



‘Exploring the role Social Media plays in the student learning experience of 2014 university life in NZ’

by

Aloundeth PANEKHAM

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Abstract

The purpose of this study is to explore how university students and lecturers use social media to support their learning and particularly to understand how such emerging technologies usage impacts student learning experience and class communication. In this research, social media tools under consideration are social networking sites, media sharing sites, creation and publishing tools, social bookmarking, and the Internet messaging.

This research employed purposive selection to obtain the quality of data from semi-structured interviews of twelve students and four lecturers from the Victoria University of Wellington who are known to have experience of using social media tools in their courses.

The study identified two major usages of social media to support learning activities, five key usage activities for students and four major usage activities for lecturers. Students' choices and usages of social media applications were more diverse compared to the lecturers. The usages and preferences of students from different disciplines were varied. Moreover, there were numbers of social media interactions and communication among the students and their peers. Even though the interaction and communication between students and lecturers through social media was minimum due to the limited uses of social media for formal learning in class by lecturers and students, the lecturers and students expressed that the usage of social media helped improve class communication. Students' engagement was only area that affected by social media choices and communication using social media by lecturers. The choices and communication by students would affect greater and wider aspects of student learning experience such as learning ability, communication and collaboration, problem solving, access to information, and productivity. Even though the usage of social media to support learning by students and lecturers did not impact student learning experience equally, the findings suggest that it helps facilitate learning activities, benefit students, and enhance the student learning experience to some extent.

Preface

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Table of contents

Abstract	1
Preface	4
List of Tables	8
1. Introduction	9
2. Literature Review	13
2.1. Pedagogical values of using social media in higher education.....	13
2.2. Social media in Higher education:.....	15
2.2.1. Student’s attitude toward social media usage and their adoption for learning....	15
2.2.2. Lecturer’s attitude toward social media usage and their adoption for teaching..	18
2.3. Theoretical Foundation	20
2.3.1. The Technology Acceptance Model (TAM)	21
2.3.2. The Uses and Gratifications (U&G) theory	23
3. Research Design	25
3.1. Research approach	25
3.2. Research Participants	27
3.3. Ethical Considerations	27
3.4. Data Collection	28
3.5. Data analysis.....	28
4. Results	31
4.1. The social media choices and uses among students and lecturers	31
4.1.1. Students’ social media choices and usage	32
4.1.2. Lecturers’ social media preferences and usage	37
4.2. The social media interaction and communication	39

4.2.1. Communication and interaction between students and students	40
4.2.2. Communication and interaction between students and lecturers	41
4.2.2.1. Students-lecturers interaction	41
4.2.2.2. Lecturers-students interaction	43
4.3. Perceived impacts of using social media to support learning activities on class communication	44
4.3.1. Perceived impacts on student-student communication.....	45
4.3.2. Perceived impacts on lecturer-student communication.....	47
4.4. Perceived impacts on student learning experiences	48
4.4.1. Perceived impact on students learning ability.....	49
4.4.2. Perceived impact on students' engagement.....	50
4.4.3. Perceived impact on communication and collaboration	50
4.4.4. Perceived impact on student problem solving.....	51
4.4.5. Perceived impact on information access	51
4.4.6. Perceived impacts on student productivity.....	52
5. Discussion	55
5.1. How does university lecturers' choices and uses of social media compare to students' choices and uses?	55
5.2. To what extent do students and lecturers communicate and interact using social media?	57
5.3. Is class communication improved by using social media?.....	59
5.4. How do social media choices and communication using social media between students and lecturers affect the student learning experience?.....	61
5.5. Does social media supported classwork enhance or diminish the student learning experience?	64
6. Conclusion.....	65
7. Limitations and suggestions for future research.....	67
8. Reference:.....	69

9. Appendices.....	77
9.1 Appendix 1: Interview Questions	77
9.2 Appendix 2: Human Ethics Documentation	78

List of Tables

Table 1. Social media preferences and their usages to support learning activities... 32

Table 2. Social media usage by Student..... 34

Table 3. Social media usage by Lecturers..... 37

1. Introduction

The rapid evolution of the Internet application has led to the development of social media. The emergence of social media has changed the way people communicate and interact both online and offline. Social media is generally used on the daily basis of everyday life by millions of people, particularly for young people across the globe for different reasons. Students are a big part among the young users of social media. With social media, students have changed the way they use the web as for retrieving information to creating and sharing information with their peers over the Internet (Shittu, Basha, AbdulRahman, & Ahmad, 2011). This change also affects how technology uses in the classroom for supporting teaching and learning as well. The emerging technologies such as social media and Web 2.0 brought new improved functionalities, which are significantly useful for improving teaching and learning in higher education (Hartshorne & Ajjan, 2009).

This research explores what role social media plays in NZ higher education and particularly to understand how such emerging technologies usage to support classwork impact student learning experience and class communication. The term social media is used interchangeably with Web 2.0 in higher education when referring to the emerging online tools. In this research, the social media tools are the Internet based application that “allow the creation and exchange of user-generated content” (Kaplan & Haenlein, 2010, p. 61). Social media is based on Web 2.0 technological and ideological foundation. This means that all of the Internet and Web 2.0 applications that used to exchange social support among people can be considered as social media in this context. However, to include all available Web 2.0 and the Internet applications would increase the complexity of research. Thus, the social media tools under consideration for this study are (1) social networking sites (Facebook, Twitter, and LinkedIn), (2) media sharing sites (YouTube, Vimeo, and Flickr), (3) content creation and publishing tools (wikis and blogs), (4) social bookmarking (Pinterest, Digg, and Delicious), and (4) internet messaging (Google Hangout, Skype, WhatsApp, and Facebook Messenger).

Given the popularity of social media used by students, much of the higher education literature has revolved around the use of social media by lecturers and students for educational purpose, and its pedagogical values. Several studies argue that these tools offer opportunity to enhance learning by supporting social learning, and promote interaction among students and instructors, which in turn improves active learning and foster student-centered learning (Ajjan & Hartshorne, 2008; Buzzetto-More, 2012; R. Taylor, King, & Nelson, 2012). Despite these potential benefits and pedagogical values, researchers argue that the majority of students and lecturers are still reluctant to use the tools for teaching and learning (Ajjan & Hartshorne, 2008; Hartshorne & Ajjan, 2009; Stanciu, Mihai, & Aleca, 2012). S. A. Taylor, Mulligan, & Ishida (2012) suggest that students are not keen to use social media to communicate and interact in formal academic relationship with faculty. Although many studies have focused on educational uses of social media by students and instructors, and its pedagogical values, there are a few studies that have looked into its impacts on student learning experience (Gikas & Grant, 2013; Hrastinski & Aghaee, 2012). Therefore, this research hopes to fill these gaps of knowledge by addressing the following research questions:

1. How do university lecturers' choices and uses of social media compare to students' choices?
2. To what extent do students and lecturers communicate and interact using social media?
3. Is class communication improved by using social media?
4. How do social media choices and communication using social media between students and lecturers affect the student learning experience?
5. Does social media supported classwork enhance or diminish the student learning experience?

This research begins by presenting a literature review. It then presents the methodology used in analyzing data. Thirdly, it presents the findings of this research, which describes students' and lecturers' usage and interaction of using social media to support teaching and learning in higher education, and its impacts

on the student learning experience and classroom communication. Fourthly, it presents discussion and analysis of the research findings to enable better understanding of how social media was used to support learning by students and lecturers. Finally, it shows directions for future research as well as the limitation of study.

2. Literature Review

This chapter reviews the relevant literature, including previous studies on the use of social media for teaching and learning in higher education, and theoretical frameworks of information technologies acceptance disciplines. After a brief overview of pedagogical affordances of using social media for teaching and learning, this chapter will explore the literature on social media in higher education in terms of students' and lecturers' attitude toward the use and adoption of social media for teaching and learning purposes. The chapter will then explore the major theoretical frameworks used to understand users' intention to use, adopt and accept an information system. The review of literature related to these theories is an attempt to explore and understand the key factors that influence and motivate students and lecturers to adopt and use social media to supplement their in-class learning activities.

2.1. Pedagogical values of using social media in higher education

Social media, as one of the mainstream research areas, has received most interest. The majority of literature in the field of education has focused on the educational use of social media by students, the use by instructors, and pedagogical values of social media. Since social media tools are designed specifically for communication and social interaction, the use of these tools for educational purposes do provides a number of pedagogical benefits that are useful for students and instructors in teaching and learning environments (Ferdig, 2007). Because of these pedagogical values, many higher education instructors have started to invest their time and effort into the technology to facilitate and enhance their instruction (Selwyn, 2010). Several studies on social media in higher education suggest that social media can be used in a classroom to support social learning (Ajjan & Hartshorne, 2008; Buzzetto-More, 2012) and promote interaction among students and instructors, which improves active learning (R. Taylor, King, & Nelson, 2012) and foster student-centered learning activities that are highly constructivist (Buzzetto-More, 2012).

One of the most commonly discussed benefits of social media in the literature is the ability to engage students with constant connectivity (Gikas & Grant, 2013), which in turn makes the learning available on demand (Buzzetto-More, 2012). This means the learning is no longer restricted by time and space (Hrastinski, 2006). With the use of social media, students have the ability to communicate with fellow classmates and instructor. Moreover, the convenience of constant connectivity provided by social media tools allows students to retrieve course content and access to information quickly (Gikas & Grant, 2013). According to Lee & McLoughlin (2008), the main reason for students to use social networking sites as education tools is that they can communicate and receive support from peers, at the same time, discovering and sharing knowledge can be done easily as well. The study of 64 students and 30 academics from Romania educational institution by Stanciu et al., (2012) found that “face to face” classroom communication can be leveraged by communication with teachers through social networking.

The ability to engage students in the learning process is another focused area of using social media in a classroom. According to Shih (2011) investigation of using social networking services in a hybrid-learning environment. The findings suggest that instructors can enhance students’ knowledge construction, increase student interest and engagement, and foster collaborative learning by incorporating Facebook and peer assessment in their taught courses. Junco, Heiberger, & Loken (2011) suggest that using of Twitter for academic discussion in an encouraging environment also had a positive effect on students’ grades, engagement and motivation. The findings of Webb's (2009) study found that an increase in the overall student engagement can be a result from using a variety of social media tools as part of the course to supplement the teaching and learning process.

Another frequently cited advantage of social media is its ability to foster collaborative learning among peers and other knowledgeable person outside academia (Ajjan & Hartshorne, 2008; Gikas & Grant, 2013). The use of social media provides students with ability to collaborate, discuss, and construct their understanding with classmates and instructors (Gikas & Grant, 2013). Stanciu et al.'s (2012) study confirms that students who use social networking sites can

participate in any study groups that they are interested in and sharing of material and knowledge can be done easily on these tools. Around 50% of students who responded to the survey believe that involvement in collaborative group work and sharing of knowledge are very important aspects of using social networking sites for learning. Moreover, Instructors can integrate social media in a number of ways to encourage collaborative learning in a classroom. For example, the use of Facebook group as virtual group space and blogs or YouTube as publishing space are unique forms of communication and community building for “collective intelligence” (Chelliah & Clarke, 2011). Churchill (2009) studies a graduate level course with using blogs for a full semester. The findings suggest that blogs have a potential effect in enhancing cognitive learning experiences. Moreover, the study of wikis use in a classroom environment by Moskaliuk, Kimmerle, & Cress (2009) suggests that it can support collaborative knowledge building processes for students which in turn help them to develop holistic information integration competencies.

