Impact of Using Facebook as a Social Learning Platform to Connect High School Students with Working Adults

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Abstract: This study examines "the Socla study program" to build a social learning community for high school students using Facebook and other Internet services. In the two-week program, the students worked on individual study projects that focused on their future plans. With the help of volunteer supporters and facilitators, the students found relevant information and received constructive feedback about their progress. We investigated how the program was accepted by the students and how it affected their views on the future using pre- and post-survey data. The results indicated that the students (a) viewed their own future more positively, (b) realized that learning about unknown subjects can be interesting, and (c) discovered that advice from their superiors was useful. Moreover, we identified several issues through the program to address for the success of this approach.

Introduction

The recent rapid diffusion of social media such as Twitter and Facebook have enabled users to connect with people more than ever before. In addition, students are using social media at school for various purposes such as communicating, sharing personal experiences, and exchanging information with others (Selwyn 2009 & Hew 2011). While educators are concerned with how they should treat such media in order to prevent classroom disruption, social media also provides affordable resources that can build a social learning environment in a way that was not possible before. Recent research shows that the educational use of social media has significant potential as a learning management system (Yu et al. 2010, Lampe 2011, Junco 2012).

While most research on the educational use of social media has been conducted primarily on college students, we considered that high school students might also gain great merit by utilizing social media for the following reasons. First, high school students, especially those in Japan, do not have frequent opportunities to connect with people beyond their own generation other than their parents and teachers. In addition, high school students currently have a lack of resources and opportunities to consider their future plans. Although the competitive culture excessively influences the need to get accepted into prestigious colleges, high schools are not necessarily offering adequate resources for students, especially in regard to making wise decisions about their future. As a result, high school students in Japan unfortunately lack information that would equip them to answer questions such as what kind of institutions are universities and corporations, why should I go to college, why should I go out into society, and if I should go there, what is likely to happen? While it is true that students have to face and answer these types of questions on their own, students might be able to find a better future plan by utilizing social media as a support system, which can lead them to a more prosperous future not only for themselves but also for the universities that they enter and for society in general.

Our project team at the Benesse Department of Educational Advanced Technology (BEAT) at the

University of Tokyo has been researching on the educational use of social media since 2010. Our previous study (Yamauchi et al. 2011) conducted a project-based social learning program called the "Socla" program, which connected high school students with working adults through Twitter. The participants consisted of 17 high school students who worked on individual study projects that focused on their future plans on the basis of their specific interests. During the program, they worked on the project at home and communicated with other students and adult supporters via Twitter. On the final day of the program, each student reported the outcomes of their work in face-to-face presentations. The students' responses from a questionnaire indicated that their interaction with other participants made the program enjoyable. Such positive responses also indicated the potential of using Twitter as a successful learning platform.

Based on the outcomes of the first-year program, we have made the following changes to the overall structure of the program. First, the system platform for the program was changed from Twitter to Facebook owing to the following reasons: (a) while Twitter is easy to use and it enhances casual communication, postings disappear quickly, which makes it difficult to reflect upon afterwards; (b) Twitter does not have adequate functions to create a sense of space for an online study group; and (c) to address the privacy concerns of parents and teachers, we required more flexibility regarding privacy control settings so that the students could work safely in a social networking environment. Facebook offers easy-to-use online communication tools with a safe environment in terms of privacy. In addition, it offers group page functions that can be used for closed groups as well as for public ones. Second, facilitators were included to support the students in addition to volunteer supporters. The facilitators guided the students and encouraged the supporters to help the students at crucial points during the program. Because such roles are difficult to expect from volunteer supporters, some type of leadership role was required for the success of the overall program.

After applying these changes, we conducted the second-year "Socla" program in summer 2011. The purpose of this study was to investigate the impact of using Facebook as a learning management system for high school students in individual learning projects. We especially focused on how the students and adult volunteer supporters interacted with one another and what the students gained from the program in terms of their views on the future. The remainder of the paper describes the details of the study and the results.

