Establishing New Friendships—from Face-to-Face to Facebook:
A Case Study of College Students

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Abstract
Facebook, the largest social networking site in terms of registered users, has attracted the attention of many researchers. However, most studies on Facebook focus on the relationships between personalities and user behaviors, and few studies have examined how Facebook influences the establishment of friendship in real life. Therefore, this study undertakes a case study of 36 college students, and applies a social network analysis to investigate the differences between face-to-face (FTF) and Facebook friendship networks. It also examines qualitative data to explain the reasons for any variances. The results indicate that there are two significant differences—gender gaps and peer group pressures—between the two types of friendship networks. The discussion explains why gender gaps and peer group pressures are factors that cause barriers to FTF friendships. It also elaborates on how Facebook promotes the establishment of new friendships.

1. Introduction
In recent years, more and more people use social networking sites (SNSs) to establish or maintain their social ties with friends. They share their daily lives and emotions with others, seek social support, and look for new friends and romantic relationships via text, pictures, and videos [1-4]. Boyd and Ellison defined SNSs as websites that are established on the basis of social network services [5]. These websites allow users to: (1) establish a semi-open or open personal profile; (2) clearly identify other users known to them; and (3) examine or seek connections between themselves and friends, other users, and other people.

Traffic statistics released by Alexa indicate that among the globe’s top 20 websites [6], three are SNSs. Of these top sites, Facebook reports the fastest growth, next only to Google, the most famous search engine in the world. In Taiwan, the number of Facebook users has been growing exponentially. According to statistics from checkFacebook.com, as of January 20, 2010, there were 5,063,480 registered Facebook users in Taiwan—about 21.9% of the country’s total population. Of these users, 50.1% are male and 49.9% are female [7]. The largest age group is 25-34 (39.1%), followed by 18-24 (33.4%). Therefore, the increase in the number of individuals with common interests and activities or individuals exploring other people’s interests and activities out of curiosity on virtual communities through SNSs is an interesting phenomenon that needs to be investigated. Are there any differences between cyberspace and physical space? Why does cyberspace continuously attract new users?

There are two main streams of studies on how SNSs maintain, establish, or promote friendships. The first stream focuses on how individual personality attributes influence user behaviors, and, in turn, the creation of new friendships through the use of SNSs. For example, Orr et al. indicated a positive correlation between a person’s level of shyness and the time spent on Facebook, and a general preference for SNSs for university students [8]; however, the correlation is negative for the number of friends on Facebook. Young et al. examined the profiles on Facebook to investigate how university students reveal their religious beliefs and relationship status in order to attract dates [1]. Seder and Oishi explored the ethnic/racial homogeneity of university students, and examined how European Americans establish
friendships on Facebook [2]. These studies referred to personality attributes as independent variables, and conducted statistical analyses in order to determine what influenced the use of SNSs, and the choices of whom to make friends with.

The second stream focuses on user behaviors on SNSs and how SNSs can help maintain existing friendships. For example, Ellison et al. found that most university students use Facebook to maintain existing social ties, rather than establishing new connections [3]. Pempek et al. investigated the motivations and behaviors of American university students on Facebook, and found that a university student spends an average of 30 minutes on Facebook every day [4], with the main purpose of strengthening friendships. As many as 85% of university students communicate with existing friends, while only 9% make friends with strangers. Subrahmanyam et al. examined the Internet user behaviors of university students and young professionals, and compared face-to-face (FTF), SNS, and instant messaging friendship networks [9]. They found that online networks develop based on offline networks. Therefore, this type of study conducts large-scale analyses of user behaviors on SNSs, and emphasizes the consistency of online and offline networks for university students. Only a small number of users make new friends via Facebook; most users tend to focus on the maintenance of existing friendships.