2.2. Social media in Higher education:

Much of the literature on social media in higher education shows that social media tools have potential benefits for improving teaching and learning. However, those benefits cannot be realized if students or lecturers do not adopt and use the tools in their teaching and learning environment. Despite the pedagogy benefits of social media, the use of social media in higher education is technically still in its infancy.

2.2.1. Student’s attitude toward social media usage and their adoption for learning

The literature shows that social media tools are being adopted and used by some students across a board spectrum of university activities. The study by Barnes & Lescault (2011) found that the use of social networking sites is overwhelming in four-year colleges. The findings suggest that there are 456 four-year accredited U.S. institutions that are using some form of social media tools. Facebook is reported as the most popular tools and followed by Twitter. In a recent survey study of 3,000 students from across the US, the findings show that 90% of college

students use Facebook and 37% use Twitter (Dahlstrom, Grunwald, de Boor, & Vockley, 2011).

Even though many studies suggest that social media is used by many students for educational purpose, the usage is seemed to be limited and for social interaction rather than for supporting learning. Selwyn (2009) investigated the use of Facebook among 909 undergraduate students in an UK university and found that the main usages of this social networking tool are to exchange social support, and organize and manage their studies. Similarly, the study of British undergraduate students found that students used Facebook as “social glue” that helped them managed their university life (Madge, Meek, Wellens, & Hooley, 2009). Moreover, another survey of more than 1,000 college students in the US found that more than half of questioned students use social media to communicate with classmates about study or classwork. More than a quarter of respondents reported that they use social media for study and doing their assignments. A lower number of students said that they even used social media to contact faculty about study and classwork (Caraher & Braselman, 2010). Students seem to use social media to facilitate their studies, and exchange social support with friends rather than using the tools for collaborative learning (Madge et al., 2009; Selwyn, 2009).

While some students enjoy using social media tools for coordinating their studies, much of the literature suggests otherwise. Hartshorne & Ajjan (2009) conducted a study of 423 university students from all level to assess student awareness of the benefit of blogs, wikis, social networking and social bookmarking for learning and to better understand student's decision to adopt those tools. The findings show that most of the respondents acknowledged pedagogical benefits of using blogs, wikis, social networking and social bookmarking applications in higher education. However, the near majority of them did not use and did not plan to use either blogs (56%) or social bookmarking (71%) for learning. Even though social networks were popular among students, almost half of them did not use and had no plans to use social networks (46%) in educational contexts (Hartshorne & Ajjan, 2009). This shows that the awareness of benefit and usefulness of using social media for

learning is not the only key influencing the use and adoption of the tools among students.

However, the result from other recent studies show contradictory to Hartshorne & Ajjan (2009). In this case, students do not use social media in academic context because they do not perceive values or benefits of using social media tools to support their learning. For example, the study of the 432 students confirmed that students perceived using social networking is enjoyable, but they would not consider it as learning support tool since there is no added values in terms of enhancing their learning (Huang, Hood, & Yoo, 2013). Similarly, an exploratory qualitative study of 57 undergraduate business students by S. A. Taylor et al. (2012) suggests that students do not support the use of Facebook as part of their formal academic relationships with faculty, but the application of social networking as a concept in pedagogic practices may offers significant benefits and may work for students. The reasons for not using social media for formal interaction with faculty are that they consider social media blur their social and professional lives together, which should be separate. Secondly, professional community such as future employers, faculty and lecturers might have negative perception about the person from what they see on social networking sites. Lastly, the tools are not part of requirements to meet the course expectations, thus they perceive no necessity to use such tools in the course (S. A. Taylor et al., 2012). Another study of 213 British first year campus-based undergraduate students by Madge et al. (2009) further explains that even though they used social media for informal learning sometimes for organizing their studies, the use of Facebook for formal teaching purposes was not their ideal and they would not feel comfortable to be contacted by their tutors via Facebook for formal teaching purposes.

Therefore, the review of literature gives mixed results of how students perceive the uses and their usage of social media for learning purpose. On one hand, some students decide not to use social media for learning because they do not perceive any added values of the tools to their study. On the other hand, some students do acknowledge the pedagogical benefits of social media for educational purpose, but they still do not and have no plan to use the tools for learning. This means that

apart from pedagogical benefits of social media, there are other factors that influence students' attitude toward the use and adoption of social media for learning.

Moreover, the mainstream research on higher education has mainly focused on students' intention to use, their adoption, their reasons to use, and their usage of technology to support their learning, but only few studies have focused on the impacts of using such technology have on student's learning experience (Gikas & Grant, 2013; Hrastinski & Aghaee, 2012; Yuen, Fox, Sun, & Deng, 2009). In the field of social media, the number of studies is even lower. Therefore, there still remains a scarcity of research that explores the use of social media among students for educational purpose and its impact on student learning experience.

2.2.2. Lecturer's attitude toward social media usage and their adoption for teaching

Apart from students' engagement in social media, the usages of social media by faculty members in higher education are also spread across a board spectrum of university activities, such as academic, administrative, and support areas (Kelly, 2008). The majority of research conducted around the use of social media by lecturers mainly focus on understanding their perception of using the tools for educational purpose, intention to use the tools, their adoption and usage (Ajjan & Hartshorne, 2008; Moran, Seaman, & Tinti-Kane, 2011; Seechaliao, 2014; Stanciu et al., 2012; Zelick, 2013). For example, the study of 31 lecturers by employing diffusion of innovation theory to examine lecturers' behaviors and beliefs regarding social media in higher education (Seechaliao, 2014). The findings suggest that most lecturers are social media believer who considers videos, podcasts, and wikis are valuable tools for teaching, and it helps support collaborative learning. Moreover, Zelick (2013) conducted a study of 177 faculty members to examine their perception of the emerging online technologies on teaching and learning in higher education. The results suggested that the traditional face-to-face teaching method is preferred, but some faculty members generally utilized YouTube, Blog, Skype, Twitter, and Podcast in their courses. For example, assistant professors often use YouTube and Podcast. Adjunct faculty

members have not utilize these tools except for YouTube, and professors often use Blog, Skype, and Twitter. Moreover, nearly half of the faculty members reported that using online technologies improves the quality of teaching and enhances the student's experiences (Zelick, 2013).

Ajjan & Hartshorne (2008) report that while lecturers acknowledge the benefits of using social networking, wikis, blogs and social bookmarking tools to support their teaching and learning, the intention to use and actual use of these tools to supplement in class learning is very limited. Most respondents did not use and had no plan to use these tools in their courses. Only a small number of respondents planed to use the tools even though they did not use it at the moment. However, due to the nature of quantitative research, the reasons related to the intention not to adopt and use of the tools were not explored. Similarly, the study by Stanciu et al. (2012) suggest that teachers are reluctant about using social networking in education. Even though Facebook is the most used social network sites among teachers, only some of them recognize this tool as alternative environment to support learning. The main usage of social networking is for communicating and keeping in touch with friends and colleagues. Therefore, the usage of the tool for educational purpose is limited as to support communication in learning activities. However, the study does not explore any additional factors that influence this limited use of social networking sites for educational purpose among lecturers and how they actually use the tools in their courses.

In Ajjan & Hartshorne's (2008) study, apart from the key determinants of the adoption such as ease of use, usefulness, and compatibility; additional factor such as self-efficacy (training) also influence this limited use of the tools. This factor is also supported by Moran et al.'s (2011) study that highlights the lack of training is considered as a barrier for lecturers in adopting social media tools for educational purpose as well. In addition, Moran et al. (2011) also found that the amount of time required for using social media, privacy and integrity are additional factors that influence social media adoption in higher education. A near majority of the interviewed faculty members agreed that social media requires more time than they are worth.

Despite the concerns about privacy and intergity, and the issues of the amount of time require for training and using social media tools, the adoption rate of social media by lecturers is not affected very much. The majority of respondents are aware of most of the popular social media tools, and most of them are integrating these tools in their taught courses and also using the tools outside classroom as well. The usages of social media tools in their classroom include posting content for class, assigning student to view and read, and assigning student to post on the sites. Online video is the most used in the class and followed by podcasts and blogs. Facebook and Twitter are commonly used for personal but not in the class.

Again, similar trend can be seen from the majority of research conducted around the use of social media by lecturers. Much of the literature in this area is mainly focused on what lecturers think and their intention about using social media and their usage of the tools in teaching and learning. Though several studies reveal that lecturers are positive about using social media in their course to supplement traditional face-to-face learning, there is a lack of empirical exploration on how the tools can be incorporated into the current pedagogic practices, and what impacts the integration has on students' learning experience and lecturers' teaching experience.

Moreover, to understand the environment and the determinants that influence students and lecturers to adopt new technology to supplement their in-class learning, it is necessary to explore several models and theories of users' acceptance of information systems in different disciplines.

2.3. Theoretical Foundation

In Information Systems domain, the major models and theories for study individual user's acceptance levels toward information technology are the Theory of Reasoned Actions (Fishbein & Ajzen, 1975), the Technology Acceptance Model – TAM (Davis, 1989), the Motivational Model (Davis, Bagozzi, & Warshaw, 1992), the Decomposed Theory of Planned Behavior – DTPB (S. Taylor & Todd, 1995), and the Unified Theory for Acceptance and Use of Technology – UTAUT (Venkatesh, Morris, Davis, & Davis, 2003) to name a few.

Among those theories and models, the most popular and widely used theory for studying students' and lecturers' acceptance and adoption of social media in the higher education literature are TAM (Edmunds, Thorpe, & Conole, 2012; Ifinedo, 2006; M. K. O. Lee, Cheung, & Chen, 2005; Pinho & Soares, 2011; Rauniar, Rawski, Yang, & Johnson, 2014; Shittu et al., 2011). However, there are other models that can equally be used to understand the use, adoption, and acceptance of an information system, this model includes DTPB (Ajjan & Hartshorne, 2008; Hartshorne & Ajjan, 2009; Seechaliao, 2014), and UTAUT (Avci & Askar, 2012; Huang et al., 2013). DTPB provides a way to understand individual's actions into lower level belief constructs. This provides insights of the factors influence user behavioral intention and actual behaviors (S. Taylor & Todd, 1995). UTAUT proposes the holistic approach in explaining information technology adoption based on many psychological and social factors by synthesizing many of the above mentioned models and theories (Venkatesh et al., 2003).

Although these theories provide a comprehensive way of explaining the relationship among specific variables and their impact on users' behaviors, these theories may appear to be complex because they require many variables in order to reach a substance level of difference (Van Raaij & Schepers, 2008). However, TAM is the most simple, but robust enough to explore and explain the user's motivation to adopt a new technology such as social media. Since there are a number of revisions and extension to the TAM, additional constructs and complexity can be added to TAM for investigating and handling more complex problems such as social media, while being theoretically justified.

Moreover, apart from TAM from information system research, the Uses and Gratifications theory (U&G) from mass communication discipline is also a popular paradigm used to understand individual's acceptance and adoption of social media (Brandtzæg & Heim, 2009; Cheung, Chiu, & Lee, 2011).

2.3.1. The Technology Acceptance Model (TAM)

The technology acceptance model (TAM) is the result from the adaptation of the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) by Davis (1989) that

attempt to understand individual intended behavior in the area of information systems. In TAM, the user's intention to adopt a new technology is initially determined by three constructs, which are perceived ease of use (PEU), perceived usefulness (PU), and attitude toward using the system (Davis, 1989). Later, the behavioral intention (BI) is included as a new variable (Davis, Bagozzi, & Warshaw, 1989). Behavioral intention refers to the measurement level of individual intention to perform specific action (Masrom & Hussein, 2008). PU refers to users' perception of adopting a given technology will help them perform their action or task better. PEU refers to a degree or level of difficulty and effort required for users in adopting and using the given technology (Davis et al., 1989). Therefore, The main determinants of BI are attitude toward usage and PU. While attitude toward usage is affected by both PU and PEU, the PEU also has direct influence on PU (Davis et al., 1989). Thus, this means users will perceive the systems that are very difficult to use as less likely to be useful (Pinho & Soares, 2011). In other word, users are likely to adopt an easy to use information system, because they will perceive that system as useful than other.

