

Relationships between Research Supervisors and Students from Coursework-based Master's Degrees: Information Usage under Social Media

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Abstract

Purpose:

Existing studies reflect that traditional teaching-learning relationships between supervisors and graduate students have become disjointed with actuality seriously. In particular, there are practical difficulties in handling many students from coursework-based postgraduate degrees under current university curricula. Therefore, this study explores the relationship between research supervisors and graduate students on social media, which is popular among students.

Methodology:

This study surveyed 109 graduate students from two majors (population around 100 each) of a university in Hong Kong to explore their information usage for research on social media, related attitudes, and their perceived supervisor relationships. The differences between the two majors were also compared.

Findings:

Our findings indicated that graduate students were active on social media, and social media has successfully provided effective alternate ways for students to communicate with their research supervisors. Social media could improve relationships between supervisors and research students and among fellow students. Besides education purposes, students also discussed their personal affairs on social media with supervisors, demonstrating enhanced trusted relationships. Graduate students also showed confidence in the further application of social media in higher education. Some differences between respondents from the two programs were also found in terms of communication contents, strengths, personal preferences, and purposes for using social media.

Originality/value:

Scant studies focus on the relationship between supervisors and graduate students under the current social media environment, especially for students from coursework-based postgraduate degrees. At a deeper level, for the widespread utilization of social media in the information age, this study explores the specific changes brought about by social media. Therefore, this study is of great theoretical and practical value to graduate education under the current social media environment.

Keywords: Social media; Teaching-learning relationship; Research supervisor; Graduate students; quantitative research

INTRODUCTION

Cultivating research abilities for graduate students is a key development direction in tertiary education, and the tutorial system is the most basic training system for graduate education (Fuller, 2011). Therefore, the quality of research achievement can be directly influenced by the relationship between supervisors and students. Specifically, the teaching-learning relationship is an embodiment of educational value and academic value, which is the core of the relationship between research supervisors and graduate students (Abdul Rahman, Othman, & Al-Rahmi, 2016; Hrastinski & Aghaee, 2012; Kivunja, 2015; Milan, 2014; Thanawat, 2017). However, the reality is that the expansion of **coursework-based postgraduate students** has caused a much-reduced ratio between research supervisors and graduate students.

As such, this research explores the perceived effectiveness of applying social media in graduate research, with a focus on **coursework-based** master's programs. With the arrival of the information society, traditional relationships between research supervisors and graduate students continue to suffer from the shock of information (Abdul Rahman et al., 2016; Tess, 2013; Wagner, 2011; Wilson, 2013). As a result, the attitudes and actions of both parties exhibit remarkable changes (Abdul Rahman et al., 2016; Manca & Ranieri, 2016; Wankel & Wankel, 2011). Thus, it is crucial to explore new patterns of teaching-learning relationships on social media to improve the quality of graduate education for supervisors, graduate students, and university administrators under the current globalized knowledge era. In particular, a mission of graduate education is to cultivate a group of high-quality talents, and a key factor in cultivation quality is teaching-learning relationships (Tess, 2013).

The widespread application of social media for teaching and learning in education has resulted in ample related research both in the theoretical and practical levels. For example, supervisors have adopted Facebook groups, emails, Moodle, and other social media services for the interactions, discussions, and progress monitoring (Abdul Rahman et al., 2016; Evans, 2014; Hrastinski & Aghaee, 2012; Kivunja, 2015; McCarthy & McCarthy, 2014; Milan, 2014). In the case study from Hrastinski and Aghaee (2012), they investigated more than 1,000 undergraduate students and found that over 98% of the students kept in touch with their peers through social media monthly more than once, and over 50% of the students utilized social media to connect with their teachers for coursework. Besides, many students are allowed to post their assignments on social media and give feedback via email after lectures (Evans, 2014; McCarthy & McCarthy, 2014). The enthusiasm and timeliness of the communication between teachers and students have been stimulated by the openness, transparency, and reproduced ability of social media. Through the surveys from other researchers, students who often use social

media to communicate with their teachers can have a more intimate relationship than those who do not often use (Manca & Ranieri, 2016; Wagner, 2011). Also, active learners on social media can have a better performance in self-confidence and gain more learning content, which can contribute them to achieve learning goals (Evans, 2014).