However, although the first stream of study indicates that personality attributes and user behaviors (e.g., disclosure of personal information) are the key factors concerning the establishment of new friends, the statistical analysis process itself renders the results abstract. Therefore, it is not possible to illustrate the contexts in which Facebook can assist users in making new friends. The second stream of study describes user behavior on Facebook, and the relationships between online and offline networks. However, how user behaviors (e.g., sharing of thoughts, photos, or videos) can maintain current relationships, and the role that Facebook plays online and offline are not clearly elaborated upon. Moreover, these studies are based on samples; however, the sampling results cannot be represented in the context of friendships of the sampled users on Facebook.

To address the above issues and bridge the gaps in the literature, the current study intends to make a college class as the subject of a case study, and conducts an empirical survey to gain an understanding of how friendship networks evolve offline and online for Facebook users, and what role Facebook plays. Therefore, the first purpose of this study is to see whether FTF friendships are consistent with Facebook friendships. What are the variances, if any? The second purpose of this study is to explore the reasons for such variances, and the role that Facebook plays. In sum, the aims are: (1) to examine the variances between FTF and Facebook friendship networks, as they are relevant to college students; and (2) to understand the factors contributing to such variances.

2. Methods

2.1. Participants

In order to examine any variances between FTF and Facebook friendship networks, as well as the reasons contributing to such variances, this study analyzed a stable and closed network of friends in order to understand the influences of Facebook on an existing network. The study selected students in the same fifth grade class in the Department of Information Management at a five-year college in Taiwan. (A five-year college in Taiwan is the equivalent of the tenth through twelfth grades at an American high school and the first two years at an American university; thus, a student in the fifth grade at such a school in Taiwan is equivalent to an American college sophomore.) Because the students are all engaged in their studies as a single class, they have known each other for four years. In the past two years, no students have transferred out or in; thus, the FTF friendships between classmates are stable, which makes the class an ideal candidate for a case study.

2.2. Materials

Two research tools were used for this study. The first was a self-reported questionnaire on social networks, which consists of five sections. Section 1 covers basic data, such as name, gender, and age. Section 2 lists the names of the 36 students who participated in the study, and, to better understand the interactions of a network of real-life friends, asks the respondent to select the friends with whom they have frequent interactions with. Section 3 inquires whether they have Facebook accounts, how much time they spend on Facebook, and what Facebook functions they use. Section 4 makes inquiries regarding who invited the respondent to use Facebook, whether the respondent has successfully invited any classmates to use Facebook, and how many friends they have on Facebook. Section 5 lists the names of all 36 classmates, and asks the respondent to select which classmates are on their Facebook list of friends in order to understand the respondent’s friendship relations on Facebook. The data were analyzed by UNINET 6 [10],
a social network analysis (SNA) software package, and plotted into network diagrams.

The second research tool was a semi-structured questionnaire, which supplements and enriches the scenario data of the case study. The researcher conducted in-person interviews with the students in order to gather qualitative data regarding their interactions with FTF friends and Facebook friends. The semi-structured questionnaire has 24 items, in four parts. Part 1 covers interactions with real-life friends. For example, it asks: How do you interact with classmates at school? What are the main interaction scenarios, and who do you mainly interact with? Part 2 examines interactions with Facebook friends. For instance, it asks: On Facebook, how do you interact with your classmates? What are the main interactions, and who do you mainly interact with? Part 3 concerns the variances between interactions with real-life friends and interactions with Facebook friends. For example, it asks: Regarding the interactions with your classmates, do you feel that there are any differences in interactions in real life and on Facebook? Why do you think there are any differences? Part 4 focuses on others. For example, is it easy for you to make friends in real life? Is it easy for you to interact with friends on Facebook? All interviews were conducted with the approval of the classmates, and were recorded and transcribed to serve as the data source for follow-up analyses.