There are a number of revisions and extension of TAM that proposed by various researchers in order to understand the users' attitude and usage behavior of social media. For example, Shittu et al. (2011) investigated students' attitude and their intention to use social software in higher education by using an extended version of TAM with the subjective norm as a new variable. Another study by M. K. O. Lee et al. (2005) is to investigate students' acceptance of an internet base learning medium and to understand motivators for explaining student' intension to use new technology. The model used in the study integrates the motivational perspective into original TAM by including an intrinsic motivator that is perceived enjoyment (PE). Ifinedo (2006) also expand the original TAM model by adding continuance intention as post-adoption construct and two external constructs, which are technology characteristics (ease of finding and ease of understanding) and user characteristics (self-efficacy and computer anxiety). The two external constructs are intended to influence the PEOU and PU. The study is to investigate the acceptance and continuance intention of use for Web-based learning tools among university students. Moreover, Rauniar et al. (2014) further expand the TAM to

gain a better understanding of the students' attitude and usage behavior of social media site. Some characteristics of social media such as entertainment (perceive playfulness-PP), critical mass of users (CM), capability of technology (CP) that can benefit the users need for certain activities, and trustworthiness (TW) are added to the original TAM. The findings suggest that the PU and TW of a social media site are important determinants of a user's intention to use of the social media, which in turn, is the indicator of the actual usage behavior of social media. These expansions of the TAM for social media are to increase its explanatory power to suite this new type of technology in higher education.

Therefore, the constructs from the original and extended versions of TAM such as perceive usefulness, perceive ease of use, subjective norm, ease of finding, ease of understanding, self-efficacy, computer anxiety, perceive enjoyment, perceive playfulness, critical mass of users, capability of social media, and trustworthiness are important aspects for understanding users' adoption of social media especially students and lecturers, and are the theoretical grounding for this study.

2.3.2. The Uses and Gratifications (U&G) theory

In mass communications research, the most widely used theory for understanding user motivations, choice, use, diffusion, adoption, and acceptance of media technology is the U&G theory (Katz, 1959). The theory focuses on explaining the reasons why certain media was chosen over alternative communication media and the motivators that influence particular media behavior to occurs (Brandtzæg & Heim, 2009; Cheung et al., 2011). In U&G theory, the intended behaviors of various media are driven by certain goals and needs of users. Thus, users are seen as goal-oriented and the major goals or needs for determining the use of virtual communities such as social media are for (1) information, (2) entertainment, (3) social interaction, and (4) personal identity (McQuail, 1987).

Cheung et al. (2011) use the U&G theory to explore the factors that drive students to use online social media tools such as Facebook. The study also employs social influence theory and social presence theory to examine the use of social media. The findings suggest that among the key values of the U&G theory, the social

interaction factor significantly affect the intention to use social media. Similarly, Brandtzæg & Heim (2009) conducted a study to understand why people use social networking sites. The study employs the U&G theory to identify motivational reasons for using social networking. The findings suggested that there are 11 different reasons and several sub-reasons that drive people to use social networking services. Among those reasons, the most important reasons are to get in contact with new people, follow by keeping in touch with their friends, and socializing. This motivational reason for using social networking can be used to get a better understanding of why students decide to use or not to use social media for learning.

3. Research Design

This chapter describes the methodology used in this research. It starts by explaining the research approach used in this research. It then provides an explanation of the research participant, and followed by the description of ethical considerations. Next, it describes data collection strategies, and it concludes with an explanation of the data analysis procedure.

3.1. Research approach

In the information system (IS) discipline, the major research paradigms for understanding any information systems in organizations are positivist, interpretive and critical (Myers & Avison, 1997; Orlikowski & Baroudi, 1991). By way of contrast to the positivist philosophical assumption, the interpretivists reject the idea that researchers and reality are separate entities (Weber, 2004). The interpretive paradigm believes that the knowledge of reality is interpreted and constructed by individual perception, which depends solely on internal experiences, background and culture beliefs such as language, shared meanings, and other artifacts (Bisman, 2010; Klein & Myers, 1999). In the interpretivists' view of the world, the reality is subjective and relativistic. This research employs an interpretivist paradigm in which the meaning of the real world understanding is constructed through perceptions of people that are sorted out through personal experiences and social world.

An interpretive paradigm is one of the main underlying epistemologies, which influences the qualitative research (Myers & Avison, 2002). Neuman (1997, p. 324) highlights the important of this paradigm to qualitative research as "qualitative social research relies largely on the interpretive and critical approaches to social science". Klein & Myers (1999) and Walsham (2006) suggest the interpretive paradigm as the most suitable method for studying information system in organizations because it can improve the IS researcher's understanding of the subjective individual thoughts and actions in social and organizational contexts. Therefore, this approach is relevant to this study because it can help the

researcher to explore, interpret, and understand individual perceptions, experiences and actions of students and lecturers who have used social media tools in their courses based on their university's context and learning experience. Based on the above discussion, the research paradigm that frames this research is the interpretivism, as it considered as the most appropriate approach for this study.

In terms of research method, interpretivists consider qualitative methodology to be the most appropriate research method. The qualitative research aims to make sense of a particular social situation, event, role, group, or interaction (Locke, Spirduso, & Silverman, 2007). Miles & Huberman (1984) explain that qualitative research is a process of investigating that allow researchers to contrast, compare, replicate, catalogue, and classify the studied participants in order to gradually understand a social phenomenon. Creswell (2009, p. 176) states "... qualitative research is a form of interpretive inquiry in which researchers make an interpretation of what they see, hear, and understand". This approach focuses more on explanatory of phenomena and how it affects the way people behave rather than exploring the truth (Rubin & Rubin, 2012).

This research investigates the role of social media in student-learning experience, which is an emerging topic; therefore this study is an exploratory in nature. As its aim is to explore this new phenomenon from the viewpoint of participants (lecturers and students), the qualitative research method is deemed as the most appropriate method for this research because by its very nature it allows the researcher to develop the meaning of the real world understanding. This provides a better understanding of complex psychosocial issues and useful for answering "how" and "why" the use of social media tools in a classroom for learning and teaching has contributed to enhance student-learning experience and improve class communication (Marshall, 1996a).

3.2. Research Participants

This research employed purposive selection to select and limit research participants to those students and lectures who are most likely to have experience of using social media to support their classwork. This selection method helps the researcher to answer the research questions with data that is obtained from the most productive sample (Marshall, 1996b). To obtain the quality of data from in-depth interviews and in a short period of time is another advantage of this method (Lincoln & Guba, 1985).

The students and lecturers from the Victoria University of Wellington who are known to have experience of using social media tools in their courses are short-listed through personal networks of the researcher and supervisor. Subsequently, the invitation to participate in the interview was sent out to candidates with the outline of research. Finally, sixteen individuals agreed to participate in the research. The study comprised of two participant groups: students and lecturers. The student group consisted two undergraduate students, and ten post-graduate students. These students are from five different disciplines that are business administration, public policy and management, laws, information management, and development studies. The researcher can note that the responses could be biased towards perceptions of post-graduate students. Since students were selected through two different study levels and from five different schools at this university, this selection offers insights into how students use social media tools to support their classwork at different levels and areas of study. Four lecturers from School of Information Management are represented the lecturer group.

3.3. Ethical Considerations

In accordance with the human ethics process of Victoria University of Wellington, the data collection commenced after the approval from the university HEC on 22nd August 2014. The interviews ran from 29th August to 24th September 2014. All interviewees were provided with a participant information sheet attached with the invitation email and prior to the beginning of the interview. The participant

information sheet described the objective of research, assured participants of the confidentiality of their responses. It also stated participant's right to withdraw from the research before data analysis began. All interviewees acknowledged and allowed the researcher to record 45 minutes interviews by using a digital voice recorder. Before the commencement of an interview, the researcher also obtains a signed consent form from each participant on the day of the interview.

3.4. Data Collection

The primary method of data collection for this research was face-to-face interviews with students from different study levels, and with academic lecturers at the studied university. Qualitative interview is one of the four basic types of data collection procedures in qualitative research (Creswell, 2009). The interview can be used to gather complex dynamic reasoning of students and lecturers regarding their use of social media for learning and teaching. The interviews are semi-structured. By using semi-structured interviews, participants have more opportunity to elaborate their experiences and perceptions of using social media in their class.

There are a total of 15 main interview questions. All participants were asked with the same set of questions, while the follow-up questions differed according to the answer given to the main questions. Moreover, at the end of the interview, participants were asked for further comments in order to capture any information that had not covered by interview questions. All answers were recorded by using a digital voice recorder. After that they were transcribed, and then the interview transcripts were sent back to each interview participant for review and verification in order to ensure the trustworthiness and rigor within this study.

3.5. Data analysis

Thematic analysis and a general inductive strategy were employed to the data in the interview transcripts. To get an overview and an understanding of the data, the summaries of each interview were created. Then interview data were coded based on a general inductive coding technique by Thomas (2006). Researcher developed,

sorted, and group common themes that emerged from each response through multiple readings of the interview transcripts. The Microsoft Excel is used to layout key themes and categories, as a way of getting an overview and an understanding of the emerged themes and their relationship. This process allows research to draw the conclusions from those themes.

4. Results

The purpose of this section is to present findings from the thematic analysis of semi-structured interviews of participants' experience about their usages and preferences of social media tools to support their learning activities, and facilitate their communication and interaction among students and lecturers. Moreover, this section also presents the findings about the impacts of using such tools on class communication and student learning experience.

4.1. The social media choices and uses among students and lecturers

From the thematic analysis of semi-structured interviews of students' and lecturers' experience about their usages and preferences of social media tools to support their learning activities, two themes of how social media are used to support studies emerged, which are the usages in class as formal learning and assessment (approved, and used by lecturers), and the usages as class supporting tools (informal, student-managed environment, and used by students only). The table below shows that lecturers mostly used social media tools formally in class. While students mostly used the tools as class supported tools, they also used the tools in class as well.

Social media preferences and their usage

	Lecturers		Students	
	<i>Used in class</i>	<i>Class support tools</i>	<i>Used in class</i>	<i>Class supported tools</i>
Social networking sites				
Facebook		✓	✓	✓
Twitter				✓
Media sharing sites				
YouTube	✓			✓
Creation and publishing tools				
Wiki			✓	✓
Blogs	✓		✓	
Social bookmarking				
Delicious			✓	
Internet messaging				
Hangout				✓
Skype				✓
WhatsApp				✓
WeChat				✓
Other tools				
Google Doc				✓
Dropbox				✓

Table 1. Social media preferences and their usages to support learning activities

4.1.1. Students' social media choices and usage

Students used a wide range of applications to support their formal and informal learning activities. These applications cover all ranges of social media tools such as social networking sites, media sharing sites, creation and publishing tools, social bookmarking, Internet messaging, and collaboration tools such as Google Docs, and Dropbox. Among these applications, Facebook, YouTube, Skype, Google Hangout, and Dropbox were the most frequently used.

Students reported that there are five major usages of social media in their courses, which are (1) used as a tool to support group work, (2) used for completing formal assessment, (3) used in class as resources, (4) used as part of the community, and (5) used in personal learning as illustrated in Table 2.