To investigate the impact of social media on higher education and its influences of relationship between research supervisors and graduate students, this study compares two groups of graduate students from the same faculty. This study was conducted in the Faculty of Education of the University of Hong Kong (HKU) with the MITE (Master of Information Technology Education) and MLIM (Master of Library and Information Management) programs for comparison, which have similar program structure and a shared pool of research supervisors. Therefore, based on the utilization behavior of social media in teaching and learning activities between supervisors and graduate students, combined with the particularity of cultivating mode in graduate education (Fuller, 2011), this research puts forward the following research questions (RQs).

RQ1: How do MITE and MLIM students use social media for receiving information for research?

RQ2: What are the attitudes of MITE and MLIM students in using social media for research supervision?

RQ3: How are the relationships of the MLIM and MITE students with their research supervisors on social networks?

LITERATURE REVIEW

Social media

Social media refer to social-issue oriented media, socialized media, and communication media. Social media apply a series of Web 2.0 information technologies to solve technical and ideological issues (Patrut & Patrut, 2013), allowing users to generate their content. Social media have given users much freedom in communication via a new media technology through participation, openness, dialogue, community, and connectivity. (Tess, 2013). Wagner (2011) defined social media as communication media that allow users to write, share, evaluate, discuss, and communicate with one another's webpages through technologies (Fuller, 2011; Greenhow, Sonnevend, & Agur, 2016).

Current mainstream social networks include Facebook and WeChat, etc. Manca and Ranieri (2016) believed that apart from the general functions of traditional media, social media also have the new abilities of interaction expansion, communication, and integration anytime, anywhere. Social media (Fergie, Hunt, & Hilton, 2016; Patrut & Patrut, 2013) mainly comprise communication media and mobile media and focusses on

user interactions and experience, highlighting diversification and characterization. Thus, social media is different from traditional media or even different from the first generation of online media in the facilitation of a variety of instant new messaging media technologies (Rochez, 2015; Salmon, Ross, Pechenkina, & Chase, 2015; Szeto, Cheng, & Hong, 2016). It allows users to create published information with much freedom while they can also communicate and exchange with one another as well as outsiders, which fundamentally changed the traditional one-way information dissemination (Manca & Ranieri, 2016; Milan, 2014; Wilson, 2013).

Relationship of research supervisors with students

The relationship between research supervisor with students is a special relationship among interpersonal relationships of teaching and learning and is crucial in postgraduates' training (Fuller, 2011; McCarthy & McCarthy, 2014). This relationship comprises two aspects: supervisors' instructions and graduate students' learning. As the tutorial system is still the main training system for postgraduate research, research supervisors' instructions are mainly embodied in the learning procedure, research projects, experimental design, theoretical and practical application, etc. Supervisors may also be responsible for their graduate students' daily work and ideological construction (Szeto et al., 2016; Thanawat, 2017). Yet, the most critical of all the activities between supervisors and graduate students are providing effective instructions for their scientific research and innovation (Rashid, Prosser-Snelling, Southern, & Molloy, 2015). Therefore, traditional teacher-student relationships aim to shape the students according to their guidance, a top-down direction and learning mode.

Social media and research supervision

Ideally, through social media, students or supervisors can send their intended information and communicate by messaging outside the classroom, and they can get connected anytime, anywhere, under current ubiquitous mobile technologies (Dukic et al., 2015; Ko et al., 2015). Such open communication can also break the fixed constraints of communications and coordination between supervisors and students (Manca & Ranieri, 2016; Rashid et al., 2015). However, there is limited research in the field regarding the application of social media for research supervision. In a case study, Chong (2010) found that blogging is a pleasant combination of solitary reflection and social interaction, providing students with a space for completing the research paper under closer supervision and timely feedback from the supervisor peer-to-peer review. Chong also reported positively on blogging as an effective instructional strategy to support traditional face-to-face supervision and develop students' research capabilities.

