

Altruistic behavior in a learning stage through social network

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Abstract: In recent years, we have seen that users edited and shared information actively on various Social Network Sites (SNSs) and those sites are getting richer and more interesting. We expect students can have this mindset similarly on our learning stage. Our study proposed a social networking site for education. Like a stage for students, they can watch and show themselves. We observed altruistic motive and behavior of students on the platform.

There were 30 college students participated. We had found that there were six altruistic behaviors. And Students' altruistic motivations are enjoyment and self-development.

Keywords: altruistic behaviors, social network sites, networking learning, learning stage

1. Introduction

The rise of SNSs (e.g., Wikipedia, Facebook, YouTube), shortening the distance between people. We can keep in touch with friends more directly through SNSs. It is getting to be a new social way for people. SNSs are defined as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. (Ellison, N. B., 2007) Most of SNSs provide a function to allow users to communicate with each other, multimedia sharing, set personal profiles and even to make a friend with strangers. Moreover, it also has many applications on SNSs such as marketing, games and education. Those developments not only changed our way of life but also provided us a more convenient one. On these SNSs we can observe how user edit and share information actively. We proposed an educational SNS like a stage for students, and they can show themselves. Teachers can interact with students on our platform. Students can watch and learn other's achievement and give feedback for each other. We observed students' altruistic behaviors in this SNS on our study.

The origin of altruistic behavior is difficult to be traced. In different areas have different definitions, such as psychology, sociobiology and economics. There were lots of research in various areas. They had a formal definition of altruistic behavior that is carried out to benefit another from external sources without anticipation of rewards (Rushton, J. P., 1982). Students will do better and more detail assignments because of altruistic motivation, and benefit other students at the same time. That is one of altruistic behaviors on education. Even if other students did not get essentially help, that student who helped other still can learn thoroughly. Compared with consequence, we are more concerned about their altruistic motives. How to improve the learning motivation is an enduring issue. We expected taking the effect on social networking platform into teaching and trying a new teaching model. Let students can learn actively or pay more attention on learning. Therefore, we discussed the following issue and discuss the advantages, disadvantages and the future work in the end.

- (1) What kinds of altruistic behaviors students have when they learned on our learning stage?
- (2) What kinds of altruistic motives students have when they learned on our learning stage?

2. Related Work

2.1 The social networking sites

SNSs are the social tool for connecting our friends, classmates and share information. It changed some parts of our daily routine, and even in the social and politics. (Burke et al., 2009; Koh, Kim, Butler, & Bock, 2007). SNSs such as Myspace, Facebook and YouTube, not only have had great influence on millions of users but also have attracted many people to do research. Why did people love to use those SNSs? Nadkarni, A., & Hofmann, S. G. (2012) had concluded two reasons. Those were (1) the need to belong and (2) the need for self-presentation (Nadkarni, A., & Hofmann, S. G., 2012), and another paper mentioned that people who were higher in narcissism and lower in self-esteem were more interesting in SNSs. (Mehdizadeh, S., 2010) In addition, more and more applications were developed on the SNSs in education gradually. One study pointed out that SNSs could be easy to prepare course materials, teach, implement cross-platform device and discuss with others conveniently. (Shiu, H., Fong, J., & Lam, J., 2010) Another research showed that college students believed that the SNSs were helpful in learning English in their experiment. (Kabilan, M. K., Ahmad, N., & Abidin, M. J. Z., 2010). Social networks had more non-school time for extracurricular educational activities because it's highly informal learning environment. And that would enable users to cooperate with each other, involve actively, share resources and learn unintentionally. (Wang, C.-h., & Chen, C.-p, 2013)

As for why a user would share information and data on the Internet actively, That was an great issue and there were numerous studies (Ames & Naaman, 2007; Arakji, Benbunan-Fich, & Koufaris, in press; Cheshire & Antin, 2008; Kim & Han, 2009; Kuo & Young, 2008; Schroer & Hertel, 2009). One study indicated why users edited information on Wikipedia actively. That pointed out it was determined by the balance between costs and benefits, by the identification with the Wikipedia community, and by perceived task characteristics (Schroer, J., & Hertel, G., 2009). Another study indicated why users would share photos on social networks. There were four motives. Those were enjoyment, commitment to the community, self-development and reputation building. And we discussed what factors are associated with the sharing of information goods and participation in social structures of online communities? In addition, the extrinsic motive showed that when people got more than they paid, they might have contributed context. (Lerner & Tirole, 2002) And the intrinsic motive pointed out that people who felt enjoy would be more important than the result. (Torvalds & Diamond, 2001)

2.2 *The altruism*

People take the difficulties on themselves and make things easy for others. That is an example of altruistic behaviors. J. Philippe Rushton pointed out that one formal definition of altruistic behavior is carried out to benefit another without anticipation of rewards from external sources. In Zhang Huiping and Li Hong's (2006) study (Zhang Huiping, 2006), that analyzed the strength of people's performance of altruistic behavior and people were from different backgrounds. They classified motivation of altruism into two kinds. One is benefit another without anticipation of rewards and another one is with anticipation of rewards. They found that there was no significant difference in the comparison of boys and girls male and female. However, there was significant difference in the comparison of whether an only child or not and students from urban or rural areas. In addition, Klisanin (2011) reviewed fifty-four pages and conclude into different forms of altruism, and Klisanin (2011) considered that internet is indeed giving rise to new form of altruism. (Klisanin, D., 2011) In this study we want to show the altruistic behavior of students' on our social networking platform. Whether students would be happier to help others in the areas of their expertise on our learning stage? They would be willing to spend some time search information for others.

