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Postgraduate students' perspective on using Twitter as a learning resource in higher education

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Abstract:

CONTEXT: In the era of technology, social networking has become a platform for the teaching-learning process. Exploring international students' perspective on using Twitter would reveal the barriers and potential for its use in higher educational activities.

AIMS: This study aimed to explore the postgraduate students' perspective on using Twitter as a learning resource.

SUBJECTS AND METHODS: This qualitative study was conducted as part of a postgraduate program at a university in the United Kingdom. A focus group discussion and five in-depth interviews were conducted after receiving the informed consent. The qualitative data were analyzed by R package for Qualitative Data Analysis software.

ANALYSIS USED: Deductive content analysis was used in this study.

RESULTS: Qualitative analysis revealed four salient themes, which were (1) background knowledge about Twitter, (2) factors influencing the usage of Twitter, (3) master's students' experiences on using Twitter for education, and (4) potential of using Twitter in the postgraduate study. The students preferred to use Twitter for sharing links and appreciated the benefit on immediate dissemination of information. Meanwhile, privacy concern, unfamiliarity, and hesitation to participate in discussion discouraged the students from using Twitter as a learning platform.

CONCLUSIONS: Using social media platforms in education could be challenging for both the learners and the educators. Our study revealed that Twitter was mainly used for social communication among postgraduate students however most could see a benefit of using Twitter for their learning if they received adequate guidance on how to use the platform. The multiple barriers to using Twitter were mainly related to unfamiliarity which should be addressed early in the learning process.

Keywords:

Postgraduate education, social media, Twitter, Twitter as a learning resource

Introduction

In the era of technology, Twitter is one of the most rapidly expanding social networking platforms which is used to exchange and disseminate information among communities including those in higher education.^[1] Growing ubiquity of social media has led to its interlace in

political, social, and educational programs. Since launching in 2006, Twitter has become a prominent media tool and provides services for 330 million monthly active users in 2017.^[2] Twitter is a microblogging network where users can share their messages within the 140-character limit.^[3] The users can post questions and information on the timeline or contribute opinions and discussion in either a private or public setting.^[4]

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The role of social media, including Twitter, has infused to daily social life, political events^[5] and has extended to the education sector. Initial perceptions of students have been positive and there is some acceptance of using Twitter for learning purposes.^[6] Among health-care providers, Twitter is now one of the main sources of health information sharing and an important medium to communicate health promotion information to the general population.^[4]

Twitter allows the sharing of ideas and learning resources beyond the classroom teaching and discussion. In the United States of America, approximately one-third of university teachers are active users of Twitter and more than 50% of them use it as a learning resource.^[3] For the educators, it has the benefit to enhance the students' engagement and augment the classroom dynamics.

Communities created among students in higher education, via social networking platforms, has allowed for collaborative learning and the nature of real person discussion despite being geographically separated.^[7] Therefore, Twitter encourages the students to foster the collaborative relationship with their peers and strengthen the practice of self-directed learning from the constructivist learning perspective.^[8]

On the contrary, there is undoubtedly some barriers to using social media as an educational tool. A qualitative study conducted in a medical university revealed that a lack of knowledge on Twitter usage, low participation by teachers and classmates, and blurring of the professional boundaries were barriers to its educational usage.^[3] In addition, untailed learning resources available on Twitter often did not meet the individual students' learning needs.^[3] A study exploring students' perception of instructor credibility found that a public Twitter account could "violate the classroom and time expectations" and "breach the boundary between the student and instructor."^[9]

Although some studies have investigated Twitter usage and perceptions among undergraduate students and educators, there is still a need to explore the perception of postgraduate students from different geographic regions. This study aimed to explore the international postgraduate students' perspective of using Twitter as a learning resource. The objectives were to understand the participants' background knowledge of Twitter, to explore the factors influencing the usage, and to enquire of their perception of using Twitter for educational purposes.

Subjects and Methods

Study context

This qualitative research was conducted as part of a master's degree program in the Liverpool School of

Tropical Medicine. This study aimed to explore the international postgraduate students' perspective of using Twitter as a platform to enhance their learning experience. This was explored by enquiring about their background knowledge of Twitter, factors influencing usage of the platform, and perception of using Twitter in an educational setting. While conducting the qualitative research, rigor is crucial to certain the accuracy and quality of the study. Rigor is defined as "the quality of state of being very exact, careful or with strict precision,"^[10] which can be achieved by ensuring the reliability and validity throughout the study.^[10]

Study sample

To obtain a varied sample, the researchers recruited participants enrolled in the master's degree from various different continents. The total number of ten participants was recruited from a variety of master's programs; public health, tropical and infectious disease, and tropical pediatrics. Participants were both Twitter users and nonusers, with different ages, and included both male and female students. The recruitment was done by purposive sampling to include the various geographical backgrounds, different experiences, ages, and gender. Using the purposive sampling method, transferability was enhanced to collect the qualitative data from the different points of view. The participants involved in this study were doctors and public health workers studying for their master's degree. Informed consent was obtained from the participants.

