirect object contains the environment where students' intentions of maintaining minimal participation are feasible. The context is viewed as full of limitations and time constraints.

5.1.4.1d Summary of Category 1 – The 'how' aspect

In Category 1 of the 'how' aspect (reading), students intended to participate by reading the course Facebook page. Within the internal horizon of the act were the parts related to this behaviour – Facebook's interface and the course's norms impacted their level of participation. Participants also mentioned that time constraints stopped them from participating more, and this forms the external horizon of the act.

Students' intentions of maintaining minimal participation linked to the indirect object. The internal horizon referred to their concerns about privacy and people's judgment. The external horizon viewed the context as full of limitations and time constraints.

In conclusion, students perceived themselves as passive learners and their activities were directed by Facebook's interface, learning the culture of the class and time. They tended to read and keep silent. While in the next category, students continued to think that Facebook was another venue for them to observe and view, several students felt that they could participate more by adding information. It is related to the next category, in which Facebook was used to share useful information.

5.1.4.2 Category 2: Sharing information

In Category 2, several participants conceptualised that learning via Facebook was facilitated when they shared information on their course Facebook page. This category was affiliated with the understandings of their perceptions on learning via Facebook in

Categories 3 and 4 of the 'what' aspect that focused on faculty member involvement and the extrinsic motivation to post.

5.1.4.2a The referential aspect: act

In this category, participants felt that sharing information on their course Facebook page could facilitate student learning. This was supported by the data collected from their course Facebook pages. Over 85% of their posts were news and articles shared when they felt the information was useful and interesting. In addition, as mentioned in the survey results, students reported a higher frequency of use for sharing related and relevant articles/videos/information. One of the participants said,

> Maybe for our page, sometimes a lot of people post, but not all will have comments. I think the main idea is <u>just share whatever articles you have with others</u>. Because if you find it interesting, others will perhaps read. I think everybody really goes in and reads. (Student 1, 140404_AM session)

This participant pointed out that some students facilitated their learning by sharing interesting and related materials, and they expected other students to read the posts. Since over 85% of their posts were links from news or articles, it is believed they felt that sharing information was part of their learning activities when using Facebook.

Figures 5.8 and 5.9 serve as examples from Courses A and C to demonstrate how students used Facebook as a platform to share articles.

Figure 5.8   A post from Course A   **Figure 5.9   A post from Course C**
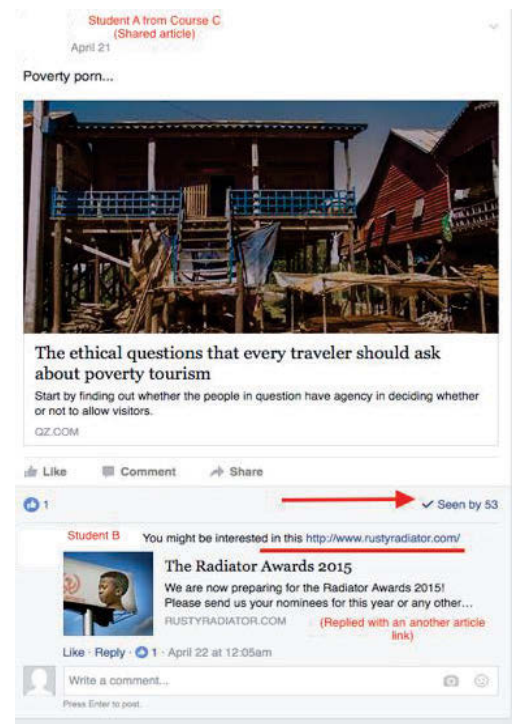
5.1.4.2b (i) The structural aspect: internal horizon of the act

This aspect relates to the inner structure of the act. Within this category, several participants emphasised the students' enjoyment from sharing and posting interesting or course-related materials on the Facebook page. The following quotes illustrate their views: "I think in class we always bring issues from outside of class. We are always encouraged to read outside. And we use that platform to share interesting things with other people." (Student 1, 140404_AM session)

This participant also pointed out that students were encouraged to share interesting things on their course Facebook page, and he considered it a good starting point for learning: "It is a good starting point because the issue may arise from an article so when you share on Facebook everybody can see." (Student 1, 140404_AM session)

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The researcher realised that there were posts on the course Facebook page to support this statement. For instance, Figure 5.10 demonstrates what a student thought others might be interested in, and, thus, he posted it on the page.

Figure 5.10 A student shared an article which he thought others may be interested

In addition to posting news or articles, students also posted videos to engage others. They used this means to engage other students because:

> Sometimes I come across a video that shows some experiments, it is <u>faster to watch the video than reading</u>, how they conduct the experiment. Sometimes people post a video on corporate fraud, like "Oh, you should go and watch this movie, it is 'inside job' or something. It is a very long documentary that is where the video comes in. (Student 1, 140404_AM session)

> Sometimes the textbooks are written in a way that are too academic, whereas articles and all that, are written for the public. When we have an article or video, a

common person who watches it or reads <u>it understands it easily</u>. It is even more so for students. They can <u>absorb the content very fast</u>. (Student 1, 140410_PM session)

From observations of the Facebook pages, it was clear that students tended to leave video links on the page to exchange their ideas on a discussion. For instance, Figure 5.11 shows that students tended to share video links from YouTube or other sources to illustrate their viewpoints (Course A)

Figure 5.11 Share of video links from YouTube to illustrate viewpoints
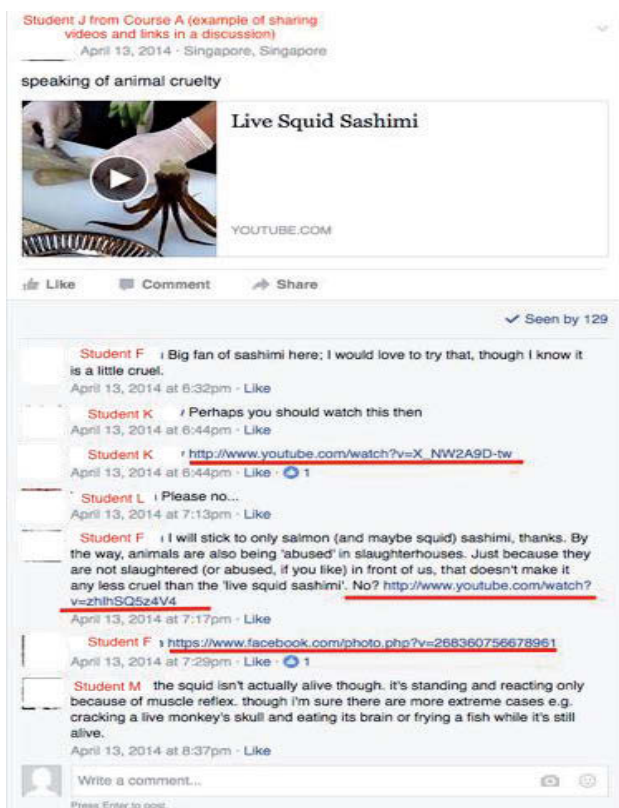
Moreover, some participants explained that because it was "faster to watch a video" and "easier to understand", they saw it as a way to facilitate learning that aligned with their aim of engaging others.

Furthermore, some participants also revealed that students were more likely to share materials on their course Facebook page when the faculty members were highly involved in the process and gave clear instructions of the expectations of the posts. For example,

these two quotes highlighted that faculty members encouraged students to post interesting (or related) materials on the Facebook page:

> For Course A, the faculty member started by posting a lot. The TA will also post at first. Then suddenly everyone will start posting <u>when they see what is supposed to be on the discussion page</u>. <u>The faculty member always asks us to read up on the news</u>, different online websites. So, I think as we read, <u>if we see anything interesting then we will post</u>. (Student 1, 140404_AM session)

> The majority of the posts come from the students that may be having a class discussion and then the faculty member is talking about something, and then someone contributes to the discussion "Oh, I read this article" then <u>the faculty member will be like 'Oh, that sounds interesting. Post it on the Facebook group.' So, she instructs people to post.</u> (Student 2, 140404_AM session)

In this aspect, participants pointed out that students were motivated to share information on their course Facebook page when they could find interesting and useful articles and when the faculty members were more involved.

5.1.4.2b (ii) The structural aspect: external horizon of the act

This aspect related to the external structure or environment of the act. Within this category, the level of learning and engagement on Facebook was still related to the class learning culture. The context was the class as a whole, and learning via Facebook was optional. Time-constraints, class dynamics, as well as instructions from faculty members, affected the act even though students were more willing to post and share information. For example,

> For me, I was more engaged to post materials earlier in the semester because things were <u>quite free</u> then. In the later part<u>, I do not have much time</u> to read all the articles

and discussions, so usually I will just quickly glance through the content. (Student 2, 140410_PM session)

Participants were more willing to post materials (unlike Category 1), however, only when they felt that they had time to do it. Similarly, their level of participation was conditioned by the class dynamics. Some of them explained and thought that if the class was active in posting, students would likely post more. "I think a lot of discussion goes on in class, and we are quite preoccupied with other things in school rather than finding things to post on Facebook." (Student 1, 140506_AM session)

It depends on the class dynamics outside of the Facebook group. If there are enough people, e.g., if you can have 10 people who are very active and they just keep posting to each other, then it can be very active. (Student 1, 140506_AM session)

Regarding the external horizon of the act, students' learning and engagement was thought to be optional. Participants considered that learning and engagement could occur when students were interested and motivated to share materials. When they sensed that faculty members and other classmates were involved, students were more willing to participate. However, this was affected by time-constraints, class dynamics and faculty member involvement. It was not completely in the individual student's control.

5.1.4.2c The indirect object

Regarding the indirect object, the act of sharing materials on their courses Facebook pages was reinforced by the participants' intentions of increasing interaction and getting others' attention by sharing interesting and course-related materials. For instance, "For me, it is good to post additional information, like fun facts or something and get people thinking. I think it has room for creating thought-provoking ideas." (Student 1, 140402_AM session)

While some students tended to view or like posts to show their presence, as was mentioned, some of them took the initiative to share the information on their course Facebook page. Getting a 'like' from other students could be a motivation that could facilitate more activates on the Facebook page. This quote exemplifies this view:

> I think there is a likelihood that one of the reasons why people keep posting articles is also some sort of innate desire to gain some sort of reputation. You know the like function. Before Facebook you do not have the like function, so you do not know the quality of your contribution, or how interested people are in your contribution. But once they have this like function, it's some sort of incentive as well for you to share articles. One reason is you genuinely think it is an interesting article. But I think there is a more insidious component that is the desire for likes and fame, in a way that … I do not know how to explain. Hoping for some likes. That is a possible reason why. (Student 3, 140404_PM session)

5.1.4.2c (i) The structural aspect: internal horizon of the indirect object

Within this aspect are the participants' ideas about the course and other students that strengthen their intentions.

Some participants were aware that if they were interested in the course itself, they would go further to find materials and post online. For example, one of them said,

> (about the reason for posting) The reason I can see is probably <u>I am really interested in the topic</u>. Because if you think about something like Accounting, to me it is not interesting so I would not even find articles about it, but Course A is something that happens all over the world, you can see it in many ways. (Student 1, 140409_AM session)

Additionally, if the students thought that the course had restrictions on doing more, they would not look for more articles to share online and, thus, engaged less online.

Because it is just the nature of the course. In class, already we have the case booklet, and then the faculty member (Faculty Member B) teaches us the model of leadership. We already have cases to apply. So, we just discuss those cases in class, the material is all given to us. There is no necessity or added incentive to go and look for more articles or cases because the discussion just ends there. (Student 2 from Course B, 140404_AM session)

Moreover, several participants considered that students would pay attention to what had been posted on the Facebook page, so they intended to post things that could impose a positive image to others. The quotes include, "If it is not graded and they (other students) still post maybe because they want to impress the faculty member, or they want to impress their friends." (Student 1, 140409_AM session); and "As in Facebook is something everyone can see, if you see someone very active on this page, you want to be active as well, so you do not lose out in some way or another." (Student 1, 140409_AM session)

In this aspect, students intended to share information on Facebook for recognition, which is aligned with Category 4 of the 'what' aspect, in which participants related learning and engagement via the Facebook page with extrinsic motivations.

5.1.4.2c (ii) The structural aspect: external horizon of the indirect object

The external horizon establishes the environment where student intentions can be met. While students were more active in comparison to Category 1 (reading), their level of participation was still affected by some external factors, e.g., time constraints, class dynamics and guidance by the faculty member.

While some participants felt that sharing materials and information was helpful, others pointed out the mixed feelings of participating more online. For example, "It is useful to introduce new ideas that you come across outside of class. But whether the discussion

goes in-depth is the question, which I think the depth part is lacking in Facebook." (Student 1, 140402_AM session)

These participants were aware that students needed to find extra online resources if they wanted to post materials on Facebook; however, as mentioned in the previous section, this action was also related to the interaction of the class. Thus, expecting all students to share and store information may not be possible.

Participants expressed that they enjoyed posting interesting materials on the course Facebook page; however, their participation varied due to limitations. All in all, students seemed to be more active and wanted to gain the attention of others.

5.1.4.2d Summary of Category 2 – The 'how' aspect

Within Category 2 of the 'how' aspect, sharing information is the main act when using Facebook for learning. Unlike Category 1, some participants acted as more than an observer; they contributed to the class by sharing information, e.g., news, articles and videos. The internal horizon of the act highlights the participants' awareness of student enjoyment and the benefits of posting, as well as involvement by faculty members. The external horizon of the act is related to the class dynamic, and the context is the class as a whole. Although students were more willing to share information on Facebook, their learning and engagement was optional because they were affected by some external factors, e.g., time and class dynamics.

The students' intentions to increase class interaction and get the attention of others formed the internal object of this category. The students' motivation to garner people's responses and students' ideas about their course established the internal horizon of the indirect object. Students had mixed feelings about sharing information on the course Facebook page. They enjoyed the interaction, but they also thought that the interaction might not be

in-depth because of the environment. This formed the external horizon of the indirect object in this category.

In the next category, students considered that the discussion of ideas would assist learning via Facebook. Students intended to learn. The participation changed from passive learning to active participation.

5.1.4.3 Category 3: Discussion of ideas

In Category 3, a few participants considered that learning and engagement via Facebook was facilitated when students discussed ideas or opinions on the Facebook page. Self-motivation cultivated this act (discussing ideas) and shows how this category is related to Category 5 of the 'what' aspect. Unlike previous categories, students took on a more active role in contributing to the learning activities.

5.1.4.3a The referential aspect: act

In this category, a few participants considered that students learning and engaging via Facebook was facilitated when students discussed ideas or opinions with each other. The students' ownership of their learning was strengthened, and students learned because of their intrinsic motivation.

Participants mentioned that they were encouraged to discuss their views online. For example,

> For Course A, how we do the discussion online is that we just find some articles, then we will post them, and state our views. Then people will just comment. It's quite easy because your discussion is based on the article. So, it is easier to share through Facebook. (Student 1, 140404_PM session)

This view is supported by the posts from Course A's Facebook page. For instance, Figure 5.12 is a post from Course A that shows students were active in discussing their ideas and they responded to others' posts or comments.

Figure 5.12 Course A's students were active in discussions

A few participants were aware that students could share and discuss their ideas whenever they wanted because of the accessibility and instantaneousness of Facebook. In addition, they felt great about having discussions with other classmates when they were able to understand other people's viewpoints and rethink their own perspective. Participants brought up that it was interesting to see and raise new ideas. To them, learning was

facilitated through this process; passive viewing, start posting, reading and rethinking (active) others' posts and raising a discussion. These quotes demonstrated their views:

> For now in class, I feel like it's an ongoing journey. I do not know what will happen after the exam, because people might think "why is this guy posting after the exam. So, weird." So, if there is a common understanding that after the exam, we will post for the sake of our own learning, I will definitely do it, if I find something interesting. (Student 1, 140402_PM session)

> To me, it is also a way to help me reflect on the readings. It is something Faculty Member A has trained us to do, I think it is very helpful to make your arguments better and better. And you are able to pick up key ideas from your readings better and engage in it, because more often we just read and put it aside, but he makes it a learning experience in a sense that he forces you to examine, consider and question some of the things in the readings. And when you look at your peer posts, you realize that everyone has a different view to it. There is a spectrum of views, and it makes you rethink what you have been thinking. I think that is very invaluable which is why people also want to post, because they post for the sake of introducing a new viewpoint, like "Oh, you did not consider this. What about this statement, or that statement?" Then people will bring in additional sources, and ask what do you think about it. It really makes us think more deeply about it. (Student 1, 140414_AM session)

In this category, a few participants pointed out that instead of just viewing or sharing materials, some students were motivated to think of their viewpoints and discuss them because they found this behaviour was for their own learning.

5.1.4.3b (i) The structural aspect: internal horizon of the act

Within the internal horizon of the structural aspect, a small number of comments by participants reflected the idea that learning and engagement via Facebook was facilitated by the discussion of ideas. Students were able to communicate effectively, and they wanted to actively participate.

Participants pointed out the importance of having a purpose for their participation and expressed that they participated in their discussions for their own learning. For example, "I enjoy posting for the sake of <u>my own knowledge</u>, my own benefit. So that's when I feel I am very comfortable posting." (Student 1, 140402_PM session)

Students wanted to receive a response from others, not because they wanted attention (Category 2); they did it because it contributed to their own knowledge. In this category, students are viewed as active participants. For example,

> For me, other than the class participation thing, the fact that people respond to it, people are more incentivized in the way that you know someone is going to respond to what you say, you are more incentivized to contribute, because you know people are going to react to it, or give their opinions. (Student 2, 140410_AM session)

> For Course A, it's closer to our hearts. So, let's say someone is having a discussion about X (a special topic of Course A), then some people will have very strong views, they will want to participate so that everyone knows. (Student 1, 140410_AM session)

Within this aspect, participants emphasised the students' awareness of intentions and benefits from having discussions. Students wanted to have a purpose in learning and contributing to their own knowledge; it formed this internal horizon of the act.

5.1.4.3b (ii) The structural aspect: external horizon of the act

Since their acts are related to their intrinsic motivation to learn, the external horizon in this category is the individual student instead of the class as a whole. A few participants raised that students' learning and engagement was facilitated when students could identify their own purposes for learning. For example,

> To me, I really enjoy the discussions. I think at the start in our class, the faculty member really said besides discussing in class, we are encouraged to go and read outside of class. If through Facebook I can see other interesting articles people come across, I can also learn from them. We are also supposed to read up and post on our own. I think it is a very good experience. (Student 3, 140404_AM session)

Within this aspect, the views from the participants reflected that all students could be engaged as long as they are self-motivated. When they possess their purpose for learning, learning and engagement can be facilitated.

5.1.4.3c The indirect object

Regarding the indirect object, the act of discussing ideas with faculty members and other classmates is related to their intention to develop their own thinking and knowledge.

As mentioned, students suggested that they participated in the discussion because of the need to expand their own knowledge:

> You know; class is not the only place to learn everything. It is more like you want to have grades; you want to have that piece of degree. I think there is more than that. It is <u>for your own learning</u>. (Student 1, 140402_PM session)

A student's desire to learn and expand their knowledge was the intent of discussing ideas on their course Facebook page. Both quotes explained this intention. Unlike previous categories, students are seen as active learners, and they are self-motivated to participate.

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5.1.4.3c (i) The structural aspect: internal horizon of the indirect object

In this aspect, data reflected that students are keen and motivated to learn. For example,

> To me, I really <u>enjoy</u> the discussion. I think at the start in our class, the faculty member really said besides discussing in class, we are encouraged to go and read outside of class. If through Facebook I can see other interesting articles people come across, I can also <u>learn from them</u>. We are also supposed to read up on our own. I think it is a very good experience. (Student 1, 140404_AM session)

While this student considered that expanding knowledge was his goal in learning, another student in the same focus group shared the importance of developing critical thinking and that was the motivation for him to participate on the Facebook page.

