Online Social Networks in Chinese Collaborative E-learning Education

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The use of Online Social Networks in Chinese Collaborative E-learning Education

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## Content

The use of Online Social Networks in Chinese Collaborative E-learning Education ........................................1

Abstract ........................................................................................................................................................................3

1. Introduction..........................................................................................................................................................4

2. Collaborative Learning Theory (CLT) ............................................................................................................7

3. Method .............................................................................................................................................................9

4. Results and Analysis ........................................................................................................................................12

   4.1 Interaction ..................................................................................................................................................12

   4.2 Individual accountability.............................................................................................................................13

   4.3 Team work ..................................................................................................................................................15

   4.4 Personalized guidance ...............................................................................................................................16

5. Conclusion and Discussion ..............................................................................................................................19

   5.1 Conclusion and Discussion .......................................................................................................................19

   5.2 Limitation and Future study ....................................................................................................................20

6. References .......................................................................................................................................................21

7. Appendix A: Questionaire ...............................................................................................................................23
Abstract

E-learning is becoming popular increasingly in higher education and other institutions such as government, from which both students and instructors gain benefits. In this paper, we investigate the possibility of that OSNs can be a foundation of collaborative E-learning platform, which try to build an E-learning platform, which is collaborative and beneficial for the Chinese E-learning users in colleges, government and other institutions. The study is based on the collaborative learning theory. Result from the investigation with 50 students and that theory indicates that features from online social networks may facilitate collaborative learning concerning: interaction, individual accountability, team work, and personalized guidance.

Key Words: E-learning, online social network, Chinese education, collaborative learning.
1. Introduction

“Technology is constantly changing and new technological development can have profound effects on education” (Bates, 2005). With the rapid development of economy and technology, educational methods, approaches and learning today is no longer confined in classrooms with lectures and teachers who are considered as the only information sources for conveying knowledge and information. E-learning has begun spreading worldwide and particularly in western countries. Users with portable devices even can do learning on the move since the development of mobile technology. From this, the user who takes an E-learning course can acquire knowledge and information anywhere and anytime. E-learning contributes to an increase in efficiency of learning due to a better adaptation of learning material to the actual knowledge and interests of students.

E-learning courses are delivered and enhanced by the Web 2.0 technologies to increase student interaction and sustain the educational material produced. This new learning style is called E-learning 2.0 (Li & Liu, 2009). For instance, online social network (OSN) is a typical web 2.0 application. This application which is used for making friends and keeping relationships with others by most people caused widespread concern. This phenomenon is not only happened in Europe, but also happened in China. Especially when the economic rise, this phenomenon appears more and more common in recent years. That is because the Chinese government which is always attaching importance to the Education field pays more attention to that application in order to catch up with the world’s pace. Moreover it is considered as one part of the government policy which can improve the national quality and be beneficial for the whole nation. Therefore in order to deeply research, we would like to focus on the use of online social network in students’ E-learning education. The OSN which were investigated in this paper are Renren and Tencent Qzone.

Some predecessor's research results were found and studied in order to get understanding of background and the status quo of E-learning in China. Ding et al. (2010) provides the background information of E-learning education in China and defines E-learning into three stages: correspondence-based education, radio and TV-based education and online education. Wu et al. (2009) indicates the functions of E-learning in China with three points: benefit for eliminating the digital divide in east and west, urban and rural areas; enhance the technological capability of peasants, benefit for become rich from poverty; promote the formation of rural learning society. Zhao&Kanju (2001) and Xu (2008) imply the possibility to applying the OSN to E-learning education.