Later, other researchers investigated different social media tools, such as Facebook (Pimmer et al., 2017) and WhatsApp (Pimmer et al., 2019), and its impact on remote research supervision. The advent of social media

has broken the limitation of time and space as facilitated by information and communication technologies. A radical change has been taken place under the social media environment, which means teachers are no longer the preachers, and students are no longer just chasing the instructors' steps. Supervisors and students together built an online community via technology tools with ongoing streams of discussions that blurs personal and educational boundaries and help develop more intimate relationships. Teachers can give students questions, answers, and explanations through social media, while students may increase contact with teachers and reduce the physical gap (Erichsen, Bolliger and Halupa, 2014; Pimmer et al., 2017). Meanwhile, online research communities enable students to receive timely directional and functional guidance from their supervisor in and off the class (Pimmer et al., 2017). As such, the emergence of social media has not only flipped the classroom teaching model but also changed the way of teaching and learning between teachers and research students.

The group of instructors and graduate students comprises links and information for learning and research, and the communication between supervisors and students becomes ubiquitous. With the growing number of graduate students but a limited number of supervisors, not every graduate student can achieve the desired relationship and guidance with their supervisors. However, the emergence of social media for social groups provides students with more opportunities to contact their supervisors. Almost all supervisors and graduate students have at least one social network link or group for participation in discussions (Fergie et al., 2016; Milan, 2014; Rochez, 2015).

User-Generated Content (UGC) and online research communities

A key feature of social media is user-generated content (UGC). It is also the prominence of public social status as well as the public's appeal for interpersonal communication and relationships (Fergie et al., 2016). In the age of social media, the autonomy and initiative of students are dramatically improved. Especially at the postgraduate level, conducting research is often considered as going through a lonely journey (Brown & Holloway, 2008) that graduate students have more flexibility to structure their individual projects or research papers (Beattie & James, 1997). The crucial point for supervisors and students is that social media provide a wealth of network learning resources and all kinds of new knowledge and academic information. Some supervisors often share with students the guidance of professional development as well as network learning and knowledge resources (Donnelly & Fitzmaurice, 2013).

Postgraduate students need a supportive community that enables them to research at their own pace while receiving essential guidance from their supervisor and support from fellow scholars (Jili & Masuku, 2017).-The feature of social media enables a shift to traditional individual supervision to be more visible and be more open

to discussion between supervisors and students (Darling-Hammond, 2010). In an online environment, postgraduate students may distance themselves from the pressure they may suffer from face-to-face pedagogy and create a *pedagogical safe house* (Canagarajah, 2011) that helps them share their thoughts and create constructive context. Graduate students can find their own points of interest and combine them with their professional direction and self-cultivation. Hence, the academic contexts generate by postgraduate students through social media, from a perspective of autonomy, represent their analytical self-reflect on each draft they have created (Irvin, 2004) and the improvement they have made after each re-inventive reflection (Andrew, 2014). As social media users are both creators and producers of the information, both supervisors and students can simultaneously synchronize to achieve progress and improvement.

Research Gap

Existing studies reflect that traditional teaching-learning relationships between supervisors and graduate students have become disjointed with actuality seriously (Leak et al., 2014). Also, scant studies focus on the relationship between supervisors and graduate students under the current social media environment (Abdul Rahman et al., 2016; Chapman-Novakofski, 2015; Evans, 2014; Fergie et al., 2016; Fuller, 2011; Greenhow & Lewin, 2015; Greenhow et al., 2016; Hrastinski & Aghaee, 2012). Those studies are mainly focused on the theoretical level to describe the changes in such relationships. At a deeper level, for the widespread utilization of social media in the information age, this study explores the specific changes brought about by social media. Therefore, this study is of great theoretical and practical value to graduate education under the current social media environment.