2.3. Procedure

This study was contained in two stages. The first stage was a non-anonymous questionnaire survey regarding social networks, which was conducted on October 20, 2009. Prior to the survey, the students were told that the results were for academic studies only—data would be presented as numbers, and the contents would not be disclosed—so as to assure them that they could be open and honest in their answers. In the process of completing the questionnaires, the students were advised to avoid mutual comparisons. Other situations that might lead to any bias were avoided. (For example, the students are concerned about whether they are considered “mutual friends,” as this could lead to distortions in the network of real-life friends.) All 36 students in the class took part in the survey; the questionnaire recovery rate was 100%.

Upon the completion of the social network analysis, this study conducted the interviews for the second stage, based on purposive sampling in order to examine the variances between FTF and Facebook friendship networks. Fourteen students using Facebook were selected (i.e., 46.7% of the Facebook users in the whole class), and the interviews were performed from November 16 to November 18, 2009.

3. Results

3.1. Descriptive data

There are a total of 36 students in the class (15 male, 21 female), aged between 20 and 22 (M = 20.49, SD = 0.56). Among the students, 30 (83.3%) use Facebook (12 male, 18 female). The student with the largest number of friends on Facebook has 249 friends and the student with the smallest number of friends has 11 (M = 76.9, SD = 47.26). The student with the largest number of classmates as Facebook friends has 28 friends and the student with the smallest number of classmates has 3 (M = 21.5, SD = 6.19).

3.2. Social network analysis

This part of the study refers to the results of the second part of the self-reported questionnaire on social networks, and analyzes the data based on symmetric friendship relations. (For example, if A considers B as a friend, but B does not consider A as a friend, then, for the purposes of the study, the relationship does not exist. Only when both A and B regard each other as friends will the relationship be considered by the study.) This paper plots network graphs of FTF friends of the class using Netdraw, a tool within UCINET 6. The symmetry principle is established for friendship relations because on Facebook, the addition of friends requires the mutual consent of both parties. (For instance, A sends out an invitation and B has to agree to it in order to establish a friendship relation.) Therefore, the relations of FTF friends must be placed in the same context as on Facebook in order to compare the variances and avoid biases in data analyses.

This study also applies fractions, a tool of subgrouping, in order to create peer groups. The grouping results suggest that a division of four groups carries the best fitness, as shown in Figure 1, which indicates that, in a FTF situation, there are four peer groups in this class. The numbers in the figure (e.g., A01) are codes for individual students. To facilitate further analyses, this paper uses Group 1, Group 2, Group 3, and Group 4 as the codes of the four separate peer groups. Table 1 summarizes the number of FTF friendship relations, average degrees, and density of the four peer groups.
Figure 1. FTF networks of friends in the class

Figure 2. Facebook networks of friends in the class
### Table 1. Total friendship relations and those of subgroups for FTF and Facebook

<table>
<thead>
<tr>
<th></th>
<th>Friendship relations</th>
<th>Degrees</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FTF</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (male = 15, female = 21)</td>
<td>194</td>
<td>10.78</td>
<td>4.72</td>
</tr>
<tr>
<td>Group 1 (female = 14)</td>
<td>84</td>
<td>12.00</td>
<td>1.30</td>
</tr>
<tr>
<td>Group 2 (female = 7)</td>
<td>18</td>
<td>5.14</td>
<td>0.90</td>
</tr>
<tr>
<td>Group 3 (male = 9)</td>
<td>31</td>
<td>6.89</td>
<td>1.27</td>
</tr>
<tr>
<td>Group 4 (male = 6)</td>
<td>10</td>
<td>3.33</td>
<td>1.37</td>
</tr>
<tr>
<td><strong>Facebook</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (male = 12, female = 18)</td>
<td>323</td>
<td>21.53</td>
<td>6.19</td>
</tr>
<tr>
<td>Group A (male = 10, female = 9)</td>
<td>170</td>
<td>17.89</td>
<td>0.32</td>
</tr>
<tr>
<td>Group B (female = 5)</td>
<td>10</td>
<td>4.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Group C (female = 4)</td>
<td>5</td>
<td>2.50</td>
<td>0.58</td>
</tr>
<tr>
<td>Group D (male = 2)</td>
<td>1</td>
<td>1.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*Compared FTF and Facebook, t(64) = 7.97, p < 0.001