> To me, it is also a way to help me <u>reflect</u> on the posts. It is something he (Faculty Member A) has trained us to do, I think it is very helpful to make your arguments better and better. And you are able to <u>pick up key ideas from your posts better and engage</u> in it. It is a <u>learning experience</u>, in a sense it forces us to examine, consider and question some of the things in the posts. And when you look at your peer posts, you realise that everyone has a different view to it. There is a spectrum of views, and it makes <u>you rethink</u> what you have been thinking. I think that is very <u>invaluable</u> which is why people also want to post because they post for the sake of <u>introducing a new viewpoint</u>. (Student 1, 140402_AM session)

While students were keen to express their viewpoints in the discussion, a few participants pointed out the importance of respecting other people's views as well as moderation by the faculty member. For example,

> Sometimes there are very controversial stuff happening, then people post very controversial ideas. That is what gets started. People will say this and that. Another person will say another thing. I would say the <u>more controversial the idea is;</u> the

more discussions are sparked. For mine, I would say it is more educational………Maybe sometimes like because in Course A, your statements sometimes are not very ethical. Sometimes you think it's ethical but other people think "Oh, this is totally wrong." So, everyone has a different perception. But sometimes it becomes quite personal when you rebut and say "This is not ethical at all. This is wrong." Then the person feels very hurt. So sometimes the anonymity might be beneficial to the situation. But I think the faculty member and the TA come out to mediate the whole situation so it's not that bad. (Student 1, 140402_PM session)

It is believed that when more controversial views are shared, more discussions and learning will occur. Faculty members acted as moderators as well as facilitators in this process. For example,

I think as a person; he is very special. How he leads the group. For other faculty members, they just stand in front and they will lecture you about stuff. He doesn't. He says "I will not say my opinion, but I will lead you to say your opinion. I am a facilitator, not a teacher, or lecturer." So, it is the difference. For other courses, let's say Business Processes or Finance. They will teach stuff in front. But for Faculty Member A, everything is inside us. It is everything we know. He just facilitates us. (Student 1, 140402_PM session)

Regarding the internal horizon of the indirect object, both students and faculty members were keen to express their viewpoints and respond to other opinions. They wanted to expand their knowledge, and moderation from faculty members was seen as a significant part of, which is further explained in the next chapter.

5.1.4.3c (ii) The structural aspect: external horizon of the indirect object

Participants raised two sides of the story when the context of this indirect object was considered. While discussing ideas was fulfilling for students, discussions might also lead to arguments. For example,

> For stuff like Course A, a lot of people have different opinions, and <u>it gets very</u> <u>heated</u>, from my perspective. Even sometimes I see myself getting very aggressive about it. And I think <u>it is interesting </u>that even though sometimes I try to break the ice or be a bit more relaxed or funny about it, not many people are. <u>So, that was a</u> <u>bit jarring at times</u>. (Student 1, 140508_AM session)

This participant considered that different opinions might create heated discussions, another participant also shared a similar view. Students posting different opinions was good for discussion, but he also mentioned that some students might not want to offend others. For example,

> Maybe you have friends who posted something, and people respond to it. Sometimes those responses disagree. The people who disagree can go on and disagree on Facebook, but they do not actually know each other. I think in that sense it is great for having discussions. One small downside to it is that people do not usually represent positions that they feel are controversial, because they do not want to offend people, because it can appear to be so public. (Student 1, 140409_PM session)

The researcher chose one of the posts that illustrates this view about having a "heated discussion" in a post among students. Figure 5.13 is an example of a heated discussion in Course A when the discussions provoked different opinions and personal judgements.

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Figure 5.13 "Heated Discussion" in Course A

Faculty member A (Example of initiating conversation)
April 14, 2014

Should we decide the right answers for the questions by majority vote? 🙂

👍 Like   💬 Comment

👍6   ✔ Seen by 125

Student F   Let's take utilitarian approach. Maximise the grades for everyone and this creates most number of happy students (and maybe parents too!).
April 14, 2014 at 12:21pm · Like · 👍 40

Student G ˌ F and Prof   That's the best idea I have ever heard of.
April 14, 2014 at 1:44pm · Like

Student H   ˙ water tight ethical argument- 0 likes
talk about grades only- 39 likes ... See More
April 14, 2014 at 6:59pm · Edited · Like

Student I ˌ Unfortunately, because all of you guys believe in the bell curve god, we have to grade all of you on a curve. Consider being an Atheist 🙂 this is what happens when you have religion. tsk tsk
April 14, 2014 at 6:59pm · Like · 👍 4

Student H ˌ i feel discriminated against due to my religious beliefs. Please stop.
April 14, 2014 at 7:00pm · Like · 👍 3   Example of discussion provoke different opinions and personal judgements

Write a comment...   📷 🙂
Press Enter to post.

Thus, in this aspect, the data represents that the participants shared the students' mixed feelings about having discussions on the course Facebook page. While they enjoyed the discussions, they also worried that their discussions might lead to arguments and offend others. This formed the context of the indirect object.

5.1.4.3d Summary of Category 3 – the 'how' aspect

Within Category 3 of the 'how' aspect, discussing ideas is the main act when using Facebook for learning. Unlike previous categories, participants took on a more active role in contributing to the learning activities. The internal horizon of the act highlights the participants' awareness of the students' intentions and benefits from having discussions. The external horizon of the act is related to the individual student. They are self-motivated and directing their own learning.

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The students' intentions to expand their own knowledge established the internal object of this category. The students' motivation to learn more and express their viewpoints created the internal horizon of the indirect object. Students had mixed feelings about having discussions on the Facebook page, and this context formed the external horizon. Although the students relished the discussions, they were also concerned that their discussions might lead to arguments and upset others. This put them in an ambivalent position.

5.1.4.4 Section summary

In conclusion, this section established the 'how' aspect of the students' conceptions of facilitating learning and engagement via the course Facebook page. Three categories were raised to explain the differences between the students' conceptions. All categories were hierarchically structured and represent the outcome space of their perspective (Table 5.2). Students perceived the process of facilitating their learning and engagement through the academic use of Facebook as:

1. reading
2. sharing information
3. discussing ideas

In the first two categories, students tended to be passive in learning and were affected by the external environment. In Category 1 (reading), students tended to maintain minimal participation; learning and engagement was passive. In Category 2 (sharing information), learning and engagement was considered optional. However, in Category 3 (discussing ideas), students were active learners and participated in discussions because they wanted to expand their own knowledge.

Table 5.2   The outcome space of the 'how' aspect for students

How aspect	Category 1 reading	Category 2 sharing information	Category 3 discussing Ideas
Act	Students mainly read posts.	Students posts interesting or course-related materials.	Discussions happen among students and even with faculty members.
Internal horizon of the act	Students choose to read posts because it is the easier way to participate.	Students participate by posting interesting and course-related materials.	Students can communicate effectively, learning and engagement is purposeful.
External horizon of the act	The context is the course Facebook page as a whole. Students do not consider themselves involved in contributing ideas.	The context is usually the class as a whole; students' learning and engagement is optional.	Students as an individual are the context. Students' learning and engagement is possible.
Indirect object	Students intend to maintain minimal participation on Facebook.	Students intend to post interesting or course-related material, so other students will pay attention to them.	Students want to develop their own thinking, so they will learn.
Internal horizon of the indirect object	Students are often perceived as observers. They have their concerns when participating.	Students are seen as having interests on the topics and wants to get others attention, that motivate them to participate.	Students are respecting each other's viewpoints.
External horizon of the indirect object	The context is viewed as full of limitations and time constraints.	The context includes teaching materials from the internet. Requiring all students to participate may not be possible.	The context is ambivalent because discussing ideas is fulfilling for students (and faculty members), but it may also lead to arguments.

5.1.5 Summary of the chapter

This chapter explored the qualitative data gathered from students to understand the different ways that university students think about using Facebook in teaching and learning contexts. The qualitative data were derived from (1) engaging students in meaningful discussions through focus group interviews, targeted at analysing data for Sub-question 1: *What are the differences among students in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?*

The previous sections of this chapter explored the 'what' and 'how' aspects of the students' perspectives when using Facebook as a tool to facilitate learning and engagement. Two outcome spaces were illustrated in Tables 5.1 and 5.2. The 'what' aspects reflect the students' perceptions of their experiences, while the 'how' aspects refer to the ways these variations occur. The analysis shows that these two aspects are inter-related and the relationship between the 'what' and 'how' aspects can be explained as follows:

Category 1 of the 'how' aspect (reading) is related to both Category 1 (Facebook's interface and functions) and Category 2 (the class learning culture) of the 'what' aspect. Students chose to maintain easy and minimal participation, and this behaviour was related to Facebook's interface as well as the learning culture of the class. Students were perceived to be passive leaders.

Category 2 of the 'how' aspect (sharing information) is associated with Category 3 (faculty member involvement) and Category 4 (student's extrinsic motivation) of the 'what' aspect. Within these categories, students expressed awareness of the benefits of participating more actively. They participated by sharing materials with others and mentioned that they did so when the faculty members initiated such activities or when there were extrinsic rewards. Their role shifted from passive readers to active participants.

Lastly, Category 3 of the 'how' aspect (discussing ideas) is connected to Category 5 of the 'what' aspect (intrinsic motivation). In these categories, students were more aware of their active contributions. They learned and engaged because they were intrinsically motivated to participate, exchange ideas and expand their own knowledge.

It is obvious that the students' perceptions of using Facebook for learning did impact the ways they used Facebook for their courses. The relationship between the 'what' and 'how' aspects are illustrated in Figure 5.14.

Figure 5.14 The relationship between the 'what' and 'how' categories

'What' Category 5:
Intrinsic motivation

'How' Category 3:   Discussing
ideas

'What' Category 4: Extrinsic
motivation

'How 'Category 2: Sharing
Information

'What' Category 3: Faculty
member's   involvement

'What' Category 2: Class
learning culture

'How' Category 1:   Reading

'What' Category 1: Facebook's
interface and functions

Students expressed different perceptions of their experiences when using Facebook for learning. They learned and engaged on various levels, and their range of experiences can be represented by different categories. All categories were hierarchically structured and represented as outcome space of their perspectives.

Chapter 7 further explains the students' experiences of using Facebook to facilitate: 1) knowledge management; and 2) engagement (Sub-question 3). These findings have implications for the future use of Facebook for learning and future research.

In the next chapter, the same procedure is adopted to elaborate on the faculty members' explanations and describe every category of the 'what' and 'how' aspects from the faculty members' perspectives.

CHAPTER SIX:
ANALYSIS OF THE QUALITATIVE DATA
(THE FACULTY MEMBERS' PERSPECTIVES)

As stated above, the purpose of this study was to gain a deeper understanding of the experiences of staff and students using a social networking site for learning. In Chapter 4, the results of the survey questionnaire provided some background ideas of the students' experience of using Facebook for academic purposes. In Chapter 5, findings from the qualitative data were explored to understand the different ways that university students think about using Facebook to facilitate learning and engagement. In this chapter, the same procedures are used to analyse the data from individual interviews with the faculty members who participated in this study. This analysis addresses Sub-question 2: *What are the differences among faculty members in terms of their perceptions of Facebook as a tool for learning? How are these differences manifested?*

As mentioned, a phenomenographic approach was used in this study. To understand the faculty members' perceptions of using Facebook for academic purposes, the same procedures used in Chapter 5 were applied. In this study, three 45-minute interviews were conducted and 11,149 words from these interviews with faculty members were transcribed. The purpose of the interviews was to guide faculty members to think about and reflect on their experience of a 'particular phenomenon' (Given, 2008) in this case using Facebook as a tool to facilitate learning and engagement.

The researcher read the transcripts many times to identify data that were relevant to this study. As in the previous chapter, data will also be presented under the 'what' and 'how' aspects. The 'what' aspect refers to the "experience of using Facebook as a tool to facilitate learning and engagement, whereas the 'how' aspect, refers to "how they facilitated learning via Facebook"? In this study, it means that the data presented in this chapter reflected the faculty members' experience on how to use Facebook to facilitate

learning. The researcher also underscored the meanings that faculty members assigned to their experiences (the referential aspect) and defined the relationship among them (the structural aspect) in this study (Marton & Booth, 1997).

As was the case in Chapter 5, the researcher will explore the conceptions applying the structure that was explained in Figure 3.1 from Chapter 3. An analysis of each category under the 'what' and 'how' aspect as well as the referential and structural aspects will be presented. Figure 3.1 sets out a comprehensive framework to analyse various aspects of the participants' conceptions.

Figure 3.1   The structure of concepts of using Facebook as a tool to facilitate learning and engagement

How was learning via Facebook facilitated?

Learning via Facebook

What was the experience of using Facebook for learning?

| Structural | Referential | Structural | Referential | Structural | Referential |

External   Internal   External   Internal   External   Internal

Act of learning   Indirect object of learning   Direct object of learning
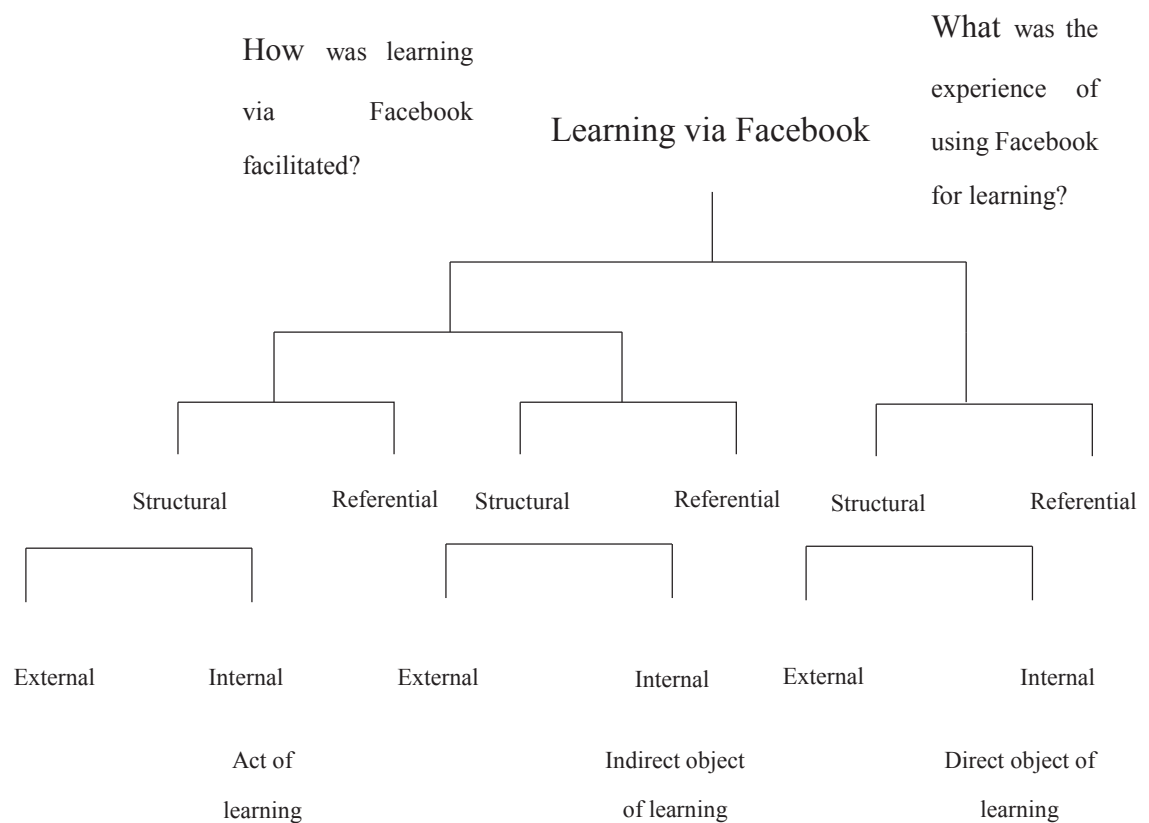
Each of these aspects consists of a number of categories that are described in the following sections.

6.1 The faculty members' perspectives

As mentioned in the previous chapters, Course A had the highest level of Facebook activity among the three courses, and Faculty Member A was very active in using Facebook to facilitate the learning process. He stated that his experience of using Facebook for academic purposes was positive and he would use Facebook again for his future courses. In contrast, Faculty Members B and C maintained low participation throughout the process, and feedback about their experiences was neutral to negative. Faculty Member B said that whether or not she would use Facebook for her future courses would depend on the interaction of the students. Faculty Member C stated that he might not use Facebook again because students were not active on his course Facebook page. The level of activity (e.g., number and mode of posts) on each of the course Facebook pages is shown in Table 6.1. This table also shows that Faculty Member A had the highest involvement.

Table 6.1   Faculty member teaching experience and level of Facebook activity

	Course A	Course B	Course C
Years of teaching experience	8	7.5	9
Time spent on the page	30 mins to 1 hour per day	1 to 2 times per week	Not regular
Total number of posts	777	150	26
Total number of posts initiated by the faculty member	241	32	4
Total number of posts with comments	409	43	5
Total number of posts with faculty member comments	180	4	1
Total number of posts with links to videos, photos or news/ articles	673	128	24
Total number of text-only posts	104	22	2
Maximum number of views of an individual post	146	43	65
Maximum number of comments of an individual post	55	3	2

Table 6.1 shows that these three faculty members each had a different level of involvement on their Facebook pages. This difference might be related to their objectives for setting up the Facebook page for learning or their perceptions about their roles during the process. These variations would also impact what they experienced in the process of using Facebook for their courses, as well as how they facilitated students' learning and engagement. As with the previous chapter, the 'what' aspects are explored first, followed by the 'how' aspects.

6.1.1   The 'what' aspect – the faculty members' perspectives

There are four categories under the 'what' aspect, each representing the variations in the faculty members' experiences when using Facebook to facilitate students' learning and engagement. For instance, Faculty Member A had a positive experience when using Facebook for his course and considered his course Facebook page to be active. Each category represents the variations in their experiences, especially in terms of their perceptions of the contributing factors.

6.1.1.1 Category 1: Facebook's interface and functions

6.1.1.1a The referential aspect

The referential aspect refers to the pattern of meanings of the experience. In this category, the data reflected that all faculty members considered some aspects of Facebook's interface and functions to be potentially helpful and because of this, they chose to set up a Facebook page for their course. For example,

> Facebook is a convenient way of saying that. Rather than saying to that one student who asked the questions, I can reply to the entire class. So, one reason I use Facebook is because sometimes students may ask me questions. Sometimes students might ask other students' questions. So, it is sort of a discussion forum for the class. (Faculty Member A, 140519_AM session)

I think what Facebook does is it expands the classroom walls, so they might read an article that someone puts up and comments on it, whereas in class they may never communicate with each other, because they are in their own groups, their own sites. They may not actually communicate whereas Facebook allows them, "Oh someone posted an article, let me comment on it." (Faculty Member B, 140522_AM session)

Nice thing about Facebook is that … the online discussion I said, brings in examples… the big value of Facebook is you have intimate discussions. (Faculty Member C, 140526_PM session)

The above quotes reflect the fact that reaching out to the entire class and continuing the discussion after class were the main reasons the faculty members set up the course Facebook pages. They considered Facebook's interface and functions to be beneficial in achieving this objective.