In addition, some researches show that collaborative learning offers a variety of benefits over traditional education methods. Collaborative learning not only enhances student satisfaction with learning experience and promotes a positive attitude toward the subject, but also offers weaker students with one-on-one tutoring and allows stronger students to conduct in-depth studies (Zhao & Kanji, 2001). The aim of this paper is defining OSN as a foundation to build an E-learning platform, which is collaborative and beneficial for the
Chinese E-learning users (eg. college students, government officers). Our main research question is: What is the possibility of those OSNs can be a foundation of collaborative E-learning platform? In order to accurately understand the main research question, it can be defined in two aspects: 1) What is the use of online social networks in Chinese students’ collaborative E-learning education? 2) What features of OSNs could enhance a more collaborative E-learning platform?

Renren and Tencent in China

The Renren Network (www.renren.com) which spreads throughout the society is the biggest Chinese social network website. It is similar with Facebook (www.facebook.com). In Feb 2011, Renren made a pre-IPO announcement that it had 160 million registered users (Hille, 2011). Then in April 2011, it had to modify that statement to "a total of 31 million active monthly users" (Chao, 2011). In China Renren mainly caters for college students, the key information to make one’s identity effective is college, high school, middle school and hometown. At present, 32,000 universities and colleges, 56,000 high schools and 85,000 companies in China and 1,500 universities in 29 other countries are available on Renren (Wikipedia). See Figure 1.
Tencent Qzone (qzone.qq.com) is a well known integrated communication social networking website in China. Because of its fee-free, powerful functions and easy use, the popularity rapid increases these years. It is designed for students to communicate with others in a synchronous or asynchronous way, and enable student easily create learning blogs to sharing ideas. We can take the advantages of these OSNs in order to improve collaborative E-learning experiences. See Figure 2.

![Figure 2 Interface of Tencent Qzone](image)

The below part of the paper will be arranged as follow: 1) Collaborative learning theory; 2) Method; 3) Results and analysis; 4) Conclusion and discussion.
2. Collaborative Learning Theory (CLT)

Collaborative learning theory is based on the model that knowledge can be created within a population where members actively interact by sharing experiences and take on asymmetry roles (Mitnik et al., 2009). This is commonly illustrated when groups of students work together to search for understanding, meaning, or solutions or to create an artifact or product of their learning. Thus, the educator’s role is to support rather than to direct. Collaborative learning emphasizes sharing and interaction (Slavin, 1994). Collaborative activities enhance learning by allowing individuals to interact with others and sharing their thought, ideas and information (Du&Wagner, 2005). Compared with traditionally individual-oriented learning, collaborative learning results in better learning outcomes (Xu, 2008). Collaborative learning is a teaching strategy in which individuals improve their understanding of a subject and foster creative thinking by interaction with others. It has four key elements: interaction, individual accountability, team work and personalized guidance (Xu, 2008). See Figure 3.

![CLT Diagram](attachment:image)

**Figure 3 Theory of CLT (based on reference Johnson and Xu)**

Interaction: Important cognitive activities and interpersonal dynamics only occur when students promote each other’s learning. This includes oral explanations of how to solve problems, discussing the nature of the concepts being learned, and connecting present learning with past knowledge. It is through face-to-face and promotes interaction that members become personally committed to each other as well as to their mutual goals (Johnson et al., 1991).

Individual accountability: The essence of individual accountability in collaborative learning is "students learn together, but perform alone." This ensures that no one can "hitch-hike" on the work of others. A lesson’s goals must be clear enough that students are able to measure whether (a) the group is successful in achieving them, and (b) individual members are successful in achieving them as well (Johnson et al., 1991).
Team work: This can be achieved through mutual goals, division of labor, dividing materials, roles, and by making part of each student's grade dependent on the performance of the rest of the group. Group members must believe that each person's efforts benefit not only him- or herself, but all group members as well as to their mutual goals (Johnson et al., 1991).

Personalized guidance: Instructions’ comments, as well as other students’ responses are given during the learning process. Comments and responses can become an integral part of learning. Because students can get useful information and can easily adopt good practices of others (Xu, 2008).