3. System Design and Implementation

3.1 *Learning stage*

Our study proposed a learning stage which teachers could interact with students. For teachers, they can teach and prepare materials on the platform. For students, they can learn from the others and get opportunities for self-reflection by watching other's achievements on the platform. Students are difficult to watch and learn from others' achievements on the traditional paper for learning. Our platform makes it easier for students because it can be presented by multimedia. Such as videos, pictures and so on. Greatly increase opportunities for students to watch and learn from each other. In addition, the system as the media for teachers and the status of learning, all the learning outcomes are

presented through a timeline. It will be easy to review in the future if we need. Teachers can also make the report card by the result of students' interaction through the system easily.

There are four main modules provided by our system.

- First, the Mission module:
Teachers can set exam paper and teaching material by using the function, and also decide whether the rights access for specified users to watch content inside, set exam paper questions and so on. Mission environment is showed in Figure 1. For students, they can answer the exam paper on the system.
- Second, the Achievement module:
When students complete a task, the learning stage will produce an achievement. The achievement is the content which students had made, or had learned. Students can review the content and watch the content which shared by others easily in the future if they need. They can also give comments and review to each other. For teachers, in this part, they can see all the learning achievement produced by students and manage students' learning situation. Students' interaction is showed in Figure 2.
- Third, the Collection module:
Students can collect other students' achievements if they are interested in those, or impressed on those. With this, they can review easily in the future if they need.
- Fourth, the Announcement module:
Teachers can announce news to students through the announcement function. Students can also leave messages for the information exchanging, and it will promote interactions between teachers and students.



Figure 1. Mission Environment.



Figure 2. Students' Interaction.

3.2 System Design

Our community platform is presented on the web so that it can be executed on a variety of platforms. With that, teachers, students, and even parents can use our platform without any geographical environment hindrance. They can learn on desktop computer, or in the classroom through connecting our system easily. Our web page is written in PHP. It can playback videos, audios, pictures and other multimedia files. On the implementation mainly divided into two parts, one is make out questions and answer the question, the other part is presentation and management. And then combine the two parts and back-end database into a complete system. We provide a wide measure of a classroom with educational content based on existing production through the above hardware and software architecture. So that students can present the learning outcomes in a different way compared with traditional ways through recording and typewriting. And make students' learning more diversity through peer observation and recommend mechanisms.

4. Experiments and result

4.1 Hypothesis

As we mentioned previously, we expected that students would be able to have behaviors and mentalities just like they were on SNSs. And we expected that those were in accordance with motives we mentioned previously. We also compared relationship between helping attitudes in daily life and altruistic behavior on our learning stage. We wanted to know whether some people are very indifferent, but they show lots of altruistic behaviors on Internet. Therefore, we assumed that:

- In education, students will show lots of altruistic behaviors on our learning stage.
- In education, students' altruistic motives will include Enjoyment, Commitment, Self-development and Reputation on our learning stage.

4.2 Procedure

We conducted an experiment at the university in Taiwan and participants were 30 college students. Students were divided into 8 groups and each group had four students. Two of the groups are only three students. Students' images would be projected onto a computer screen so that they could engage in a dialogue with the virtual character. Students performed in front of KINECT for learning English. Their Achievement will be watched and they can give comments for each other on our networking platform. The design of activities let students show themselves as possible. They will interact with virtual characters for learning English in different contexts. After that they integrate a series of continuous scripts and it will become a film. Then, they can watch other's achievements, give comments and leave a message for each other. In the end, they fill out the questionnaire and chose several students for interviews.

4.3 Questionnaire

4.3.1 The Helping Attitudes Scale

We reference questionnaires (Nickell, 1998). A 20-item measure of participants, helping, feelings, and behaviors. Each item is answered on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). For example: It feels wonderful to assist others in need. Doing volunteer work makes me feel happy.

4.3.2 Altruistic Behavior Questionnaire

It is used to view what students' altruistic behavior on our learning stage. We designed questionnaire and the internal consistency reliability coefficients α is 0.842. And we measured the validity by factor analysis, the total explanation of variance have 63.5%. We have 30 samples. We can see in table1. There are total nine questions and the questionnaire is 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

4.3.3 Altruistic motives

In our study, to view the motivation, we followed the research model by Oded Nov et al (2009). The research model and questionnaires are used for analysis of participation in an Online Photo-Sharing Community. There are total 12 questions and they are divided into intrinsic motivations "Enjoyment" and "Commitment" and extrinsic motivations "Self-development" and "Reputation". We can see that in the table2.