Supporting group work: most master students mentioned that social media tools were mainly used to facilitate and support their communication, collaboration, and

sharing of resources in group projects or group assignments. The usage of social media in this category is not part of the formal assessment, thus lecturers do not require students to use the tools for doing group assignment. The most heavily used tools in this category are Facebook as social networking sites, Internet messaging tools such as Skype and Google Hangout, and collaboration tools such as Dropbox.

One of the master student stated that his group decided to use social media to support the group project because most of them are fulltime workers and too busy to meet up.

I used it [social media] in the group projects... Most of my group members are full time staff, and they don't have time to meet together or discuss on the project, so we decide to setup group in social media so that we can communicate and share our work... (Student No. 9, Master student in Information Management)

More than half of the students reported that lecturers' encouragement is another reason that influences students to use social media to support group work even though the assignment did not require the uses of the tools. One student mentioned that:

I used it [social media] in the institution and policy process... Lecturer encourages us to use social media to help in the course activities. He encourages us to use the tools for discussion with our classmates. (Student No. 6, Master student in Public Policy)

	Social media usage to support classwork by Student				
	Support group work	Formal Assessment	Used in class (Not formal assessment)	Used in the community (Class group)	Personal
Social networking sites					
Facebook	✓			✓	
Twitter			✓		
Media sharing sites					
YouTube			✓		✓
Creation and publishing tools					
Wiki		✓			✓
Blogs			✓		
Social bookmarking					
Delicious			✓		
Internet messaging					
Hangout	✓				
Skype	✓				
WhatsApp	✓				
Facebook Messenger	✓			✓	
WeChat	✓				
Other tools					
Google Doc	✓				
Dropbox	✓				

Table 2. Social media usage by Student

Used for completing formal assessment: in this category, the uses of social media were integrated into the current pedagogical practices. Thus, students were required to use some forms of social media in order to complete the assignment. Only two students mentioned this kind of usage of social media in their courses. One undergraduate student in Business Information System reported that one of her course is about building a wiki for a company. Thus the formal assessment of the course is based on how well the wikis project is developed.

The use of Wiki is a project-based paper where the whole paper is to finish this project and you have a project partner where we both contribute to

create a wiki. So we post our entire project on to the wiki... (Student No. 2, Undergraduate student in Business Information System)

Another master student from Public Policy mentioned a similar scenario where his assignment was based on the information on social media. Therefore, to complete the assignment, he had to use social media such as Facebook and Twitter to gather information.

We have to choose the topic and go to different social media bases on the topic that we choose... So we look at the different kind of ICT and social media tools that they [the company] have used, for example, some they [the company] have used Facebook and twitter (Student No. 10, Master student in Public Policy)

Used in class: several students mentioned that they have used some forms of social media in their courses as resources or materials during presentation, or as part of a course as lecturers encourage, recommended, or require them to use. However, this usage is optional and not part of the formal assessment. For example, Honours student in Information Systems reported that her lecturer encouraged the use of Delicious, the social bookmarking tool, to the class as a new way to share information among students.

So at the moment I am doing the course where the lecturer encourages us to use Delicious a social bookmarking tool. So it's the first time that I had actually used that in the course. (Interview No. 4, Honours student in Information Systems)

YouTube and blogs were the most used in class as resources and course materials. Three master students stated that they had used YouTube during their presentation to support their argument or to back up their points. Only one master student mentioned about the blog usage in her course. The blog entries were used as reading materials in the course as to provide updated information of what practitioners are actually doing in the field of her study.

Used as part of the community: ten out of twelve interviewed students reported that most of their class, courses or programme had a private Facebook group for students who enrolled in that class or programme. Only two master students from Information Management did not have Facebook group from their classes. The Facebook group is managed by class representative, and every students in the class were added to the group. This usage is the most common way of using social media to support learning activities by students. It is informal because it is a student's initiative and only students are in the group. In some groups, lecturers are involved, but did not take part in the conversation. Thus, lecturers were in there for monitoring only. The group is used for asking, sharing, confirming, and clarifying course related information and questions by posting questions, reminders, announcements, ideas, and comments. Joining the group is optional, and it is not part of course formal assessment. The major reasons for students joining Facebook for learning are that most of their friends and contracts are on Facebook, Facebook is where they interact with their friends, Facebook allows them to share a lot of different types of media, Facebook is easy to access and more user friendly compared to Blackboard, almost all of the students are used to it, and students can get instant notification by using Facebook.

Used in personal learning: apart from using social media in class and for handling group project with classmates, nearly all of the students reported that they had used social media especially YouTube and Wiki to get a better understanding of the topics that were discussed in class. In this category, the students used social media tools to access resources and materials for learning. The students reported that they used blogs and YouTube because those tools have diverse and updated information and the information can be trusted if they are from academic sources. Eleven students mentioned that they used YouTube whenever they had difficulties in understanding the topics. Two students reported they used both YouTube and wiki.

So whatever there is a new terms or new concept, which I am not particular clear about, I use either wikis or YouTube to get a base understanding about it. (Interview No. 1, Master student in Information Management)

I use YouTube for explaining some lectures that I face the most difficult to understand. I can go back and look at it on YouTube and it helps me understand the language easier. It can provide more background and whole picture of the topic that I don't understand. (Interview No. 5, Master student in Public Policy)

4.1.2. Lecturers' social media preferences and usage

The choice of social media usage by lecturers were not varies. According to the Table 1, the interviewed lecturers reported that they only used Facebook, YouTube, and Blogs. Table 3 shows that the usage of social media among lecturers is very limited and it can be categorized into four main usage activities which are (1) used as resources in class, (2) posted content to class, (3) assigned students to read and view, and (4) assigned students to post.

	Social media usage to support classwork by Lecturer			
	<i>Used in class</i>	<i>Posted content to class</i>	<i>Assigned student to read/view</i>	<i>Assigned student to post</i>
Facebook	✓	✓		
YouTube	✓		✓	
Blogs	✓	✓	✓	✓

Table 3. Social media usage by Lecturers

Used in class: this is the most common use of social media in the class by all of the lecturers. In this category YouTube, Facebook, and blogs were used as course materials and resources. One of the lecturers stated that he used YouTube videos and Blogs posts as reading material for students in order to deliver the materials that focused on New Zealand context and on recent events within last 12 months

I direct students using links on Blackboard to blogs entries or YouTube entries where people have something to say because I find the academic writing in

the areas of ethics tend to be a bit of historical like they are not able to talk about what happen in the last twelve months and they are almost nothing available academically in terms of ethics for NZ situation and I focus a lot on NZ situation. (Lecturer No.3)

Facebook was mainly used for discussion and sharing the ideas among students outside the class. Lecturers used those online conversations in class as to further the discussion and to support their lectures as well. Three lecturers reported that they usually referred or used the students' discussion, posts, and comments on Facebook and blogs as examples during their lectures. One lecturer explained:

In the lecture, I will always pull up some example of the student posts and few comments, and I show and value their work to the class and then I engage them and talk about it and ask students to talk about their work (Lecturer No. 4)

Posted content to class: the usage of social media to publish new information for students by lecturers was very limited. The lecturers did not tend to use Facebook, YouTube, or blogs to post new content to the class very much except for posting questions for weekly discussion. Only two out of four interviewed lecturers reported that they posted materials on Facebook and Blogs. One lecturer reported that she used to post learning materials on Facebook for students, but she tried not doing that because Facebook is not the main and formal discussion board for the class and not every student has access to Facebook. Therefore, whenever she posted something on Facebook, she had to post that on Blackboard as well. Another lecturer stated that she and her tutors posted questions based on the weekly reading to the blog for students to answer before they attend lectures.

Assigned students to read and view: apart from using social media as course material and publishing new content to students, two of the lecturers reported that they also used social media as formal assessment that requires students to read and view articles on social media sites. One lecturer reported that he set the weekly assignment for students to answer the set of questions based on the

reading materials. The reading materials are from blogs entries or YouTube videos. Therefore, students are required to read or view those posts or videos before they can answer the questions.

I will direct them using a link on Blackboard and then I set weekly assignments and I will ask them to read that blog or watch that YouTube and focus on specific issues and I will ask them questions and they have to respond after. (Lecturer No. 3)

Assigned students to post: only one lecturer reported that she used blogs as formal assessment that requires students to respond to questions by posting answer to the blogs and commenting to other students' posts before the lectures. The questions are based on weekly reading materials. This usage was intended to prepare students for lectures and it also helped build up students' understanding and thinking toward formal assignments.

Before students come to the lectures they need to response to the blog questions and interact with each other. What that means is when they come to the class, they have been thinking about the readings to some extend. (Lecturer No. 4)

4.2. The social media interaction and communication

This section describes the usage of social media by students and lecturers for formal interaction and communication in class. The interaction and communication can be categorized into two major groups, which are student-student interaction, and student-lecturer interaction. The interaction and communication between students and lecturers through social media is very limited. However, there are several social media interactions and communication has been reported among the students within their circles.

4.2.1. Communication and interaction between students and students

The thematic analysis reveals that students used social media to communicate with their friends and classmates by (1) posting to social media groups, and (2) messaging their friends through social media tools.

Posting: all of the interviewed students who have used Facebook to support learning emphasized that they mainly posted to the Facebook group whenever they want to communicate or interact with the whole class about studies. Thus, the interactions are mainly about asking and updating course related information and notifications, sharing of the resources, and arrange studies. One Honours student reported that her main communication and interaction medium was a Facebook group.

Generally we do everything on the private group page because you don't know your classmates that well sometime. It's a good way to add people temporary to put up link, to share YouTube videos, to share an update documents when we don't use Google docs. In some cases we just put up our files to the Facebook group and that way is like collaborating as well (Student No. 4, Honours student in Information Systems)

Messaging: four of the interviewed students reported that when they were working on a group project, they interact and communicate with group members by messaging them through Skype, Google Hangout, and Facebook Messenger. Two master students reported that because they did not use Facebook in their class, the instant messaging is the only way for them to communicate and interact with classmates and team members. Moreover, two of the students mentioned that even though they used Facebook group for the whole class, they also used social instant messaging apps like WeChat and WhatsApp for real time communication with team members.

With my classmates sometime we use Google hangout, or Skype. When we want to have one to one discussion we use Skype. And whenever we need to send out the message to the team we just use WhatsApp. Social Media mostly

used among classmates and friends network (Student No. 1, Master student in Information Management)

4.2.2. Communication and interaction between students and lecturers

4.2.2.1. Students-lecturers interaction

Almost all of the interviewed students mentioned that they never used social media to contact their lecturers. The majority of the students reported that they used formal communication channel, such as Blackboard, email, text, and face-to-face to approach the lecturers. However, only one student reported that he used social media to contact his lecturers by messaging or calling using Skype whenever he had problems or difficulties.

I use Skype to communicate with lecturers sometime. When I don't understand how to deal with my assignments, so I Skype and ask them how to approach the assignment because the question is not clear.

Some lecturers they keen to use voice chat like telephone, some lecturers prefer to leave questions or messages on their Skype account, and then they will reply later (Student No. 6, Master student in Public Policy)

Most of the students did not directly discuss the reason why they did not use social media to interact with their lecturers. However, few students reported that communication through social media seems to be inappropriate because lecturers do not normally use social media or they might not be interest to use the tools for communication.