In the interviews, Faculty Member A felt that Facebook was a convenient way for him to communicate with students after class. He felt he could post relevant materials on Facebook to start a conversation with his students and take learning outside the classroom. Faculty Member B shared this idea. Faculty Members B and C also mentioned that students might feel it was easier to raise their comments or discussion on a Facebook page. Thus, the notion of accessibility to students was one of the key drivers for their desire to deploy Facebook for academic purposes. However, they also brought up some of the limitations of Facebook's interface, and, because of these limitations, they chose not to rely solely on the Facebook page to facilitate learning or engage students. For instance, Faculty Members A and C made the following comments:

The problem I have seen is that if you keep adding people, some people may not be able to read the very first post. And they scroll down until they see the very first

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post, they post a comment. And that brings that post back on top. (Faculty Member A, 140519_AM session)

Faculty Member C has shared the same opinion. He said,

Facebook is much more flexible. The problem with Facebook, though, is things just disappear down at the bottom. You need to look hard for old information. So at least the way I use Facebook, I do not use it all the time, every few days I am gone. So maybe I missed 90% of what was on my wall. But I don't care. It doesn't matter. Whereas, on the e-learning platform, it is very structured. I have to read it every week. And I brought discussions there into the classroom. So, if somebody says X and you say not X, then I will bring that debate into the classroom. (Faculty Member C, 140526_PM session)

All faculty members realised that the interface and functions of Facebook did have impacts on the experience of using Facebook for academic purposes. In this aspect, all of them appreciated the accessibility of Facebook, but noticed the limitations of Facebook's interface, e.g., the lack of an organised structure. These characteristics affected their tendency to using Facebook for academic purposes.

6.1.1.1b (i) The structural aspect: internal horizon

According to Marton and Booth (1997), the internal horizon means "the parts and their relationship together with the contours of the phenomenon" (p. 87). In this aspect, the data gathered related to the emergent theme that student characteristics were directly linked to the level of learning and engagement when Facebook is used for academic purposes. These characteristics include individual concerns and personality.

Faculty Member A shared his views on the students' concerns, including judgements by others and reactions to posts. Faculty Member A stated:

I think their concern, at least this year, has to do with the nature of the language used. I remember it was in week 2, and someone posted a comment, and there were lots of replies. I think there was one student who said 'Ok, if you want to talk like a fool, then I do not want to waste my time.' There was one comment like that. So, students came up to me in class, and said 'You know, I want to be part of the forum, but I do not like other people calling me a fool. It is not nice and I think this kind of language will put off other people as well.' So, he suggested one way of doing this was to cover up people's identity. (Faculty Member A, 140519_AM session)

In addition to these concerns, Faculty Member C pointed out that personality might also play a part in this experience. He felt students might be shy and self-conscious, stating:

Students were too shy to put stuff that they did not know on the page… and I also think because they think others are looking at them and they became self-conscious, they do not want to say something stupid. (Faculty Member C, 140526_PM session)

Quotes like the above reflected how Faculty Member A and C thought students were concerned about their image and they did not want to look bad in front of their classmates. This was discussed in Chapter 5 (the students' perspectives), but faculty members also raised this point in their interviews when they were asked to recall their experiences in using Facebook for their courses.

6.1.1.1b (ii) The structural aspect: external horizon

The external horizon refers to "the ways in which the phenomenon we experience in a certain way is discerned from its context, and to be more precise we should add, how it is related to its context as well" (Marton & Booth, 1997, p. 89). Within this aspect, all faculty members were aware of the limitations of Facebook's interface and functions. Students' learning and engagement were, thus, more likely to happen in traditional classrooms. The student characteristics, such as individual concerns and personality,

described by some faculty members in the internal horizon section made them feel that learning and engagement might be easier to achieve through traditional classroom settings. All considered their students to be very active and were committed to having lots of discussions in class. For example, all faculty members indicated that their students were usually very engaged in class discussions, and, thus, it was natural for the faculty to want to set up a Facebook page to continue those conservations. This notion was clearly articulated by Faculty Members A and C in the following quotes: "The main purpose of the Facebook page is to supplement classroom discussion, meaning there are some questions left over in class, and Facebook becomes a venue for continuing the discussion." (Faculty Member A, 140519_AM session); and "Facebook is like an extension of the classroom." (Faculty Member C, 140526_PM session)

It was revealed in the interviews that all faculty members wanted to use Facebook to provide students with the opportunity to continue discussions after class. However, since they were aware of the limitations of Facebook's interface and functions, they expressed a clear preference for a traditional classroom environment as the context for facilitating students' learning and engagement.

6.1.1.1c Summary of Category 1 – the 'what' aspect

In Category 1, the data showed that all faculty members focused on the interface and functions of Facebook when they shared their experience of using Facebook to facilitate learning. They pointed out both advantages and limitations of Facebook's features when it was used academically. Because of Facebook's limitations, faculty members tended to see it as a supplementary tool for learning. The internal horizon of this category includes the students' personality and concerns. The faculty members' opinions on Facebook's interface and functions also concluded that a traditional classroom setting was the primary setting; it was essential and it formed the main physical context for students' learning and engagement in this category.

As with the categories explored from the students' perspectives in the previous chapter, Category 1 relates to Facebook's interface and functions and the perceptions within this physical context. The faculty members' perceptions of the ways in which the class interaction level impacted students' learning and engagement are explored in Category 2.

6.1.1.2 Category 2: Class interaction levels

6.1.1.2a The referential aspect

In this category of conception, all faculty members emphasised the interaction of the class and how it affected whether, or to what extent, they could use Facebook effectively for academic purposes.

For example, Faculty Member A mentioned that the interaction of the class impacted his tendency to use Facebook for academic purposes. He said,

> At the end of the day, using Facebook or not for teaching and learning will depend substantially on how good or bad the class's interaction is. If the class is not particularly good, and it is not interesting, I am not sure if I am willing to make any extra time for outside classroom discussions. If the class is interesting enough, I think that would motivate me to use it (Facebook). (Faculty Member A, 140519_AM session)

Faculty Member A emphasised the students' level of interaction, and claimed he would use Facebook for academic purposes if he sensed their interaction was obvious. Likewise, Faculty Member B also put forward the view that the interactions of her students contributed to her overall experience of using Facebook.

> For my course (Course B), I really enjoyed it. It also forced me to constantly read the articles that my students post. I read more widely because they shared articles that I may not have read or a different view point of something. It's a huge benefit

for me. And I think for the students in the class who have been active, it's a huge benefit for them as well. (Faculty Member B, 140522_AM session)

However, Faculty Member C was not happy about his experience because students in his course were not active on the course Facebook page. He explained, "The class was not very active; I wasn't very active either…. I know they're interested in the topic and they're serious about the topic, they just didn't express it through Facebook." (Faculty Member C, 140526_PM session)

As listed in Table 6.1, there were 777 posts from Course A, but only 150 from Course B and 26 from Course C. The students perceived that class learning culture was related to this phenomenon, and faculty members shared similar thoughts. Faculty members focused more on the interaction level of the class when Facebook was used, and they considered that it was related to their experiences.

6.1.5.2b (i) The structural aspect: internal horizon

Regarding the internal horizon of the structural aspect, all participants presented views acknowledging class interactions, e.g., the nature of the course.

For example, Faculty Member A considered that some courses were more active on their Facebook page than others, and he thought that it was related to the inherent nature of the course.

I think it may have something to do with the nature of the course. My course (Course A) is something that if you can get the students to see it as everyday relevance, then it is easy to find matters relating to Course A everywhere around us, newspapers, magazines, billboards… it is everywhere. So, in that sense I think it is easy to generate materials on Course A for the Facebook group. And if another subject is technical in nature, there is only a limited discussion and material, then I think it may not be suitable. (Faculty Member A, 140519_AM session)

Faculty Member B shared a similar opinion. For example, Faculty Member B mentioned,

> The nature of the course (Course B) that I teach requires them to be looking at what
> is relevant to the business world. I constantly refer to examples. It could be popular
> examples like Apple, Google or Facebook or could be examples of smaller
> companies. The students need awareness of all this. If they do not, they are going
> to find it quite hard to participate in the course that I teach, because it is linked
> directly to many things around us. (Faculty Member B, 140522_AM session)

Conversely, Faculty Member C believed that students were not active because his course
was less practical compared to the other two courses. He stated, "My course was more
abstract and I think other two courses were more practical." (Faculty Member C:
140526_PM session)

Thus, in this aspect, the data showed that all faculty members consider the nature of the
course impacted the activities on the Facebook page, as well as the learning and
engagement of the students. Chapter 5 detailed similar views by students – that if the
nature of the class was less theoretical but more interactive, Facebook would be easier to
use in their course.

6.1.1.2b (ii) The structural aspect: external horizon

The external horizon refers to "the ways in which the phenomenon we experience in a
certain way is discerned from its context, and to be more precise we should add, how it
is related to its context as well" (Marton & Booth, 1997, p. 89). As stated in the internal
horizon, all faculty members suggested that students were more likely to engage and learn
when the course was interesting and practical.

The same quotes from Faculty Members A and B pointed out the physical contexts helpful
in facilitating interaction within this category. All faculty members considered that
students' learning and engagement occurred when the physical context could give them

a sense of relevance. For instance, Faculty Member B posted materials that she felt relevant for the course. In addition to the quote cited in the internal horizon, she also mentioned this in her interview: "I feel that Facebook allows me to share articles, and allows them to share articles among themselves. And they constantly look out for what's relevant." (Faculty Member B, 140522_AM session)

Students also shared a similar view that learning and engagement occurred when the environment gave them a sense of relatedness with their course. Thus, a context that provided them with a sense of relevance was the setting for their learning and engagement, and it established the external horizon.

6.1.1.2c Summary of Category 2 – the 'what' aspect

Within Category 2, the data illustrated that faculty members focused on the interaction of the class. The interaction of the class was said to have a direct relationship with the level of learning and engagement on the Facebook page. The level of the student interaction was an important element in the referential aspect. In the internal horizon, faculty members believed that students would learn and engage when the activities on Facebook could be connected to the nature of the course. An environment that gave them a sense of relevance was the context for their learning and engagement and formed the external horizon. Compared to the previous category, this category focused more on the interaction of the class. In the next category, the faculty members' perceptions of the students' extrinsic motivations as a factor affecting their level of activities on Facebook is presented.

6.1.1.3 Category 3: The students' extrinsic motivations

6.1.1.3a The referential aspect

The referential aspect means the pattern of meanings of the experience that faculty members assign to it. In Category 3, data from interviews demonstrated that all faculty

members in this project shared the same views on student involvement, putting forward the opinion that most students participated for extrinsic rewards. This category shifts the focus from class interaction to student motivation. The views presented below highlight the student preoccupation with grades and are representative of the feelings of the faculty members: "I made it very clear in week 1 that it is not graded, I think there are some students who still believe, rightly or wrongly (it was clearly wrongly in this case) that it's graded and then they posted." (Faculty Member A, 140519_AM session); and "I can only say some students do not have any incentive to share because it is not graded. Say, if I am to make it graded, I am sure the participation would just go up by leaps and bounds." (Faculty Member B, 140522_AM session)

Faculty Member C graded his students' performance based on their participation on the e-learning platform, and, thus, his e-learning platform was a lot more active compared to the Facebook page. He explained,

> On the e-learning platform, I have a very structured system. I have a question; then they respond to the question. Sometimes they can choose between two questions. And they need to respond to the questions. There are a certain number of questions every semester and I grade them on it. Then, students had a weekly contribution. (Faculty Member C, 140526_PM session)

His students also mentioned in the focus group interviews that they were motivated to participate on the e-learning platform because Faculty Member C graded it.

In this category, all faculty members associated students' learning and engagement via the Facebook page with the students' extrinsic motivation. They perceived that students would participate and use Facebook for academic purposes when the latter received extrinsic rewards, e.g., marks or grades.

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6.1.1.3b (i) The structural aspect: internal horizon

Marton and Booth (1997) mention that the referential and structural aspects are interrelated. As mentioned in the referential aspect, all faculty members felt that most of their students were motivated by extrinsic rewards. They felt that a participation mark (a grade) was an important factor affecting students' learning and engagement. Faculty Member B mentioned that students would be more motivated if their participation was rewarded with a grade. She stated, "I guess to make it graded. That's the only incentive I can see that would get them. But then there is a flipside to it. Students will only go for the sake of the grades." (Faculty Member B, 140522_AM session)

Notably, all faculty members were concerned that students would participate just because they wanted a good grade, not for learning.

Additionally, positive influence from peers was also seen as an important role in facilitating students to engage via Facebook, and students were inspired by each other to participate. For example, Faculty Member A pointed out,

> I think peers' influence may have a role. In my case, I am very lucky to have some students who are very active… I mean they respond to each other's comments and posts. I think it may have a bit of a spill over effect… people are inspired by others. So, if you have some classes and students are not very active, then that might reduce the level of participation. (Faculty Member A, 140519_AM session)

Faculty Member A suggested that positive inspiration from peers generated motivation and facilitated learning.

Therefore, extrinsic motivation, like a good grade or a positive influence from peers, formed the internal horizon of the structural aspect.

6.1.1.3b (ii) The structural aspect: external horizon

Regarding the external horizon, while the traditional classroom setting remained the primary context for students' learning and engagement, faculty members perceived the students' need to feel supported and acknowledged. As mentioned in the internal horizon, faculty members were aware of the importance of giving recognition to students, and, thus, an environment that could provide support and encouragement to students formed the external horizon.

6.1.1.3c Summary of Category 3 – the 'what' aspect

In Category 3, faculty members assumed that students participated on the Facebook pages because of extrinsic motivation, e.g., high academic marks and a good grade. The internal horizon comprised rewards like a good grade and a positive influence from peers. An encouraging and supportive environment formed the external horizon. The next category highlights the faculty members' views that a student's desire to learn is essential. This relates to the conception that a student's intrinsic motivation and responsibility to learn plays an important part in the experience when Facebook is used as a tool to facilitate learning and engagement.

6.1.1.4 Category 4: The students' intrinsic motivations and learning responsibilities

6.1.1.4a The referential aspect

This category shifts the focus from the students' extrinsic rewards to their intrinsic motivations for learning, considered to be the student's responsibility.

Regarding the meaning of the experience, Faculty Member A and B developed the notion that a student's motivation and responsibility to learn were the vital factors in the experience. Intrinsic motivation to participate and learn were perceived in the same way

as the students who had the mindset that learning and participating on the Facebook pages was for their own benefit.

For example, Faculty Member A recalled some students who had participated in the Facebook discussion and reflected on the positive benefits of this experience. He said,

> In fact, I can show you (the researcher) many emails from students, which say 'I (student) really hope our Facebook group does not end.' I (Faculty Member A) have plenty of emails like that and a student said, 'Even though the classes are over, I hope our group continues because I have learned a lot from the Facebook group.' (Faculty Member A, 140519_AM session)

By the same token, Faculty Member B also mentioned the importance of self-responsibility in learning. She said, "The idea is not to grade them or what, it is for them to spontaneously feel that they think there is a benefit of sharing and learning this kind of knowledge. That is the idea." (Faculty Member B, 140522_AM session)

In this category, Faculty Member A and B revealed that Facebook activity was affected by a student's own motivation to participate. This formed the referential aspect. Responsibility for learning was important when Facebook was used for academic purposes. Students also shared similar views when they reflected on their experience; their views are detailed in Chapter 5.

6.1.1.4b (i) The structural aspect: internal horizon

The internal horizon of this aspect relates to the observation that students should be seen as wanting to learn for its intrinsic benefits and should be motivated to take charge of their own learning.

For example, Faculty Member A stated that students should participate because they wanted to learn, but not because of good grades. "You (students) should do this not because of grades, but because you want to learn, because you have something to share,

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because you want to be part of the conversation. That's why you should do it." (Faculty Member A, 140519_AM session)

Faculty Member B also elaborated on her views when she mentioned responsibility for learning. She stated,

> There is responsibility for learning and that's the whole idea of university education. They (Students) must have responsibility for their own learning, rather than having somebody saying 'Oh, this is what you need to study, what you need to look at. (Faculty Member B, 140522_AM session)

She emphasised the importance of self-initiative and responsibility for learning, and she considered it the key to facilitating learning and engagement.

Additionally, Faculty Member B considered the maturity of the students would determine their sense of responsibility for learning. She felt that students who were in Year 2 and higher would be more aware of their responsibility in learning and be more proactive in participation. She said,

> I think the first year is a transitional phase, they are still trying to figure out how university works, how courses work, and all that… so they are still getting their bearings. I think by the time they are in the second or third year, they will understand that they need to take responsibility for their learning. No one is going to spoon feed them, they need to be aware of what is happening around them, to make them smarter, fitter, in that sense. So, I think that is when they start seeing a benefit from Facebook. (Faculty Member B, 140522_AM session)

These quotes show that Faculty Member A and B considered the academic use of Facebook by students was active when students were motivated to take charge of their own learning. Faculty members valued initiative in students to facilitate their own learning and engagement.

6.1.1.4b (ii) The structural aspect: external horizon

In the internal horizon of the structural aspect, faculty members highlighted the importance of the students' responsibility and initiative for learning. It implied that learning and engagement could happen anywhere – inside or outside the classroom – and, given a student had the motivation to learn, they would take part and engage with each other. This formed the context and the external horizon.

For example, Faculty Member A mentioned that his students still participated in the Facebook page after the course had ended because they felt that they learned a lot from the course Facebook page. He wanted the students to understand that learning is an on-going process and it can happen everywhere. He said,

> The way I have been trying to use the Facebook group, it has really been to get students to see there are things outside the classroom. So, they may read two, three or four things for the class. The point of the Facebook group was to show that that's not the end of it. It is only the beginning. And if you're willing to look forward, you will find it everywhere. (Faculty Member A, 140519_AM session)

Similarly, Faculty Member B stated that students should have the mindset of thinking and learning outside the classroom, and she hoped they could draw a connection between classroom learning and practical situations and would take the initiative to learn. She stated:

> They need to see that connection between theory and practice, and the only way to start seeing that is they start training their minds, to look at the things or stories around them. What is happening in the business world? What is the culture in Google? They watched the movie 'Internship'. Is it applicable in Asia? They have to start thinking about these things, take the initiative to learn. That's what university education is about. That is what it should be. (Faculty Member B, 140522_AM session)

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Within the external horizon, faculty members considered that the physical context of students' learning and engagement extends outside classroom learning because they felt that learning and engagement could occur anywhere and everywhere as long as the students were self-motivated to learn, participate and engage.

6.1.1.4c Summary of Category 4 – the 'what' aspect

In Category 4, academic use of Facebook was linked to the theme identified as the students' intrinsic motivation for learning. Data from the interviews with faculty member stressed that students who participated more were those that were intrinsically motivated. That is the quality of the overall experience was determined by their own sense of responsibility towards their learning, instead of solely motivated by extrinsic motivation, e.g., a good grade or their image. Any setting could provide a context for students' learning and engagement within this external horizon because a student's desire to learn was the key factor.

6.1.1.5 Section summary

In conclusion, this section established the 'what' aspect of the faculty members' conceptions of the experience of using Facebook as a tool to facilitate learning and engagement. Comparatively, Faculty Member A had a positive experience of using Facebook for his course, and he considered his course Facebook page to be active, whereas Faculty Members B and C had an opposite view of this experience.

Four categories were raised in this section to explain the faculty members' conceptions. All categories were hierarchically structured to represent the outcome space of their perspectives. Faculty members perceived the academic use of Facebook was affected by:

1. Facebook's interface and functions
2. The class interaction level
3. The students' extrinsic motivation

4. The students' intrinsic motivation and responsibility to learn

In the first two categories, Facebook activities were affected by the physical settings. These settings ranged from tools (Facebook) to atmosphere (the class interaction level); whereas, in Categories 3 and 4, Facebook activities were determined by people (the students). The lower numbered categories focused on external factors, e.g., the tools and atmosphere, while the higher numbered categories involved human factors. The categories were distinctive but not necessarily the dominant view. This is demonstrated in Figure 6.1 and Table 6.2.