There are two reasons that we use CLT theory in the research of the use of OSNs in Chinese E-learning education. Firstly, Du and Wagner (2005) have shown that collaborative learning theory can be use in blogging learning based on their empirical investigation. Results from the investigation with 33 students indicate that blogging performance is a significant predictor for learning outcome, while traditional coursework is not. Secondly, Yumei Zhang and Junyong Zhang (2010) have grounded the theory well with learning with blogs. According to these two reasons mentioned above, we considered that the CLT can be also used in learning with OSNs. Because OSNs have similar features with blogs, and based on that OSNs have more other features and applications that can support collaborative E-learning.
3. Method

In this paper the qualitative and quantitative method were used to address our research question. On one hand, we would do the literature study which could be found through the internet search engine, the literatures were considered as basic level which can lead us to find general ideal about the role and use of the social networks in terms of the education in China. “Your literature review is where you demonstrate that you are able to engage in scholarly review based on your reading and understanding of the work of others in the same field” (Bryman, 2008, p. 81). The ELIN @ Örebro, Google Scholar and some others stated at the references of four articles were used for collecting the literature, articles and journals. E-learning, online social network, Chinese education, collaborative learning was considered as the key words to search the literature.

CLT was used as a framework in this paper. First of all, some literatures which indicated the CLT theory were found and collected by search engine. For instance, the article of “learning with a QQ-based Collaborative E-learning System” (Xu, 2008) was considered as one of the main references. And then the related articles were compared in order to make conceptualization. Finally the CLT concept was summarized according to the well-chosen literatures.

In terms of meeting the needs of research, a questionnaire were used for data collection, because “questionnaires and rating scales are commonly used to measure qualitative variables” (Svensson, 2000). The questionnaire was designed according to the CLT framework. The qualitative method was used to the question design. Before the final questionnaire was decided, the small range of testing and adjustment was carried on during our Chinese classmates in Örebro. In order to make sure that we had enough data to be analyzed, 100 emails regarding to the background of our research and the link of questionnaire were distributed to different informants. The informants who came from different Chinese colleges were randomly extraction. The functions of searching friends which were designed for Renren and Tencent Qzone were used. The reason why college students had been chosen to do the questionnaires is that the students who come from high school and middle school don’t use OSN as a learning platform. The traditional teaching method for learning is still proceeding in the school. But the education approaches in colleges are changed in the recent years. In the end, the number of feedback from the informants was 78. But when we were sorting questionnaires, we found some problems, for instance lacks of data from open-ended questions were existed in some of the questionnaires, and useless information appeared in open-ended questions. According to our inclusion and exclusion criteria’s, for example all the data should be completed and the data should be relevant to the questions, therefore the final questionnaires which were used after data sorting were considered as 50. See Table 1. Therefore the effective response rate was 64.1%. The data reported here were collected between 12th April and 26th April in the year of 2011.
Online questionnaire (See Appendix A) was released on www.askform.cn which is designed as a platform for users to release questionnaires and collect feedbacks. In the absence of standard instruments there is a considerable variety in the type of instruments and scales that are available to assess the same qualitative variable (Svensson, 2000). The questions were mainly divided into four aspects as interaction, individual accountability, team work and personalized guidance. In our questionnaire these variables were measured: 1) basic information of students: gender, age, online frequency; 2) applications used by students: browsing friends’ blogs or shared contents, browsing friends’ photos, releasing new blogs, showing photos, searching for familiar friends, sharing information, making new friend, discussing in groups, etc.; 3) experience of team work and frequency of that in OSNs; 4) some other opinions about E-learning with OSNs: benefits and disadvantages. In terms of interaction, the question 7 and 8 were put forwarded relative to this area. We planned to analyze the experience of assignment discussion and the frequency from these two questions. Regarding to Individual accountability, the question 5 and 12 were point out. From the collected data of these two questions, we planned to analyze what functions and applications that the users use most frequently, and if the OSNs which were consisted by those functions and applications contributed to their E-learning study. Also the question 9 was indicated to the field of team work. We planned to analyze if it is popular team working through OSNs in Chinese education currently. Question 10, 11 and 13 were about the area of personalized guidance. We planned to analyze how the users do the self-assessment, and if it is good for them that they can get personalized guidance anytime and anywhere when they use OSNs for E-learning. More details from the four aspects could be found in the questionnaire. See Figure 12 to Figure 15.