From my perspectives, I don't think that the lecturers are interested in using social media tools to communicate directly with students (Student No. 9, Master student in Development Studies)

I think there is scope... I just don't interact with them using social media because I have feeling like they're very respectable people and also most of the

lecturers don't normally use social media (Student No. 10, Master student in Public Policy)

One student expressed that it is not a common practice to use social media to contact lecturers, and that why she did not use it.

I don't know, I know that some of my lecturers are on Facebook, but I haven't added them as a friends I guess it seems weird. Facebook is for your peer group (Student No. 11, Master student in Development Studies)

When asking students' opinions about lecturers use social media to communicate and interact with them, nearly half of the students felt comfortable with the idea. Two of the students highlighted that they would be happy if lecturers to contact and communicate with them through social media.

It would be good if lecturers are keen to use social media for communicate with me, I would appreciate that (Student No. 9, Master student in Development Studies)

Yes, I would interact with them if they open and keen enough to use social media to communicate (Student No. 10, Master student in Public Policy)

One student argued that it would improve the relationship between students and lecturers, and he has no problem with lecturers to communicate with him using certain tools of social media, but not for Facebook because of privacy issue.

I think it would be easier and faster, and relationship with lecturers would be closer. I have no problem with lecturers using Skype to contact me because there is not much story of myself on the Skype, but I have to think about when lecturers want to add me as a friend on Facebook (Student No. 8, Master student in Information Management)

4.2.2.2. Lecturers-students interaction

The interaction and communication between lecturers and students are all depended on the features and characteristics of social media tools that lecturers used and how they used them in the class. In the case of Facebook, all of the lecturers who integrated Facebook as an informal discussion board highlighted that if there is formal communication to the whole class about the course, they would mainly use Blackboard to announce that to the class because they need to ensure that every student would receive the message. However, if there were additional learning that support in-class learning, they would interact and communicate with students mainly by responding to students' comments on the Facebook group. Moreover, both of the lecturers argued that since Facebook allows students to send private instant messages, there is a number of students who used that feature to reach them. However, one lecturer confirmed that she did not reply or respond to this kind of communication because it is not professional.

Personally I don't response because to me it's not professional, if you need to contact me, you can contact me via my work email not Facebook. The discussion group is different story... but private messaging is just I don't think it is professional at all (Lecturer No. 2)

Another lecturer who also used Facebook in her courses explained a different practice that is she did responded to the private message on Facebook, but she also reminded them to use the formal communication channel to approach her next time.

...there are some private messages instead of emails. I didn't quite appreciate it, but I would reply them and remind them that email would be the best if you need to get in touch with me (Lecturer No. 1)

In the case of blogs, the main interaction is to respond to the students' comments. One lecturer who incorporated the blog into a weekly discussion highlighted that she did interacted with students through the blogs by commenting on students'

posts sometime. However, with more than hundreds of students, responding to comment is not effective.

Yes using the blogs, but I more encourage them to communicate with each other. But I sometime come in and comment. But with more than 100 students, it's not easy to work out how to do that (Lecturer No. 4)

Another lecturer reported that even though he used blog and YouTube in his course, he did not interact and communicate with students using social media. He highlighted that the way he used social media in his course was to deliver course materials to students only, and he personally did not perceived any benefits of using social media to interact with students. Therefore, there is no communication and interaction over social media between him and his students.

Communicating with students I use announcement function on Blackboard because it can generate an email to students at the same time. So in that way I can be sure that students are getting those announcements. Otherwise, face to face, email and telephone.

I see no point in using new technology unless it provides values beyond what I am already doing. General speaking, I don't want endless communication with my students (Lecturer No. 3)

4.3. Perceived impacts of using social media to support learning activities on class communication

Since almost all of the students mentioned that they used social media to communicate with classmates only, and when asking about the impacts of using social media on class communication, therefore they discussed only impacts on class communication between students and students. However, lecturers who interacted with students using social media suggest that using social media to support class activities also impacts class communication between students and lecturers as well.

4.3.1. Perceived impacts on student-student communication

By iteratively analyzing the interview data, almost all of the students and lecturers mentioned classroom interaction, face-to-face communication, and classroom relationship are the most affected aspects by the social media usage for supporting class work. Only one student perceived that there is no impact on face-to-face communication at all.

For classroom interaction, most of the students argue that social media make communication and interaction among classmate easy, real-time, instantly, and available on demand.

Communicating with my team members and everybody is easy and in real-time. I can communicate to them and there weren't any problems even though we were having class only the evening. We can talk to each other during Saturday and Sunday. So that really helps (Student No. 1, Master student in Information Management)

However, there are some drawbacks as well. One student reported that communication over social media is not clear which can lead to misunderstanding, and in some cases, online communication cannot deliver your expression like face-to-face communication.

When you communicate [using social media], it's quite hard sometime to understand what the second or third party is saying when they talk. The communication is not clear during the voice or video chat.

Using Social Media to communicate cannot express the feeling like face-to-face communication. Sometime we need to make sure that we understand when we using Facebook or Skype (Student No. 6, Master student in Public Policy).

For the classroom relationship, most of the students and lecturers noticed that by using social media to supplement in-class learning, students get to know each

other and working together because they know students who are in the same class and that improves access to their friends in the same course. This helps build up a relationship with new classmates. In addition, the majority of students commented that social media makes students in the same class closer, and friendlier, and creates family-like environment.

I think it's more positive for me because I can increase relationship with other students. It's really help me when I have to approach some difficulty in learning because I can keep contact with many students in the same time (Student No. 5, Master student in Public Policy)

It makes us feel more friendly with one another and make more family environment (Student No. 12, Master student in Development Studies)

However, only one student argues that using too much of social media to communicate with your friends would make you isolate from the class because you can communicate and interact with classmates from anywhere and anytime. This means you do not have to come to class.

Using SM too much make you isolated. The atmosphere is not quite like in the classroom where we meet people and discuss... Now using social media for learning, we can stay at home and communicate with classmates. Who are busy with their jobs can ask classmate on Facebook and Skype but the atmosphere are differed from classroom (Student No. 6, Master Student in Public Policy)

For face-to-face communication, only two students noticed the impacts. One of the students perceived that using social media for learning makes students discuss and talk less during face to face sessions because students will depend more on Facebook to ask questions.

...probably make communication less because you don't really talk to people face to face that much anymore. If I have a question I just message you on

Facebook later to avoid personal contacting (Student No. 2, Undergraduate student in Information Systems)

In contrast, one master student argues that using social media for a group project helps him to discuss better during the face-to-face meeting because he already known team members from online group discussion, and this make he feels more comfortable to talk to them face to face.

In last trimester I didn't know any of my classmates and then after we were assigned to the group project. We started to communicate firstly through social media, and after that when we met in a classroom, we get to know each other faster because we used to communicate already (Student No. 8, Master student in Information Management)

4.3.2. Perceived impacts on lecturer-student communication

Overall lecturers expressed that the usage of social media helps improve students' participation, the quality of class discussion, and delivery of lectures. One of the lecturers argue that social media usage offer students a new way to participate in class activities.

It helps people who may not have a voice in the classroom to get a voice (Lecturer No. 4)

Three of the lecturers expressed that by using social media to support learning activities the quality of discussion is improved because students are more comfortable to give their opinion online and they are more prepared to contribute during face to face discussion.

So the discussions are really good on Facebook because people are opinionated and I find that students find it's easier to share their opinion online. So we got more quality discussion on Facebook as oppose to in class face to face. If person B disagree with person A, it's easier for person B to say disagreement on Facebook (Lecturer No. 2)

I have noticed that the more I integrate social media in the face-to-face session, the more quality discussion go on (Lecturer No. 4)

Moreover, Another lecturer mentioned that the incorporation of the blogs into weekly discussions helps students prepare for lectures that encourage them to contribute to the class

...when students come to class they always posted on the blogs. So they are more prepared to contribute to the classroom discussion. And while in the class they can pull up the blogs and look at it. So they can look at the ideas from other people as well as their own (Lecturer No. 4)

Furthermore, one of the lecturers provided examples of how she used Facebook group to facilitate delivery of lectures and to check students understanding.

...when I gave lectures on Cyber security I use Facebook as example to retrieve public information of students and share it with the class to prove to them and to make my point across about how secure is the Facebook that we're using.

It assists me in relating more to the students, I can look at their profile and see what kind of students they are, I can see who are addicted to Facebook or not and those are usually the clever one. So it's easy for me to pick on them... So at least it gives me the indications about whether these students are absorbing information that I was talking about in the lecture.

(Lecturer No. 2)

4.4. Perceived impacts on student learning experiences

This section describes students' and lecturers' perception about how the usage of social media for supporting learning activities can impact student-learning experience. Six key themes of perceived impacts on students learning experience were found, which are learning ability, students' engagement, communication and collaboration, problem solving, access to information, and productivity.

4.4.1. Perceived impact on students learning ability

Almost all interviewed students positively mentioned that the usage of social media for learning in any categories (used as a tool to support group work, used for completing formal assessment, used in class, used as part of the community, and (used in personal learning) improves their understanding of the topics, and makes learning easy. One of the students expressed that using social media for learning helps he learns better because social media make things simpler and that way he can understand better.

In general it [social media] gives a lot of simplicity and it make us easy to understand about the topics while the lecturers present it.

I find using social media helps me learn easily on the particular topics, give a better understanding, having different perspectives ...so that help us a lot (Student No. 1, Master student in Information Management)

Whilst the usage of social media for learning can improve learning ability of students, it also can become distraction and negatively affect learning ability as well. Two of the students expressed concern that using social media in class in inappropriate way can distract their learning.

I think it gives you both good and negative learning environment. It can enhance your study, but sometime using social media during the class to get in touch with your friends... then it become problems and it can become distraction for some students. (Student No. 8, Master student in Information Management)

I don't know if sometime I get distract because normally when I access to social media, I might want to talk to my other friends and I may not be studying... (Student No. 5, Master student in Public Policy)

4.4.2. Perceived impact on the students' engagement

Another important impact of using social media in class is that social media provides an opportunity to increase students' engagement by making class more interesting to students with its interactive features, providing students with encouragement to study, and offering a variety of learning to students. One of the students mentioned that social media allows students to approach learning differently, and that makes learning more interesting as oppose to one-way communication like Blackboard as the learning management system.

The use of blackboard after sometime it becomes boring. So it's like one-way communication and the same frequency, same volume, everything we hear is from the same person. But with the social media concept, we can depend up on various people and we can get more information from various aspects, so this will helps (Student No. 1, Master student in Information Management)

Similarly, one of the students expressed that social media make class more interesting because new and very interesting materials are available on a Facebook group, especially YouTube videos.

It just keeps me more interested because lots of really interesting things are being posted by my classmates and it just makes me feel more supportive. And in terms of YouTube, it engages me in class (Student No. 12, Master student in Development studies)

4.4.3. Perceived impact on communication and collaboration

Communication and collaboration are two main aspects of students' learning activities. Almost all of the students claimed that social media enhance their ability to communicate with friends. The majority of students mentioned that by using social media to communicate and collaborate with classmates, they are able to communicate more freely with friends, classmates and lecturers. They can discuss and share ideas, topics, and course related information anytime and anywhere. This helps update and notify them about studies instantly if their classmates share

or post something to the group. Two of the students expressed that by using social media to support class activities, they can further the learning outside the classroom.

I think it will help further show that education is 24/7 thing, you don't just go to class to learn, but you're learning all the time (Student No. 12, Master student in Development Studies)

I think it's good and very convenient; we can work anytime and anywhere. The mobility feature is good (Student No. 8, Master student in Information Management)

4.4.4. Perceived impact on student problem solving

Half of the students mentioned that social media improves their ability to solve learning difficulties because social media provides a comforting environment and accommodate learning. This makes students felt more comfortable when asking their friends for help. One of the lecturers highlighted how social media accommodate students in terms of asking questions to their classmate.