Figure 6.1 Using Facebook to facilitate learning: categories of conception for faculty members
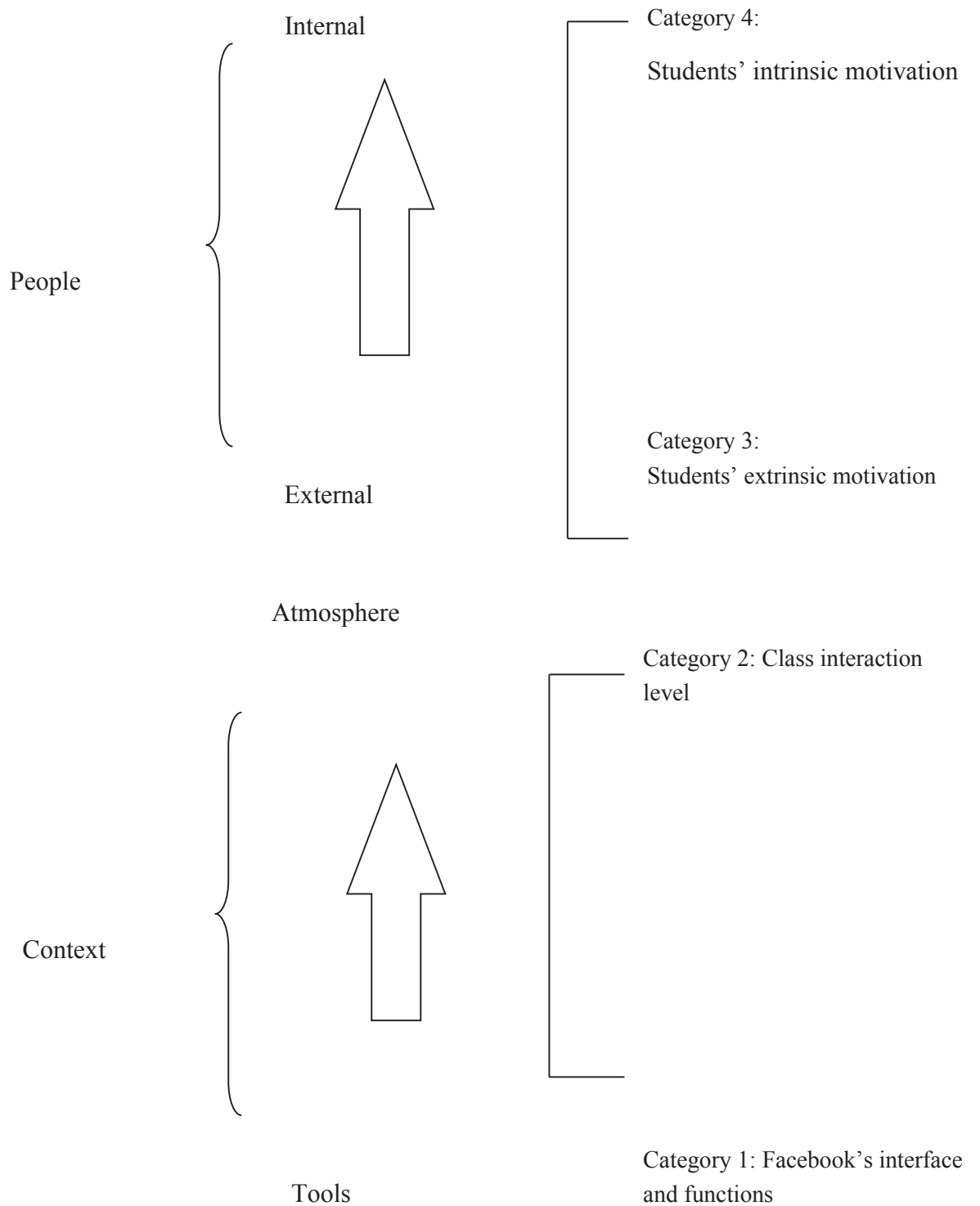

Internal

People

External

Category 4:

Students' intrinsic motivation

Category 3:
Students' extrinsic motivation

Atmosphere

Context

Tools

Category 2: Class interaction
level

Category 1: Facebook's interface
and functions

Table 6.2   The outcome space of the 'what' aspect for faculty members

What aspect	Referential aspect	Structural Internal horizon	aspects External horizon
Category 1 **Facebook's** **interface and** **function**	Learning and engagement via Facebook is affected by Facebook's function and interface	Students' preferences and concerns	Learning and engagement occurs in traditional classroom environments
Category 2 **Class** **interaction** **level**	Learning and engagement via Facebook is affected by the interaction of the class	Institutional factors, e.g., the nature of the course	Learning and engagement occurs in environments with a sense of relevance
Category 3 **The students'** **extrinsic** **motivation**	Learning and engagement via Facebook is affected by extrinsic rewards	Students are extrinsically motivated, e.g., participation marks, and it is related to the maturity level of the student	Learning and engagement occurs in supportive environments
Category 4 **The students'** **intrinsic** **motivation** **and** **responsibility** **to learn**	Learning and engagement via Facebook is determined by the students' intrinsic motivation and responsibility to learn	Students are intrinsically motivated; they are responsible for their own learning	Learning and engagement can occur in all settings, formal and informal, face-to-face or online when students are motivated to take responsibility for their learning

This section describes four categories under the 'what' aspect and demonstrates the faculty members' perceptions of the experience of using Facebook as a tool to facilitate learning and engagement. While faculty members might share similar views in terms of their perceptions of Facebook as a tool for learning (the first part of Sub-question 2), they had different opinions on 'how' to facilitate students' learning and engagement using a Facebook page (the second part of Sub-question 2).

In the 'how' aspect, variations in the faculty members' preferences for Facebook activities are identified, including how they used Facebook differently for academic purposes. In the next section, three categories within the 'how' aspect are examined to illustrate the second part of Sub-question 2 (How are these differences manifested?).

6.1.2 The 'how' aspect – the faculty members' perspectives

Having demonstrated the categories of the 'what' aspect in the previous section. This section moves forward to talk about the 'how' aspect. Reviewing faculty members' perspectives on how students' learning and engagement via Facebook was facilitated and specifically, how they used Facebook for academic purposes. As was the case in chapter 5, the 'how' aspect in this chapter also consists of two parts: The act and the indirect object (Marton & Booth, 1997). Here, the act is taken to include the faculty members' perceptions on how to facilitate learning and engagement via Facebook. The indirect object refers to the quality of the act (the act of learning) and what the art of learning aims to achieve (the indirect object of learning) (Marton & Booth, 1997).

In this section, three categories of the 'how' aspect are considered: 1) setting up the Facebook page; 2) posting; and 3) discussing ideas.

6.1.2.1 Category 1: Setting up the Facebook page

In the first category, all faculty members presented the conception that learning via Facebook was initially facilitated through their efforts to set up the course Facebook page. This category works closely with Categories 1 and 2 of the 'what' aspect. Faculty members saw themselves as an instructor responsible for initiating the use of the platform. In this category, they conceived that learning via Facebook was governed by the interface and functions of Facebook as well as the course content and context.

6.1.2.1a The referential aspect: act

The act of learning means the experience of the way in which the act of learning is conveyed (Stamouli & Huggard, 2007). In this category, all faculty members saw the benefits of using Facebook as an extension of classroom learning. As mentioned in the 'what' aspect, while Faculty Member B thought the "Facebook page is to take classroom discussion beyond just the four walls of the classroom" (140522_AM session), and Faculty Member C used Facebook because "Facebook is like an extension of [the] classroom." (140526_PM session) and he "will go in and like, just to encourage." (140526_PM session) Likewise, Faculty Member A set up the Facebook page to extend classroom learning; however, he also expected more than this. As stated at the beginning of this section, Course A had the highest level of activity. Faculty Member A further elaborated the main purpose of the Facebook page was, "to supplement classroom discussion, meaning there are some questions left over in class, and Facebook becomes a venue for continuing the discussion" (Faculty Member A, 140519_AM session)

Thus, he set up a course Facebook page and used it to continue class discussions. The difference in the conceptions among these three faculty members is illustrated in Categories 2 and 3.

6.1.2.1b (i) The structural aspect: internal horizon of the act

Regarding the internal horizon of the act, all faculty members wanted to encourage students to communicate outside of the classroom setting, but they were aware that the level of student participation was related to the level of class interaction during the lectures. For example, Faculty Member B compared classes 1 and 2 of her Course B, and she felt that the different dynamics of these classes contributed to variations in the students' behaviour. She said,

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If you come across my 2 classes, class 1 always has greater involvement from the students. They get a lot out of it because they are active in it and on Facebook. For class 2, I think because they are first-year students, they have yet to see the relevance, or benefits perhaps, so they are not very active. (Faculty Member B, 140522_AM session)

In addition to the course dynamic Faculty Member B mentioned, Faculty Members A and C also revealed that it might be difficult to get everyone on the Facebook page when some of the students did not have a Facebook account, or did not want to use it for academic purposes for personal reasons, e.g., they wanted to separate study and personal life. These views shaped the faculty members' actions. For instance, the faculty members merely set up the Facebook page but did not actively encourage students to participate because they felt it was the student's decision as to whether to use it for learning. This was especially the case for Faculty Members B and C.

6.1.2.1b (ii) The structural aspect: external horizon of the act

Regarding the external horizon of the act, the level of students' learning and engagement on the Facebook page was related to the class interaction level. The physical context was the class as a whole. The faculty members' primary objective was to set up the Facebook page as a way communicate with the entire class. In this category, faculty members did not consider themselves involved in individual conversations with students. For example, Faculty Member A stated he wanted to use the Facebook page to communicate with the entire class:

Rather than saying to that one student who asked the questions, I can reply to the entire class. So, one reason I use Facebook is because sometimes students may ask me questions. Sometimes students might ask other students' questions. So, it is sort of a discussion forum for the class. (Faculty Member A, 140519_AM session)

The above quote represents the views of all faculty members. Thus, in this category, all faculty members wanted to communicate with the whole class when they established their Facebook pages. The physical context was the class as a whole; this constructed the external horizon of the act. As mentioned, Faculty Member A and the other two faculty members had different levels of involvement in using Facebook for academic purposes, and these differences are discussed in Categories 2 and 3.

6.1.2.1c The Indirect object

The indirect object of learning refers to the goals that the learner is trying to achieve (Stamouli & Huggard, 2007). In this study, it means the intention of the faculty members when they first set up the Facebook page. In this category, the act of setting up a Facebook page was related to the faculty members' intentions to maintaining an easy and convenient way to communicate with the whole class. For example, Faculty Member A said, "This happens pretty often; students ask me questions and I do not know how to answer. I will tell them 'When I find the answer, I will tell you.' And Facebook is a convenient way of saying that." (Faculty Member A, 140519_AM session)

Faculty Member B also shared a similar idea, she said:

> I find it is the easiest way for me to get the stuff across to the class. If I find an article, how do I get that across other than Oh, I have to download the article, I have to attach it, or email it to one of my TAs… Rather than that, I just go and click share on Facebook and it's straightforward. (Faculty Member B, 140522_AM session)

This can be observed from the course Facebook page. Figure 6.2 shows an example of Faculty Member B sharing a video on the course Facebook page as to illustrate the ideas that she had taught in class.

Figure 6.2   Faculty Member B shared a video

This category was aligned with Category 1 of the 'what' aspect that emphasised the characteristics of the interface and functions of Facebook. Ease-of-use and convenience were the key components in this category.

6.1.2.1c (i) The structural aspect: internal horizon of the indirect object

Inside the internal horizon of the indirect object were the expectations the faculty members placed on themselves in their role as lecturers. The data revealed that all three faculty members saw themselves as an instructor who initiated the setup of the course Facebook page and invited students to join. However, beyond this, Faculty Members B and C did not perceive it as within their role to actively encourage their students to join the page.

For example, Faculty Member A set up the Facebook page, and he explained how he encouraged his students to join the Page. He recalled his experience,

I encouraged people to join the forum, to be active in the forum. And maybe around week 7 midterm, I sent out a reminder saying that even though it is a break, our class still continues in the form of the forum. (Faculty Member A, 140519_AM session)

Comparatively, Faculty Member A put more efforts into encouraging his students to join the course Facebook page, e.g., he sent invitations twice during the school term and tried to talk about the Facebook page in class. Conversely, Faculty Members B and C played a passive role; they let the students decide whether they wanted to participate or not. Faculty Members B and C felt that their presence on the Facebook page was good enough to encourage students to join, and, thus, no further action was needed. For example, Faculty Member C maintained a low participation on his course Facebook page as he seldom left comments. He usually went to the Facebook page only to view and 'like' some posts because he thought it was the students' responsibility to participate. He explained that he did not actively participate on the Facebook page because "things are up to the students." (Faculty Member C, 140526_PM session)

This behaviour was reflected by the examples from his course Facebook page shown in Figures 6.3 and 6.4.

Figure 6.3   Faculty Member C tended to only view and like the posts (example 1)

Figure 6.4   Faculty Member C tended to only view and like the posts (example 2)

6.1.2.1c (ii) The structural aspect: external horizon of the indirect object

The external horizon of the indirect object involved the environment where could meet the faculty members' intention of having a means of communicating easily with the whole class.

But, Faculty Member A and C were aware of the limitations of the interface and functions of Facebook, and because of this, the students' level of learning and engagement might be affected. For example, Faculty Member A shared that, "I want to find a particular article someone posted or I posted, it's very difficult to find because I do not remember, sometimes the links disappear." (Faculty Member A, 140519_AM session)

Having said that, Faculty Member A still used Facebook exclusively for his course because of its accessibility and user-friendliness. Conversely, due to the limitations of the interface and functions of Facebook, Faculty Member C chose to use another technology to assist his teaching (an e-learning platform). He did use both media for his course, but felt that the e-learning platform was more structured and encouraged his students to use the e-learning platform more by making it be part of the course requirements. In turn, his course Facebook page was not active.

While Faculty Member C used both the e-learning platform and the Facebook page for his course, he noted that "they are a competing outlet" (140526_PM session). Thus, his students were not active on Facebook, as most of them spent time on the e-learning platform and were unwilling to spend extra time on the course Facebook page. Faculty Member A also had the same assumption when he shared his views on his understanding of the phenomenon. He said, "Too many forums are too difficult for students." (140519_AM session) Thus, Faculty Member A and C realised the importance of having an exclusive platform that could make students concentrate on one media.

In this category, Faculty Member A and C perceived that the limitations of Facebook's functions and the presence of a competing platform were a critical part of this experience. Since they wanted to easily communicate with the whole class (the indirect object), an environment, which could support this objective, formed the external horizon of the indirect object.

6.1.2.1d Summary of Category 1 – the 'how' aspect

In Category 1 of the 'how' aspect (setting up the Facebook page), the clear intention of all three faculty members as revealed in the data were to set up the Facebook page (the act) and encourage the students to join. Within the internal horizon of the act were the parts related to this behaviour; e.g., the interaction of the class, as well as Facebook's interface and functions contributed to their behaviours. All faculty members agreed that the nature of the class nature and its interaction level were the key parts in the internal horizon of the Act. Additionally, the physical context was the class as a whole and the faculty members' primary objective of setting up the Facebook page was to communicate with the whole class. This formed the external horizon of the act.

All faculty members expressed their intention of having an easy way to communicate with the class linked to the indirect object. The internal horizon referred to their expectation on their role of being an initiator. The external horizon viewed the context as full of limitations, e.g., the presence of a competing platform. Faculty members highlighted the importance of having an exclusive platform.

In conclusion, all faculty members perceived they were the initiator who set up the course Facebook page and encouraged students to join. Comparatively, Faculty Member A was more active in encouraging students to join the Facebook page after it was set up. Facebook page activities for the course were directed by the interface and functions of Facebook, the level of class interaction as well as the presence of a competing platform,

i.e., an e-learning platform. In the next category, Faculty Member A and B felt that they could facilitate students' learning and engagement through their own postings.

6.1.2.2 Category 2: Posting

In Category 2, the faculty members, especially Faculty Member A conceptualised that students' learning and engagement via Facebook was facilitated when faculty members participated and posted information on their course Facebook page. Unlike Category 1, Faculty Member A and B facilitated interaction by posting information on the course Facebook page. This category is affiliated with their understandings of their perceptions on learning via Facebook in Category 3 of the 'what' aspect, which focused on students' extrinsic motivations to post.

6.1.2.2a The referential aspect: act

In this category, the data reflected that Faculty Member A was the most active in terms of the number and length of his posts. His contention that students respond positively when a faculty member is seen to be actively posting is supported by the data collected from the course Facebook pages.

There were 777 posts on Course A's Facebook page and Faculty Member A was active in initiating 31% of the total posts. Faculty Member B also felt that students participated when they sensed that their professors emphasised posting, but she was not as active as Faculty Member A. The next section explains the internal and external horizon of the act (posting).

6.1.2.2b (i) The structural aspect: internal horizon of the act

Regarding the internal horizon of the act, this aspect focused on the posting of the faculty members. Compared to Category 1, faculty members not only set up the course Facebook page, but also participated by posting information. Their role shifted from initiator to

participant. For example, Faculty Member A and B highlighted the importance of their participation in posting interesting or course-related materials on the course Facebook pages.

For example, Faculty Member A pointed out the impact of a participation by faculty members. He related his experience and concluded with this perception, "Initially the Facebook Page was not as interactive as it is today. Maybe I did not put in enough effort." (Faculty Member A, 140519_AM session)

He further elaborated by saying, "It might have to do with how much [the] Professor participates on the Facebook Page. I think if the Professor participates a lot, it might encourage more people to… so that might have more participation." (Faculty Member A, 140519_AM session)

Faculty Member A believed that his involvement positively affected the level of student participation. Thus, he was willing to spend time every day on his course Facebook page to facilitate student participation. He said, "I certainly go to the Facebook group every day, no doubt about that. I would say on average, maybe I spent anywhere between 30 minutes to 1 hour every day." (Faculty Member A, 140519_AM session)

Activity on the course Facebook pages was observed and Faculty Member A was indeed active in posting. Figure 6.5 shows an example of Faculty Member A's active participation. He continued to post on the Facebook page near to the end of the school term even though he said he would not.

Figure 6.5   Active participation of Faculty Member A

Faculty Member B pointed out her perception of her role on the course Facebook page. Although she sensed the importance of having her presence on the Facebook page, she felt that she was just a participant as she did not see herself as the main person to facilitate her students' learning experiences. She stated:

> Now I do share articles myself, but it is not meant to be a site for [an] instructor to be sharing, but rather for the class. So, I am the participant in that class community, but I am not the main person. The main idea is for the students to share with each other. (Faculty Member B, 140522_AM session)

This aligned with her level of participation on Facebook, she visited the Facebook page once to twice per week.

Regarding the internal horizon of the act, data showed that Faculty Member A and B considered their participation played a part in the experience, but they shared different views on the level of the faculty involvement. Students also shared the same feedback in

their focus group discussions. Students said that they were motivated to share information on their course Facebook page when they noticed the faculty members had high involvement. Students agreed that Faculty Member A had the highest level of involvement and his actions motivated student participation.

For example, a student from Course A said:

> For Course A, Faculty Member A started by posting a lot. The TA will also post at first. Then suddenly everyone will start posting when they see what is supposed to be on the discussion page. Faculty Member A always asks us to read up on the news, different online websites. So, I think as we read, if we see anything interesting then we will post. (Student 1, 140404_AM session)

In addition, students from Courses B and C commented on the low level of participation of Faculty Members B and C. Within this category, the importance of having faculty member participation was emphasised. It was echoed by the experience of Faculty Member A that a readiness and willingness to participate was required on the part of faculty members, and this formed the internal horizon of the act.