On the basis of the results of the fifth part of the self-reported questionnaire on social networking, the network diagrams of Facebook friends are plotted. The same subgrouping tool is used to divide the class into peer groups; the results suggest that a division into four groups carries the best fitness, as shown in Figure 2. This indicates that on Facebook, there are also four peer groups in this class. To facilitate further analyses and avoid any confusion with the FTF groups, Group A, Group B, Group C, and Group D are used as names for the Facebook friendship groups. Table 1 also summarizes the number of Facebook friendship relations, average degrees, and density of the four peer groups.

According to Table 1, there are a total of 194 FTF friendship relations in the whole class (n = 36) (M = 10.78, SD = 4.72). However, on Facebook (n = 30), the total number of friendship relations increases to 323 (M = 21.53, SD = 6.19). This paper conducts t-tests to compare the variances between the FTF and Facebook friendship networks. The result is t(64) = 7.97, p < 0.001, indicating that there are significant variances between these two networks. This is relevant to the first research aim of this study.

However, the question remains is, exactly what variances occur between the networks? A comparison, as shown in Figure 1 and Figure 2, indicate three findings: (1) Gender gaps. In the FTF friendship network (Figure 1), the border between males and females is very distinct. Males are located at the top and right corners of the graph (Groups 3 and 4); females are located at the bottom and left corners of the graphs (Groups 1 and 2). However, the Facebook friendship network (Figure 2) suggests a blurry distinction between males and females. For example, Group A consists of 10 males and 9 females. (2) Peer group pressures. In the FTF friendship network (Figure 1), there are four peer groups in the class, and the distinctions among these four groups are clear. However, the distinctions in the Facebook friendship network (Figure 2) are blurry. Even though there are still four peer groups, classmates belonging to different FTF groups are gradually moving toward the largest Facebook group (Group A). (3) Facebook’s role as a promoter of friendship relations. Classmates establish new relationships outside their FTF friendship network via Facebook, which increases their number of friends as well as enhancing the overall intensity of the networks.

### 3.3. Qualitative data

The qualitative data helped achieve the second research aim—to gain an understanding of the reasons contributing to the variances between FTF and Facebook friendship networks, as relevant to college students. The presentation of qualitative data provides an in-depth understanding of the overall situation observed in the case study; in addition, it identifies the reasons that account for the variances between FTF and Facebook friendship networks. The following analysis is performed in the context of the three common variances found in SNA: gender gaps, peer group pressures, and Facebook’s role as a friendship promoter.

#### 3.3.1. Gender gap

Gender is the first factor influencing the networks of FTF friends. There is a significant gap between the friendship relations of male and female students. According to the replies provided by both male and female students, there are misunderstandings caused by a previous lack of interactive opportunities. The changes in the interactions between the students identified as A06, A16, and A34 after using Facebook are a great example, as seen in these excerpts taken from the study data.
“A34 (Group 3) is a living proof. We do not have many interactions in real life, since we are seated far from each other. We do not have much contact either in our daily life.” (A06, Group 1, female)

“In fact, I had no interactions with A34 (Group 3) at all in the past. I thought he was a horrific person.” (A16, Group 1, female)

“The group of ladies (Group 1) in front of me did not seem to care for anybody else. This is why I had few interactions with those in front since I did not feel they were interested. I did not care much either.” (A34, Group 3, male)

Facebook is another means of interaction, and has enhanced mutual understanding. According to Figure 1 and 2, A06 and A16, from Group 1, and A34, from Group 3, belong to different groups in the FTF friendship networks. However, they all belong to Group A on Facebook.