Data collection

To have the proper understanding and range of the subject matter, a focus group discussion (FGD) was conducted with the ten participants. The FGD is a good method to gather the information and experiences on the selected topic of interest.^[11] This FGD was used to explore the students' views, experience, perception, and practices surrounding Twitter as a tool for enhancing their learning.

The FGD was recorded and it was used to prepare the semi-structured interview guide for the in-depth interview. The interview guide included (1) knowledge about Twitter, (2) cultural background influence on using Twitter, (3) experience of using Twitter, (4) usage of other social media, (5) barriers of using Twitter, and (6) personal opinion on potential of using Twitter for educational purposes.

After that, an in-depth interview was conducted with each of the five participants to explore their perspective on the usage of Twitter as a resource in their learning process. During the interviews, the open-ended questions were used to explore more about the participant's experiences and perspectives and followed by the

targeted questions according to the interview guide. The face-to-face interviews were recorded, transcribed, and saved into the Microsoft Word documents. To protect anonymity, the transcripts were identified by participant number (P-number) only. Ideally, a larger sample size including participants from the different master's groups, should have been recruited until the data were saturated. However, due to the time constraint, the researchers were able to conduct five in-depth interviews, lasting between 30 and 60 minutes each.

Data analysis

Following the in-depth interviews, the qualitative data analysis was analyzed using the HUANG, Ronggui. (2018); RQDA: R-based Qualitative Data Analysis; R package version 0.3-1. The interview transcript documents were imported into the RQDA software. The deductive (directed) content analysis was used in this study because previous studies had reported that Twitter was used for the dissemination of health information and enhanced the communication and discussion among the students and educators.^[12] Deductive content analysis was done by two independent researchers. The researchers used the predetermined codes and added new coding for the text which was not suitable for the predetermined codes. Member checking was done with participants by confirming the interpretations of their answers and discussions.

On completion of the initial coding, the researchers in the team discussed and finalized the coding to complete the analysis process. Salient themes were deduced, discussed, and reviewed for the similarities and differences in the participants' answers. To ensure the reliability and dependability, the researchers analyzed the data independently and finalized with the researcher group discussion. Triangulation of this study was ascertained by checking the data from different methods, FGDs, and in-depth interviews by two independent researchers.

Ethical approval

Ethical approval was not applicable in this study.

Results

Deductive content analysis revealed four salient themes related to the perspective of Twitter usage among the postgraduate students. They were (1) background knowledge on Twitter, (2) factors influencing the usage of Twitter, (3) students' perception on using Twitter for education, and (4) potential of using Twitter in postgraduate study [Table 1].

Background knowledge on Twitter

The participants recruited in this study had different backgrounds and cultures; there is a variation of usage of

Table 1: Postgraduate students' experiences and perspectives on Using Twitter

	Themes	Sub-themes
1	Background knowledge on Twitter	Knowledge about Twitter Methods to use Twitter
2	Factors influencing the usage of Twitter	Culture Age Perceived benefits Privacy concern
3	Master students' experiences on using Twitter for education	Information gathering Interaction between classmates
4	Potential of using Twitter in the postgraduate study	Favourable factors Unfavourable factors

Twitter in their daily lives. Every participant was aware of Twitter for social communication before starting this master's program; however, not all of them had used the Twitter platform.

Knowledge about Twitter

Some participants were fluent in Twitter literacy; meanwhile, some had little knowledge of using it. The participants who did not use Twitter before had started to use it since joining the postgraduate program. Nonetheless, there were some students still not using Twitter until the study period.

"I use Twitter very much, for communicating, discussing, socially interacting with people." (P-4)

"I know little. It is a social networking service that you can connect with different people and follow them. You can post and comment and people can follow you." (P-3)

"I'm not really sure about how that works. Where I come from we don't really use social networking for learning, it's quite a different experience." (P-5)

Methods to use Twitter

The participants shared their experiences and difficulties when they started to use Twitter. Even though Twitter is easy to use, some basic steps are essential to know for the first-time users.

"Even though Twitter is very easy to use there are some basic things that you need to know about like the hash tag system or how to communicate between users." (P-1)

"I support it, but then need clear instructions on how it needs to be done, and it's good to assume that not everyone knows how to use it well, therefore guidance should be given, especially for first time users." (P-4)

Factors influencing the usage of Twitter

Factors influencing the usage of Twitter in general

The researchers explored the factors influencing the usage of social media among the participants coming

from different parts of the world. All participants mentioned that culture was less important for using Twitter but that age was the biggest influence to utilize the current trends in technology.

"I think cultural background actually has less to do with it." (P-1)

"No, over the years I have been at school, I should say that I have been out of my traditional culture for a longer period of time I was more within my culture for the first one and half decades, after that I have been out of it. What I mean here is that when I was very young, I was influenced by my culture, but as I have grown up I am affected more by others." (P-4)

The participant 1 (P-1) considered that cultural background did not have an influence on the usage of Twitter. Meanwhile, the fourth participant (P-4) shared his experience as the culture was not a factor to determine the usage of Twitter as an adult.

"The generational divide is huge. You see some people who are older who haven't been exposed to it, don't really use it, don't know how to use it, and don't see the value in it. Age and use of technology is more important" (P-1)

Regarding the influence of age on the usage of Twitter, the first participant (P-1) explained that age is an important factor to use Twitter as the younger generation is more familiar with the technology and social media. Whereas, the older generation had difficulty to use the social media such as Twitter and did not appreciate the value of it.

"All the kids back home do tweet. The younger the more experience with Twitter." (P-5)

The fifth participant (P-5) admitted that the children were using Twitter at his home and younger generation had more experience of using it.

Factors influencing the usage of Twitter among study participants

Although it might be the participants' first time using Twitter, they were aware of its benefits and some preferred to use it for communication between study groups and family members.

"I don't have much experience using Twitter. But 2 weeks ago, I registered with Twitter based on recommendation from the lecturer, I started following her. It's quite interesting and educative. You will also get updated." (P-3)

"And recently when I went back home, my son surprised me when he asked me, 'do you have a Twitter account?'

I told him yes –give it to me and I will connect with you (laughter). So I found that it was really very interesting and easy to keep in touch and there is no cost like a telephone." (P-4)

On the other hand, some participants had different perspectives of sharing opinions on Twitter, which discourage them to use Twitter as a social platform.

"I don't like using Twitter or other kind of chatting online because I'm not good at giving my opinions in socially or publicly." (P-2)

The participants described that they have concern about privacy issues when using social media including Twitter as follows:

"I don't have any idea. But, some of my friends including myself we are afraid to intrude anybody to our private life, and this is the only issue we have." (P-3)

"I'm just a bit worried about the issue of privacy. I've heard from some friends who talk about their Twitter handles, Facebook handles being stolen, hacked into, things like that." (P-5)

In addition to the privacy concern, unease to initiate the tweets is a barrier and one participant responded as follow:

"To be honest it's about participation, nobody wants to be first to participate on the platform and so I guess it has an effect on your confidence if you try to participate and nobody else does." (P-1)

Master students' experiences on using Twitter for education

Way of gathering information for educational purposes on Twitter

Twitter can be a source of information for learning; however, diversity of interest in subject matter among the classmates shaped their individual usage.

"It depends on the relevance so a lot of topics I think will be relevant may not be to a lot of other people. So, in the research methods module I think from my peers and from tutors who post relevant information about that module. In terms of more global things, say if I'm looking at TB then it might be interesting to get information from big organizations because they may post links to studies that they have done that are relevant and new." (P-1)

"Everybody has conflicting views from what they want out of research methods and so there will be a group that want more qualitative and there definitely is a group that wants more quantitative." (P-1)

Interaction between classmates

The majority of participants in this study used Twitter for social communication.

“I prefer tweeting to my friend, relatives, colleagues wherever they are, here in this university or in back home and it makes it easy to communicate with them with everyone by tweeting to them.” (P-3)

However, interaction between the classmates was scant and one participant shared the experience of his tweet as follows:

“There doesn’t seem to be that much interaction from other group members on this module. I think there was one joke interaction about a week ago that was responded to by the module convener, apart from that I don’t think it’s picked up a groundswell of interest.” (P-1)

Potential of using Twitter in the postgraduate study

When the researchers analyzed the responses of participants regarding the potential of using Twitter in the postgraduate program, diverse opinions on Twitter usage and suggestions were disclosed as follows:

“I think for the educational purpose, it’s not very beneficial because there is character limit for Twitter. So, it’s not enough to share the knowledge for me. In my opinion, Twitter might not be that much useful for the educational purpose.” (P-2)

Another participant reported that Twitter could be the learning platform in this postgraduate program and provided some suggestions, such as greater range of tutors tweeting from various specialties.