6.1.2.2b (ii) The structural aspect: external horizon of the act

Within this aspect, which focuses on the context of the act, all faculty members considered the level of students' learning and engagement on Facebook was related to the students' perceptions of participation. This included the students' concerns on whether people would judge their posts or whether their performance would be graded by the faculty members. All faculty members felt that they were not able to achieve 100 percent engagement on the Facebook pages among their students or get everyone to participate.

For example, Faculty Member A thought that students were concerned about their image when they participated and he recalled one of the students had suggested that discussions on the Facebook page should be kept anonymous because, "if it is anonymous in the

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sense, people do not know who you exactly are. That was one concern that students raised." (Faculty Member A, 140519_AM session)

Faculty Member C also felt that students were self-conscious and thought that they were evaluated by others. Thus, he considered that students were mindful about whether or not they should participate or what they should say on the course Facebook page.

In addition, Faculty Member A felt that students participated because they thought that their participation would be graded. He recalled his experience, "I think there are some students who still believe, rightly or wrongly (it's clearly wrongly in this case) that it is graded. And on some occasions, I have seen people post some quite irrelevant things." (Faculty Member A, 140519_AM session)

Conversely, some students chose not to participate because they knew it was not graded. Faculty Member B said, "Students do not see it as an important thing because it is not graded." (140522_AM session)

This category was associated with the understandings of their perceptions on learning via Facebook in Category 3 of the 'what' aspect, which focused on the students' extrinsic motivation to participate.

Within the external horizon of the act, students' learning and engagement were thought to be optional. All faculty members considered that learning and engagement could occur when students were motivated and willing to participate. Faculty Member A and B shared that students were more willing to participate when they sensed that faculty members were more involved. However, participation was also affected by the students' individual concerns and motivation. In this case, faculty members could not get everyone to participate.

6.1.2.2c The indirect object

The indirect object represents the aims the faculty members were trying to accomplish (Stamouli & Huggard, 2007). Within this aspect, the act of posting on the course Facebook page was manifested in the faculty members' intentions to get the students' attention and their hope that students would read more outside the class.

Faculty Member A articulated this intention in this way, "It is to get people to read more about the subject, beyond what is prescribed. On Facebook, you can get people to read more." (Faculty Member A, 140519_AM session)

Faculty Member B also disclosed that she chose to use Facebook as it allowed students opportunities to "share articles, to comment, share videos". She did post and share on the course Facebook page; students noticed this and participated as they noticed the benefits of participation. She said, "When I can, I share. I have some students in week 11 or 12 wanted to join Facebook when I made a reference to an article I posted, or someone else posted. They saw the benefits." (Faculty Member B, 140522_AM session)

Thus, Faculty Members A and B wanted their students to read more and see the benefit of participation, and this formed the indirect object.

6.1.2.2c (i) The structural aspect: internal horizon of the indirect object

Within this aspect, the faculty members' ideas about student motivation strengthened their intention of getting the students' attention. As mentioned in the 'what' aspect, all faculty members perceived that most of the students participated because of the extrinsic rewards, e.g., a good grade or benefit to their performance in the course. Because of this perception, Faculty Member A tried to stress the significance of the course Facebook page as to increase the students' motivation. He did it through his own participation.

Faculty Member A evoked an experience, and it showed that the faculty members' participation could make students feel that the Facebook page was essential and students would miss something if they did not participate. He explained,

> Last 2 semesters back, for whatever reasons, some student, at the very end of term, I think they thought the Facebook forum might have something to do with the exam, so they wanted to get in. I allowed to add a couple of people. There was one girl who, once added, came into the Facebook Page and said, 'Wow, now I realize how much I have missed out in this term. (Faculty Member A, 140519_AM session)

Thus, in this aspect, the focus was on student motivation. All faculty members were also aware that this aligned with Category 3 of the 'what' aspect, in which faculty members related students' learning and engagement via Facebook with extrinsic motivations. They considered that students participated on the Facebook page when they sensed they would benefit from the participation, e.g., perform better and get a good grade for the course.

However, comparatively, Faculty Member B and C did not participate much on the course Facebook page. Only Faculty Member A actively participated in his course Facebook page because he saw it as a means of getting the students' attention and making them read more after the class. Thus, apart from the students' motivation, the faculty members' responses to student participation also established the internal horizon of the indirect object in this category.

6.1.2.2c (ii) The structural aspect: external horizon of the indirect object

A context or an environment to meet the faculty members' intentions, formed the external horizon. While faculty members, like Faculty Member A, were more involved than in Category 1 (setting up the Facebook page), the data showed that their level of participation was still affected by some external factors, e.g., time constraints.

Although all faculty members set up the Facebook page as they wanted to use the Facebook pages to continue the class discussion after the 3.5-hour class, they could not fully integrate the course Facebook page with the classes because of time constraints.

For example, Faculty Member A expressed the view that he seldom brought Facebook's discussions back to the classroom setting for lack of time. He mentioned, "I do not discuss the Facebook group at all in class. We already have a lot to get through in 3 hours. And I do not really have the time to discuss." (Faculty Member A, 140519_AM session)

In addition, all faculty members were aware that students needed to find extra online resources if they wanted to post materials on the course Facebook pages. However, students might not have extra time to do this. Faculty Member C considered that students were not active on the course Facebook page because they had no time to do so.

Thus, the level of participation was affected because of the time constraints. The external horizon under this category viewed the context as full of limitations, e.g., time constraints.

6.1.2.2d Summary of Category 2 – the 'how' aspect

Within Category 2 of the 'how' aspect, posting on the Facebook page was the main act. Unlike category 1, comparatively, Faculty Member A was more involved, and he facilitated the interactions by posting information on the course Facebook page. Within the internal horizon of the act the faculty members' awareness of the importance of their own involvement was highlighted. The external horizon of the act was related to the students' concerns and extrinsic motivation. Although faculty members were trying to participate on the Facebook page, students' learning and engagement was optional due to the concerns raised by students.

Faculty members' intentions to get the students' attention and make them read more formulated the internal object of this category. The students' motivation to get a better

grade and the faculty members' responses established the internal horizon of the indirect object. The external horizon viewed the context as full of time constraints.

In the next category, faculty members considered that facilitating discussion with students would assist students' learning and engagement on the course Facebook page. The roles of faculty members would change from participant to facilitator and moderator.

6.1.2.3 Category 3: Facilitating discussions

In Category 3, the data shows that Faculty Member A and B considered learning and engagement via Facebook was facilitated when they initiated and facilitated discussions with students. In addition to from posting materials (Category 2), faculty members should discuss ideas or opinions with students on the course Facebook page. Faculty members, especially Faculty Member A, believed that active involvement on their behalf and self-motivation by students cultivated this act. It was shown that this category related to Category 4 of the 'what' aspect. Unlike previous categories, both faculty members and students were perceived as active in contributing to learning activities. The following categories and quotes explain this view in detail.

6.1.2.3a The referential aspect: act

In this category, a clear picture that emerged from the data. Faculty Member A and B considered that students' learning and engagement via Facebook was facilitated when faculty members and students discussed ideas or opinions with each other. This was supported by the data collected from their course Facebook pages. There were 409 posts with comments on Course A's Facebook page and Faculty Member A was active in exchanging comments with students (44% of the total posts).

However, Faculty Member B was not as active (four out of 43 posts) as Faculty Member A in posting comments. She mentioned how her act could have facilitated students' learning and engagement. She mentioned, "In my class 1, sometimes I put the questions

to provoke comments and discussions. And it has generated that. Some students returned paragraphs." (Faculty Member B, 140522_AM session)

Thus, the faculty members and especially Faculty Member A, felt that students' learning and engagement via Facebook was facilitated when faculty members and students were active in discussing ideas or opinions with each other, and this shaped the act.

It was noted from the posts that Faculty Member A facilitated interactions by his own actions. Figures 6.6 and 6.7 are examples showing Faculty Member A's participation. He facilitated discussions by asking a question or inviting student opinions.

Figure 6.6   Faculty Member A invited opinions from students

Figure 6.7   Faculty Member A gave feedback to a student's comment and asked for more opinions

6.1.2.3b (i) The structural aspect: internal horizon of the act

Regarding the internal horizon of the act, Faculty Members A and B reflected that learning and engagement via Facebook was facilitated by the discussion of ideas. For example, Faculty Member A was keen to participate in discussions, and students could communicate effectively as both parties wanted to have an active participation.

First, Faculty Member A related the level of activities on the Facebook page to the faculty's involvement. He said, "it might have to do with how much Professor talks about what's going on in the Facebook group." (140519_AM session) Even he could not fully integrate his course Facebook page into his class. As stated in Category 2, he was very active in facilitating discussions; he visited the course Facebook page every day and

posted 241 times. He saw himself as a facilitator and moderator, and this was also commented on by one of the students in his class.

> I think as a person. How he (Faculty Member A) leads the group. For other faculty members, they just stand in front and they will lecture you about stuff. He does not. He says "I will not say my opinion, but I will lead you to say your opinion. I am a facilitator, not a teacher, or lecturer." So, it is the difference. For other courses, let's say Business Processes or Finance. They will teach stuff in front. But for Faculty Member A, everything is inside us. It is everything we know. He just facilitates us. Maybe different modules, different kind of facilitation. (Student 2, 140402_PM session)

Similarly, Faculty Member B agreed on the importance of the faculty's facilitation; however, she also pointed out that her level of involvement was affected by the students' intrinsic motivation to learn. If the students were active in participating, she would be more willing to post on the Facebook page. She said,

> If I see there is a class where the students are posting a lot, which is my motivation. I would post a lot more. If I can they are interested in it, I am willing to go 150% and share a lot more because I know they are getting something out of it. If they take responsibility for their education and see that it is worth it, I am willing to do it. If they are not, I am like "Just stick to what we learn in class". It is their loss actually. It is a harsh way of looking at it. (Faculty Member B, 140522_AM session)

In contrast, Faculty Member C remarked that he "will have to moderate" (140526_PM session) if he wanted to generate more participation with students. However, Faculty Member C had irregular visits to his course Facebook page and did not spend much time on it. As a result, his students considered that he was not an emphasis on the course Facebook page, and, thus, his students chose not to participate actively there.

Moreover, all faculty members pointed out that students should have a purpose for their participation and they expressed that students should be willing to participate in the discussion for their own learning.

As mentioned before, Faculty Member A stated that students should participate because they wanted to learn, not because of wanting to get a good grade. "You (students) should do this not because of grades, but because you want to learn, because you have something to share, because you want to be part of the conversation. That's why you should do it." (Faculty Member A, 140519_AM session)

Faculty Member C also thought that students "should feel free to discuss and debate and come up with their own ideas" (140526_PM session), and he hoped it was a reason for students to participate on the course Facebook page.

In this category, the faculty members reflected that learning and engagement via Facebook was facilitated by the discussion of ideas with students. Thus, the willingness to initiate discussions from both faculty members and students formed the internal horizon of the act.

6.1.2.3b (ii) The structural aspect: external horizon of the act

Since their act was related to a student's self-motivation to learn, the external horizon of the act was individual students instead of the class as a whole. All faculty members raised that students' learning and engagement was facilitated when individual students were able to identify their own purposes for learning. For example, Faculty Member B stated,

There's a responsibility for learning and that is the whole idea of university education. They (Students) must have responsibility for their own learning, rather than having somebody saying 'Oh, this is what you need to study, what you need to look at. (140522_AM session)

She emphasised the importance of self-motivation and responsibility for learning, and she considered it was the key to facilitating learning and engagement. She recalled the performance of her class 1 and the students were very involved and "get a lot out of it."

Within this aspect, all faculty members perceived that all students could be engaged when they were self-motivated.

6.1.2.3c The indirect object

In this category, the act of facilitating discussions with students was related to the faculty members' intention of developing the students' thinking and relating their classroom learning to practical situations. As mentioned, Faculty Member A had relatively high involvement on his course Facebook page, and the cited quotes from Faculty Member A demonstrate this conception.

For example, Faculty Member A stated that the discussion was to,

> show that what we are discussing matters in real life, and that it has relevance to the now and here. It is not just to show an academic article. It shows yesterday news report. This is what we discussed, and it is happening here. (Faculty Member A, 140519_AM session)

He also mentioned,

> The way I have been trying to use the Facebook group, it has really been to get students to see there is a world outside the classroom. So, they may read two, three or four things for the class. The point of the Facebook group was to show that that is not the end of it. It is only the beginning. And if you are willing to look forward, you will find it everywhere. (Faculty Member A, 140519_AM session)

Thus, it could be concluded from the quotes that faculty members like Faculty Member A had the intention of developing the students' thinking through discussing ideas with

them. Although this was not a dominant behaviour, it was a distinctive view of this experience, and it shaped the indirect object of this category.

6.1.3.3c (i) The structural aspect: internal horizon of the indirect object

This category aligned with the act and Category 4 of the 'what' aspect, which emphasised the students' intrinsic motivations for learning. Faculty members were able to facilitate student learning when students took on responsibility and had a purpose for their learning. Students shared similar thoughts in their focus group interviews. For example:

> To me, it is also a way to help me reflect on the posts. It is something he (Faculty Member A) has trained us to do, I think it is very helpful to make your arguments better and better. And you are able to pick up key ideas from your posts better and engage in it. It is a learning experience, in a sense it forces us to examine, consider and question some of the things in the posts. And when you look at your peer posts, you realize that everyone has a different view to it. There's a spectrum of views, and it makes you rethink what you have been thinking. I think that is very invaluable which is why people also want to post because they post for the sake of introducing a new viewpoint. (Student 1, 140402_AM session)

> To me, I really enjoy the discussion. I think at the start in our class, faculty member really said besides discussing in class, we are encouraged to go and read outside of class. If through the Facebook I can see other interesting articles people come across, I can learn from them also. We are supposed to read up on our own also. I think it is a very good experience. (Student 1, 140404_AM session)

Thus, in this category, the students' intrinsic motivations and responsibility for learning created the internal horizon of the indirect object (developing their thinking).

6.1.2.3c (ii) The structural aspect: external horizon of the indirect object

Among the three faculty members, only Faculty Member A, introduced the notion that there were two sides of the story when the context of this indirect object was considered. While discussing ideas was fulfilling for both faculty members and students, it also required more work from the faculty members. For example:

Faculty Member A extracted his experience; he said, "I do not just post but I also reply to what people say. Those things take time." (140519_AM session) As mentioned before, he was very active on his Facebook page, and his students commented that he was there all the time, and he emphasised the importance of active participation to his students.

I think our course Page (Course A) is very active because he is very charismatic, he encouraged a lot of people to do it. When the class just started, he told us that learning is everywhere… something like we were expecting very mediocre education from the university, and we should take our initiative to make it a more wonderful experience for ourselves. So, he encouraged us to read newspapers and all that post our views on Facebook. (Student 1, 140402_PM session)

For Course A, especially for this Faculty Member A, he wants his students to be very engaged, he puts very great importance on participation. So, I think people would really devote their time to this (Facebook page) when he is so active. (Student 2, 140410_PM session)

In addition to the conception that successful discussions required more work from the faculty members, a view was also articulated by a significant number of students that more discussions might also create more disputes. Faculty Member A's class fell into a dispute when there was a heated conversation. He recalled,

I remember it was week 2, and someone posted a comment, and there were lots of replies. I think there was one student who said 'Ok, if you want to talk like a fool,

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then I do not want to waste my time.' There was one comment like that, you see. So, students came up to me in class, and said 'You know, I want to be part of the forum, but I don't like other people calling me fool.' (Faculty Member A, 140519_AM session)

One of his students recalled the same incident in the focus group discussions, and the example of the Facebook page was illustrated in the previous chapter.

For stuff like Course A, a lot of people have different opinions, and it gets very heated, from my perspective. Even sometimes I see myself getting very aggressive about it. And I think it's interesting that even though sometimes I try to break the ice or be a bit more relaxed or funny about it, not many people are. So, that was a bit jarring at times. (Student 1, 140508_AM session)

In this aspect, the data reflected that Faculty Member A had mixed feelings about discussions on Facebook. While he wanted to have more discussions, he also realised that discussions demanded more work of faculty members and may lead to arguments between students. Once again, even though it was not the dominant view in the interviews, this represented a distinctive experience, and it formed the external horizon of the indirect object.

6.1.2.3d Summary of Category 3 – the 'how' aspect

Within Category 3 of the 'how' aspect, facilitating discussion was the main act when using Facebook for academic purposes. Unlike the previous categories, faculty members needed to take on a more active role in enabling the interactions and discussions of the class. Within the internal horizon of the act, the participants' awareness of their own involvement and the benefits students derive from having discussions was highlighted. The external horizon of the act was related to individual students. Students were perceived as self-motivated, and they directed their own learning.

The faculty members' intentions to develop the students' own knowledge established the internal object of this category. The students' motivations to learn more created the internal horizon of the indirect object. Faculty members, like Faculty Member A, had mixed feelings about having discussions on Facebook. While he enjoyed the discussions, he also realised that it required more work from faculty members and the discussions might create disputes between students. This formed the external horizon.

6.1.2.4 Section summary

In conclusion, this section established the 'how' aspect of the faculty members' conceptions of facilitating learning and engagement via the course Facebook page. Three categories were raised to explain the differences between the faculty members' conceptions. All categories were hierarchically structured and represented the outcome space of their perspective (Table 6.3). Faculty members perceived the process of facilitating students' learning and engagement through the academic use of Facebook as:

1. setting up the Facebook page
2. posting
3. facilitating discussions

In the first two categories, faculty members tended to be passive in initiating conversations and were affected by the external environment. In Category 1 (setting up Facebook page), faculty members tended to use Facebook as an extension of classroom learning, learning and engagement were seen as passive. In Category 2 (posting), faculty members were aware that students' learning and engagement was optional. Whereas, in Category 3 (facilitating discussion), faculty members served as facilitators and moderators, and students were perceived as active learners and participants in discussions because they wanted to expand their own knowledge.

Table 6.3   The outcome space of the 'how' aspect for faculty members

'How' aspect	Category 1 Setting up the Facebook page	Category 2 Posting	Category 3 Facilitating discussions
Act	Faculty members mainly invite students to join the Page.	Faculty members post course-related materials.	Faculty members facilitating discussions.
Internal horizon of the act	Faculty members are intended to get students to communicate outside the classroom setting, but not everyone will join.	Faculty members are intended to facilitate student learning via Facebook by their own posting; this requires the faculty member's willingness and readiness.	Faculty members are facilitators and students are able to communicate effectively, learning and engagement is purposeful.
External horizon of the act	The context is the course Facebook page as a whole.	The context is usually the class as a whole, student's learning and engagement is optional because students have their concerns when posting.	Students as an individual are the context. Students' learning and engagement is possible since both faculty members and students were keen to discuss their ideas.
Indirect object	Faculty members set up the Facebook page because it is an easy and convenient way to communicate with the whole class.	Faculty members intend to post course-related material, so students will pay attention to the course.	Faculty members want students to develop their own thinking, so they will take responsibility for their learning
Internal horizon of the indirect object	Faculty members are the initiator to encourage participation.	Faculty members want to get the students' attention to participate through their posting and students are seen as having interest to	Faculty members are facilitators. Students are seen as taking on responsibility and to have a purpose for learning.

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		participate because of extrinsic rewards.	
External horizon of the indirect object	The context is viewed as full of limitations.	The context includes teaching materials from the internet. Requiring both faculty members and all students to post may not be possible because of time constraints.	The context is contradictory because discussing ideas is fulfilling for students and faculty members, but it requires more work from the faculty members, and the discussion may create disputes.