“If there are games available or messages posted on Facebook, A34 (Group 3) would also leave comments and join discussions.” (A06, Group 1, female)

“Facebook brings me closer to A34 (Group 3).” (A16, Group 1, female)

“A16 (Group 1) is surprisingly the person that uses the chat system the most. We were not familiar with each other before. However, after the interactions on Facebook, that group of ladies can be funny too. They are very different from how they look.” (A34, Group 3, male)

3.3.2. Peer group pressures. Peer group pressures are the second factor influencing FTF friendship networks. Why do the peer groups feel there are barriers between the FTF networks? Some students believe that the conflicts between A01 (Group 1) and A29 (Group 2) is the main reason why some peer groups do not interact with each other.

“A01 (Group 1) is simply too blunt and harsh. It could be that A29 (Group 2) is also very direct. The two of them just cannot get along.” (A02, Group 1, female)

“No, there is no quarrelling. However, they talk behind others’ backs and attack each other.” (A06, Group 1, female)

When conflicts between different peer groups gradually evolve into peer group pressures, it restricts FTF network development of peer group members, and constrains the members from freely interacting with any member of the other peer groups.

“Of course, I am less able to speak with them! For example, A13 (Group 2) and I have a lot to talk about. We were in the same group in history classes. I had a great time chatting with her because we have so much in common! We read the same comic books and our conversations started from there. We noticed that we share a lot of common interests. After classes, A29 (Group 2) would come and look for her and I might look for A25 (Group 1)... Her group would simply stand there, waiting for her outside. If I go look for A13 (Group 2) by myself, other groups will surely think it is weird!” (A02, Group 1, female)

“Of course! If A01 (Group 1) were there, I would have avoided going.” (A22, Group 2, female)

A02 (Group 1) and A13 (Group 2) have common hobbies, but belong to two different peer groups, as they cannot interact with each other in real life due to peer pressures; however, they can be relatively free of peer group pressures on Facebook. Therefore, they have both become members of Group A. (In Figure 1, A02, and A13 belong to Group 1 and Group 2, respectively. However, in Figure 2, both are in Group A, and connected as friends.) A01 and A29, who cause conflicts between groups, remain in different groups—Group C and Group B—on Facebook. Via Facebook, these two classmates have been able to establish a new friendship relation, which they have been unable to do in real life. When students gradually establish new friendships on Facebook, the borderlines between the peer groups begin to blur.

“No, groups are less restrictive on Facebook, but not free from such restrictions. For example, two different groups frequently leave messages with each other and this is not the case at school. Such instances are regular on Facebook, as if both parties are close to each other.” (A07, Group 3, male)

“I still recall one such an occasion. I left a message to A34 (Group 3) on Facebook and he replied to me. A02 (Group 1) also left a message and more people followed suit. In the end, even A29 (Group 2) jumped into the
bandwagon. With so many people talking together, it feels great because I do not usually interact with the other three groups at school. It was good to chat together.” (A16, Group 1, female)

3.3.3. Facebook as a promoter of friendship relations. The third issue is the role that Facebook plays both online and offline. Why is Facebook able to initiate new friendships? Gender gaps are an obstacle to FTF friendship relations. However, on Facebook, there is none of the embarrassment or discomfort found in real life; hence, male and female students find it easier to interact.

“P started on Facebook… I am not familiar with some female classmates. I have exchanged less than ten sentences with some since the semester began. However, it is easier to speak on Facebook. For example, she will leave messages about my status and I will reply her. I speak with her on Facebook more than the aggregation of sentences we’ve exchanged at school from the first to the fifth years.” (A08, Group 3, male)

“In real life, you may see a girl but find it difficult to comfort her when she is upset. However, on the Internet you can simply send her a message if her status is unhappy. Words come out easily in cyberspace! If somebody is crying in real life, you may not be feeling confident if you want to go comfort her because you are not sure whether it is appropriate. You tend to care more (about social proprieties) in real life and less on Facebook.” (A08, Group 3, male)

In addition to interactions via text, Facebook also offers many applications provided by third parties. Among the myriad of applications available, personality tests are the most frequently used games among the students; they provide a platform for discussions between classmates who were not familiar with each other originally, or who are from different peer groups. The following are some students’ opinions about the personality tests.