The Study

Participants

We conducted the Socla program for a two-week period from July 30 to August 13, 2011. The participants included 23 second-year high school students (six from the Great East Japan Earthquake disaster area that were separately recruited, and 17 from the general application), 32 volunteer supporters publicly recruited from Facebook (including 22 working adults, seven undergraduate students, and three graduate students), and six facilitators consisting of graduate students majoring in education or education-related fields.

Program Overview

The program was created as a blended-project learning approach by combining on-site, face-to-face guidance, and follow-up sessions with online project learning through Facebook. Before the program began, the students were asked to choose a study theme category for their project (academic plan, career plan, and life plan) on the basis of their individual interests. The students were prearranged into six small study groups (consisting of three to four students, five to six supporters, and one facilitator for each group).

On the first day of the program, the students participated in a face-to-face orientation session held at the University of Tokyo. The students formulated questions and a hypothesis for their individual projects and planned a study schedule. In addition, they attended a hands-on introductory lecture on how to safely use Facebook. The project themes that the students worked on are shown in (Tab. 1).

Theme Category	Study Theme
Academic Plan (College Life)	What can you gain from participating in a study abroad program while attending a college of medical science?
	What is a seminar in a college like?
	What kind of options are there after graduation for female students pursuing a career in the sciences?
Career Plan (Career and Job Search)	Can female students majoring in the arts and social sciences become an airline pilot?
	Is it useful to go to college when pursuing a career as a stage or voice actor?
	What career should you pursue to solve global poverty issues (Ministry of Foreign Affairs, United Nations, or Non-Government Organizations)?
Life Plan (Marriage and Everyday Life)	Is it difficult for philosophy majors to find jobs?
	What skills should I acquire to become an information study teacher?
	Relationship between married life and pursuing personal goals.

Table 1: Examples of Study Project Themes Chosen by Students.

After the guidance session, the students worked on individual study projects through Facebook for a period of two weeks. In addition, they searched the Internet for relevant resources and answers to their research questions, while the facilitators and volunteer supporters encouraged them and responded to their inquiries. During the project, the students were required to submit (a) a daily report to share their progress with others; (b) an interim report that outlined their final report; and (c) a final report that summarized their findings and conclusions. All these reports were submitted on the program's Facebook group message board and shared with peer students and the supporters. The participants were encouraged to press the "like" button and comment on the reports throughout the program. The students were also suggested to submit public questions through both the program's Facebook page and Twitter. In this case, the facilitators and supporters assisted them to form adequate questions that could gain the expected responses that they required.

For example, a student from a private high school in the Tokyo Prefecture worked on his project theme of "What can you gain from participating in a study abroad program while attending a college of medical science?" Through surveys conducted on Facebook, he discovered that there were both advantages and disadvantages of studying abroad while attending a college of medical science. In addition, he noticed that studying abroad as a student offered few merits in furthering one's career because it generally lacked actual participation in medical activities. In addition, he concluded that timing and a clear vision of the future were some of the most important factors when choosing a suitable study abroad program. Another student from a public high school in the Miyagi Prefecture worked on his theme of "Is it difficult for philosophy majors to find jobs?" Based on the advice from the volunteer supporters, he conducted research on the careers of graduates in philosophy and in which fields the skills and knowledge acquired could be used. It was also suggested that he conduct interviews with specific alumni in the philosophy field as well as a professor in the department of philosophy. After his research, he concluded that philosophy is about realizing inconsistencies in everyday life. While deep critical thinking is what companies seek in its newly hired employees, finding a job can still be difficult regardless of the study field. Therefore, the only way forward is to continue making the "right" type of decisions and putting efforts in the right direction.

All these activities were conducted on the Facebook group pages, which were set up for use by small study groups. The participants were also permitted and welcomed to use the open forum for both casual conversation and information sharing. In addition, a group page was created so that the facilitators and volunteer supporters could communicate with one another outside the students' circles. On the final day of the program, the students presented their project outcomes in a poster session format. The supporters and

facilitators attended the session and offered feedback and other helpful comments. All students completed the program requirements, although one student could not attend the poster session (owing to personal reasons) and submitted the required presentation materials via Facebook.

Data Collection

We collected pre- and post-survey data to explore how the program was accepted by the students and how their experience in the program affected their individual views on the future. At the beginning and end of the program, the students were asked to answer the following questionnaires in terms of their overall impression of the use of Facebook, their experience in the program, and their views on learning about their individual future paths. Moreover, we collected all postings from the group pages and analyzed how the students communicated with one another during the program.

Findings and Discussions

Students' Impression of the Use of Facebook

Using a five-point Likert scale (1: totally non-applicable to 5: totally applicable), the students answered 14 questions regarding their views on the use of Facebook and their overall experiences in the program. According to the responses, most students found that Facebook was easy to use, and they enjoyed communicating with others through the application. Regarding their impression of the program in general, they found the program to be both enjoyable and engaging (Fig. 1).

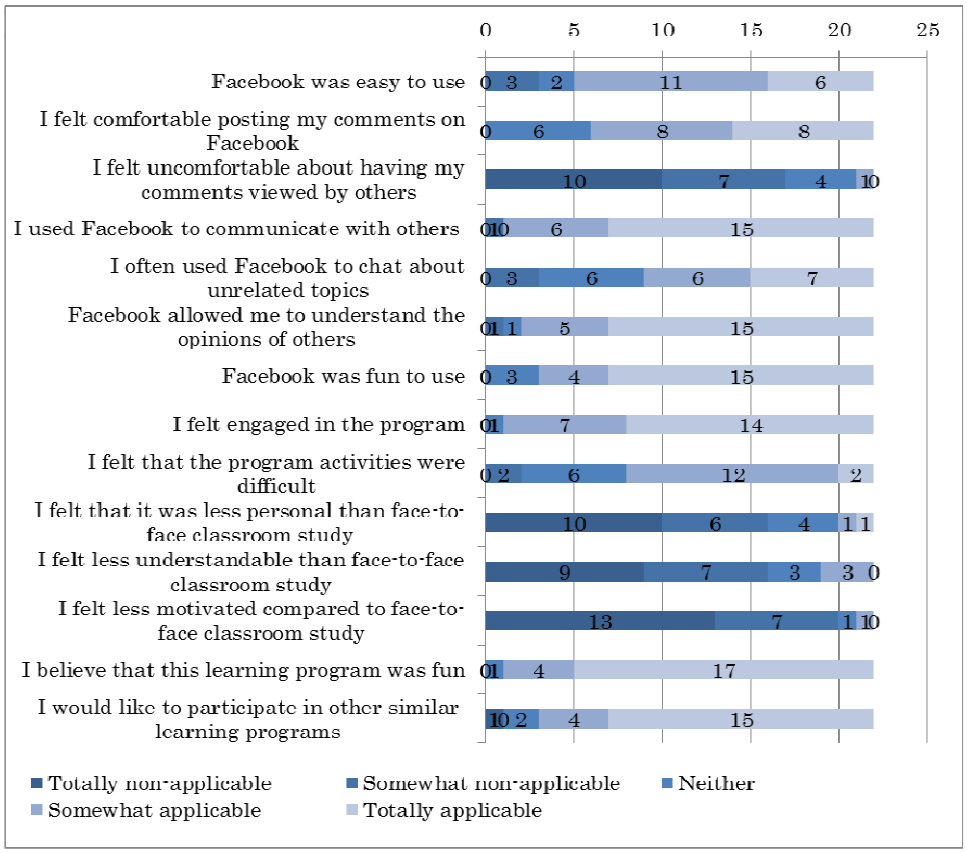

Figure 1: Questions Concerning the Use of Facebook

Students' Views on Learning and their Future

Using a five-point Likert scale (1: totally non-applicable to 5: totally applicable), the students answered questions about their overall views on learning. The comparison of results from pre- and post-survey data indicated that more students believed that it was useful to receive advice from their superiors (Pre<Post P = .031), and information found on the Internet was useful toward their study (Pre<Post P = .018, Tab. 2).