6.1.3   Summary of the chapter

This chapter aimed to investigate the qualitative data to understand the different ways faculty members thought about using Facebook in facilitating students' learning and engagement. The qualitative data were derived by engaging faculty members in individual interviews, which were targeted at Sub-question 2. *What are the differences among faculty members in term of their perception of Facebook as a tool for learning? How are these differences manifested?*

The previous sections of this chapter explored the 'what' and 'how' aspects of the faculty members' perspectives on using Facebook as a tool to facilitate learning and engagement. Two outcome spaces were illustrated in Tables 6.2 and 6.3. The 'what' aspects reflect the faculty members' perceptions of the experience and the 'how' aspects refer to the variations in manifestation. This study showed that these two aspects were interrelated.
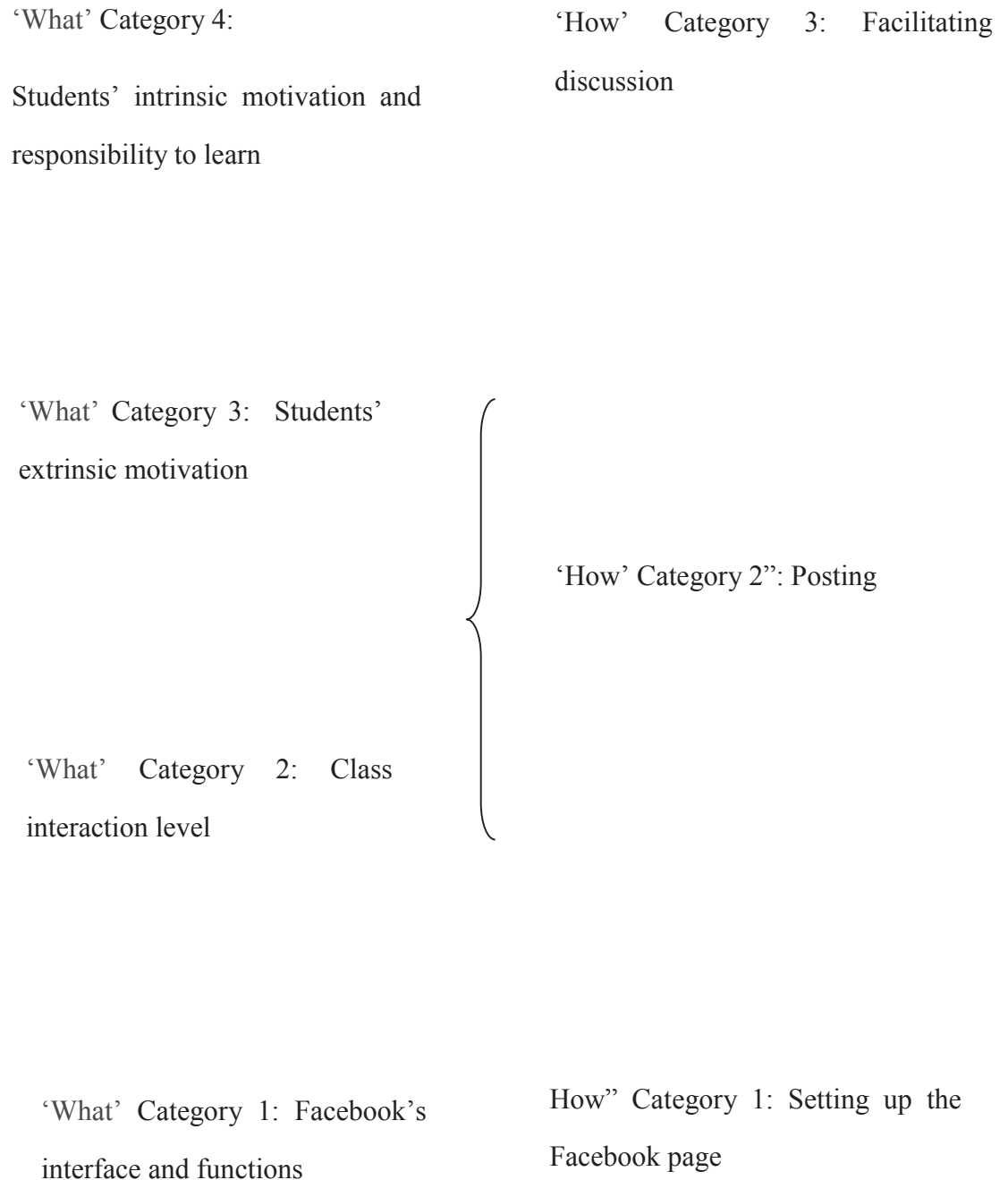
Category 1 of the 'how' aspects (setting up the Facebook page) related to Category 1 (Facebook interface and functions) and Category 2 (the class interaction level) of the 'what' aspects. Faculty members wanted to have an easy and accessible way to expand

classroom learning, and this behaviour was related to Facebook's interface and functions as well as class interactions.

Category 2 of the 'how' aspects (posting) was associated with Category 3 (the student's extrinsic motivation) of the 'what' aspect. Within these categories, faculty members were aware of the benefits of having more active participation and perceived that students participated for extrinsic reward. The faculty members' roles shifted from initiator to participant. Category 3 of the 'how' aspect (facilitating discussions) was connected to Category 4 of the 'what' aspect (the student's intrinsic motivation and responsibility to learn). In these categories, Faculty Member A and B were aware of the significance of their duties as facilitators and moderators. Students were seen as more engaged because they were intrinsically motivated to participate and expand their own knowledge.

It was obvious that the faculty members' perceptions of using Facebook for learning did impact the ways they have used Facebook for their courses. The relationships between the 'what' and 'how' aspects are illustrated in Figure 6.8.

Figure 6.8   The relationships between the 'what' and 'how' categories for faculty members

'What' Category 4:

Students' intrinsic motivation and responsibility to learn

'How' Category 3: Facilitating discussion

'What' Category 3: Students' extrinsic motivation

'How' Category 2": Posting

'What' Category 2: Class interaction level

'What' Category 1: Facebook's interface and functions

How" Category 1: Setting up the Facebook page

As stated in the previous sections of this chapter and in Chapter 5, both faculty members and students expressed various perceptions about their experiences when using Facebook for academic purposes. The data are further explained in Chapter 7 (Findings, discussion and conclusion) to demonstrate the experience of using Facebook to facilitate knowledge management and engagement (Sub-question 3). These findings have implications for the future use of Facebook for academic purposes and for future research.

CHAPTER SEVEN:
DISCUSSION AND CONCLUSION

As explained in the previous chapters, this study used a phenomenographic approach to gain a deeper understanding of the experiences of students and faculty members when using Facebook for teaching and learning in a tertiary context. The following research question guided this study: What are the different ways students and faculty members experience the use of a social networking site as a means of facilitating learning and engagement? To address this question, three sub-questions were proposed.

In Chapter 1, the background and objectives of this study were explained, and the research questions were introduced. In Chapter 2, an extensive literature review was presented to discuss the current thinking on using social networking sites for teaching and learning. In the latter part of that chapter, concepts like engagement and knowledge management were explored. Chapter 3 discussed the methodology and the phenomenographic research approach used in the study.

Chapter 4 presented the quantitative data and provided a background understanding of the phenomenon. Chapter 4 also showed that students had contradictory views on using Facebook for academic purposes. Even though they indicated that Facebook was a useful tool to facilitate learning and engagement; in fact, they did not use it that frequently for their courses and other variables may need to be considered to fully explain this phenomenon. Chapters 5 and 6 illustrated the qualitative data collected from interviews with students and faculty members. Categories of description and outcome spaces were identified in these two chapters to represent the views of the students and the faculty members. Data were presented according to the 'what' and 'how' aspects of the phenomenon. As introduced in Chapter 3, the 'what' aspect refers to "the experience of using a social networking site, i.e., Facebook, as a tool to facilitate learning and

engagement, while the 'how' aspect, refers to "how learning was facilitated through Facebook".

This chapter is based on the data presented in Chapters 4 to 6. The aim is to elaborate on the findings and discuss some of the more important implications of that data.

The first section of this chapter begins with a discussion of the key findings, followed by the implications for theory and practice, the limitations of this research and the recommendations for future research. The chapter ends with the concluding remarks of this thesis.

7.1 Discussion

Through the application of the phenomenographic approach in this study, different themes were identified and categories of description and outcome spaces were formed from the students' and faculty members' perspectives. Chapters 5 and 6 detailed the findings and directly addressed Sub-questions 1 and 2. Through interviews, students and faculty members were asked to recall their experiences and perceptions of using Facebook for their course. Although most students declared in their survey responses that Facebook was a useful tool for facilitating learning and engagement, their actual use did not appear to correlate with their views. These inconsistencies were explored in the interviews with the students and faculty members to gain deeper insights into their experiences and discover any possible variables to explain these inconsistencies. The next section examines the variables that appeared to influence this disjuncture the overall experiences of using Facebook to facilitate knowledge management and engagement for students and faculty members are described to address Sub-question 3 of this research.

7.1.1 Possible variables to explain contradictory views

7.1.1.1 The students' concerns

The qualitative data from the focus group discussions with students and the individual interviews with faculty members reflected that students had various concerns about using Facebook for academic purposes. As stated in Category 1 of the 'what' aspect (Facebook's interface and functions) and the 'how' aspect (reading) in Chapter 5, students raised concern about being judged. Some students described participating in the course Facebook page as inviting judgement from faculty members and classmates, and this concern stopped them from participating. For instance, some students feared that others would judge the quality of the content that was posted or the effort that was devoted to creating the post. They also worried that the posts would become an extension of their offline identity as they sensed that their online presentation would impact other people's perceptions of their online and offline identities. They felt that their Facebook posts allowed others to judge them easily. The focus group participants also mentioned that, since the content on Facebook remains on the page by default, others can easily scroll through their previous posts, and this may also invite judgment. In addition, most of the participants felt that using Facebook for their course allowed others to invade their privacy because other people would be able to access their personal Facebook page. Hence, some participants chose to separate their work and personal life. This finding supports the opinions from the previous studies by Parameswaran and Whinston (2007) as well as Schlenkricj and Sewry (2012).

According to the students, Facebook is a tool to use for personal life, and some thought it should not be used for academic purposes. Their opinions were similar to the results of the study done by Quek, Yang, and Liu (2012) which showed that students preferred using Facebook for social interaction but not for formal learning. Students' personal preferences and concerns affected their opinions of the experience and may be one of the

variables that contributed to the contradictory views the quantitative data highlighted. Faculty members held similar views, sharing their students' concerns about using Facebook for academic purposes. Faculty concerns included being judged by their students and student reactions to their posts. Their views are detailed in Category 1 of the 'what' aspect (Facebook's interface and functions) and the 'how' aspect (setting up the Facebook page) in Chapter 6.

7.1.1.2 The nature of the course

The qualitative data also reflected that students and faculty members felt the nature of the course would impact the class culture and, most importantly, the level of activity on the Facebook page. Category 2 of the 'what' aspect (the class learning culture) and 'how' aspect (sharing information) in Chapter 5 described the students' perspectives. For instance, most of the students in the focus group discussions agreed that Course A had the highest Facebook activity of the three courses because of its unique nature. As uncovered in Chapter 5, participants felt that content for posts was easier to get from the internet and more suitable for debate for Course A than for Courses B and C.

Similarly, Category 2 of the 'what' aspect (the class interaction level) and 'how' aspect (posting) in Chapter 6 also explained that faculty members felt some courses were more active on their Facebook pages than others and believed it to be related to the inherent nature of the course.

Thus, most of the participants, both students and teachers, sensed that the nature of the course was responsible for the differing activity levels across each class's Facebook page, and this may have contributed to the phenomenon that some students, especially those from Courses B and C, did not use Facebook frequently for their course even though they claimed Facebook to be a useful tool for learning.

7.1.1.3 Involvement by faculty members

In addition, many students in the focus group discussions shared that they were more inclined to participate more when their faculty member was more involved in the process. It was observed that different levels of involvement by faculty members influenced the class atmosphere and contributed to the diversity of the students' experiences. From the student perspective, involvement by faculty members includes participating on the course Facebook page, along with their guidance, direction and moderation. For example, when a faculty member participated actively on the Facebook page, students suggested that they would recognise that faculty member as putting in an effort and felt they should reciprocate by participating more. A faculty member's actions also helped guide the students' ideas about the level of content they were supposed to post by referencing the professor's posts.

For example, participants from Course A all mentioned a distinct culture on their course Facebook page nurtured by Faculty Member A, and students gave positive feedback on this. Faculty Member A created a culture of active posting by facilitating posts on the course Facebook page, and his active participation started a culture of active posting. This also pressed students to take responsibility for their education and motivated students to be active.

In contrast, many participants reflected that Faculty Members B and C were less active in encouraging activities on their Facebook pages, and, thus, students felt less motivated to participate.

Students also thought that faculty members impacted their learning culture through explicit discussions about why students should take responsibility for their learning and giving them the opportunity to add to what they have learned in the course. All these form significant elements that faculty members should have to scaffold the structure and expectations of the Facebook activities. In short, students indicated the importance of

involvement by faculty members, and their views reflected that this as being one of the factors that contributed to their experiences. A detailed explanation of the students' views on faculty member involvement are listed in Category 3 of the 'what' aspect (involvement by faculty members) in Chapter 5.

Faculty members did not highlight the importance of their involvement in the interview; however, Chapter 6 revealed that each of the three faculty members had a different level of involvement in their course Facebook page. This difference might be associated with their perceptions of their roles during this process. Each set up their Facebook page to continue discussions outside the classroom. However, Faculty Member A was comparatively more active in facilitating and moderating his Facebook page, whereas Faculty Member B saw herself as one of the participants. Faculty Member C did not pay much attention to the page at all. It was evident that each faculty member used Facebook differently for their course. For example, Faculty Member A actively used the Facebook page to invite student participation and encouraged them to think more about the topics outside of the classroom. He was active in initiating and moderating discussions, and increased activity was reflected in his posts and the overall number of Facebook posts for his course. Faculty Member B used Facebook mainly for sharing course-related articles or videos but was not very active in initiating discussions. As mentioned in Chapter 6, she felt that it was mainly the students' responsibility to participate on the Facebook page and she was just one of the participants. Faculty Member C was not active on his course Facebook page, only posting four times during the entire period under this study. His intention to set up the course Facebook page was to give students another discussion venue outside the classroom. He showed his involvement by liking students' posts but seldom communicated with students using the platform.

Thus, the manifestation of the faculty members' involvement included their participation, facilitation, guidance and direction, and their involvement was directly related to the level

of activity on the Facebook page for their course. Course A was the most active class among the three classes in this study, and Faculty Member A gave his course Facebook page more time and attention than Faculty Members B and C. As reflected by the data from the students' perspectives, faculty member involvement was one of the variables that may be a contributor to the contradictory views of students when they recalled their perceptions of using Facebook for learning.

7.1.1.4 The students' motivations to learn

Both students and faculty members thought that a student's motivation to learn also contributes to their overall experience. As cited in Chapters 5 and 6, some participants spoke about their motivation to post on Facebook in ways that indicated either extrinsic or intrinsic motivation. Extrinsic motivation was characterised as having their Facebook posts graded and recognised by the faculty member or other students in the form of mentioning their post in class or replying to the post itself.

Some students admitted that they only participated because of extrinsic motivation. For instance, when Faculty Member C emphasised the importance of another platform (an e-learning platform) over Facebook, he gave class participation marks to the students when they participated there, students then participated actively on the e-learning platform. This incentive translated into higher extrinsic motivation for posting there, and, at the same time, diverted students from posting on the course Facebook page. This view is detailed in Category 4 of the 'what' aspect (extrinsic motivation) within the students' perspective.

By the same token, faculty members also shared a similar opinion. For example, Faculty Member B mentioned that students would be more motivated if their participations were rewarded with a grade. This view is also explained in Category 3 of the 'what' aspect (the students' extrinsic motivation) from the faculty members' perspectives.

Conversely, the intrinsic motivation to post was defined as students having a mentality to participate for the inherent benefit to themselves. In this regard, participating more on the course Facebook page was a form of learning for their advantage. Category 5 of the 'what' aspect (intrinsic motivation) in Chapter 5 showed that intrinsic motivation was directly related to a student's learning preferences. A few students took responsibility and ownership of their learning and participated on the Facebook page without reference to any external motivation. In this context, personal interest in the specific topic was also mentioned as a possible driver of intrinsic motivation to participate more actively on the Facebook page. Similarly, Faculty Member A stated that students should participate because they want to learn, not for good grades. Category 4 of the 'what' aspect (the students' intrinsic motivation from the faculty members' perspectives) has a detailed description of this view.

Thus, apart from the influence of the faculty members' involvement explained in the previous section, the students' personal motivations also determined whether they would participate on the Facebook page. Those who were motivated were more active on their course Facebook page. As explained in previous chapters, Course A's students participated on Facebook more than the other groups. There were 777 posts from course A, and only 150 from Course B and 26 from Course C. In the focus discussions, the students from Course A referred to their own desire to learn more rather than any external incentives.

All in all, these four variables were important elements in determining the level of student participation on the course Facebook page and, thus, contributed to the phenomenon. They also provided insights to better understand the contradictory views found from the quantitative data in Chapter 4. The following section describes the students' and faculty members' experiences of using Facebook to facilitate knowledge management and

engagement. The discussion of these findings also has implications for practice, which are explained in a subsequent section.

7.1.2   The students' and faculty members' experiences of using Facebook

The outcome spaces, as seen in previous chapters, were used to illustrate the participants' understandings of their experience as well as to highlight the ways students' learning and engagement was facilitated. Knowledge management and engagement were the two learning outcomes explored in the education setting of this study. The following sections discuss the findings related to knowledge management and engagement.

7.1.2.1 Knowledge management

As mentioned in Chapter 2, a knowledge management framework combined with the theory of engagement can be used to examine the passive and active interactions on social networking sites. (Coates, 2007; Hodgson et al., 2012; Kearsley & Shneiderman, 1998) Chapter 2 also discussed the definition of knowledge management. According to this definition, knowledge management includes the process of creating, capturing, storing and sharing (Bassi, 1997; Kulkarni, 2013; Wenger et al., 2002). Further, Biasutti and Heba (2012) suggest that knowledge management has five functions. They are knowledge acquisition, knowledge internalisation, knowledge creation, knowledge sharing and application and the innovation process. A detailed definition of each function was provided in Section 2.9 of Chapter 2. Using the framework detailed in Chapter 2, this section presents a discussion on the participants' articulation of their experiences with knowledge acquisition, creation and sharing. These three functions, along with engagement, were the elements nominated as vital by faculty members when they discussed their expectations for choosing to use Facebook as a tool to facilitate their students' learning and engagement.

7.1.2.1a Knowledge acquisition

As stated in Chapter 2, knowledge acquisition refers to the methods, strategy and tools that may be used to obtain information, including search engines and databases (Biasutti & Heba, 2012). In this study, Facebook was used as a platform to show information that faculty members and students had found from other online channels and linked on the course Facebook page. This is reflected in Category 1 of the 'what' aspect (Facebook's interface and functions) and 'how' aspect (setting up the Facebook page) of the faculty members' perspectives. Faculty members valued some of Facebook's functions and used Facebook to display the information they had acquired for the entire class.

Similarly, as stated in Category 1 of the 'what' aspect (Facebook's interface and functions) of the students' perspectives, accessibility and integration with academic content were the main concerns when students were trying to obtain information online.

Students shared that it was convenient for them to obtain course-related information from online news channels and magazines, e.g., BBC, CNN, Times, or videos from YouTube, and put the information on their course Facebook page.