I notice they are more collaborative because they can ask questions to the groups of friends without worry about if it's a bad question or good question, they don't worry about whether they asking a stupid question. So students can reach out, that is social aspects of learning (Lecturer No. 1)

4.4.5. Perceived impact on information access

Another important impact of using social media for class activities is that it allows students to have access to variety forms of information. Nearly half of the students reported that social media improves their ability to access more information in various ways. Most of the respondents in this group claim that social media offers another avenue for information access and retrieval. One of the students expressed that using social media to gather information for his research is very effective because now he has immediately access to information related to his topic that difficult to access and not available in written form.

In my country some of the issues have never been written, but I can only manage to find those information on Facebook. So in that way, social media like Facebook helps me get data and information, which I need to do my research or I can just message my friends back from home to do interview with them, online. So that's how I see social media play the big part in my context (Student No. 10, Master student in Public Policy)

Moreover, another student explained that before he approached classmates for group study, he used Facebook to check his friends' status to identify their mood, and this helps him to pick the right time to approach them.

I can apply it to facilitate the way I study. It allows us to access more than daily life information, for example, we can know the mood or the moment that our classmates are ready to do some classwork with us because they will post something and we can see some informal notifications like emoticons so we can decide when to approach (Student No. 9, Master student in Development Studies)

4.4.6. Perceived impacts on student productivity

Whilst discussing the impacts of using social media for learning, a small number of the students did mention productivity impacts that they perceived as it affects their learning experience. Four of the students reported that using social media for class affect their productivity. Even though the students did not further explained about it, one of them mentioned that social media helps her work faster.

It didn't impact my understanding of the course at all. It just helps me to get the work done faster. You're more likely to get a better grade because you're more contacted with each other (Student No. 4, Honours student in Information Systems)

One of the students argued that social media make learning easier, which in turn increase procrastination for her. Another student mentioned that by using social media to help with class activities, his learning style had changed from offline to

online. Again the students did not further explain whether this change is negative or positive changes.

Before I rely on borrowing books from library, but after I start using social media for support my learning, I search for information on YouTube or Google and read them online (Student No. 6, Master Student in Public Policy)

5. Discussion

This chapter presents discussion and analysis of the results presented in the previous section in order to answer the research questions, which is to get insight into how social media was used to support learning by students and lecturers, and its impacts on class communication and students' learning experience.

5.1. How does university lecturers' choices and uses of social media compare to students' choices and uses?

The most frequently used tools among the students are YouTube as learning resources, Facebook as an informal discussion board for course related information, questions and clarification, Skype and Google Hangout for small group communication and discussion, and Dropbox as collaboration tools for group work.

While the majority of the students argued that YouTube is the most important source of learning site compared to other tools, there were major differences in the usage of other social media tools among students from different disciplines. For example, two master students in Information Management did not mention any usage of Facebook to support their learning; they mainly used Skype, Google Hangout, and Dropbox to facilitating their group projects. In contrast, master students in Development Studies, undergraduate students, and honours student were heavily relied on Facebook for communication and collaboration among students. Moreover, Master students in Public Policy reported that they used those tools equally. For example, Skype and Google Hangout were used for group communication, discussion, and organizing study. Whereas Facebook was used to share information related to assignments, group project, and class in general. Dropbox was used for collaborating the documents, or other material for group projects. This shows that the usage of social media by students is varied and depended on the requirements of the courses and assignments. Students used different tools for different purposes and activities in class. The main activities for social media uses in class are for communicating, discussing, sending instant messages, sharing (documents, files, ideas, and information), posting (questions,

reminders, announcements, ideas, and comments), collaborating, and searching information. These activities are the factors that drive students to use online social media tools. These factors are also supported by existing literature which highlights the social interaction factor of the U&G theory significantly affects the intention to use social media (Brandtzæg & Heim, 2009; Cheung et al., 2011)

The research findings show that students did not use social media for facilitating their group studies and exchange of social support only, they also used the tools for collaborative learning with their peers. However, the learning almost happened outside the class and in an informal way. This is the most common form of social media uses among post-graduate students. However, for undergraduate students, the uses of social media are mainly for exchanging of course related information, questions and clarification. Apart from using social media in class to collaborate with classmates, social media was used for personal learning by students as well. YouTube and wikis are the most used tools for personal learning. The students used those tools mainly for gathering background information on topics that were discussed in class and information for doing assignments.

For lecturers, social media tools used for learning were very limited. Lecturers used only Facebook, blogs, and YouTube. The main usages are for facilitating class discussion and delivering course materials. However, the use of these tools in class was not fully integrated into the actual learning, they were partially used in class. For example, YouTube and blogs are used as resources for teaching. The usage of Facebook by two of the lecturers was described as an informal discussion board, and it was not part of the formal assessment. Therefore, students can see it as an option and would not pay attention to it. The most important aspect of social media for learning is that there are enough people contributing and collaborating to make it useful. One of the lecturers who used Facebook in their class mentioned that Facebook was not used for collaborative learning very much compared to last year; it was used only when students need to find answers or want to clarify something. While there are three social media tools used in class by lecturers, only

blogs that had been integrated into the current pedagogical practices as formal assessment.

The choices of social media tools used in class by lecturers somehow corresponding to the choices of tools used by students except for blogs which is not popular amongst the interviewed students. Two of the lecturers explained that they selected Facebook and Twitter as tools for an informal discussion board because they are the most used and popular among students, and students are used to them. Students, however, picked Facebook instead of Twitter. However, the decision to use blogs and YouTube by other lecturers seem not related to students' preferences. One lecturer mentioned that he decided to use blogs and YouTube because they provide update information that related to the course. Another lecturer explained that she selected blogs because it would accommodate students to get the discussion go on and this would help build understanding toward the formal assignment for students. Findings of this research show that perceived usefulness, critical mass of users, and the capability of social media appear to be the key factors that influence lecturers to use certain tools of social media in their class.

5.2. To what extent do students and lecturers communicate and interact using social media?

Communication and interaction between students and lecturers using social media described in the previous chapter were categorized into three major groups of communication and interaction: student-to-student, student-to-lecturer, and lecturer-to-student. While the interaction and communication between students and lecturers through social media is very limited, there is a number of social media interactions and communication among the students and their peers.

The analysis of interview data reveals that the general uses of social media mostly for informal collaborative learning. The interviewed students mainly used social media to support their group work, and to communicate and interact with classmates informally outside the class. Therefore, their main interaction and

communication is among their peers within the course circle. The thematic analysis shows that students mostly used social media to communicate, discuss, send instant messages, share study resources, post (learning materials, questions and reminders), collaborate, and search information to and with their friends. The strong student-to-student interaction using social media may be as a result of many group assignments, the nature of the courses, or encouragement from lecturers that require students to work and collaborate with one and another. However, this study did not focus and explore the issue in details.

In terms of student-to-lecturer interaction and communication, almost all of the students expressed that they never used social media to approach their lecturers due to several reasons. Firstly, they worried about using social media to communicate with lecturers would cause them any inconveniences because the students assumed that lecturers are not interested to use the tools. Secondly, the students perceived that lecturers do not use social media at all, thus it is difficult to approach them when they do not have online presence. Finally, the students perceived that social media such as Facebook is for personal and friends only. Therefore, using the tools for professional and formal interaction would seem to be inappropriate. However, among twelve students only one student used social media to communicate with his lecturers regularly. He mentioned that his lecturers do use social media for teaching and they are keen to use the tools to communicate with students.

In terms of lecturer-to-student, their interaction and communicate were limited to commenting on students' posts. Almost all of the lecturers reported that they interact and communicate with students using social media only by responding to comments on Facebook group or blogs. In some cases, students did contact two of the lecturers through private message. However, one of the lecturers did not respond because it was inappropriate and not professional. Another lecturer did not appreciate the approach, but the lecturer did reply to students.

The lack of interaction and communication between students and lecturers may result from the limited uses of social media for learning in class by lecturers and

students. The findings of lecturer-to-student interaction and communication also support this. From the findings it can be seen that when the lecturers use social media for class, they normally interact and communicate with students using those tools. For example, the use of Facebook for class discussion board is one example. Even though, it was not part of the formal assessment, the lecturers did respond to students' comments and posts. Similarly, the use of blog is for formal assessment as weekly discussion. The lecturers and tutors post questions and respond to students' answers. However, apart from formal usage of the tools, the lecturers did not use social media tools to communicate with students. For example, the lecturers did not appreciate the use of Facebook private message. In the case of blogs, there are no other social media tools were used as communication channels. Moreover, the informal uses of social media for learning by students also isolate students and lecturers further. This means that the usage of the tools was within student groups and lecturers did not involve or participate in the conversation or discussion. Therefore, their interaction with the student groups was minimum.

From analysis of the interview data, the students perceived positively about lecturers use social media for communicating and interacting with them. They perceived that using social media with lecturers would benefit their studies and improve their learning experience. In contrast, the lecturers would not welcome endless and 24/7 communication with students.

5.3. Is class communication improved by using social media?

The usage of social media tools to support learning both negatively and positively affects class communication. By iteratively analyzing the interview data, classroom interaction, face-to-face communication, classroom relationship, students' participation, quality of class discussion, and delivery of lectures are the most affected aspects of class communication by the social media usage for supporting class work.

The most commonly discussed impact on class communication of social media usage for supporting class work is better classroom interaction. Even though there

is limitation of online communication in terms of emotional expression, social media offers constant connectivity. This means that communication among their peers and lecturers is no longer restricted by time, space, and within a classroom.

Moreover, the findings show that using social media in class helps students build up a new relationship with classmates that they did not know before and that make classmates closer and friendlier. This also improves face-to-face communication because they used to communicate with one and another, and they get to know each other from an online group before they meet up. The connection and relationship build up faster in this way. However, there are some concerns about relying too much on social media that can separate individuals from the group and that make students feel isolated and make less face-to-face communication because students can communicate, interact, and discuss with friends using social media tools.

Furthermore, some students are shy during face-to-face session, and they would not like to participate and contribute to class activities. The findings from the previous section show that students and lecturers used social media in several ways for class learning activities. These usages offer students different ways to participate and contribute to class activities. This might improve students' participation because, for some students, they are more comfortable to do things online. Adding to the belief that students can now participate and contribute to the class in different ways and by sharing and discussing opinion online, it would help them prepare for lectures. This would improve the discussion both during lectures and on the online community because students are more prepared and comfortable to discuss their opinions to the class since they had already discussed with their classmates online. Therefore, using social media for supporting learning creates a comfortable environment for students to reach out to their friends and accommodating environment for participating and contributing to class discussion, both online and during face-to-face sessions. Overall, the lecturers and students expressed that the usage of social media helps improve class communication.

5.4. How do social media choices and communication using social media between students and lecturers affect the student learning experience?

The impacts of using social media for learning and communication addressed in the previous chapter were categorized in six themes, which are learning ability, engagement, communication and collaboration, problem solving, access to information, and productivity. These impacts are also supported by existing literature which highlights increased student engagement, improved communication, and better collaborative learning are pedagogical benefits of using social media for learning (Ajjan & Hartshorne, 2008; Gikas & Grant, 2013; Shih, 2011; Webb, 2009).