Table 2 Question Designed list

<table>
<thead>
<tr>
<th>Learning Elements</th>
<th>Questions Designed in Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction</td>
<td>question 7 and 8</td>
</tr>
<tr>
<td>Individual Accountability</td>
<td>question 5 and 12</td>
</tr>
<tr>
<td>Team Work</td>
<td>question 9</td>
</tr>
<tr>
<td>Personalized Guidance</td>
<td>question 10, 11 and 13</td>
</tr>
</tbody>
</table>

The aim of last three open-ended questions were to know some opinions from Chinese students concerning advantages, disadvantages and improvement of OSN based on collaborative E-learning. Although they were not directly related to the variables in the
framework, it was an expansion of our study. In summary, the advantages were much more than disadvantages, such as immediate information; convenient for communication; gain valuable information; expanding knowledge; expanding social circle; no restrictions about time and space; increase the efficiency; provide more exchanges choice. Moreover, personal information protection aroused more attentions; more details had been discussed in the Chapter 5.

The data was collected by the askform platform automatically. The main statistical measure we used was descriptive statistics. "This is useful in research, when communicating the results of experiments" (Wikipedia). Excel, which is one of the popular office software, was used for depicting figures in order to have more intuitive understanding of data. In this paper pie charts and bar charts were combined used for data analysis.

In addition, a comparison of the elements of CLT with a statistics of OSNs usage was put forward to understand and summarize what features of OSNs that could be integrated in E-learning platforms and curricula. Moreover some suggestions were also put forward from our own opinion according to the statistic of OSNs usage.
4. Results and Analysis

4.1 Interaction

In collaborative learning, interaction is the most important element. In classroom, face to face interaction is the main communication way (Xu, 2008). When OSN is used in collaborative E-learning, students who can discuss with the instructor and other course mates face-to-face through web camera after class are no longer working in isolation, but actively cooperate with each others as parts of the larger community. It mainly depends on the varieties functions of OSN.

Moreover, students’ self-responsibility and interaction with the knowledge construction can be promoted by working in a community (Kuutti, 1995). OSN definitely could serve as the tool and community for this function. The community showed that interaction was significant in students’ E-learning education. Students could discuss assignment with course mates in the community without working alone when they got in a difficulty. Therefore, the interaction should be well considered in the usage of OSN. So combined the theory with research question, the questions seven and eight were put forwarded relative to this area.

Questions 7 and 8 were about interaction aspect. Our questions were emphasized on students’ communication and discussion after class. And of course, the frequency was an important aspect we cared about, because it shows the trend of user's study habit. In addition, Question 7 could also be considered as the comparison of usage of E-learning and traditional education approach. The current situation of E-learning in China was showed directly to the reader.

According to the response of the questionnaire, most of the students had experience of discussing and sharing assignments or homework with their classmates through Renren/ Tencent Qzone. It reached to 53.85 percent of the total informants. So the interaction was successful popularized. But on the other hand there was still 46.15 percent who didn’t have experience of that. It was quite a big population that who didn’t have interaction by OSN in China. So the traditional education approach was entrenched. See Figure 4.

![Figure 4](image)

Figure 4 Do you have experience of discussing and sharing assignments or homework with your classmates through Renren/ Tencent Qzone?
In order to understand the interaction, an extended question about the frequency of OSN usage was designed. The data were collected by the informants who had chosen “yes” in the last question. From the Pie Chart it was clear to see that the most area had been taken over by the answer “sometimes”, it reached to 43.1 percent. The second large area was depicted by the answer “Rarely”, it reached to 29.31 percent. However the data “often”, which was expect to see depicted by the red color, was only 3.45 percent. See Figure 5. Therefore integrated with two questions we suggest that it is necessary to further increase the popularization. For example, if the students prefer and rely on the E-learning education, they will actively participate in the Interaction. The interactivity will be stimulated and increased.