METHODOLOGY

In this research, a survey was conducted to obtain first-hand information to investigate the research questions. This survey comprises five parts, including demographic information, social media types versus traditional means for teaching-learning in research, communication contents on social media, and perceived effectiveness and personal preference towards using social media. Most of the questions utilized the Likert scale from 1 to 5, to enable data analysis by statistical tests. For this research, the Mann-Whitney *U* test is a non-parameter test used to compare two groups of graduate students (Corder & Foreman, 2011).

A total of 109 participants from students of MITE and MLIM (population around 100 each) of HKU participated in the survey with consent voluntarily. After excluding 14 incomplete ones, there were 88 valid questionnaires. The participant consent form and questionnaire were reviewed and approved by the Faculty

Review Board delegate according to the guidelines of the Human Research Ethics Committee of the HKU. IBM SPSS Statistics were used for data analysis. Table 1 presents the demographics of our respondents. Graduate students from MITE and MLIM in the Faculty of Education of HKU are the two comparison groups of this study. Over 90% of graduate students are under 30 years of age.

Table 1. Demographic information

Age Group	MITE			MLIM		
	Male	Female	Total	Male	Female	Total
18-25	6	19	25 (62.5%)	2	25	27 (56.3%)
26-30	2	12	14 (35%)	4	13	17 (35.4%)
31-35	1	0	1 (2.5%)	0	4	2 (4.3%)
>36	0	0	0	0	0	0
Total	9 (22.5%)	31 (77.5%)	40 (100%)	6 (12.5%)	42 (87.5%)	48 (100%)

RESULT AND DATA ANALYSIS

General social media usage

Table 2. Types of electronic communication frequently used by respondents

Communications means	MITE	MLIM	Overall Mean
Types of electronic means			
Email	15.3%	21.6%	18.3%
Facebook	16.2%	13.1%	14.6%
SMS	10.9%	3.0%	7.1%
WeChat	20.7%	23.6%	22.2%
WhatsApp	15.3%	11.6%	13.4%
Other	1.8%	0.4%	1.1%
Total (Electronic means)	80.2%	73.3%	76.7%
Types of traditional means			
Face-to-Face	6.3%	12.1%	9.2%
Phone	13.5%	14.6%	14.1%
Total (Traditional Means)	19.8%	26.7%	23.3%

Table 2 depicts the general preference of our respondents' use of communication means. Our results show that over 80% of our respondents preferred to connect people via electronic means in their daily life. WeChat and Facebook were the most popular social media among young students. Compared with MITE students, MLIM students preferred to use email to connect with others. However, some respondents still preferred to use traditional means of communication, but far less of those who prefer social media. Notably, only 6.3% of MITE students used face-to-face meetings. This demonstrates that social media has been widely adopted in the majority of the respondents.

Table 3 shows the respondents' general purposes of using social media, all at a high level. There were no significant differences between MITE and MLIM respondents in using social media for entertainment, multicultural knowledge, and improving relationships with classmates and supervisors. However, MITE students were significantly ($P < 0.001$) more engaged with gaining professional knowledge and convenience for

communication to supervisors, compared with MLIM students.

Table 3. General Purpose of Using Social Media

Purposes	Mean N=88	MITE	MLIM	Z (U test)	p-Value
Gain professional knowledge	4.08	4.63	3.63	-6.123	.000
For entertainment	4.11	4.20	4.04	-.197	.844
Convenience for communication to supervisors	4.06	4.40	3.77	-3.851	.000
Gain multicultural knowledge	3.98	3.93	4.02	-.680	.496
Improve relationship to classmates and supervisors	4.22	4.25	4.19	-.325	.745

Notes: Scale - 1: Strongly Disagree; 2: Disagree; 3: Neutral; 4: Agree; 5: Strongly Agree.