Students' choices of social media applications are diverse in order to support and facilitate different requirements of their formal and informal learning activities. The main usage is for communication with classmates. With connectivity and ease of communication offered by social media, almost all of the students reported that they are able to communicate more frequently with friends, classmates and lecturers without the boundaries of time and space. This ease of communication improves their ability to discuss and share ideas, topics, and course related information. The connectivity helps students to reach out to their classmates, which result in a boarder and a wider network of students in the same circle. This would increase their ability to collaborate with more students in the same class to get better answers, ideas, and discussion, which create better collaboration experience. Even though the interaction and communication between students and lecturers were limited, most of the students did not find it affected their learning experience because they were mostly communicated with their peers. Five students mentioned that it would benefit them if they are able to communicate with lecturers using different forms of social media.

Moreover, when classroom interaction, face-to-face communication, and classroom relationship are improved, two of the lecturers stated that this creates a comfortable environment for students to reach out to their friends for helps. This

allows students to access a better and larger pool of knowledge for solving their studies difficulties. With connectivity and ease of communication, the majority of the students mentioned that they can ask questions to many classmates all at once within their circles, and at the same time they have options to post the questions to the group or send them through instant messages. Therefore, there are varieties of options for asking for help from classmates and instructors, and the feedback is almost immediate. However, most of the students reported that they normally asked only trivial questions that related to course and assignment to their friends. For other formal inquiries, they used formal approaches to ask lecturers. Therefore, the social media choices and communication using social media by lecturers did not affect their ability to solve learning difficulties with their friends.

With the use of YouTube and wikis in personal learning, eleven students expressed that the tools provide access to a variety of information in different forms. This becomes another avenue for information access and retrieval. The information provided by social media such as YouTube and wikis is much more rich, simple, and easy to digest as opposed to information from textbooks and academic journals. Moreover, two of the students mentioned that the information can be trusted if it comes from academic sources such as lectures from other universities. Moreover, with the use of social networking (Facebook and Twitter), and Internet instant messaging (Skype, Google Hangout, Facebook Messenger, and WhatsApp), it allows students to communicate with classmates anytime and anywhere. Two students mentioned that this allows them to receive instant updates and notifications about topics, assignments, and course related information. Since using Facebook for learning is like merging professional space with private life, therefore, one of the students mentioned that Facebook allows students to be aware of other students' emotional status before approaching them for group work. This information cannot access elsewhere.

With better communication and connectivity, better collaboration, richer discussion and immediate information access, the students' productivity can be improved because whenever students have learning difficulties, they can

communicate and ask their friends anytime and get respond almost immediately. Four of the students reported that using social media for class affect their productivity in terms of time saving, improved working speed, increased procrastination, and changed of learning style.

Moreover, by using different tools of social media, students are exposed to different forms of learning. With the usage of blogs, students are engaged in discussion with classmates and the visibility of different perspectives from other students engages them even more. The usage of Facebook helps update students with a lot of interesting materials posted by other students. One of the students mentioned that the richer information provided by YouTube in the form of videos, when use by lecturers can make the lectures much more interesting as oppose to power point presentation. All of these are features of social media that used by the lecturers in learning activities and within a classroom in order to make the class more interesting and engage students in learning.

Finally, the social media choices and communication using social media between students and lecturers also affect students learning ability. Almost all interviewed students positively mentioned that the usage of social media for learning in any categories and communication using the tools improve their understanding about the topics discussed in class, assignments, and course material, and that makes learning easy. This is because social media makes communication among friends and instructors easy, expands students' network, and allows access to a variety of information. This allows students to access background and basic information of new concepts or topics that they are unfamiliar quickly and easily, provides boarder view and shows different perspectives of the topics. With the uses of YouTube and Facebook, students get richer, interactive, and recent updated information about certain topics. Whenever students have problems and difficulties, they can reach out to their friends and ask for help easily.

5.5. Does social media supported classwork enhance or diminish the student learning experience?

Analysis of data showed that the uses of social media to support classwork help facilitate learning activities such as communication, collaboration, discussion, seeking clarification, and information access and retrieval. While there is a number of negative impacts of using social media for learning activities on class communication between students and lecturers, and on student learning experience, nine students mentioned that using social media to support class activities improved their learning ability in several ways as discussed in previous sections. Two students expressed that it did not affect their learning directly, but it improved their ability to access information, and communicate with their classmates. This means that by using the tools, they are able to discuss, collaborate, and share studies resources with classmates better. One of the students stated that the learning experience could be greatly improved if the lecturers integrate the tools into the learning properly and students used the tools well. Moreover, three lecturers argued that using social media for classwork benefit students. One of the lecturers mentioned that it helped students in terms of knowledge sharing. Students were able to share any new knowledge and resources to class as the lecturer said social media “provides collaborative space for students to share knowledge” (Lecturer No. 1). Another lecturer expressed that social media brought the class closer and that helped to build better collaboration because students are comfortable with one and another. The findings of this study show that the use of social media to support classwork can enhance the student learning experience even though the students used the tools for informal collaborative learning more than formal learning. With the right pedagogical integration, social media can further benefit both students and instructors.

6. Conclusion

The purpose of this study was to explore what role social media plays in New Zealand higher education and particularly to understand how such emerging technologies usage to support classwork impact student learning experience and class communication. Through conducting sixteen semi-structured interviews of twelve students from five different study disciplines and four lecturers from School of Information Management, the study identified two major usages of social media to support learning activities, used in class, and used as class supporting tools, five key usage activities for students and four major usage activities for lecturers. Moreover, the study identified several social media interactions among students, but the interaction between students and lecturers was minimum. In addition, classroom interaction, face-to-face communication, classroom relationship, students' participation, quality of class discussion, and delivery of lectures are the main themes of perceived impacts on class communication. Six themes of perceived impacts on students learning experience were also found, which are learning ability, engagement, communication and collaboration, problem solving, access to information, and productivity.

The results showed that students' choices and usages of social media applications are more diverse compared to the lecturers. The usages and preferences of students from different disciplines are varied. However, further studies are required to explore the differences. Moreover, the most frequently used tools among the students are YouTube, Facebook, Skype, Google, and Dropbox. The main usages are for informal collaborative learning with their peers, facilitating their studies and exchange of social support. For lecturers, only Facebook, blogs, and YouTube were used to facilitate class discussion and deliver course materials. The interaction and communication between students and lecturers through social media is minimum due to the limited uses of social media for formal learning in class by lecturers and students. However, there is a number of social media interactions and communication among the students and their peers. Even though there is the lack of social media interaction and communication between students

and lecturers, the lecturers and students expressed that the usage of social media helps improve class communication.

In addition, the finding revealed that the social media choices and communication using social media by lecturers would affect only students' engagement. However, the choices and communication by students would affect student learning ability, communication and collaboration, information access, problem solving, and productivity. This is because students mostly used social media tools to support their informal learning and to communicate with their peers. Therefore, any changes to lecturers' choices and uses of social media tools would not affect the student learning experience very much. However, if lecturers are to get involve more in the informal learning activities and increase the interaction and communication with students using social media, then the changes to lecturers' choices and uses of social media tools would affect student learning experience very much. Moreover, the findings suggest that the uses of social media to support classwork help facilitate learning activities, benefit students, and enhance the student learning experience.

7. Limitations and suggestions for future research

Three main limitations of this study that found to be challenging by the researcher are the unbalance of interview participants, limitation of single data source, and timeframe constraint. Firstly, this research is an exploratory study based on an unbalanced number of students and lecturers as the interview participants. A total of twelve students and four lecturers participated in semi-structured interviews. Within the students group, there are ten post-graduate students and only two undergraduate students. Therefore, this unbalanced interview participants could bias the research findings towards post-graduate students' experience. Secondly, this study is based on students and lecturers from Victoria University of Wellington. Wider interview participants from other universities in New Zealand would enable the greater exploration of the findings and discussion. Finally, the scope and the depth of the study were limited by six months time frame.

The goal of this study was to explore how university students and lecturers use social media to support their learning and particularly to understand how such emerging technologies usage impacts student learning experience and class communication. While the results revealed the students' and lecturers' choices and usages of social media tools are varied, their interaction and communication is limited. This also leads to new questions and concerns. Based on the findings of this study, the following are suggestions for future research:

- Examining the differences of social media usages and preferences of students from different disciplines
- Investigate the factors that influence students and lecturers to communicate and interact using social media.
- Examining the impacts of social media usage in class on lecturers experience

8. Reference:

- Ajjan, H., & Hartshorne, R. (2008). Investigating faculty decisions to adopt Web 2.0 technologies: Theory and empirical tests. *The Internet and Higher Education, 11*(2), 71–80.
- Avci, U., & Askar, P. (2012). The Comparison of the Opinions of the University Students on the Usage of Blog and Wiki for Their Courses. *Educational Technology & Society, 15*(2), 194–205.
- Barnes, N. G., & Lescault, A. M. (2011). Social media adoption soars as higher-ed experiments and reevaluates its use of new communications tools. *Center for Marketing Research. University of Massachusetts Dartmouth, North Dartmouth, MA.*
- Bisman, J. (2010). Postpositivism and Accounting Research : A (Personal) Primer on Critical Realism. *Australasian Accounting Business & Finance Journal, 4*(4), 3–25.
- Brandtzæg, P. B., & Heim, J. (2009). Why people use social networking sites. In *Online communities and social computing* (pp. 143–152). Springer.
- Buzzetto-More, N. A. (2012). Social networking in undergraduate education. *Interdisciplinary Journal of Information, Knowledge, and Management, 7*(1), 63–90.
- Caraher, K., & Braselman, M. (2010). *The 2010 21st-Century Campus Report: Campus 2.0. 2010 CDW Government LLC.*
- Chelliah, J., & Clarke, E. (2011). Collaborative teaching and learning: overcoming the digital divide? *On the Horizon, 19*(4), 276–285.

- Cheung, C. M., Chiu, P.-Y., & Lee, M. K. (2011). Online social networks: Why do students use facebook? *Computers in Human Behavior*, 27(4), 1337–1343.
- Churchill, D. (2009). Educational applications of Web 2.0: Using blogs to support teaching and learning. *British Journal of Educational Technology*, 40(1), 179–183.
- Creswell, J. W. (2009). *Research design: qualitative, quantitative, and mixed methods approaches*. New Delhi; Los Angeles: Sage.
- Dahlstrom, E., Grunwald, P., de Boor, T., & Vockley, M. (2011). ECAR National Study of Students and Information Technology in Higher Education, 2011. *EDUCUASE Center for Applied Research*. [Http://www.educause.edu](http://www.educause.edu).
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319–340.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8), 982–1003.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace¹. *Journal of Applied Social Psychology*, 22(14), 1111–1132.
- Edmunds, R., Thorpe, M., & Conole, G. (2012). Student attitudes towards and use of ICT in course study, work and social activity: A technology acceptance model approach. *British Journal of Educational Technology*, 43(1), 71–84.
- Ferdig, R. E. (2007). Examining social software in teacher education. *Journal of Technology and Teacher Education*, 15(1), 5–10.

- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*.
- Gikas, J., & Grant, M. M. (2013). Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. *The Internet and Higher Education, 19*, 18–26.
- Hartshorne, R., & Ajjan, H. (2009). Examining student decisions to adopt Web 2.0 technologies: theory and empirical tests. *Journal of Computing in Higher Education, 21*(3), 183–198.
- Hrastinski, S. (2006). The relationship between adopting a synchronous medium and participation in online group work: An explorative study. *Interactive Learning Environments, 14*(2), 137–152.
- Hrastinski, S., & Aghaee, N. M. (2012). How are campus students using social media to support their studies? An explorative interview study. *Education and Information Technologies, 17*(4), 451–464. doi:10.1007/s10639-011-9169-5
- Huang, W.-H. D., Hood, D. W., & Yoo, S. J. (2013). Gender divide and acceptance of collaborative Web 2.0 applications for learning in higher education. *The Internet and Higher Education, 16*, 57–65. doi:10.1016/j.iheduc.2012.02.001
- Ifinedo, P. (2006). Acceptance and continuance intention of web-based learning technologies (WLT) use among university students in a Baltic country. *The Electronic Journal of Information Systems in Developing Countries, 23*.
- Junco, R., Heiberger, G., & Loken, E. (2011). The effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning, 27*(2), 119–132.

- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68.
- Katz, E. (1959). Mass communications research and the study of popular culture: An editorial note on a possible future for this journal. *Departmental Papers (ASC)*, 165.
- Kelly, B. (2008). A review of current and developing international practice in the use of social networking (Web 2.0) in higher education.
- Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly*, 67–93.
- Lee, M. J., & McLoughlin, C. (2008). Harnessing the affordances of Web 2.0 and social software tools: Can we finally make “student-centered” learning a reality? In *World conference on educational multimedia, hypermedia and telecommunications* (Vol. 2008, pp. 3825–3834).
- Lee, M. K. O., Cheung, C. M. K., & Chen, Z. (2005). Acceptance of Internet-based learning medium: the role of extrinsic and intrinsic motivation. *Information & Management*, 42(8), 1095–1104. doi:10.1016/j.im.2003.10.007
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, Calif: Sage Publications.
- Lipka, S. (2007). For professors, “friending” can be fraught. *Chronicle of Higher Education*, 54(15), A1–A28.
- Locke, L. F., Spirduso, W. W., & Silverman, S. J. (2007). *Proposals that work: a guide for planning dissertations and grant proposals*. Thousand Oaks: Sage Publications.

- Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Facebook, social integration and informal learning at university: "It is more for socialising and talking to friends about work than for actually doing work." *Learning, Media and Technology*, 34(2), 141–155.
- Marshall, M. N. (1996a). Sampling for qualitative research. *Family Practice*, 13(6), 522–526.
- Marshall, M. N. (1996b). The key informant technique. *Family Practice*, 13(1), 92–97.
- Masrom, M., & Hussein, R. (2008). *User Acceptance of Information Technology: Understanding Theories and Models*. Venton Pub.
- McQuail, D. (1987). *Mass communication theory: An introduction*. Sage Publications, Inc.
- Miles, M. B., & Huberman, A. M. (1984). *Qualitative data analysis*. Beverly Hills. Cal.: Sage.
- Moran, M., Seaman, J., & Tinti-Kane, H. (2011). Teaching, Learning, and Sharing: How Today's Higher Education Faculty Use Social Media. *Babson Survey Research Group*.
- Moskaliuk, J., Kimmerle, J., & Cress, U. (2009). Wiki-supported learning and knowledge building: effects of incongruity between knowledge and information. *Journal of Computer Assisted Learning*, 25(6), 549–561.
- Myers, M. D., & Avison, D. (1997). Qualitative research in information systems. *Management Information Systems Quarterly*, 21, 241–242.
- Myers, M. D., & Avison, D. (2002). An introduction to qualitative research in information systems. *Qualitative Research in Information Systems*, 4, 3–12.

- Neuman, W. L. (1997). *Social Research Methods, Qualitative and Quantitative approaches* (3rd ed.). Boston, MA: Allyn and Bacon.
- Orlikowski, W. J., & Baroudi, J. J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research, 2*(1), 1–28.
- Pinho, J. C. M. R., & Soares, A. M. (2011). Examining the technology acceptance model in the adoption of social networks. *Journal of Research in Interactive Marketing, 5*(2/3), 116–129.
- Rauniar, R., Rawski, G., Yang, J., & Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: an empirical study on Facebook. *Journal of Enterprise Information Management, 27*(1), 6–30.
- Rubin, H. J., & Rubin, I. (2012). *Qualitative interviewing: the art of hearing data*. Thousand Oaks, Calif: SAGE.
- Seechaliao, T. (2014). Lecturers' Behaviors And Beliefs About The Use Of Social Media In Higher Education: A Study At Mahasarakham University In Thailand. *Journal of International Education Research, 10*(2), 155.
- Selwyn, N. (2009). Faceworking: exploring students' education-related use of Facebook. *Learning, Media and Technology, 34*(2), 157–174.
- Selwyn, N. (2010). Looking beyond learning: Notes towards the critical study of educational technology. *Journal of Computer Assisted Learning, 26*(1), 65–73.
- Shih, R.-C. (2011). Can Web 2.0 technology assist college students in learning English writing? Integrating Facebook and peer assessment with blended learning. *Australasian Journal of Educational Technology, 27*(5), 829–845.

- Shittu, A. T., Basha, K. M., AbdulRahman, N. S. N., & Ahmad, T. B. T. (2011). Investigating students' attitude and intention to use social software in higher institution of learning in Malaysia. *Multicultural Education & Technology Journal*, 5(3), 194–208.
- Stanciu, A., Mihai, F., & Aleca, O. (2012). Social networking as an alternative environment for education. *Accounting and Management Information Systems*, 11(1), 56–75.
- Taylor, R., King, F., & Nelson, G. (2012). Student learning through social media. *Journal of Sociological Research*, 3(2), Pages–29.
- Taylor, S. A., Mulligan, J. R., Ishida, C., & (first). (2012). Facebook, social networking, and business education. *American Journal of Business Education (AJBE)*, 5(4), 437–448.
- Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: a test of competing models. *Information Systems Research*, 6(2), 144–176.
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246.
- Van Raaij, E. M., & Schepers, J. J. (2008). The acceptance and use of a virtual learning environment in China. *Computers & Education*, 50(3), 838–852.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 425–478.
- Walsham, G. (2006). Doing interpretive research. *European Journal of Information Systems*, 15(3), 320–330.
- Webb, E. (2009). Engaging Students with Engaging Tools. *Educause Quarterly*, 32(4), n4.

- Weber, R. (2004). The Rhetoric of Positivism Versus Interpretivism: A Personal View. *MIS Quarterly*, 28(1), III.
- Young, J. R. (2009). How Not to Lose Face on Facebook, for Professors. *Chronicle of Higher Education*, 55(22).
- Yuen, A., Fox, R., Sun, A., & Deng, L. (2009). Course management systems in higher education: understanding student experiences. *Interactive Technology and Smart Education*, 6(3), 189–205.
- Zelick, S. A. (2013). The perception of Web 2.0 technologies on teaching and learning in higher education: A case study. *Creative Education*, 4(07), 53.

9. Appendices

9.1 Appendix 1: Interview Questions

Interview Questions

1. Definition of social media tools under consideration for this study

- (a) Social networking sites: Facebook, Twitter, and LinkedIn
- (b) Media sharing sites: YouTube, Vimeo, and Flickr
- (c) Creation and publishing tools: wikis, and blogs
- (d) Social bookmarking: Pinterest, Digg, and Delicious
- (e) Internet messaging: Google Hangout, Skype, WhatsApp, and Facebook Messenger

2. Screening questions:

SQ1. Do you use social media?

SQ2. Do you have experience of using social media in your courses?

3. Interview questions:

1. Can you describe the course where you used social media as educational tools?

1.1 Please explain how is that different from a course not using social media?

1.2 Please explain your experiences of using social media in your course?

1.3 Please describes your lecturer's expectation of your social media usage? What did they expect from you?

1.4 How did that impact your understanding of the content?

1.5 What do you think about using social media to support your classwork?

2. Could you give examples of social media tools that you use in your courses?

2.1 How did you use the tools for in your course? What type of activities?

2.2 Could you give examples of your most frequently used social media tools in the course? And could you explain why you like them?

3. How did you interact/communicate with classmates/lecturers using social media?

4. How did that impact class communication?

5. What are the changes to the learning environment when social media are integrated?

6. What changes do you see as/in the learners when you used social media?

7. How does the use of social media in your course affect your learning experience (student) or teaching experience (lecturers)?

8. In your opinion, what are the better ways to use social media for supporting classwork?

9. Any further comments?



SCHOOL OF INFORMATION MANAGEMENT

TE KURA TIAKI, WHAKAWHITI KŌRERO

LEVEL 5, RUTHERFORD HOUSE, PIPITEA CAMPUS, 23 LAMBTON QUAY, WELLINGTON

PO Box 600, Wellington 6140, New Zealand

Phone +64-4-463 5103 Fax +64-4-463 5446 Email sim@vuw.ac.nz Website www.victoria.ac.nz/sim

9.2 Appendix 2: Human Ethics Documentation

Participant Information Sheet

Research Project Title: Exploring the role Social Media plays in the student learning experience of 2014 university life in NZ

Researcher: Aloundeth Panekham, School of Information Management, Victoria University of Wellington

As part of the completion of my Master of Information Management, this study is designed to discover what role does social media plays in NZ higher education and particularly to understand how such emerging technologies usage to support classwork can enhance student experience and improve class communication.

Victoria University requires, and has granted, approval from the School's Human Ethics Committee.

I am inviting students and lecturers who have experience with using social media to support classwork to participate in this research. Participants will be asked to take part in a 30 to 45 minutes interview. Permission will be asked to record the interview, and a transcript of the interview will be sent to participants for checking.

Participation is voluntary, and you will not be identified personally in any written report produced as a result of this research, including possible publication in academic conferences and journals. All material collected will be kept confidential, and will be viewed only by myself and my supervisor Dr. Allan Sylvester. The research will be submitted for marking to the School of Information Management, and subsequently deposited in the University Library. Should any participant wish to withdraw from the project, they may do so until 30/9/2014, and the data collected up to that point will be destroyed. All data collected from participants will be destroyed within 2 years after the completion of the project.

If you have any questions or would like to receive further information about the project, please contact me at panekhalou@myvuw.ac.nz or telephone **022 129 2218**, or you may contact my supervisor **Dr. Allan Sylvester** at allan.sylvester@vuw.ac.nz or telephone **463-6813**.

Aloundeth Panekham



SCHOOL OF INFORMATION MANAGEMENT

TE KURA TIAKI, WHAKAWHITI KŌRERO

LEVEL 5, RUTHERFORD HOUSE, PIPITEA CAMPUS, 23 LAMBTON QUAY, WELLINGTON

PO Box 600, Wellington 6140, New Zealand

Phone +64-4-463 5103 Fax +64-4-463 5446 Email sim@vuw.ac.nz Website www.victoria.ac.nz/sim

Participant Consent Form

Research Project Title: Exploring the role Social Media plays in the student learning experience of 2014 university life in NZ

Researcher: Aloundeth Panekham, School of Information Management, Victoria University of Wellington

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered to my satisfaction.

I understand that I may withdraw myself (or any information I have provided) from this project, without having to give reasons, by e-mailing panekhalou@myvuw.ac.nz before 30/09/2014.

I understand that any information I provide will be kept confidential to the researcher and their supervisor, the published results will not use my name, and that no opinions will be attributed to me in any way that will identify me.

I understand that the data I provide will not be used for any other purpose or released to others.

I understand that, if this interview is audio recorded, the recording and transcripts of the interviews will be deleted within 2 years after the conclusion of the project (October 214). Furthermore, I will have an opportunity to check the transcripts of the interview.

Please indicate (by ticking the boxes below) which of the following apply:

- I would like to receive a summary of the results of this research when it is completed, and I understand that the entire research report is available through the Victoria Library.
- I agree to this interview being audio recorded.
- I understand that the final report may be used for publication in academic or professional journals or conferences.

Signed:

Name of participant:

Date: