An Investigation of How Chinese University Students Use Social Software for Learning Purposes

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Abstract

Social software (also called "social networking sites" or "social media sites") is used by people of all walks of life around the globe, and a variety of research studies have been conducted regarding its use for learning purposes, as the pedagogical value of the informal communication space has been recognized by researchers with different perspectives. Facebook and Twitter, which are very popular social software in many countries, are not available to general users in mainland China, where alternatives, e.g., QQ and WeChat are widely used. This paper reports findings of a study that investigated how students from three Chinese universities of different geographic locations (one from Northeast China, one from Northwest China, and another from Southwest China) use the social software for learning purposes. Data were collected from interviews with some of the users, and observation of how the spaces were used, in the past two years. Based on a review of relevant literature and the analysis of the research data, the authors’ reflections and recommendations are presented with the hope to offer educators of higher education some useful reference to consider when they design curriculum and courses that could provide students with an enriched learning experience.

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1. Introduction

With increased number of computers and mobile devices that are connected to the Internet through cables, wireless network (wifi) and/or mobile data plans, more and more people have access to the online communication...
spaces. Besides communication channels such as email, instant messaging or voice/video chatting systems (e.g., MSN Messenger, Yahoo Messenger, Google Talk, Skype), and online chat rooms, social software, also called social networking spaces, social networking media, social networking sites, social media, or social networking software, such as Facebook, MySpace, blogs, wikis, and Twitter have users from all walks of life around the world.

Social software has created a phenomenon on the Internet that has gained popularity over the last decade (Sponcil & Gitimu, 2012). This set of Internet-based, consumer-oriented computer technologies that is designed to help people to interact, communicate, create, and share content (Feuer, 2009), has caught the attention of educators and scholars (Allen, 2012; Aydin, 2012; Dyson, Vickers, Turtle, Cowan, & Tassone, 2014; Kent, 2013; McRae, 2014), who are increasingly recognizing the pedagogical values of such spaces.

In the past decade, China has seen dramatic increases in the access, affordability and availability of Information and Communication Technologies (ICT), especially Internet-connected computers and mobile phones. As of the end of 2009, the total number of Internet users in China was 384 million, most of whom were using broadband as their Internet connection, and the number of mobile Internet users was 233 million, accounting for 60.8% of all Internet users in the country (China Internet Network Information Center, 2010). It is reported that the ownership and use of mobile phones are increasing faster among all types of users, including students from rural areas of the country (China Internet Network Information Center, 2013). Higher education institutions across the country have more or less infrastructures of ICT available for administration, teaching and research purposes. Most universities have a website in Chinese and English, or more languages. In many universities in China, academic departments send out announcements as short text messages to employees’ cell phones. They also set up groups on QQ (a popular Chinese online communication tool with functions of instant messaging, email, off-line messaging, file transferring, audio and video chatting, and group chatting) for teaching and research teams to have group communications.

Social software such as Facebook, Twitter and YouTube that are popular in Western countries, are not available to general users in mainland China for political, economic and technical reasons. Users in China have some equivalents, such as QQ, WeChat and Youku for similar purposes (Yu, Asur & Huberman, 2011). This study examines how Chinese university students use the social software, specifically QQ group, for learning purposes.

2. Literature review

Social software was started as a space for social communication. For example, the original uses of weblogs, or blogs, were mainly for the publication of simple, online personal diaries. After being used in different domains for a variety of purposes, blogging has evolved to have the capacity that can engage people in collaborative activity, knowledge sharing, reflection and debate (Hiler, 2002). For educational purposes, writing a blog forces a student to confront their own opinions and contemplate how their views might be interpreted and reflected upon by others (Mortensen & Walker, 2002). Academic literature documented how graduate students use blogs for their academic development (Freeman, et al., 2006), and the use of blog for English language learning (Blackstone, Spiri & Naganuma, 2007). Based on their literature review, Williams and Jacobs (2004) conclude that “blogs have the potential, at least, to be a truly transformational technology in that they provide students with a high level of autonomy while simultaneously providing opportunity for greater interaction with peers (Summary and conclusions, ¶ 4). In a paper that shares their practice in a teacher education program, Zhang, Tousignant and Xu (2012) stated that they encouraged their teacher candidates to create blogs as an online space to complete case studies in small groups, and they also introduced wikis as a useful tool for language arts students to do peer editing. They observed that most of their teacher candidates had their own Facebook profile for social purposes, but some also used it for their professional development and networking.

Literature on pedagogical values of social software shows that such spaces can be used for education purposes at different levels and subject areas, but a more in-depth understanding of the relationship between the use of social software and learning can be found in the discussion of Christine Greenhow, who says that “What we found was that students using social networking sites are actually practicing the kinds of 21st-century skills we want them to develop to be successful today” (Brindley, 2012, ¶ 11), which means that educators should not only view the
pedagogical value of social software in specific learning contexts, but also the educational outcomes the use itself brings about.

A study by Grunwald Associates (2007) of nine-to-17-year-old students shows that 96 percent of the research participants with online access have experiences of using social software. The authors suggest that “Educational leaders should work with social networking companies to increase services that are explicitly educational in nature, via informal or formal initiatives that highlight educational offerings” (Striking a Balance – Guidance and Recommendations for School Board Member). Baird and Fisher (2005) argue that “Social networking media provides the opportunity to take the social interaction to deeper levels as well as address learning styles rooted in digital technologies” (p. 8) and suggest that social software can engage users in the learning content and actively participate during social interaction, knowledge exchange and cognitive development. Boulos and Wheeler (2007) examined the applications of Web 2.0 in the context of health service and education and assert that there is a need to raise awareness of Web 2.0 tools and the possibilities they offer. They argue that there is an urgent need to conduct quality research to inform better use of Web 2.0 applications.

Field and Spence (2000) argue that “social capital can offer both a complement and an alternative to education and training as a means of attaining both individual and group goals” (p. 35). They believe that high levels of trust and strong networks can be associated with a tendency to promote informal learning through members of the family or neighbourhood or workforce… it could be hypothesized that in certain circumstances, high levels of social capital will foster high levels of informal learning and low levels of participation in formal education and training. One key ingredient in the equation will then be the extent to which education and training systems themselves are an embedded aspect of the networks and trust which provide such effective resources in attaining group goals. Instead of a simple linear model, a more complex set of alternative relationships are available. (p. 35)

Huber (2010) provides insight that supports the use of Web 2.0 tools as a venue for educators to tailor a sharing of resources, posting personal thoughts and responding to questions that provide opportunities for sustained professional conversations around teaching and learning. Considering Grossman, Wineburg and Woolworth’s (2001) views on a teacher learning community, there must be more than a superficial social element of participation in conversations that goes deeper into an intellectual realm. This involves a type of “discussion brokering” where participants contribute to group discussions, but also engage in questioning and critiquing of thoughts that are being shared, for the main purpose of learning together (Grossman, Wineburg & Woolworth, 2001, p. 979).

With the interactive nature of social software, it can be viewed as an environment that facilitates access to a population of geographically dispersed users consisting of a wide variety of expertise. Glynn, Huge and Hoffman (2012) who did a study with Facebook users at a US university on factors related to news use on Facebook and argue that “social networking sites will certainly play a large role in how citizens share information” (p. 118). Kurtz (2014) finds that the Facebook group was perceived as a protected environment that fosters social learning processes while emphasizes learner involvement and active contribution as well as frequent interaction with peers and instructor. Shirky (2008) refers to social software users as operating in small groups as part of a community that is subdivided into small but densely connected clusters of people sharing certain values. Usually, in social networking, the principle of homophily applies, where people associate with other groups of people who are mostly like themselves (Yardi & Boyd, 2010). Grossman, Wineburg and Woolworth (2001) maintain that teacher communities “work most smoothly when teachers self-select into groups of like-minded colleagues” (p. 50). A revisit of Grossman, Wineburg and Woolworth’s (2001) elements of an effective teacher community indicates that a community allows for a sharing of resources for others’ learning, clarification of thoughts and the building of ideas through group discussions, and a willingness to critique to further collective understanding.

Ebner, Lienhardt, Rohs and Meyer (2010) describe how this communication can foster “process-oriented learning due to the fact that it can allow continuous and transparent communication” (p. 93) which supports a social constructivist approach to learning. The learning process becomes transparent and as a result can benefit others who participate in the communications. Members of social networking spaces do not make equal contributions in posting messages. That is, about half of them just “lurk” and read others’ postings (Preece, Nonneec, & Andrews, 2004), but that does not necessarily mean those who do not actively participate do not learn anything in the community (Beaudoin, 2002).

Studies show that younger people are more actively engaged in the use of social networking spaces, and such spaces are useful more for social than learning purposes. Roblyer, McDaniel, Webb, Herman, and Vince Witty’s
A study by Zuochen Zhang and Ying Xue (2010) found that 95% of students reported having a Facebook account while only 7% of faculty did, but students and faculty shared the perception that the SNS was the least-commonly used technology for instructional purposes. They suggested that even though their research participants mostly perceived Facebook as a tool for social rather than educational, people’s “attitudes toward technologies tend to change over time” (p. 138).

Twitter, a web-based tool, has been described as a “premier microblogging site” (Small, 2011, p. 872) as well as a social networking application that brings together multiple audiences into single contexts (Marwick & Boyd, 2010). Twitter users have appropriated this medium to “reflect whatever use or style of communication they want” (Mischaud, 2007, p. 40). A content analysis study by Mischaud (2007) demonstrates that 58% of Twitter users are going beyond a simple sharing of what they are doing by using the medium to send messages to other people known by the user, publish one’s personal viewpoints and thoughts, and to share news-like information with others (pp. 23-25). He contends that participants have realized the flexible use of this medium and have adapted the technology to reflect a style of communication that addresses the innate human desire to converse with others (Mischaud, 2007).

Twitter has provided a medium for a new form of collaboration and communication through conversations (Ebner, Lienhardt, Rohs & Meyer, 2010; Grosseck & Holotescu, 2008; Honeycutt & Herring, 2009) by allowing for conversations among educators following collaborative learning structures and transformational learning theories. The notion that educators are discussing topics of their own choosing that relate directly to their experiences, provides opportunities for educators, who might feel isolated in their schools, to explore the values and perspectives of other educators, around the globe.

As can be expected, when discussing educational benefits of social software, it is undeniable that concerns and issues also exist, especially when it comes to the use of social software by younger people. It seems that younger people, or more specifically teenagers, are more enthusiastic about using social software, but spending a lot of time on these tools does not mean this group of users really have adequate literacy in terms of how to protect their privacy online, which is a concern when we think of younger people using social networking spaces (Livingstone, 2008). It can be agreed upon by educators that, if used properly, social software has many potential benefits to their users, educators and learners included. However, it should be borne in mind that social networking could “provide a rich setting for criminal activities and other misdeeds” (Weir, Toolan & Smeed, 2011, p. 38), such as cyber bullying and identity theft. It is important for teachers to be aware of the potential dangers of the social software and caution their students of such dangers.

QQ is one of the most popular software tools used in mainland China, and a number of studies have been conducted to investigate how QQ has been used for educational purposes. Dai (2011) proposed a QQ-based interactive model for after-class translation teaching after the analysis of QQ group’s chief functions and the features of QQ-based interaction. To understand the capacity of QQ and in what ways it can be used for teaching and learning, Xu (2009) identified four features of the communication models of QQ between teachers and students: 1) richness of communication symbols, 2) freedom of communication, 3) diversity of ways of communication, and 4) transcendence of the time and space. Xu (2008) reports a case in which a QQ-based collaborative e-learning system was used as a learning environment in addition to face-to-face class meetings, and it was found that the use of this environment got better student learning performance.

3. Methodology

Research data for this study were collected using interview and observation. At interviews participants were asked about their perspectives of and attitudes towards the software tool QQ (more specifically QQ group), and using it for learning purposes; Besides the interviews, observations were made of how the participants in the three QQ groups (online discussion groups) made use of the space.

3.1 Research questions

Two research questions were used to guide this investigation, namely:
a. How do the research participants perceive social software as a tool for learning purposes?

b. How do the research participants use the QQ group for learning purposes?

3.2 Research sites

This paper reports what we learned from three QQ groups that involved students from three universities, one from northeast, one from northwest, and another from southwest of China. Two groups had third and fourth year university students who were registered in teacher education programs, and one had first-year Master’s students of Educational Technology. There were about 20 students and 3 professors in a group. Each of the online spaces (QQ groups) was created by a student from the target university, who invited students and professors of their cohort to join so they could share resources and have discussions on topics related to the participants’ programs of study. These online spaces are considered communities of practice, where members "share a passion for something they know how to do and who interact regularly to learn how to do it better" (Wenger, 2006). One of the authors of this paper was a faculty member of one of the above-mentioned universities, while the other was a faculty member from a university in Canada, who was invited to be a guest mentor in the online groups. Communications in the online groups were mostly text based, but audio and video communications were also utilized from time to time. English and Chinese were used alternatively for the communications.

3.3 Research participants

Maybe because all the participants were in the educational domain, the majority of them were female students, which is a quite common phenomenon in China. Regarding the age range, most participants were in their early- to mid- 20’s, but some of the Master’s students were in their early 30’s. The participants represent a variety of academic disciplines, such as biology, chemistry, Chinese language and literature, computer science, English, educational science, educational technology, math, political science, physics, physical education, psychology, social work, etc.

3.4 Interview

Semi-structured interview questions were designed to ask the research participants of their perspectives of and attitudes towards social software for learning purposes, and 3-5 participants from each group were invited to be in the interview. The interviews were conducted in Chinese and the conversations were recorded with a digital voice recorder as well as the researchers’ notes.

3.5 Observation

In a QQ group, a member can post a text message or upload a voice message for the whole group, or share a file with all the members. One can also choose to have a private communication with one or more members without the knowledge of others. Observation was made of all the communications that took place in the public forum, mostly the archives of text messages posted in the space, with the aim to obtain a holistic picture that can illustrate aspects of communication among members of each group, and also the communication between students and the researchers, including frequencies of making postings, topics of communication, emerging patterns of communication, etc.

3.6 Data analysis

This paper mainly focuses on the qualitative data of the study, and we concentrated on the “thick description” (Geertz, 1973) of what the participants said and did, with an intention to provide an overall landscape of investigation. We applied second, open coding (Saldaña, 2009) in order to generate a preliminary thematic analysis. Some simple quantitative data analysis was also carried out, such as creating frequency tables and bar charts with Microsoft Excel. These figures were used to draw a concept map that presents relationships that existed among students.
certain variables (Creswell, 2005). Voice recordings of the interviews were transcribed and translated into English by a Research Assistant with assistance of the software package Transana 2.3, and hand written notes were word processed by the researchers for easy reading.

4. Findings

This study focuses on how the research participants perceive social software, specifically QQ group, and how they use the online space for learning purposes. Findings from the two data sources are presented below.

4.1 Interview data

When asked about their perspectives of and attitudes towards the social software QQ, specifically QQ group in this case, most participants responded positively based on their experience of using the features and functions of the system in terms of reliability, user friendliness, accessibility, and compatibility, as it could be used on different platforms, such as computer, tablet, and smartphone. Most of the participants reported that they had a smartphone with a mobile data plan, and they could also connect to the Internet by wifi which is widely available on campus.