- **Enjoyment:** In this paper, we view whether students show more altruistic behaviors because they feel fun and interesting. For example, I will feel happy when I find that my videos are seen by others on our learning stage.
- **Commitment:** We view whether students want to help others because of the commitment. For example, I will feel down if I can't use on the community platform.
- **Self-development:** We view whether students can learn something from others, make their technical skills better and would be willing to help others actively. For example, I think I can enhance some skills by uploading videos on the community platform.
- **Reputation:** We view whether students do better because they want to get higher reputation. For example, I think I get some reputations by uploading videos to be seen by others on the community platform.

Table 1: Students' altruistic behaviors on our platform.

Question		Mean	SD
1	I will film the video richer because I know it will be seen by the others on the learning stage	3.59	0.78
2	I will be happier to help the others on the learning stage if it is my expertise areas.	4.07	0.53
3	I will take the initiative to review the others' films and give feedback to the others.	3.41	0.73
4	I will film the video more special because I want to get more attentions from the others.	3.34	0.93
5	I would like to film the video again when I watch the others' videos.	3.07	0.99
6	I will pay more attention to perform because I know the video is public.	3.72	0.79
7	I will be happy to spend some time to prepare information and let the others learn and save time.	3.72	0.79
8	I will film the video better because I want to get a higher rating.	3.66	0.97
9	I will not try to let the video show error message because I know the others can see my video on the learning stage.	4.21	0.56
Total Average		3.64	0.53

Table 2: Students' altruistic motives on out platform.

Motives	Mean	SD
Enjoyment	3.70	0.66
Commitment	3.06	0.62
Self-Development	3.76	0.44
Reputation	3.01	0.90

5. Discussion

According to table 1, we can see that there are 6 mean values > 3.5 in the nine altruistic behaviors' questions. We take those as a positive result. And we can see that there are 3 mean values which are amount between 3 and 3.5. We take it as a non-significant result. The data show that students will try to avoid error messages when they make a film, or they will concentrate more on making a film and provide a richer message due to the film they made will be seen by others. However, we have non-significant results. Such as "It will make me re-film again if I see others' videos" and "I will take the initiative to score others' films and give feedback to others". By the interview, we know that the film's content are drab and it had nothing related with what they learned in school, so they didn't want to do it again.

In table 2, we can see the enjoyment and Self-development is a positive result. However, we can see the Commitment and reputation is non-significant results. According to interviews, students believe that they won't have chance to use our learning stage after this experiment, unlike other famous SNSs they use every day. (e.g., Facebook and YouTube). We believe that we can observe more positive result on our learning stage in the long-term observation. According to the interviews with students, they think if our learning stage have more users, they are more willing to use it. The activity design is that let students show themselves as possible so that they will get the others' attentions. Compared to traditional teaching material, multimedia our platform can show richer and unique contents. Students

will be immersed in it. Overall, Most of them believed that they would do better and learn something on our learning stage.

6. Conclusion and Future Work

We put that the initiative of users share and edit information actively on SNSs to the education. We observed altruistic motive and behavior of students on our learning stage. We carried out an experiment in April 2014. Result showed that there were six positive results in our 9 altruistic behaviors' questions. Students will pay more attention to their performances because they care how other students think. They will be happy to spend time to prepare information for others. Simultaneously, most of them believed that they have learned something in the process. Students' altruistic motivations, enjoyment and self-development also have a positive result. In the future, we will do more research and do a long-term and more people experiments. And try to realize how students' altruistic behaviors can help others effectively, find the suitable way for education in the school and design more reliability and validity questionnaires. We look forward to it can have more contribution in education.

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References

- Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210-230.
- Rushton, J. P. (1982). Altruism and society: A social learning perspective. *Ethics*, 425-446.
- Nadkarni, A., & Hofmann, S. G. (2012). Why do people use Facebook? *Personality and Individual Differences*, 52(3), 243-249.
- Mehdizadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *Cyberpsychology, Behavior, and Social Networking*, 13(4), 357-364.
- Shiu, H., Fong, J., & Lam, J. (2010). Facebook-Education with social networking websites for teaching and learning Hybrid Learning (pp. 59-70): Springer.
- Kabilan, M. K., Ahmad, N., & Abidin, M. J. Z. (2010). Facebook: An online environment for learning of English in institutions of higher education? *The Internet and Higher Education*, 13(4), 179-187.
- Wang, C.-h., & Chen, C.-p (2013). EFFECTS OF FACEBOOK TUTORING ON LEARNING ENGLISH AS A SECOND LANGUAGE.
- Schroer, J., & Hertel, G. (2009). Voluntary engagement in an open web-based encyclopedia: Wikipedians and why they do it. *Media Psychology*, 12(1), 96-120.
- Zhang Huiping, L. H. (2006). Investigation on Altruistic Motivation of College Students. *Studies of Psychology and Behavior*, 4(4), 285-289.
- Klisanin, D. (2011). Is the Internet Giving Rise to New Forms of Altruism? *Media Psychology Review*, 3(1).
- Nickell, G. S. (1998). The helping attitude scale. Paper presented at the meeting of the American Psychological Association, San Francisco.
- Oded Nov et al (2009). Analysis of participation in an online photo-sharing community: A multidimensional perspective.