“I will reply whenever I come across anything interesting. I make comments on personnel remarks. I comment on the results of personality tests for others and continue the discussions at school.” (A10, Group 3, male)

“We tease each other about personality tests and use these tests to start topics. We continue to chat with messages online, and online messages become a communication means. We sometimes laugh at each other. If he replies, we continue.” (A34, Group 3, male)

The above example shows how personality tests are a tool to trigger conversations among classmates, or facilitate conversations with unfamiliar classmates. Regarding the differences between FTF and Facebook, some students believe that they are two different worlds, while others argue that Facebook merely provides a freer and more relaxed interactive environment.

“Facebook is another space. The two worlds are somewhat different.” (A10, Group 3, male)

“There are differences. Interactions on Facebook are more than interactions in real life. This may be due to shyness or something. Sometimes words are difficult and inconvenient to express. It gets better online via some applications on Facebook. In real life, things are more direct. On Facebook things are more special and real.” (A08, Group 3, male)

“I think so. This is because some people arm themselves in real life so that it is not easy to understand them. It tends not to be the case on Facebook.” (A34, Group 3, male)

“I guess so. It is easier to talk on Facebook…It can be more open. It is possible to tease our group no matter what. However, it will be a stretch if I have to talk to A29 (Group 2) in real life!” (A02, Group 1, female)

4. Discussion

This paper conducts case studies to examine the differences between FTF and Facebook friendship networks, and investigates the reasons for such differences. Unlike surveys, case studies focus on all possible changes within a single environment, and emphasis is placed on observations of phenomena in a natural environment. Multiple sources of data are collected for research purposes [11]. The target of this study is a single class (as a research unit), and SNA is applied to explore changes in the networks of friends in the case study. Qualitative data are supplemented to enrich the contexts of the case. This study found three issues worthy of attention: gender gaps, peer group
pressures, and Facebook as a driver of the development of friendship relations.

The first issue is the gender gap. Relevant studies indicate that female students tend to develop intimate friendships more often than male students; moreover, female students show a stronger willingness than male students to maintain intimate friendships [12,13]. However, friendships within the same gender gradually shift to friendships with the opposite gender as students grow older. For example, Johnson indicated that the majority of the friendship relations of students between the eighth and tenth grades in the United States are with others of the same gender [13]. However, the number of friendship relations with the opposite gender gradually surpasses that with the same gender from the twelfth grade throughout the university years. In this case study, the students are equivalent to tenth grade students in the U.S. As Johnson describes it, this is a stage where the relations with the same gender dominate. In addition, females tend to have closer friendship relations than males. Table 1 shows that the network density of the FTF friends for female students Group 1 (0.92) and Group 2 (0.86) are either the same as, or greater than, that of the male students Group 3 (0.86) and Group 4 (0.67).

One question that arises is why these students do not develop friendship relations with the opposite gender after four years, as Johnson anticipated. High school students (equivalent to the tenth to the twelfth grades in the U.S.) have opportunities to develop friendship relations with the opposite gender upon entering college. However, the students in the case study are in a five-year college, rather than a three-year high school. Beginning in the first year (equivalent to tenth grade in the U.S.), the students in the study have spent four years together at school and developed very steady friendship relations. Gender gaps remain a problem even in the fifth year without the stimulus of an external environment. At this juncture, Facebook plays the role of a friendship catalyst by triggering friendship relationships that could have very easily happened on their own, but had not. Facebook allows male and female students to know more about each other and create more interactive channels, in an atmosphere other than that at school. Gender gaps fade gradually within the Facebook network of friends, for both male and female students.