In regards of the pedagogical value of QQ, especially QQ group, about one third of the participants believed it could be used for teaching and learning, especially informal learning, and when they were asked to give some examples of such uses, most of them responded that the space could be used for sharing news of their interest and other learning resources. One of the participants made the statement that When we come across useful resources we would bring it here and share it with other members. Sometimes someone may start a discussion topic related to a reading we have had recently but normally there would be just a few responses. By sharing learning materials, we learn together. (Interview with a Master’s student)

In response to the question about their preferred way of communicating in the space for learning purposes, more than half of the participants indicated that they appreciated learning resources shared by other members, but would normally like to have a private chat or face-to-face meeting if an in-depth discussion was to be carried out, because they believed that having a discussion in the public forum could easily get distracted by others, and typing on a smartphone is oftentimes rather cumbersome.

Almost all the participants reported that they would make an effort to participate in a discussion in the space if a professor facilitated such a discussion, otherwise they might read the postings, but would not respond unless they really felt necessary. Following is the response from a participant After all, the QQ group is an informal space. It is not a discussion forum in an online learning course, or an online part of a blended course, where you are required to make contributions. You will not be assessed of your participation in this space, so why do you need to worry if you do not respond to someone’s posting? (Interview with a third year university student)

4.2 Observation data

Use of the space in the QQ groups was observed by the authors of this paper since they were created, and it was noticeable that this space was more frequently used at certain periods of time than others. For instance, there were more activities going on after a practicum or other organized event, or before examinations. After a practicum or other organized event, such as a talk from an invited speaker, members would come to the space to share pictures they took, or presentation materials they collected, and besides the sharing of materials, there might be some brief comments, mostly on the pictures, or show of appreciation to members who shared them.

Before mid-term or final examinations, members of the QQ groups, especially those of the undergraduate students, would use the space to ask clarification questions about the subjects of their concern. Occasionally members who missed a class would come to the space asking for updates, and those who responded would normally suggest that they use the private chat instead of talking about it in the public forum.

The status panel on the QQ system shows the names (or handles) of those who are online and those who are not. From time to time, some members may forget to sign out when they leave and their status would show they were online even if they were not, but a more common phenomenon is that some people prefer to set their status as
“invisible” and they would join in discussions only when they wanted to. These members may belong to the so-called “lurkers” who usually do not “speak” but they could still be reading postings, and were ready to get what was made available in the space, and more often than not, they would not respond to another member’s argument if they agreed with him/her, and they would only share their thoughts when they wanted to show they disagreed with somebody, but seldom try to criticise.

5. Concluding remarks

Data from the interviews indicate that participants were interested in being a member of the group, as it was easily accessible anytime and anywhere using their computer or hand-held devices. They reported that they felt it a useful space where they could get a lot of resource they needed. Most of them viewed the group as a resource sharing space rather than a space for in-depth discussions, which they would prefer to carry out face-to-face, or in a private chat.

Our observation of the space indicated that, on average, each group only had a small percentage of (15%) participants who usually actively participated in the communications in the public forum, a phenomenon of which a conclusion could be drawn that most of them preferred to be “lurkers”, who would read what others posted or download the resources others shared, but would seldom participate in discussions in the public forum. “Lurking” has been documented in previous literature regarding online learning, but for this specific context, a number of reasons could be identified, including the Chinese culture and “Eastern pedagogy”, in which students are normally expected to be “good listeners”, and culture of the institution, where the students are not used to having a lot of academic discussions in an online environment.

Based on the findings of this research and what has been reported in the literature we reviewed, we would argue that, increased availability and accessibility of networked computers and mobile devices make it possible for online learning environments to be set up, and it is widely possible for university students in China to join a social software group, such as QQ group, where they can enjoy the flexibility made available by the system so they can learn “anytime” and “anywhere”. However, in order to make an e-learning environment based on social software really effective, a number of considerations should be taken into account, including learners’ academic and cultural backgrounds, their comfort zone, and their motivation for learning. One of the most important factors in this regard is the role of the professor(s), whose facilitation can certainly make a difference, as a facilitated discussion gets significantly more members involved. The findings of the study come from an investigation of participants who are university students in China, but it is our belief that similar situations may also exist in other countries and students of other age groups. It is our hope that by sharing the findings of our study and our reflections, we can provide reference regarding the use of social software for learning purposes to scholars and practitioners who work in the education domain in other academic and cultural contexts.

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