	Mean		Std.	
	Pre	Post	Pre	Post
Q1–9. Usefulness of advice from superiors	4.26	4.74	.730	.619
Q1–10 Usefulness of information from the Internet	3.57	4.04	.945	.638

Table 2: Students' Views on Learning

Regarding their views on the future, the results revealed that the students changed their views about future and career decisions once the program was completed. In addition, the students generally felt more hopeful about their future (Pre<Post P = .005, Tab. 3).

	Mean		Std.	
	Pre	Post	Pre	Post
Q2–6 Feeling hopeful toward the future	3.26	3.7	1.054	.926

Table 3: Students' Hopes for the Future

The relationship between the students' views on feeling hopeful toward the future and their impression of Facebook and the program indicated that the students who enjoyed the program and the use of the application generally felt more hopeful toward their own future (Tab. 4).

	Q4–4 Interchanged on Facebook	Q4–6 Gained opinions on Facebook	Q4–7 Enjoyed Facebook	Q4–8 Participated well	Q4–10 Felt personal	Q4–11 Understandable program	Q4–12 Engaging program
Q2-5 Hope for future	.475 *	.59 **	.456 *	.579 *	−.484 *	−.447 *	−.687 **
*p < .05, **p < .01 N = 23 (except Q4–6: N = 22)							

Table 4: Relationship between Students' Hopes for the Future and Impression of the use of Facebook and the Program

In addition, it was identified that more students felt less anxious about choosing a career path (Pre<Post P = .026) and that they considered seeking advice about career choices. Finally, it was also identified that more students believed that external factors did in fact influence career paths (Pre<Post P = .024).

Students' Impression of Facilitators and Supporters

The facilitators and supporters provided useful information and advice for the students throughout the entire program. The results of the survey showed that most students found them helpful toward their study (Fig. 2).