The second issue is peer group pressures. Relevant studies suggest that female students tend to seek peer group affiliations, and feel the sensation of belonging to a peer group more intensely than male students do [14]. In a peer group, it is necessary to obey rules in order to be recognized by other members. Therefore, in this case study, the previous conflicts between A01 and A29 resulted in a lack of interactions between Groups 1 and 2. However, A02 in Group 1 and A13 in Group 2 found, during their interactions in history classes, that they share common interests, but could not become friends in real life due to peer group pressures. At this point, Facebook serves as a friendship facilitator and provides a virtual friend-making environment that is different from real life. A friendship that was not allowed to grow in real life can be maintained in a virtual world, as students belonging to two different groups can become friends via Facebook. Peer group pressures gradually dissolve due to the establishment of Facebook friendship networks, which consist of students of different peer groups.

Finally, in terms of Facebook’s role as a friendship relation promoter, this paper examines the functions and applications of Facebook. Regarding functions, Facebook provides walls and chats to communicate in text, and sharing mechanisms for pictures and videos. Applications offered by third parties also play an important role, as users can interact openly or in private via multiple interactive models for intellectual fun, pleasant conversation, or simple entertainment. For example, the students in the case study think that personality tests both improve mutual understanding and set the stage with topics for interactions. Cheng et al. indicated that the degree of social presence depends on the number of communication channels available [15], and as Facebook continues to increase the number of interactive channels by combining the resources of third-party vendors, it enhances the channels and effects of interactions between friends.

Regarding the applications of Facebook, one of the key elements is that it serves as a friendship catalyst, as a media able to trigger new friendships. It also serves as a friendship facilitator by providing an additional communication channel that can remove environmental barriers to friendship relations. However, the concepts of friendship catalysts or friendship facilitators hinge on how users perceive and use Facebook. Technological concepts make sense to different individuals in different ways [16,17]; thus, different users give Facebook different meanings according to their varying perceptions and attitudes towards Facebook. Facebook can be used to construct friendships through its ability to transform into various tools that promote friendships, and assist the establishment of new friendships.

A lack of generalization is the main limitation of the current study, as the research is limited to a case study of one college class; hence, the entire analysis may be restricted by its case scenarios. In other words, gender and peer group problems may not be prevalent among other Facebook users. The above limitations may only exist at certain specific times and spaces, and it is necessary to perform further studies for
confirmation. The second limitation is that this is a cross-section study rather than a long-term tracking exercise. Future studies could examine and observe how Facebook influences friendship relations over the long-term.

5. Conclusions and future research

Why does Facebook continually attract new users? Why is Facebook the world’s largest SNS? People tend to imitate real-life relationships with friends on Facebook, and even establish new friendship relations that cannot exist in real life, owing to distance or other factors. They share experiences, memories, and feelings (happiness, sadness, anger, and joy). This study clearly depicts the social phenomenon of how Facebook influences the establishment of new friendship relationships. After applying different research techniques and strategies, this paper identifies gender gaps and peer group pressures, issues that went unnoticed by previous studies of Facebook. Meanwhile, this paper also provides an in-depth understanding of the role played by Facebook in the establishment of new friendships.

Apart from an emphasis on generalized and long-term observations, this paper suggests that future studies could pursue two directions. First, the SNA method should be applied to perform similar researches, since SNSs such as Facebook are intended to connect the social networks of the users; this includes all the functions and applications provided by third parties, which serve the same purpose. However, the possible correlation among personality attributes, network position characteristics, and user behaviors of SNSs is an issue worth exploring in the context of social networking.

Second, there is the question of how technology sensemaking works with different cognitions and perceptions [16,17]. Because Facebook is a computer-mediated communication (CMC) system, its various operational environments and applications lead to different degrees of sensemaking owing to the varying perceptions of the users. As a result, their user behaviors are different. Whether this leads to other social problems, such as behavior exceeding social communities, as envisioned by Facebook, is a topic worthy of exploration.

6. References