Communication for research supervision

Table 4. Types of communication means that students used for research instruction

Communication Means	MITE	MLIM	Mean
Electronic Means			
Email	14.4%	48.9%	31.6%
Facebook	7.7%	20.0%	13.8%
SMS	12.5%	0%	6.3%
WeChat	22.1%	0%	15.5%
WhatsApp	23.1%	14.4%	18.8%
Total (Electronic means)	79.8%	92.2%	86%
Traditional Means			
Face-to-Face	10.6%	5.6%	8.1%
Phone	9.6%	2.2%	5.9%
Total (Traditional Means)	20.2%	7.8%	14%

Table 4 depicts the communication means that graduate students used for receiving research instructions. Over 90% and around 80% of MLIM and MITE research supervisors preferred to give instructions via electronic means, respectively. However, 20.2% of MITE research supervisors still preferred to use traditional means.

Table 5. Communication contents of research supervision

Communication Contents	Means (N=88)	MITE	MLIM	Z (U test)	p-Value
Study problems	3.76	4.38	3.25	-4.807	.000
Research projects	3.94	3.93	3.96	-.207	.836
Writing problems of academic dissertations/reports	3.60	3.88	3.38	-2.052	.040
Methods of scientific research	3.65	3.83	3.50	-1.489	.136
Ideological problems	3.17	3.53	2.88	-2.549	.011
Career inquiries	3.25	3.68	2.90	-2.890	.004
Daily greetings and other personal affairs	3.64	4.00	3.33	-2.277	.023

Notes: Scale -1: Never; 2: Seldom; 3: Sometimes; 4: Often; 5: Very Often.

Table 5 shows the communication contents of research supervisors and graduate students on social media. To be specific, research projects and study problems were the most frequent discussion topics, followed by scientific research methods. MITE respondents generally communicate more with various topics with their supervisors than MLIM respondents. Compared with MLIM students, MITE students more significantly ($p < 0.05$) preferred to discuss study problems, problems about academic writing, ideological problems, career inquiries, and sharing their personal affairs with their supervisor on social media.

Table 6 shows the participants' reasons for using social media for research supervision. Participants

generally considered that using social media was convenient, effective, and efficient. MITE students felt more difficult to have a face-to-face meeting with their supervisors significantly ($p < 0.05$), as compared with MLIM students. Notably, MITE respondents agreed more significantly ($p < 0.001$) than MLIM respondents on social media could “break geographical constraints” and “avoid the embarrassment during face-to-face meetings.”

Table 6. Reasons for using social media for research supervision)

Reasons	Means (N=88)	MITE	MLIM	Z (U test)	p-Value
Enhances your supervisors' time management	4.13	4.25	4.04	-1.341	.180
Your supervisor's personal preference	4.02	3.93	4.10	-.944	.345
Social media give more convenience to supervisors than graduate students.	4.14	4.30	4.00	-1.877	.060
Your supervisors are too busy for face-to-face meetings	3.25	3.65	2.92	-2.680	.007
You cannot easily arrange a time to meet your supervisor in person	3.78	4.03	3.58	-2.224	.025
Break geographical constraints	4.65	4.90	4.44	-4.178	.000
Social media are simple, convenient and fast	4.09	4.00	4.17	-1.241	.214
Save us a lot of time	4.16	4.38	3.98	-1.853	.064
Digital data can be stored immediately and conveniently	4.10	4.20	4.02	-.961	.336
More guidance on social media than face-to-face	3.42	3.88	3.04	-2.930	.003
Supervisors' efficiency is high on social media	3.82	3.95	3.71	-.867	.386
Supervisors are able to distribute enough attention to every student	3.83	4.20	3.52	-2.577	.010
Avoids the embarrassment during face-to-face meetings	3.91	4.23	3.65	-2.686	.007

Notes: Scale - 1: Strongly Disagree; 2: Disagree; 3: Neutral; 4: Agree; 5: Strongly Agree.