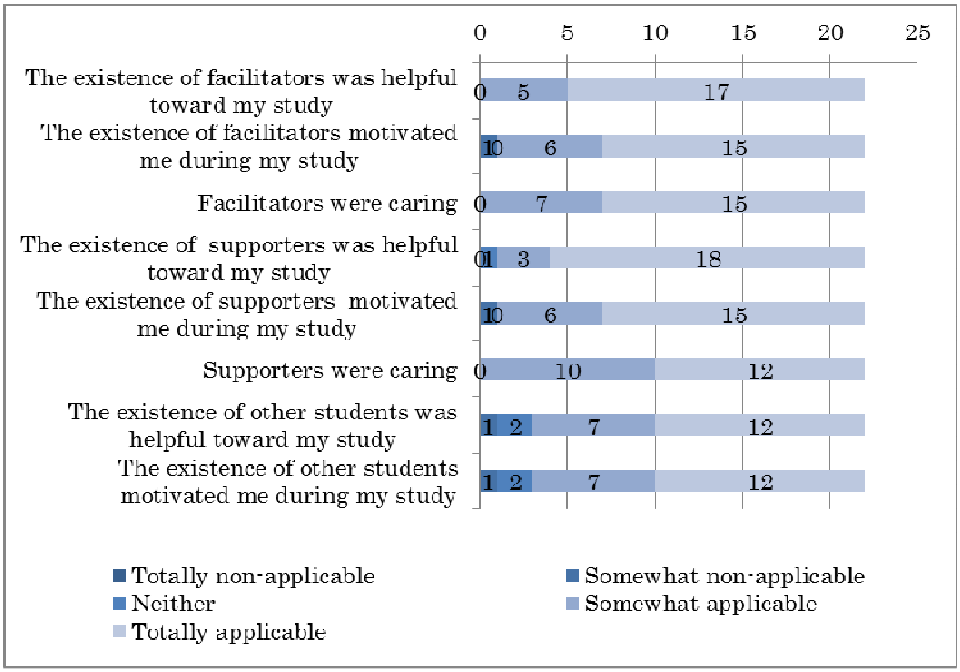

Figure 2: Questions Concerning Relationship in the Program Community

Posting-Log Analysis

During the program, a total of 5,108 messages were posted on the Socla program's Facebook group page. 786 messages were new threads that initiated communication, and 4,322 posts were responses to them. The high school students posted approximately 60% of the posts whereas the rest were from the facilitators and supporters. A unique feature of Facebook allows viewers to indicate whether they liked the post by pressing the "like" button. In this case, 3,676 "likes" were counted for the 5,108 posts. The diagram of social network analysis visualized that the social network connected with the "like" button included more network paths among the participants than that connected with comment responses (Fig. 3). Even the supporters who did not frequently participate in the program had multiple connections. The participants commented that the "like" button was a convenient feature that expressed their acknowledgement of and interest in the postings of others. It could be inferred that the use of this button allowed the participants to easily react to postings, which then further enhanced social interaction within the community.

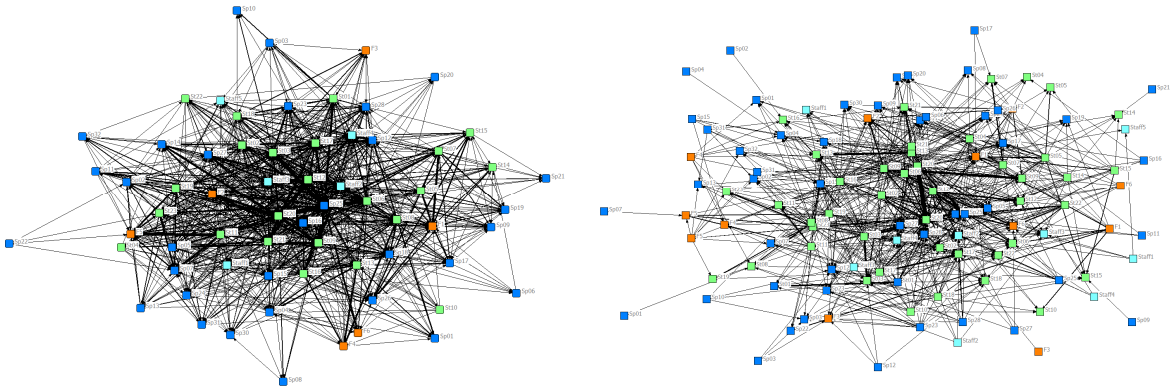

Figure 3: Network Diagram of Participants' Connection with the "Like" Button (left) versus with Comment Responses (right)

Other Technical Issues

During the program period, we did not face serious technical issues. However, subtle technical matters caused problems for some participants. First, at the outset of the program, Facebook had some technical issues in terms of compatibility among the different web browsers and operation systems. For example, the group document function did not work properly on Microsoft's Internet Explorer browser. In some cases, postings would disappear, which frustrated students who wrote long documents (without backups) because they had to rewrite them all over again. For the participants using Mac OS computers, postings on the Facebook group wall disappeared as well. Because these issues occurred inconsistently, it took some time to detect and troubleshoot these problems. In addition, occasional updates of Facebook functions and user interfaces were another cause of technical issues. Because Facebook made changes to their system settings during the program period, we had to adjust to the system changes by updating instructional materials and announcing these changes to the participants. Although these specific technical problems were eventually resolved, immediate technical troubleshooting was performed to reduce unnecessary frustration caused by these unexpected issues.