![Pie Chart showing frequency of OSN usage]

**Figure 5** If you have chosen YES in last question, then how often?

Furthermore, from another side to consider, online games which are provided by OSN can increase the interaction between the students. Students who have common interest may play games together. This action can deeply raise the understanding and cooperation among students. Meanwhile, it also laid a foundation of everyone’s interaction.

### 4.2 Individual accountability

A blog, as a knowledge sharing technology, provides a useful medium for knowledge sharing and interaction on the internet. Instructors can write down their curriculum plan and experiences while students can write down how they consider what they are learning (Xu, 2008). According to different questions and feedbacks from students on the blogs, instructors keep track of those blogs and summarize all of them. Then the instructors can focus on answering the common questions while answer the issues of differentiation independently. But all of those questions and answers can be seen by students. The benefit from this, students’ thoughts get collided, integrated and mutual inspiration reached. Furthermore, it supplies diverse perspectives, and enrich learning experiences of students (Slavin, 1994).

Furthermore the Individual accountability is the belief that the individual will be accountable for their’ performance and learning (Jeffrey, 2010). For example, the individual should
accomplish the same kinds of assignments by themselves after learning interaction, because learning interactivity was basic, so that individual can do it more easily when they are alone. Moreover Individual accountability is the structural element required to discourage and lower the likelihood of free riders or social loafing. So the students are responsible for their individual blogs and photos, and publish their thoughts, ideas and works with their authenticated identity. Once students find valuable information, they can extract from other place, and then publish their concerns. That valuable information can get better organized and used when necessary. Students can also upload their own works and design for sharing. Published information on the web is immediately visible to others. During this process, students are self-studying and self-motivated (Zhang and Zhang, 2010).

In addition, students can compare their work against other and determine the general performance level of their peers, and then more easily adopt good practices of others and become more aware of bad practices through comparison and evaluation of other’s works (Du&Wagner, 2005).

Aiming at those characteristics, the question five and twelve were designed concerning to this area. Individual accountability is about individual's activities and performance when E-learning is carried on. Our questions were emphasized on what activities the individual do most frequently.

![Figure 6 Which functions of Renren/ Tencent Qzone do you use most frequently?](image)

According to our statistics, the most used functions and quantity were Browsing friends’ blogs or shared contents (37%); Browsing friends’ photos (35%); Sharing or acquiring information (22%); Chatting with friends privately (21%) respectively. Those were most frequently usage for the students. Those basic functions which the efficiency of the E-learning in China was improved could increase students’ studying interest and also attract more peoples’ attentions. The students were helped by the functions when they were
learning how to accountable for their’ performance and learning, such as published their’ own opinions, do not plagiarism from others’ articles. In addition, the students should believe that their individual contributions, learning, and performance will affect the grades that they receive. Therefore in our opinion the OSNs which consist of those applications contribute to their E-learning study. See Figure 6.

![Figure 7](image)

Figure 7 Renren/ Qzone is a useful tool that can improve and facilitate our study in classroom and E-learning education. Do you agree?

From the Figure 7, we could see that the agreement choice was taken over 50 percent. Therefore we considered that the users were satisfied with the using of OSN in E-learning in China. However there were still less than half informants, who didn’t agree with that, because the current popularization of E-learning was not as good as traditional education. The traditional thought was deeply rooted when they were studying.