Supervisor-student relationship on social media

Table 7 presents the personal preferences of our respondents in using social media. “Discuss individually with supervisors on social media,” “discuss coursework with supervisors on social media,” and “follow each other on social media” were the top three activities that our respondents enjoy. MITE students were more initiative to add supervisors into friend lists significantly ($P < 0.001$), compared with MLIM students. Also, there was no significant difference in supervisors' efficiency of the two majors on social media. In terms of sharing academic issues, MLIM students prefer to forward or make comments for academic information ($p < 0.05$), as compared with MITE students.

Table 7. Personal preferences towards by using social media

Personal Preference	Means (N=88)	MITE	MLIM	Z (U test)	p-Value
Discuss individually with supervisors on social media	4.01	4.60	3.52	-5.591	.000
Discuss to supervisors for other purpose	3.30	3.75	2.92	-4.008	.000
Follow each other on social media	3.69	3.95	3.48	-2.389	.017
Add supervisors into friend lists initiatively	3.39	4.13	2.77	-5.922	.000
Communicate on social media on urgent matters	3.53	3.73	3.38	-1.631	.103
Discuss coursework with supervisors on social media	3.91	3.75	4.04	-1.230	.219
Sharing academic issues on social media	3.53	3.33	3.78	-2.004	.045
Receive your assignments or tasks on social media	3.65	3.93	3.42	-1.884	.060

Notes: Scale: 1: Never; 2: Seldom; 3: Sometimes; 4: Often; 5: Very Often.

Table 8. Overall student perceptions

Overall student perception	Mean N=88	MITE	MLIM	Z	Value
Using social media to discuss academic matters can build better relationships between you and your supervisor.	4.18	4.85	3.63	-6.802	.000
You participate in online discussion groups because you want to improve relationships with classmates and supervisors.	3.58	3.78	3.42	-1.794	.073
In the future, social media will play a more and more important role in academic communications	4.47	4.60	4.35	-2.289	.022

Notes: Scale - 1: Strongly Disagree; 2: Disagree; 3: Neutral; 4: Agree; 5: Strongly Agree.

Table 8 shows that both MITE and MLIM students were willing to improve their relationships with their classmates and supervisors. Therefore, this was one of the reasons they participated in online discussion groups. This result suggests supervisors create more online discussion groups and make good use of them. However, MITE students considered more significantly ($p < 0.001$) that they were capable of building a better relationship with their supervisors through social media compared with MLIM students. In terms of the expected trend of social media educational applications, MITE and MLIM students showed high expectations (4.47) without significant differences.

DISCUSSION

Using social media for receiving research supervision (RQ1)

A considerable amount of MITE research supervision was still done through traditional means because MITE is more inclined to education science that needs more interactions directly, as compared with MLIM. Another reason that of this result was that traditional means might have their advantages. For example, body language and mood could be expressed and investigated through meetings and discussions, which might increase the level of intimacy in a relationship by providing a sense of reality (Benton et al., 2016), which is truly irreplaceable. Thus, supervisors should pay close attention to the utilization of information technology (IT) instead of being stuck in traditional means, and explore alternative ways to enhance the communication between supervisors and graduate students.

There were only around 15 supervisors of both in MITE and MLIM, but over 100 graduate students who needed supervision for their graduation project. Therefore, graduate students should communicate with their supervisors more proactively to improve communications efficiency instead of complaining about the unavailability of supervisors (Suttles & Ide, 2013). Graduate students should also develop personal autonomy and make efforts to solve problems by themselves (Magdy et al., 2015). However, as shown in Table 9, all respondents had at least one kind of contact on various social media. Collaborative learning on social media provides another useful method to gain knowledge and therefore help alleviate the time management pressure

of supervisors (Benton et al., 2016).