Second, the privacy policy we assumed for the program conflicted with some technical operations. As noted, the students were requested to set their privacy settings to a "friends only" status during the program, especially in regard to the safety of novice Facebook users. This privacy policy helped us manage the program in a safer manner, and it addressed the concern of both parents and teachers regarding the online privacy protection of their children and students, respectively. However, a technical issue occurred regarding information sharing while using the "note" function. Because the students and supporters were not necessarily connected with one another as Facebook "friends", some supporters could not browse other students' notes on their personal pages. Although Facebook offers flexibility in regard to the control of privacy settings for every user, novice users cannot use such flexibility owing to its complexity. Therefore, we advised the participants to use the group page to share their work progress instead of using the "note" function on their private pages.

Conclusions

In summary, the project successfully offered an engaging opportunity that enhanced social interactions between students and adult supporters in the process of learning. The result of the survey revealed that students gained a positive attitude about their future paths through the program. In addition, it was indicated that their experiences from the program alleviated some level of anxiety in regard to choosing future paths. The group function offered by Facebook was used to establish a semiopen and safe learning platform for high school students who were not necessarily accustomed to participating in a social networking community. Some

technical issues were recognized during the program, and these problems need to be addressed to gain the most from this type of program in the future.

Moreover, the study illustrated that the continuous support from the facilitators and supporters largely contributed toward engaging the students in their individual projects. Research has shown that encouraging students to actively participate in online communication can be a difficult task and such students become frustrated without immediate feedback (Aoki & Molnar 2011). Even when comment responses become difficult to process, participants can interact using the "like" button. This type of system function eases the overall burden of responders and contributes toward a positive and active social learning community. Although the e-tutor's role is still a pivotal factor toward engagement in collaborative learning, system functions help reduce the tutors' load by providing immediate feedback to the students.

Finally, because this program was conducted with a relatively small number of students, future research should be performed on a larger population, possibly on an international scale. To expand the scale of the program, it is necessary to accept participants without requiring face-to-face sessions. We will continue to improve the program and establish it as a model of a social learning program that offers students the opportunity to connect and work with adults in a safe and engaging environment.

References

Aoki, K., & Molnar, P. (2011). Project-Based International Collaborative Learning using Web 2.0 Tools for Authentic Learning of Foreign Language and 21st Century Skills. In T. Bastiaens & M. Ebner (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications, 2011,* Chesapeake, VA: AACE. 2349-2353. Retrieved from http://www.editlib.org/p/38186.

Bingham, T., & Conner, M. (2010). *The New Social Learning - A Guide to Transforming Organizations Through Social Media*, Berret-Koehler Publishers.

Hew, K. (2011). Students' and teachers' use of Facebook. *Computers in Human Behavior,* 27, 662-676.

Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, 58(1), 162-171.

Lambropoulos, N., Faulkner, X., & Culwin, F. (2011). Supporting social awareness in collaborative e-learning. *British Journal of Educational Technology*, 43(2), 295-306.

Lampe, C., Wohn, D. Y., Vitak, J., Ellison, N., & Wash, R. (2011). Student use of Facebook for organizing collaborative classroom activities. *International Journal of Computer-Supported Collaborative Learning*, 6, 329-347.

Selwyn, N. (2009). Faceworking: exploring students' education-related use of Facebook. *Learning, Media and Technology*, 34(2), 157-174.

Yamauchi, Y., Tsubakimoto, M., Kitamura, S., Misono, T., Otsuji, Y., & Suzuki, H. (2011). The Socla Project: an Attempt to Build an Innovative Study Environment through SNS Linkage of Second-Year High School Students and Working Adults. In T. Bastiaens & M. Ebner (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications, 2011,* Chesapeake, VA: AACE. 1276-1282

Yu, A.Y., Tian, S.W., Vogel, D., & Kwok, R.C. (2010). Can learning be virtually boosted? An investigation of online social networking impacts, *Computers & Education*, 55(4), 1494-1503.

Wang, Q., Woo, H. L., Quek, C. L., Yang, Y., & Liu, M. (2011). Using the Facebook group as a learning management system: An exploratory study. *British Journal of Educational Technology*, 43(3), 428-438.