4.3 Team work

There are many group projects handed out in our courses nowadays. The group project is assigned to have common goal that can only be achieved by cooperation. Team work provides a way for students to develop their technical skills, as well as the valuable skills regarding effective interpersonal and constructive communication and leadership skill (Xu, 2008). Social software provides many features that can serve the team work of E-learning in different ways. For example, group chat and group video call allow users to talk online together. Students can discuss and get each other’s opinions and ideas at the same time without face-to-face chats. Some students who are shy in classroom may express their ideas actively through an OSN. And some other software is used for information tagging and sharing, which is considered useful for team work of E-learning, such as del.icio.us allows students to share their bookmarks and Flicker allows sharing of tagged pictures (Li & Liu,
2009). When students discuss some topics, they can choose either of them at their convenience.

![Figure 8](image_url)

**Figure 8** Did you have experience of team working with your partners through Renren/ Tencent Qzone?

In order to survey the teamwork usage of OSN, the question 9 were designed to indicate the situation. Obviously, we aimed to know that if it is popular team working through OSNs in Chinese education currently. The data showed that only 16 percent of total informants had team work experience via OSN. See Figure 8. But the opposite data was majority; it reached to 84 percent of total informants. In our opinion, that depends on the education method which is used in China. Most of assignments which had been set out by the instructor were individual work. So the students had to do it by themselves. But when the students meet with difficulties, they will discuss and get a small cooperation in private. From question 7 and 8, we can also know a little bit about the team work situation. In China the independence was a significant evaluation indexes when the people comment on you. Therefore if the student had interaction, they would have team work. The independence couldn’t be well trained by students themselves. So more assignments were distributed and completed by the form of independence. See Figure 4 and 5. In other words, popularization of E-learning was obstructed by this phenomenon. Consequently, we suggested that the co-operative spirit should be well trained in the University in order to adapt to the development of the times and enhance the ability of the students.

### 4.4 Personalized guidance

Instructors’ and other students’ comments and feedbacks can be published instantly, allowing subsequent revision and reading by all participants (Xu, 2008). Personalized feedback or comment is similarly possible for traditional learning notes, but the differentiation is that the anytime and anywhere availability of OSN makes the difference more convenient. Students can get useful information, and can easily adopt good practices of others.
The question 10, 11, and 13 were put forward to discuss the personalized guidance. Personalized guidance is about instructions' and other students’ comments and responses which can become an integral part of learning. Because students can get useful information and can easily adopt good practices of others. So we want to get information about how the users do the self-assessment to adopt good practices of others, and if it is good for them that they can get personalized guidance anytime and anywhere when they use OSNs for E-learning.

![Figure 9](image)

Figure 9 When using Renren/ Qzone, you can check comments and feedbacks of your work from others anytime and anywhere. Do you agree?

According to questionnaire statistics, 72 percent of total informants agreed with that student can check comments and feedbacks of their works from others anytime and anywhere. It was three times higher that the answer “Disagree”. The opposite’s opinions were rare, only reached to 10 percent of total informants. So this feature was fully affirmation. See Figure 9.

![Figure 10](image)

Figure 10 Have you ever self-assessed by comparing others’ work?
From Figure 10, we could see that only 14 percent informants had self-assessed by comparing others’ work. This depended on the studying habits. Most of the Chinese students have stronger confidence on their study and work. It is a reflection of independence. Unless they want to deep study, such as divergent thinking, then they would like to compare the works.

For deeper understanding, an open question which can help us to collect extensive data from different informants was designed. The aim of the open question was considered to know how the feature of personalized guidance worked via OSN. Due to the open question, the Data couldn’t be statistic by the software. Therefore we summarized data and reduced to these aspects. They were immediate information; convenient for communication; gain valuable information; expanding knowledge; expanding social circle; no restrictions about time and space; increase the efficiency; provide more exchanges choice. From above, it is clear to see that there are many benefits from the use of the OSN in E-learning in China. So the OSN plays an important role during the peoples’ lives and learn.
5. Conclusion and Discussion