According to the researchers' investigations, as MITE students were mostly busy with part-time or full-time work, there were fewer MITE students enrolled in summer courses. Further, over 20% of the MITE research supervisors still preferred to hold face-to-face meetings for their students (see Table 6). This was one of the factors that might cause many MITE students to consider it hard to meet their supervisors in person. As most MLIM students enrolled in summer courses in which their supervisors taught, they could discuss study problems and research projects with their supervisors in person. Secondly, the MITE curriculum focuses on e-learning design, App development, digital game-based learning instead of behavioral research, MITE students might have more technical problems. As ever 80% of the MITE students preferred to use social media (see Table 3), it seemed logical for MITE students to discuss study problems more frequently than MLIM students. Notably, MITE students were more significantly ($P < 0.05$) concerned about career plans than MLIM students, as a majority of MLIM students already had concrete career plans (Lo et al., 2017).

Attitudes of research students in using social media for research supervision (RQ2)

As MLIM students had more chances to meet their supervisors in person according to Tables 1 and 6, social media did not benefit them as much. The survey results revealed that there was still a gap between supervisors and graduate students (see Tables 3 and 5). For supervisors, email was the most commonly used for giving instructions, while our respondents preferred to use instant messaging like WeChat and WhatsApp, popular among young generations. Given this gap, supervisors were suggested to harness the strengths of social media and try to achieve cognitive consistency with their students (Greenwald et al., 2002). For example, supervisors could create online discussion groups and take the initiative to guide their students (Lakkaraju & Speed, 2019). Because of the interaction characteristic of social media, providing instant feedback to students contributes to improving teaching-learning relationships (Fisher & Reuber, 2011). It is also essential to encourage students to express opinions freely, and the favorable discussion atmosphere facilitates the building of equal and intimate relations (Habibi et al., 2016).

Relationships of research students with their supervisors on social networks (RQ3)

As MITE respondents often discussed career, ideological problems, and personal affairs with their supervisors on social media, along with academic problems, this indicated that their supervisors had won the trust and respect of their students. The situation of MLIM was also good, as the communications between respondents and their supervisors were still satisfactory. According to our findings, the impact of social media on the relationships between research supervisors and graduate students was promising and showed a high level of

satisfaction, augmenting physical contacts for learning, thinking, and communication.

On the other hand, almost all respondents use smartphones to browse news and contact with classmates. Social media not only enriched the richness and colorfulness of university life but also elapsed fragmented time for the students (Al-Rahmi, Othman, and Yusuf, 2015). This also demonstrated that social media and mobile technologies bridged the distance between younger generations (Cheng et al., 2020). However, interpersonal relationships might probably become alienated or indifferent in the real world (Zagenczyk et al., 2010), as a majority of our respondents regarded entertainment as their primary purpose in using social media (Table 11). Therefore, the university should provide more education and guidelines for information literacy on social media to prevent addiction and improve their judgment of information validity (Ollier-Malaterre, Rothbard and Berg, 2013; Zhang et al., 2020). This would help not just student research quality but also their general lives.

CONCLUSION

This research explores the teaching-learning relationships between research supervisors and graduate students of the MITE and MLIM programs in the Faculty of Education of the University of Hong Kong. Compared to traditional means, social media has successfully provided effective alternate ways for students to communicate with their research supervisors. This study also shows how social media can improve relationships between supervisors and research students and among fellow students by investigating the purpose, preference, and communication contents in using social media. Besides education purposes, students also discussed their personal affairs on social media with supervisors, demonstrating enhanced trusted relationships. Graduate students also showed confidence in the further application of social media in higher education.

Limitations and future work

Similar to other researches, this research also has its limitations. Firstly, the subjects of the research were only students and lacked data obtained from research supervisors. Secondly, the data were limited to two majors under the same faculty. We are planning for further studies of a larger scale involving graduate students and supervisors of different majors and in universities of different countries. In addition to the survey, we would also like to collect multiple types of data from supervisors and graduate students through interviews and focus-group discussions. In this way, researchers can get more real first-hand information to support their own research. On the other hand, we are also interested in privacy related issues (Hung et al., 2007) and the application of social capital theories in education aids through social networks (Chung et al., 2020; Fong et al., 2020).

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