Moreover, the data reflected that most the Facebook posts included links to videos (YouTube), news or articles (673 out of 777 from Course A; 128 of 150 from Course B and 24 of 26 from Course C), which shows that most students tended to search for existing online resources to attain knowledge as they felt that these materials could communicate their messages easily. This finding echoed Eteokleous and his colleagues' research that the usage of videos, bulletin boards and picture posting have great potential to promote sharing between students and faculty members (Eteokleous et al., 2012).

7.1.2.1b Knowledge sharing

Knowledge sharing emphasises the social aspects of knowledge management through members sharing information, knowledge and experiences (Biasutti & Heba, 2012). In this study, the act of sharing encouraged students to engage in sense-making. Students tried to obtain and share relevant information on the course Facebook page to help others understand the content better by sharing relevant information. Facebook provided an informal network for the students to participate in the sharing of and access to knowledge.

Their informal exchange of ideas and opinions facilitated brainstorming and the exploration of ideas. This behaviour supports the ideas from Social Constructivism and Connectivism that information technology creates platforms which encourage collaborative learning. Data from this study showed that students' learning is not only a process of knowledge acquisition and it also involves social and intellectual interactions.

As mentioned in Chapter 4, students reported a higher frequency of use for sharing related and relevant articles/videos/information. In Category 2 of the 'how' aspect from both the faculty members' perspectives (posting) and the students' perspectives (sharing information), both students and faculty members shared information on the Facebook page particularly by linking videos and articles.

The data from the interviews also helps to explain the reasons for this behaviour. In Category 3 of the 'what' aspect (involvement by faculty members) from the students' perspectives, students pointed that their sharing activity was associated with faculty member involvement and guidance.

For example, Faculty Member A was active in initiating posts (31% of the total posts). He shared articles, news and videos online to encourage student participation, and students in Course A indicated that they were active in sharing on the Facebook page because they saw that Faculty Member A was very involved and committed to the

process. Their views indicated that their sharing activities were associated with the involvement and guidance of faculty members, and educators can encourage this behaviour by their own participation.

Both students and faculty members also considered that students would be more motivated to share information if they were rewarded with a grade (extrinsic motivation) or by knowledge enhancement (intrinsic motivation). Their views are detailed under the 'what' aspects of Chapters 5 and 6.

7.1.2.1c Knowledge creation

Chapter 2 also stated that knowledge creation is the process of organising and grouping similar information to transform tacit knowledge into explicit knowledge (Biasutti & Heba, 2012). In this study, faculty members, like Faculty Member A and B, hoped that students would contribute real-life examples and discuss them on the Facebook page. Under Social Constructionism and Connectivism, learning exists via communication of practice, dialogue and conversations (Fang & Chiu, 2010; Gunawardena et al., 2009). In this study, while students were expected to think critically and discuss ideas on the page, both students and faculty members shared that not every module could achieve this objective. The survey data showed a lower reported frequency of use for raising enquiries. That means most students did not frequently use the Facebook page to exchange ideas. Comparatively, there were more interactions and posts from Course A, and it was evident that the students from Course A were more able to group similar information or real-life examples to demonstrate their understanding. Thus, their experiences show that an environment that supports putting the students' knowledge into practice is a key element in knowledge creation.

As stated in Chapters 5 and 6, students felt that the nature of Course A was more widespread compared to the other two courses. The students said topics relating to Course A were everywhere and students would easily be able to draw connections and find

relevant materials to put on their course Facebook page. Faculty members and students considered that the nature of the course did impact the level of student activity and directly affected the intensity of knowledge creation. When the course was more practical and less abstract, students were able to search for related information to assist their own understandings. This support the ideas of the Engagement theory and Gagne (1984) that all student learning should involve active valuable tasks and cognitive processes, such as creating, problem-solving, reasoning, decision-making and evaluation.

In contrast, some students from Course C had difficulty in finding information and transformed their knowledge. They failed to make a connection between the knowledge they learned in class and resources they could find online. Course C had the lowest number of posts (26).

The data from the previous chapters reflects that not all participants in this study were able to initiate or participate in the knowledge creation process. The nature of the course is one explanation for why they failed to achieve this. Additionally, the student motivation also contributed to the experience. Participants admitted that if they were motivated or felt being part of the community, they would spend extra time searching for information online to supplement their studies. However, it was apparent from the qualitative data that the majority of students did not feel motivated to go the extra mile to do more without an extrinsic motivation or a sense of community. As mentioned in Chapter 2, Hughes (2010) suggested that when students do not perceive themselves as part of the group, they are less likely to engage fully with the learning community. In short, knowledge creation was not active or apparent in this study when most of the students failed to participate enthusiastically or see themselves as part of the community. The interviews reflected that most students focused on attaining a good grade over creating new knowledge. Among the five functions of knowledge management, students participated more in knowledge

acquisition and sharing, and these two elements are more related to behavioural engagement as explained in the next section.

7.1.2.2 Engagement

Chapter 2 described the essential components of engagement. In summary, engagement includes behavioural involvement in or outside class (behavioural engagement), intellectual activities like knowledge creation (cognitive engagement) and social connectedness and relationships (social engagement) (Krause & Coates, 2008; Skinner & Belmont, 1993).

Regarding Categories 1 (reading) and 2 (sharing information) of the 'how' aspect from the students' perspectives, most of the participants agreed that students were more active in class than on the course Facebook page. The quantitative data also reflected that students did not spend much time on their course Facebook page. These categories point out that behavioural engagement primarily relied on having students participating in class, and behavioural involvement in the class did not automatically translate to the same level of involvement on the course Facebook page.

As stated above, students mainly participated on the course Facebook page by observing, liking or sharing Facebook's posts, while faculty members initiated the process by setting up the page (Category 1 of the 'how' aspect) and posting relevant materials (Category 2 of the 'how' aspect) on the Facebook page. Behavioural involvement on the Facebook page was reflected by the total number of posts on the Facebook page for each course; therefore, students from Course A were more behaviourally engaged compared to the other two courses. As indicated above, Course A had the highest number of activity among the three classes and the highest level of involvement by the faculty member.

In addition, the nature of the course impacted on the student activity levels on Facebook. As cited in Chapter 2, according to Wang et al. (2012), learning activity, as defined by

engagement theory, should be project-based, have an outside focus and occur in a group context. However, Course C did not include a group project; thus, students might not see the need to communicate or connect with others outside the class and specifically on the course Facebook page.

While Social Constructionism and Connectivism emphasise the importance of social and intellectual interactions, students also stated in the interviews that a sense of social connection was necessary to determine whether they felt they were in the same community. The examples from their experiences in co-curricular activities (CCAs) explained that students needed mutual goals and a sense of direction in the community to have a higher involvement. These behaviours formed the essential element of social engagement. This indicates that social engagement occurs when the participants engage in a collective activity. In this study, these activities were online posts and discussions.

The data showed that the levels of social engagement on the course Facebook pages were different among the three classes. The participants reflected that their sense of social connectedness was also related to the learning culture of their class, the nature of the course, and the involvement of faculty members, as well as a student's motivation. More importantly, this study shows that online activities (behavioural engagement) and social connectedness (social engagement) are correlated. The data showed that Course A had the highest amount of online activity, and the students were also more socially connected. Data from the quantitative survey indicated Faculty Member A's class as the class with the most frequent usage and most positive attitude towards using Facebook as a tool for learning. This finding is consistent with the results from the focus group discussions, where participants from Course A expressed how the class Facebook page had been more active, and that made learning more enjoyable.

The discussion on knowledge construction (cognitive engagement) is reflected in Category 3 of the 'how' aspect from the students' perspectives (discussing ideas) and the

faculty members' perspectives (facilitating discussion) that students were cognitively engaged when they discussed ideas and opinions with others. Students were required to contribute more than just liking or sharing posts. However, as mentioned in previous sections, the activity of discussing ideas was limited to Course A, as most of the students from the other courses were not motivated to go the extra mile to create new knowledge on their class Facebook pages. This study shows that when participants were too focused on performance assessment (getting a good grade), they tended not to focus on creating any new knowledge or cognitive engagement they thought was ungraded. In this context, the engagement was focused on the behavioural aspect and neglected the cognitive aspects.

All these findings imply that student engagement is possible if the faculty member is involved, the online activity is aligned with the nature and content of the course, and the students are intrinsically motivated. Educators need to think about the ways they plan to engage and encourage students to participate on Facebook for academic purposes. This implication is further discussed later in this chapter.

In conclusion, this section discusses the findings from previous chapters. Possible reasons for the contradictory views expressed by students are explained, as well as the students' and faculty members' experiences of using Facebook to facilitate knowledge management and engagement. Implications for practice and theory follow in the coming sections.

7.2 Implications for practice

It is hoped that the results of the analysis will contribute to knowledge in the following areas:

- The affordances and barriers of using Facebook as a tool for learning as perceived by students and faculty members

- The skills and dispositions faculty members should have to facilitate learning and engagement via Facebook

- The perceived outcomes of using Facebook as a tool for learning

The findings relating to these areas are elaborated upon in the following subsections. It is expected that this discussion could inform future guidelines of practice for educators who are considering using Facebook as a tool for educational purposes.

7.2.1 The affordances and barriers of using Facebook as a tool for learning

7.2.1.1 Affordances

As mentioned in Chapter 2, when Barczyk and Duncan (2013) and Eteokleous et al. (2012) studied students' usage of Facebook's features for academic purposes, this study investigated the experience from both students' and faculty members' perspectives. Some participants in this study revealed they used Facebook because of its accessibility, convenience and user-friendliness as a supplement to in-class discussions. Facebook enables participants to reach out to the whole class when almost everyone has a Facebook account.

Likewise, as stated in Chapters 5 and 6, some students and faculty members considered some of Facebook's functions to be very useful, e.g., adding friends, invitations and Facebook messaging. Their views expanded the findings from Deng and Tavares (2013) and Sánchez, Cortijo and Javed (2014), as they explained that these functions could enable students and faculty members to put their views online to facilitate further discussion. This kind of accessibility also allowed students to collaborate with individuals with similar experience even though they may not have met in person or to continue dialogues with other classmates after class. Other functions, like sharing links and attachments, also assisted both parties to share their views in an accessible way.

In summary, some participants reflected that Facebook was user-friendly and they could easily access other classmates outside of class. Additionally, functions such as sharing links and attachments, adding friends and Facebook messaging helped to facilitate their discussions. These are the affordances of using Facebook as a tool for learning as perceived by students and faculty members.

7.2.1.2 Barriers

On the other hand, students and faculty members also shared their views on the possible barriers when Facebook was used for academic purposes.

First, many of them commented that Facebook did not have an organised structure like many e-learning platforms, and it was difficult for them to search through previous posts on Facebook.

In addition, Facebook was also seen to be too superficial as a tool for learning, as students had difficulties using it for in-depth discussions.

Second, some students had concerns about their privacy because Facebook was built for social and leisure purposes. Thus, indirect access to individual and personal Facebook pages including their personal posts, photos or other information was of concern. They perceived this as another barrier to Facebook's use for academic purposes. Students perceived this as another barrier when Facebook was used for academic purposes as they were cautious or not fully comfortable with the contents that they have posted.

Overall, students and faculty members highlighted that since Facebook was built for social purposes, the interface was not structured in the same way as an e-learning platform. Most students tended to see it as a tool for short conversations, and they were hesitant to put comments on the course Facebook page as it was open to the public. The results were similar to the previous studies by Gettman and Cortijo (2015) and Wang et al. (2012). All these are possible barriers that educators need to bear in mind when

considering using a social networking site for academic purposes. In light of these findings, the researcher recommends that educational institutions provide additional technical support for students and faculty members who are planning to use a social networking site for teaching and learning. As mentioned, some of the participants highlighted the importance of having a user-friendly platform. They suggested retaining some of Facebook's functions, such as article sharing and the ability to link videos from other platforms, but at the same time, designing an interface that is able to categorise their posts in a more organised and secure way.

7.2.2   The skills and dispositions faculty members should have

Some students and faculty members highlighted the following skills and dispositions as beneficial in the interviews.

First, the importance of digital literacy was highlighted in the interviews with faculty members. For example, Faculty Member B recalled her experience of setting up the course Facebook page, and she said she needed extra assistance from a staff member from the IT department because she did not know how to create a closed group and set the privacy settings of the page from the outset.

Second, Faculty Member A emphasised the importance of committing to the venture as a faculty member. Likewise, Chapter 5 showed some students shared this idea, and many of them placed a great deal of emphasis on the faculty member's involvement. This shows the high level of commitment required by faculty members if students are to be engaged on a course Facebook page. For instance, most students suggested that a faculty member should actively facilitate discussions. Facilitation requires moderation and effort by the faculty member, but this effort can motivate students to become more involved. Faculty members are expected to moderate the posts and make statements that encourage students to freely disclose their views without the worry of being judged.

In addition to facilitation and moderation, some students elaborated that guidance by faculty members was also important in facilitating their learning via Facebook. This guidance consisted of suggestions like having a structure or setting topics for the posts with clearly defined objectives. This is one of the dispositions a faculty member should have.

Furthermore, a few students also revealed that the personal characteristics of the faculty member were also important. For example, the students from Course A felt that Faculty Member A had charisma and could draw the students' attention, as well as motivate the students to participate.

From the students' perspective, involvement by a faculty member can shape the learning culture of the course and the use of Facebook for learning. The above points illustrate the important elements that a faculty member should have to facilitate effective learning on Facebook: digital literacy, a high level of commitment, clear guidance and direction, facilitation and moderation and personal characteristics, e.g., charisma. As stated, Imlawi et al. (2015) suggested that educators' involvement can boost students' motivation and engagement. Besides, Social Constructionism believes that students can learn better under the guidance of the skilled peers or educators. In this study, the students' feedback supported these ideas and their views also related to the concepts from Vygotsky (1978) that educators are significant in the learning process when they provide guidance and scaffolding as to maximise students' abilities. Similarly, it highlights the importance of teacher engagement, which is discussed in the coming section.

7.2.3 The perceived outcomes of using Facebook for learning

The faculty members perceived knowledge management and engagement as two learning outcomes when Facebook was used collaboratively for their courses.

The previous section revealed that students mainly participated on the course Facebook page by observing, liking or sharing Facebook posts. Students mentioned they would search for material and post it on the course Facebook page when they felt motivated by either extrinsic rewards or intrinsic drives. Specifically, the data showed that student involvement was more related and limited to knowledge acquisition and sharing and behavioural and social engagement. These outcomes were easier to achieve because they could be measured by numbers, e.g., numbers of posts and discussions. It was also shown in the quantitative data that most of the students felt that they were competent users of Facebook. They knew how to obtain information online and share it on the course Facebook page. Thus, the level of competency was not a factor affecting their level of activity on Facebook. As mentioned in the previous section, students appreciated some of the functions of Facebook, such as the accessibility of sharing articles and the ability to link videos from other platforms; however, they also thought that and interface could be designed that would allow them to categorise their posts in a more organised and secure way. These suggested features may improve Facebook as a platform for academic use. Nonetheless, the data highlighting Facebook's interface and functions was the lowest category in the outcome space, and other more impactful categories should be taken into account.

While Siemens and Conole (2011) predicted that the theory of connectivism would revamp the learning experience as the learner, not the teacher, would be at the centre of the learning process, this study suggested that the involvement of faculty members was still an important factor in facilitating students' learning. In practical terms, this means faculty members should give clear guidelines and instructions to facilitate Facebook activities and achieve perceived outcomes, such as knowledge acquisition and sharing, as well as behavioural and social engagement, which can be easily measured by numbers. Moreover, if educators hope to see cognitive engagement or knowledge creation, they will be required to do more, e.g., setting the pedagogical objectives which are the

important message from Siemens (2006). The data reflected in this study failed to show a high level of cognitive engagement or knowledge creation and the previous section details the explanations for this. Learning from this experience, educators need to think more about a means of engaging students in knowledge creation or cognitive engagement if they want to use Facebook effectively to facilitate learning and engagement.

Thus, while most of the existing literature focuses on explaining whether social networking sites are beneficial for educational purposes (Bosch, 2009, Moran, Seaman & Tinti-Kane, 2011; Ractham et al., 2012; Roblyer et al., 2010), it is clear from the current study that the focus should be on: "How to use social networking sites effectively for teaching and learning."

The previous chapters highlight the importance of involvement by faculty members and the skills and dispositions faculty members should have when using social networking sites for academic purposes. The emphasis on faculty member involvement and the preferred skills and dispositions provides some important implications for practice that can be drawn from this research and recommended for consideration by educators who choose to use social networking sites to facilitate students' learning and engagement. There are a few other considerations, and these are discussed next.

First, regarding privacy concerns and the judgments of others, educators should create a closed/private page for their course. They should also set ground rules for confidentiality. For example, no post should be forwarded to other platforms or other users outside the closed group. Faculty members should reassure students that they are safe and encourage students to demonstrate their understanding of the topics or exchange opinions on the course Facebook page. Second, educators need to set clear objectives for the use of the course Facebook page or any other social networking sites. These objectives and expectations must be communicated clearly to the students. Students need to understand why and how they should participate in these mediums, e.g., whether they should

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determine the content or create new ideas (Siemens & Conole, 2011). In addition, educators might lead by example and post course-related materials, inviting students to view or comment on the posts. Additionally, following the ideas from Wang et al. (2012) mentioned in Chapter 2, learning activities defined by engagement theory should be project-based, have an outside focus and be in a group context. Educators should introduce group project elements and encourage students to communicate and collaborate on their project work using the Facebook page.

Ongoing scaffolding, facilitation and moderation by the faculty members are also required during the process to create an open and respectful environment for discussions. Moreover, educators should act as role models to initiate discussions and set the field for cognitive engagement or knowledge creation. Real-life examples can be introduced on the Facebook page to supplement knowledge shared in class when they can be used to promote knowledge application. Discussing ideas and grouping similar information transforms tacit knowledge (theory) into explicit knowledge (practice) and shows students that learning is more than behaviour engagement, which is mainly measured by the number of posts or rewarded by participation marks or grades.

It is clear that the educators' involvement is an essential element in the learning process when using external venues like social networking sites to supplement classroom learning. This study not only highlights the importance of involvement by educators as part of the implications for practice, but this element also has implications for theory, i.e., engagement theory, which are explained in the coming section.

7.3 Implications for theory

Recommendations for future practice and the implications for theory are offered in this section.

7.3.1 Engagement theory

Chapter 2 reviewed the definition of engagement and noted that most authors focus on behavioural engagement, social engagement and cognitive engagement. However, the findings of this study reveal that engagement by educators is also essential in the experience. As mentioned in the previous section, while Social Constructionism highlights the importance of educator's scaffolding, students in this study also emphasised the importance of faculty member involvement as one of the variables that impacted their participation in the course Facebook pages. Authors like Harris (2006) and Louis and Smith (1992) have suggested the importance of educator or teacher engagement, but it is often discounted in the literature. A lack of emphasis on educator engagement may leave students to participate in online learning activities without clear guidance and direction. This, in turn, will most likely lead to a low level of activity or a disappointing outcome. Therefore, when there is a focus on student engagement, a broad level of educator engagement is also recommended.

7.3.2 Communities of practice

Chapter 2 also explained that a CoP is created by the people who participate in mutual learning in a common dominion, such as a group of students studying the same course (Wenger, 2011). Such groups mutually engage, through a common platform, to share ideas, resources and information, and the members work together to develop and maintain knowledge (Solomon & Schrum, 2007).

The students within each course in this study fit the above definition; they used a common platform (the Facebook page), and they shared information and knowledge with each other. Yet, not all students considered their class to be a community. These experiences provide insights into the meaning of a CoP that should be applied to academic settings.