5.1 Conclusion and Discussion

Online social network is very beneficial for the educational institutions as a new tool. It plays an important role in distance education as it can form a platform that is interactive and collaborative. In this paper, the use of online social networks in students’ learning experience was discussed based on collaborative theory as well as according a study on Renren and Tencent Qzone which were two of the most popular online social network sites in China. The analysis of online questionnaires about Renren and Tencent Qzone was conducted to explore the use of online social network in Chinese students’ collaborative E-learning. The result was that we defined that use into four aspects, which were interaction, individual accountability, team work and personalized guidance. And the reasons that E-learning associating with online social networks would impact students’ education were presented. However, though OSN provides a way to create a collaborative learning environment, the success of the collaborative learning depends not only on the students’ active involvement, but also on how instructors interact with the students.

It is clear to see that the CLT framework throughout the whole research process. It plays a significant role. So it is necessary to summarize and reduce to the features of CLT. All the features are listed in the following. See Table 3.

Table 3 Features of CLT

<table>
<thead>
<tr>
<th>Learning Elements</th>
<th>OSN Feature</th>
<th>Possible Learning Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction</td>
<td>Web camera chat Discuss and share the homework Reading blogs</td>
<td>Expand thought Arouse the interest of all Deepen the understanding of course</td>
</tr>
<tr>
<td>Individual Accountability</td>
<td>Creating blogs Show their opinion Update their own opinions Read others’ opinions</td>
<td>Easy to manage the user account Development thinking Improve the efficiency of study</td>
</tr>
<tr>
<td>Team Work</td>
<td>Develop their technical skills Develop their valuable skills Improve regarding effective interpersonal and constructive communication Develop leadership skill</td>
<td>Deepen the understanding of the classmates Increases feelings between classmates Increase knowledge Training cooperation spirit Development thinking Saving time</td>
</tr>
<tr>
<td>Personalized Guidance</td>
<td>Instructors’ and other students’ comments and feedbacks can be published instantly Allowing subsequent revision and reading by all participants.</td>
<td>Immediate information Convenient for communication Gain valuable information Expanding knowledge Expanding social circle No restrictions about time and space Increase the efficiency</td>
</tr>
</tbody>
</table>
According to the features which have been summarized above, table 2, which elements have significant influence plays a guiding role in the OSN construction for E-learning in China. So the leader of the university should pay more attention to these features. In addition it is clear to see that the table 2 should not only be used in the different universities which want to change their teaching mode and improve the teaching quality, but also should be used in the Electronic Government field which can exchange opinions between the users in order to improve the efficiency of handling affairs by the Government. That is because they have some commons which can be based on the using of OSN.

5.2 Limitation and Future study

The research was in general and very limited. Future research with more participants will hopefully lead to even more robust results. Furthermore, we were not able to compare student’ learning outcome with versus without the adoption of online social networks. Future studies may include a control group (e.g., a course taught by the same instructor, but without the implementation of online social networks), and compare the two groups of students learning outcome.

In addition, according to our research, the features of CLT framework were perfect embodiment out integrating with the students’ work in e-learning education in China. Most of the students who were using OSN combined with daily study. So for future development of OSN, we suggest that it should be based on CLT framework.

It is very important to protect the personal information about who is using the online social network in the realistic live. According to our research half of the informants were not satisfied with the online social network in this aspect. They worried about the Information leakage. Therefore it is better to improve the protection of the personal information in online social network in order to have widely usage in E-learning. See Figure 11.

Figure 11 Personal information can be protected by Renren/ Tencent Qzone. Do you agree?
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## Appendix A: Questionnaire

### Part one of the Questionnaire

**关于社交网络在中国电子学习中的使用情况的调查**

**Dear participants,**

We are e-Government master students. We are doing a project about influence on e-learning education from online social network in China. This questionnaire is a part of our work. We intend to use this information to present a report for our project. Please choose the answer and fill the boxes where necessary with numerical labels. We will appreciate for your effort on our questionnaire. Thank you!