“If you’re going to make Twitter a platform for teaching then it has to target each of those groups individually as well as combining it so that everybody can access the same information with an element of choice in what you’re accessing. If there’s only one feed and its only targeted at one type of research, then not enough students are going to access it.” (P-1)

“I think that it’s an interesting concept that our university are trying to use it because I think they are trying to modernize their way of teaching and they are trying to get on top of something that has exploded in us. I think they need to tweet it and probably need to add in more feeds from different people rather than just one person. Say our statistics professor with stats tweets and infectious disease professor with malaria tweets.” (P-1)

Discussion

Background knowledge on Twitter

This qualitative study explored the master’s students’ background knowledge of Twitter. All the participants were aware of Twitter; however, some were reluctant to use it, as they were not familiar with the usage. Similar findings were found to those in previous studies among students, where their lack of familiarity to technology led to reluctance to open a Twitter account and learn through this microblogging tool.^[13,14] In our study context, the students had also been introduced to the university e-mail system, and course dashboard website (i.e., vital), so that they were familiar to those systems. For those who were new to Twitter, it was considered to be an extra technology and generated an undue burden for them.

The participants also pointed out the importance of basic steps for Twitter usage. In a student’s perspective study, some steps such as signing up a new account, tweeting to a backchannel, forgetting to check the feed, and forgetting their account password were found to be barriers to utilizing Twitter in an educational setting.^[13] Therefore, to become familiar with Twitter, the first-time user students should receive adequate instruction before using it as a learning resource.

Factors influencing the usage of Twitter

Although the study participants came from different geographic regions and diverse cultures, it did not have an effect on the usage of Twitter as a social media. Conversely, participants reported that age influenced their willingness to utilize the Internet and social media.

The recent technology utilization is not equally disseminated among all age groups. Metallo and Agrifoglio reported that digital natives or persons who were born after 1980 found it easier to use Twitter and had more social pressure to use it compared to those born before the widespread usage of digital technology.^[15] The reason for having such differences between generations is that the younger generation have grown up with better access to modern technology and hence are accustomed with its regular daily usage.^[16] In addition, race, geographic regions, and socioeconomic status were also influential factors for the accessibility and utility of modern technology.^[13,17-19]

Twitter is a quick communication tool, allowing for immediate contact with classmates, family members and those with similar interests. While some students mentioned about their preferences to use social media for communication and learning, the others disclosed concerns regarding privacy of the platforms which led to hesitation to initiate tweets, and reluctance to express opinions publicly. This was similar to another study

conducted with graduate students, in which a proportion of students responded that they were private people and this meant that they were not comfortable to discuss their opinions on social media.^[4]

Master students' experiences on using Twitter for education

Interest in the subject matter enhances the engagement of post graduate students and is a key factor for continuing use of Twitter as a learning tool. Conversely, a lack of diversity of subject topics hinders the usage of the platform and interest in the tweets.

Although Twitter was used for social communication, participants' interaction on Twitter in this postgraduate course was scant. Only a few students in the course were actively using Twitter in their learning process. Given the lack of peer participation and interaction, the initiator might feel unmotivated to discuss the next topic. Many studies indicated that its usage was too multifarious to define it for academic purposes and, without adequate information from those teaching, uninterested students may not aware of its application as a learning resource.^[4,20-22]

Potential of using Twitter in the postgraduate study

The researchers inquired about the potential of using Twitter in the postgraduate program. The diverse opinions among participants were noted as some did not recommend using it as a learning platform while others saw value in using social media and suggested to expand the range of subjects and to have participation from experts in different specialties. The faculty should plan to have a structured approach to incorporate Twitter in their curriculum and should initiate with a pilot study in a particular class. This would need to include a tutorial focusing on the basics of using Twitter as there were a number of participants who had never used the platform and therefore felt isolated. Concerns regarding privacy should also be addressed to ensure that new users to Twitter will feel confident in the information that they share. To have the better benefit, students' participation should be encouraged to improve the network of teaching-learning in the University Twittersphere.^[23] It is crucial to get the student's evaluation and feedback regularly for further improvement and to enhance utilization.

Our study had a significant limitation of time constraint; the researchers were only able to conduct one FGD and five in-depth interviews. Ideally, the sample size should be larger, and the data collection should continue to ensure saturation. In an attempt to mitigate the limited number of in-depth interviews purposive sampling methods were used to recruit the participants from the available student pool to ensure a variety of backgrounds

were included in the study. Further research with a larger sample size of international students from different post graduate courses should be conducted to further explore the potential barriers and benefits of social media in education.

Conclusions

Twitter has the potential of enhancing the active learning process and communication among both learners and educators in a post graduate setting however this also poses additional challenges on top of the traditional learning methods. Our study revealed that Twitter was mainly used for the social communication among the international postgraduate students. The privacy concerns, unfamiliarity of the platform, and 140-character limit hindered the usage of Twitter in our postgraduate setting. Therefore, adequate training of both educators and learners to improve social media literacy will improve engagement of first-time users. It should not be assumed that all students are familiar with Twitter and are comfortable with using the platform for information sharing purposes and this should be addressed early in the course. Engagement of faculties from a wide range of subjects, organizations, and leaders in different fields will maximize the engagement of post graduate students which is vital if Twitter is to continue to act as a teaching and learning platform.

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Conflicts of interest

There are no conflicts of interest.

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