This study shows that the concept of a CoP may be better illustrated when the community has developed organically due to intrinsic motivations in its participants. In this study, students studied a course to fulfil its academic requirements. They enrolled in the courses to meet a credit unit with the aim of scoring a high grade-point average. Class performance was mainly task-oriented, behavioural-based and driven by extrinsic motivation. Because of the grading system, i.e., the bell curve, some students saw their classmates as competitors instead of working partners. Thus, when students did not have a sense of mutual support and social engagement, a sense of community lacked in this experience.

Additionally, these courses were structured for a certain period, 15 weeks in this case, which may not be long enough to motivate students to get to know each other to form a community. Time constraints were highlighted during the interviews as another factor educators need to consider if they want to apply a CoP in class or simply build a learning community.

These experiences infer that the concept of a CoP works better in settings where groups form organically, the members are motivated by intrinsic rewards, competition is absent and, last but not least, when there are no time constraints.

7.3.3 Virtual communities of practice

As cited in Chapter 2, the more recent concept of VCoPs has been introduced now that social networking sites can be used to form discussion groups. Undoubtedly, the virtual world is an infinite venue; online content can be posted anywhere to anyone at any time without boundary. However, in this study, students worried that their posts would invite the judgement of others and their privacy may be invaded. Their concerns reflected that participants on Facebook (or other social networking sites) need to feel comfortable with the content they post, even when the Facebook page used for discussions is private. These views supported the ideas suggested by authors like Waycott et al. (2010).

Thus, when educators facilitate learning and engagement via social networking sites, they need to be mindful of the core concerns of their students. Chapter 5 details the students' concerns and these concerns give rise to the idea of including a sense of online safety into the existing theory of VCoPs.

It is therefore recommended that when educators aim to facilitate students' learning and engagement through social networking sites, whether that be behavioural, social or cognitive engagement, they also need to pay attention to the basic psychological needs of the students. The results of this study find the students' most basic psychological need in an online learning setting is a sense of safety – a sense of security and trust. Most students stressed concern about using Facebook for academic purposes. Their concerns included privacy and being judged by others. It follows that an open and supportive discussion cannot occur without a sense of online security, privacy and mutual trust. The existing theory of VCoPs overlooks this important element, which impacts the willingness to participate. A sense of online security and privacy can be provided in the page's settings, e.g., a closed group with ground rules about confidentiality and mutual respect.

7.4 Limitations of this study

This study has some limitations that need to be considered. First, this study was conducted across three different schools at the same university in Singapore. The results may not be generalisable to other universities or non-Asian contexts. Readers must moderate the usefulness of this study in their own contexts.

Second, there was a fairly low number of students who participated in the focus group discussions. Exactly 170 students took part in the survey questionnaire, but only 15 participated in the focus group discussions. Most participants came from Course A. To achieve a representative sample size, more students should have been recruited; however, there were in difficulties in setting a mutually agreeable schedule for all students across

the different courses to participate. Additionally, the length of the study also restricted the data collection process. The interviews were done two weeks before examinations; hence, not many students were willing to participate due to their busy schedules. This time constraint affected the sample size of the participants. If this study could be conducted across more courses, more data could be identified and used to enrich the data analysis and discussion.

Another further limitation was that some participants had trouble understanding some of the terms, e.g., the definition of engagement, communication and collaboration. Statements were repeated in an attempt to guide the participants to think of their own understandings of the terms without providing a preferred answer. However, some did need more guidance, and this may have impacted the explanations of their experiences when misunderstandings occurred.

Some students may have participated in the study because they thought it was part of the course work requirements and that it would be assessed by their professors (the three faculty members). Students were assured that their participation was voluntary; it would have no impact on grading, and all information would be kept confidential. Having said that, some students may have still worried about the impression they were creating for their professors and chosen to stay silent on their course Facebook page or limited their disclosures. Limited disclosures would influence data collection and analysis.

Finally, it should also be acknowledged that this study used a complex, though very useful framework proposed by Harris (2006). Using this framework required the researcher to explain every category under the 'what' and 'how' aspects along with the referential and structural aspects. Undoubtedly, this framework provides a comprehensive explanation of the categories. But the challenge for the researcher, as a writer, is to provide careful signposts for the reader to avoid any sense of repetition that may result from the very valuable iterative approach to the data analysis.

7.5 Recommendations for future research

More work is required to study the methods used to encourage cognitive engagement of the students. While the data in this study reflected more on the behavioural and social engagement, it is also necessary to address cognitive engagement, and this means focussing on engaging students in learning. More research should be done in this area.

In addition, it would be beneficial to investigate both students' and faculty members' conceptions of educator engagement, as existing studies seldom include this element. This study showed how students and faculty members understand their experience of using Facebook for academic purposes. Participants highlighted the importance of faculty member involvement, and a resulting call to investigate the concept of teacher engagement in future research.

Based on the limitations of this study, future study should extend this thesis to other schools, departments, universities and cultures to enrich the data and the analysis.

Another recommendation of this study is to provide more incentives to encourage faculty members to use social networking sites for academic purposes. Incentives could be provided in the form of more training opportunities or as research funding for faculty members who intend to use social networking sites as a tool for teaching.

Lastly, this study adopted the phenomenographic framework proposed by Harris (2006). It is a complex and complicated framework that includes thorough explanations of the 'what', 'how', referential and structural aspects of a phenomenon and results in a range of rich and comprehensive data. This study demonstrated the strengths and weaknesses of this complex framework and should give future researchers some direction in deciding whether to apply this framework to their studies.

7.6 Conclusion

To fill the research gap, this study aimed to achieve a deeper understanding of the experiences of staff and students using a social networking site, in this case, Facebook, to facilitate learning and engagement. At a practical level, the findings from this study show that students and faculty members highlight the importance of having a user-friendly, legitimate and secure social networking site as a platform for their teaching and learning. However, this study found out that if educators want to use Facebook for academic purposes, they should bear in mind that the involvement of faculty members and students' self-motivation are as essential to the accessibility and security of the platform.

If educators hope to see a high level of knowledge management and engagement, such as cognitive engagement or knowledge creation, an effort is required. Learning from the experiences revealed in this study, educators need to think more about the methods used to engage students in knowledge creation or cognitive engagement if they want to use Facebook to effectively facilitate learning and engagement. Ongoing scaffolding, facilitation and moderation by faculty members can create an open and respectful environment for discussions to facilitate learning. However, the results demonstrate that using social networking sites for learning requires a high level of commitment by faculty members, a clear direction to be set and a strong sense of connection between learning in the classroom and learning via the social networking site.

At a conceptual level, theories on student engagement and CoPs suggest the need for review to encompass a wider definition. Teacher engagement and the students' sense of safety are emphasised in this study.

This study illustrated the views of both students and faculty members and obtained both quantitative and qualitative data to reach a comprehensive picture of the participants' experiences. This mixed method enriched the knowledge of the research problem. It

offered a comprehensive view of the phenomenon and enhanced the validity of the research findings. While existing research typically focuses on either the students' experiences or the faculty members' experiences and seldom covers both. Nor do existing studies emphasise, to any significant degree, variations in the experience of using social networking tools for learning between participants. Qualitatively, these variances may hold key insights for ensuring social networking sites are used effectively to facilitate learning and engagement. This study filled these research gaps as it reached a depth understanding of both the students' and the faculty members' experiences and the variations within them.

A phenomenography approach was used to demonstrate the pros and cons of each category under the 'what', 'how', referential and structural aspects of the setting under study. It is a complicated, but comprehensive, framework. This study achieved a richness and deepness in data collection and analysis. It also provides future researchers with some guidance in deciding whether this framework might be appropriate for their own studies.

Undoubtedly, information technology has impacted the way students obtain and develop knowledge. Some authors suggest that the new generation of students have established different ways of thinking, behaving and learning, and expect such technologies to be integrated into their education (Connaway, Radford & Williams, 2009; Hanny & Fretwell, 2011). Others see no differences between the generations regarding the use of information technology and learning (Bennett et al., 2008; Bullen et al., 2011). As an educator, we have the responsibility to shape and guide student learning. And, as declared, the focus should be placed on "how to use the new technology, like social networking sites, effectively for teaching and learning". Educators should prepare themselves to commit time and guide students if they want to use social networking sites effectively for teaching and learning, and an organised and secure platform should be built to encourage student participation.

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APPENDIX A

<u>**CONSENT FORM**</u>

Protocol Title: A case study on University Students using Facebook as a tool to facilitate learning and engagement

Principle Investigator: Ms Chung Yee Lin

I understand that participation is voluntary. Refusal to participate will involve no penalty. I understand that I may discontinue participation at any time without penalty or loss of accrued benefits (Benefits are accrued in proportion to the amount of study completed or as otherwise stated by the researcher) to which I am otherwise entitled. I declare that I am at least 18 years of age.

Name of Participants	Signature	Date

Investigator Statement

I, the undersigned, certify that I explained the study to the participant and to the best of my knowledge the participant signing this informed consent form clearly understands the nature, risks and benefits of his/her participation in this study.

Name of Investigator	Signature	Date

If you have questions about this research study, you may contact one of the Principal Investigator as reflected in this consent form.

APPENDIX B

Survey Questionnaires

1. Do you have a Facebook account before this course?

    ☐ Yes
    ☐ No

2. How long have you used Facebook for?

    ☐ Never
    ☐ Less than 12 months
    ☐ 13 months to 24 months
    ☐ 25 months to 36 months
    ☐ More than 36 months

3. On a daily basis, I check Facebook _____ times.

    ☐ 0
    ☐ 1 – 2 times
    ☐ 3 – 4 times
    ☐ 5 – 6 times
    ☐ More than 6 times

4. On a daily basis, I check Facebook ____ times (for this course).

    ☐ 0
    ☐ 1 – 2 times
    ☐ 3 – 4 times
    ☐ 5 – 6 times
    ☐ More than 6 times

5. The amount of time (in minutes) you spend on Facebook in a day is.

    ☐ 0
    ☐ Less than 30 minutes
    ☐ 30 minutes to less than 60 minutes
    ☐ 60 minutes to less than 120 minutes
    ☐ 120 minutes to less than 180 minutes
    ☐ More than 180 minutes

6. The amount of time (in minutes) you spend on Facebook (for this course) in a day is.
   ☐ 0
   ☐ Less than 30 minutes
   ☐ 30 minutes to less than 60 minutes
   ☐ 60 minutes to less than 120 minutes
   ☐ 120 minutes to less than 180 minutes
   ☐ More than 180 minutes

7. In general, your reasons for using Facebook. Please select Three items from the lists that are most applicable to you and rank them in order of importance (1 being Most important, 3 being least important):
   ☐ Learning and knowledge (e.g., educational purposes)
   ☐ Organising Events (e.g., Gathering with friends)
   ☐ Networking (e.g., joining alumni groups, professional networks, company groups, etc.)
   ☐ Entertainment (e.g., playing games, receiving updates from pop artistes)
   ☐ Feedback/complaint channel to organisations
   ☐ Social purposes (e.g., Searching and Making Friends, Keeping in Touch with Friends)
   ☐ Source of Information (e.g., Following and Receiving Updates from Favourite Organisations)
   ☐ Leisure purposes (e.g., Killing Boredom)
   ☐ Others, please specify:
   _____

8. In general, your participation in Facebook activities Please select Three items from the lists that are most applicable to you and rank them in order of frequency (1 being Most frequent, 3 being least frequent):
   ☐ Check Friends' Status Updates
   ☐ Update Own Status
   ☐ Update Locations
   ☐ Join Groups
   ☐ Like or Follow Pages
   ☐ Messaging
   ☐ Facebook Chat
   ☐ Post and/or Look at Pictures
   ☐ Applications
   ☐ Educational Purposes
   ☐ Facebook Polls
   ☐ Others, please specify:
   _____
   ☐ Not applicable

9. Please rate your level of competence in using the various factures (e.g., commenting, posting photos, etc.) of Facebook.

    Please rate: _____
    Totally not competent= 1, somehow not competent = 2, Neutral = 3, somehow competent = 4, Totally competent = 5

10. Have you used Facebook for any of your classes in this university?
    ☐ Yes
    ☐ No

If yes, in what capacity?
_____

11. What are your concerns regarding Facebook being used in the classroom? Please select Three items from the lists that are most applicable to you and rank them in order of importance (1 being Most important, 3 being least important):
    ☐ Distraction
    ☐ Lack of Privacy
    ☐ Lack of Security
    ☐ Fear of judgment from classmates
    ☐ Diminishing real-life class interaction
    ☐ Waste of Time
    ☐ Connectivity Problems
    ☐ Leaving a bad impression on Professors/Lecturers who viewed your profile
    ☐ Lack of informal conversations taking place
    ☐ Surveillance by Professors/Lecturers
    ☐ Request of a second Facebook account for lesson use
    ☐ Others, please specify:
    _____
    ☐ Not applicable

12. Did you have to open a Facebook account solely/separately for this course?
    Yes/ No

13. How many of this class's participants are your own "Facebook Friends"?

14. Please select UP TO THREE most useful Facebook Functions during this course period
    ☐ Update Own status
    ☐ Follow classmates/friends' new feeds
    ☐ Like
    ☐ Comments
    ☐ Messaging
    ☐ Facebook Chat
    ☐ Post and/or Look at Pictures

☐ Post and/or view videos
☐ Post and/or view links Facebook Polls
☐ Others, please specify:

_____
☐ Not applicable

With regards to Type of Using (Frequency)* Frequency-more than two times per day, please indicate the extent to which you agree or disagree with the following statements:

15. You use Facebook frequently in Communicating amongst team members
     Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

16. You use Facebook frequently in building networks/social ties with other course mates
     Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

17. You use Facebook frequently in raising enquiries
     Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

18. You use Facebook frequently in discussing ideas
     Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

19. You use Facebook frequently in sharing of related and relevant articles/ videos/ information
     Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

With regards to the Effective of Facebook, please indicate the extent to which you agree or disagree with the following statements:

20. Facebook is an effective tool for communication between course mates.
     Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

21. Facebook is an effective tool for building networks/ social ties with other course mates.
     Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

22. Facebook is an effective tool for communication of course related enquires.
     Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

23. Facebook is an effective tool for communication of course related information.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

24. Facebook is an effective tool for developing new course related knowledge.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

25. Facebook is an effective tool for collaboration in group projects.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

26. Facebook is an effective tool for discussion of ideas in a course.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

27. Facebook is an effective tool for sharing material/ information.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

28. If you have other comments on the effectiveness of using Facebook in learning, please specify:

With regards to Your overall experience of using Facebook, please indicate the extent to which you agree or disagree with the following statements:
29. You prefer using Facebook compared to other alternative technologies for classroom tool.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

30. Overall, you feel Facebook is a good tool for communication.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

31. Overall, you feel Facebook is a good tool for building networks/ social ties with other course mates.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

32. Overall, you feel Facebook is a good tool for discussing of ideas.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

33. Overall, you feel Facebook is a good tool for sharing of materials.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

34. Overall, you feel Facebook is an easy and convenient alternative platform for you to participate in the course outside of class.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

35. Overall, you feel Facebook is a useful source of additional course information that benefits your class performance.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

36. Overall, you feel the use of Facebook in this course increase your enjoyment in learning.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

37. Overall, you feel it is appropriate to use Facebook as part of teaching and learning
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

38. In the future, you will use Facebook as a study tool.
Strongly Disagree=1, Disagree=2, Somewhat disagree =3, Neither Agree or Disagree=4, Somewhat Agree=5, Agree=6, Strongly Agree=7

39. Please indicate your age:
40. Please indicate your gender: Male/Female
41. What year are you in: Year 1/2/3/4/5 or Exchange student
42. Which faculty are you from? Business/ Accountancy/ Information Systems/ Economics/ Social Sciences/ Law
43. Your Nationality is:
44. What is your ethnicity? Chinese/ Malay/ Indian/ Vietnamese/ Indonesian/ Others
45. Please indicate the module in which you are participating in Facebook discussion

End of survey

APPENDIX C

Focus Group Discussion questions (Students)

Please share your perception on the following statements:

1. The course FB page is active (why and why not?)

2. Students are engaged in the FB page (What is your opinion of their level of engagement?)

3. Facebook is a useful tool for communication and collaboration

4. Facebook is a useful tool for discussion of ideas

5. Facebook is a useful tool for sharing material/ information

6. Facebook is a useful tool for building networks/ social tie

7. Facebook is a useful tool for initiate discussion, but I will prefer other means to continue the conversation.

8. Students have various concerns when they are using Facebook for learning

9. The way that I can post videos, links etc. can help me understand the ideas of the discussion.

10. Your overall impression of using Facebook as a tool to facilitate learning

11. Something should be further improved to increase my motivation in using Facebook in learning. (what are they?)

12. I will use Facebook in my future learning

Individual Interview questions (Faculty members)

1. Background information of the faculty members: Years of teaching, years of using Facebook for class? How many hours and visits he/she has spent on Facebook post for this course?

Please share your perception on the following statements:

2. Some FB Pages are active than the others (why?)
3. Students are engaged in the FB page (What is your opinion of their level of engagement?)
4. Facebook is a tool for communication and collaboration
5. Facebook is a tool for discussion of ideas
6. Facebook is a tool for sharing material/ information
7. Facebook is a tool for building networks/ social ties
8. Students have various concerns when they are using Facebook for learning
9. The way that I can post videos, links etc. can help me understand the ideas of the discussion.
10. Your overall impression of using Facebook as a tool to facilitate learning
11. Something should be further improved to increase my motivation in using Facebook in teaching
12. I will use Facebook in my future teaching

APPENDIX D

Appendix Ethics Application Approval

Dear Applicant

[The UTS Human Research Ethics Expedited Review Committee reviewed your application titled, " A case study on University students using Social Networking Site as a tool to facilitate learning and engagement ",

and agreed that the application meets the requirements of the NHMRC National Statement on Ethical Conduct In Human Research (2007). I am pleased to inform you that your external ethics approval has been ratified.

Your approval number is UTS HREC REF NO. 2013000718

Please note that the ethical conduct of research is an on-going process. The National Statement on Ethical Conduct in Research Involving Humans requires us to obtain a report about the progress of the research, and in particular about any changes to the research which may have ethical implications. This report form must be completed at least annually, and at the end of the project (if it takes more than a year). The Ethics Secretariat will contact you when it is time to complete your first report.

I also refer you to the AVCC guidelines relating to the storage of data, which require that data be kept for a minimum of 5 years after publication of research. However, in NSW, longer retention requirements are required for research on human subjects with potential long-term effects, research with long-term environmental effects, or research considered of national or international significance, importance, or controversy. If the data from this research project falls into one of these categories, contact University

Records for advice on long-term retention.

You should consider this your official letter of approval. If you require a hardcopy

please contact Research.Ethics@uts.edu.au.

To access this application, please follow the URLs below:

* if accessing within the UTS network:

http://rmprod.itd.uts.edu.au/RMENet/HOM001N.aspx

* if accessing outside of UTS network: https://remote.uts.edu.au , and click on

"RMENet – ResearchMaster Enterprise" after logging in.

We value your feedback on the online ethics process. If you would like to provide

feedback please go to:http://surveys.uts.edu.au/surveys/onlineethics/index.cfm

If you have any queries about your ethics approval, or require any amendments to your

research in the future, please do not hesitate to contact Research.Ethics@uts.edu.au.

Yours sincerely,

Professor Marion Haas

Chairperson

UTS Human Research Ethics Committee

C/- Research & Innovation Office

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I: http://www.research.uts.edu.au/policies/restricted/ethics.html

P: PO Box 123, BROADWAY NSW 2007

[Level 14, Building 1, Broadway Campus]CB01.14.08.04

Ref: E13