**Appendix A:** Questionaire

**Figure 1**

#### About e-learning

E-learning comprises all forms of electronically supported learning and teaching. The information and communication systems, whether networked or not, serve as specific media to implement the learning process. The term will still most likely be utilized to reference out-of-classroom and in-classroom educational experiences via technology, even as advances continue in regard to devices and curriculum.

#### About QQzone

QQzone is a social networking website, which was created by Tencent in 2005. It permits users to write blogs, keep diaries, send photos, and listen to music, etc. The functions we talked here also include instant messages and group chatting.

#### About Renren

The Renren Network is a Chinese social networking site with an interface similar to that of Facebook. It is popular among college students in China.

#### About人人网

人人网是一个与腾讯网相似的中文社交网站。其在中国高校非常流行。

1. **What is your gender?**
   - 1. Female 女
   - 2. Male 男

2. **How old are you?**
   - 

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*Figure 12 Part one of the Questionnaire*
3. How often do you online Renren/ Tencent Qzone? *
您上人人网/腾讯QQ（空间）频率是？

- 1. Never 从不
- 2. Rarely 很少
- 3. Sometimes 有时
- 4. Often 经常
- 5. Always 一直

4. Which online social network do you use most? *
您最常用的社交工具是？（多项选择）

- 1. Renren 人人网
- 2. Tencent Qzone 演义QQ（空间）

5. Which functions of Renren/ Tencent Qzone of do you use most frequently? (Multiple choice) *
哪一种人人网/腾讯QQ（空间）的功能您用得最多？（多选）

- 1. Browsing friends’ blogs or shared contents 浏览朋友的日志或共享的内容
- 2. Browsing friends’ photos 浏览朋友的照片
- 3. Releasing new blog 发布新的日志
- 4. Uploading photos 上传照片
- 5. Searching for familiar friends 寻找认识的朋友
- 6. Sharing or acquiring information 分享或获取信息
- 7. Making new friends 认识新的朋友
- 8. Chatting with friends privately 和朋友个别聊天
- 9. Discussing in groups 群聊
- 10. Playing games online 网上游戏

Figure 13 Part two of the Questionnaire
6. Personal information can be protected by Renren/ Tencent Qzone. Do you agree? *
人人网腾讯QQ（空间）能保护好您的个人信息，您同意吗？
- 1. Strongly disagree 非常不同意
- 2. Disagree 不同意
- 3. Agree 同意
- 4. Strongly agree 非常同意

7. Did you have experience of discussing and sharing assignments or homework with your classmates through Renren/ Tencent Qzone? *
您是否有在人人网腾讯QQ（空间）上与同学讨论任务或功课的经历吗？
- 1. Yes 有
- 2. No 没有

8. If you have chosen YES in last question, then how often? 
如果您在上一题回答“有”，那么请回答讨论任务或功课的频率
- 1. Never 从不
- 2. Rarely 很少
- 3. Sometimes 有时
- 4. Often 经常
- 5. Always 一直

9. Did you have experience of team working with your partners through Renren/ Tencent Qzone? *
您是否有在人人网腾讯QQ（空间）上与搭档小组合作的经验吗？
- 1. Yes 有
- 2. No 没有

10. Have you ever self-assessed by comparing others’ work? *
你曾经通过比较他人的作品来评价自己的吗？
- 1. Yes 有
- 2. No 没有

Figure 14 Part three of the Questionnaire
11. If you have chosen YES in last question, how did you do the self-assessment?

12. Renren/ Qzone is useful tools that can improve and facilitate our study in classroom and e-learning education. Do you agree?

13. When using Renren/ Qzone, you can check comments and feedbacks of your work from others anytime and anywhere. Do you agree?

14. What benefits will you get from Renren/ Tencent Qzone in e-learning education?

15. Does it have any disadvantages when apply Renren/ Tencent Qzone in e-learning education?

16. In your opinion, what can be improved when applying online social network to e-learning education? And how?

Figure 15 Part four of the Questionnaire