# THE EFFECTIVENESS OF TRAINING ON USING SOCIAL NETWORKING SITES IN ONLINE COLLABORATIVE PROJECTS

**Luh Putu Putrini Mahadewi[1)]**
**Diane Hamilton-Hancock[2)]**

[1)]Universitas Pendidikan Ganesha, Jl. Udayana Singaraja
[2)]Western Illinois University, Illinois
mahadewi@undiksha.ac.id

**Abstract**: **The Effectiveness of Training on Using Social Networking Sites in Online Collaborative Projects.** This study examined university students' attitudes towards and skill levels of using social networking sites to promote public health information online. Data were collected from the student participants who were health professionals from six different countries. The participants were given surveys before and after their training. The surveys assessed: (1) their comfort levels in using social networking sites, (2) their attitudes towards online health information dissemination, and (3) their ability to create effective online health information sites. A Health Sciences faculty member worked with an instructional designer and technologist to create a training video and guidelines for designing effective online websites. Training materials were posted to the online course area. Working in collaborative teams, the student participants developed online health social networking sites that targeted global health education issues. Competence and skill level of students were assessed using project-based learning criteria. Results of the study reveal: (1) participants have a high comfort level in using social networking sites, (2) participants, in general, have positive attitudes toward online health information, and (3) participants are highly competent in creating online health information sites.

**Abstrak**: **Efektivitas Pelatihan Menggunakan Situs Jejaring Sosial dalam Projek Kolaboratif secara *Online*.** Studi ini mengkaji sikap mahasiswa dan tingkat kemampuan mereka terhadap penggunaan situs jejaring sosial untuk promosi informasi di bidang kesehatan secara *online*. Data dikumpulkan dari mahasiswa yang menjadi partisipan dalam studi ini. Partisipan adalah para profesional di bidang kesehatan dari enam negara. Survey yang dilakukan bertujuan untuk menilai: (1) tingkat kenyamanan partisipan dalam menggunakan situs jejaring sosial, (2) sikap mereka terhadap penyebaran informasi kesehatan secara *online*, dan (3) kemampuan partisipan dalam menciptakan situs informasi kesehatan secara *online* yang efektif. Dosen Jurusan Ilmu Kesehatan bekerjasama dengan desainer dan teknolog pembelajaran menciptakan video dan panduan untuk pelatihan bagi para partisipan dalam mendesain *websites* yang efektif. Materi pelatihan diposting secara *online* pada area mata kuliah yang digunakan. Para partisipan bekerja dalam tim secara kolaboratif untuk mengembangkan situs jejaring sosial online tentang isu-isu global di bidang pendidikan kesehatan. Tingkat kemampuan dan keterampilan partisipan dinilai dengan menggunakan kriteria pembelajaran berbasis proyek. Hasil penelitian menunjukkan: (1) partisipan memiliki tingkat kenyamanan yang tinggi dalam menggunakan situs jejaring sosial, (2) partisipan secara umum memiliki sikap yang positif terhadap informasi kesehatan yang disajikan secara *online*, (3) partisipan memiliki kompetensi yang tinggi dalam menciptakan situs informasi kesehatan *online*.

**Key words:** social networking sites, online collaborative, project-based learning, health education.

Today, many people search for health information online. According to the Pew Internet and American Life (2009) research findings, 83 percent of internet users and 61 percent of the total

U.S. adult population have sought health information online. In contrast, only one in four (25%) looked online for this type of information in 2000. As wireless connections and mobile technologies expand, the pursuit of health information online is expected to continue to widen. Further, when the Pew Internet Survey participants were queried about all the sources they used when in need of health information or assistance in dealing with health or medical issues, 86% replied that they asked a health professional, 68% asked a friend of family member, and 57% sought information online.

As these data point out, consumers seek information from both health professionals and online resources. Yet, health professionals and educators have been slow to use online sources to disseminate information (Luo, 2007). With the increasing pursuit of health information online, the health professional community should be using these tools in patient education and health promotion. One main goal for healthcare and health education providers is to help create a health-literate consumer, and this involves professionals using the internet to provide accurate and credible information to aid them in making informed health decisions (Cobus, 2008; Wolfe & Sharp, 2005).

Ready or not, online internet access and the corresponding e-health consumer are a reality and are here to stay. Social networking sites (SNSs) such as Facebook, Twitter, MySpace, and Ning are popular among consumers with 41% of e-patients reading another's commentary or experience about health or medical issues on an online news group, website or blog (Pew Internet Project and American Life Project, 2009). However, concerns exist regarding the trustworthiness of online information. Illustrating this point, Luevorasirikul, Gray, and Anderson (2007) used the DISCERN instrument to evaluate 50 websites providing information regarding weight loss guidelines. Evaluation of these sites revealed that 70% of the websites were poor of quality. With this in mind, there is an urgent imperative to provide training for health professionals and educators on how to use SNSs and other online sites to provide credible health resources.

As one of many online sites, SNSs encourage practitioners in the field of health to use its features to promote health related information by posting valid and reliable information for health consumers. Boyd and Ellison (2007) stated that as web-based services, SNSs allow their users to build a public or semi-public profile within a surrounded system, manage their connection lists, and with whom they share that connection. Furthermore, the users can view and pass through their and others connection lists within the system. It is not only that the users can meet strangers, but also allow them to articulate and make visible their social network. This makes the SNSs unique in comparison to other types of websites.

In this study, the SNS called Ning (Ning, 2010) was used. Ning as one of many SNSs can be used by health professionals to promote health related information. Ning was launched in October of 2005 and it is designed around creating social networks. On Ning, users can create their own SNS pages by following a series of steps, such as determining the name of their SNS pages, selecting a color scheme, and allowing for unique profile questions. In addition, the features on Ning allow the users to create text boxes on the main page, to upload photos on the photos page, to upload videos on the videos page, to chat on the chat page/window, to post blogs on the blogs page, to discuss a certain topic on the forum page, to invite friend on the invite page, to create event on the events page, and the users can see the members of their sites on the members page. The effectiveness of this training can be seen from the health professionals' readiness in integrating SNSs into their professional practices.

The important role of the health professionals as promoters of health related information requires that health practitioners keep up-to-date with current, effective and innovative promotion strategies and technologies. The Health Sciences Department at Western Illinois University through the *Community Health Education Technique and Procedure* course, prepares their graduate students to be health professionals in the future who are able to use SNSs and other sites for their professional practices. To do so, the training that provides graduate students practical experiences in designing and developing health social networking sites should be conducted effectively.

The purpose of the study was to determine the effectiveness of social networking site (SNS) development training for health education professionals in conducting their projects collaboratively. The effectiveness of the training can be determined from the readiness of health professionals to use online social networking in their professional practices. Areas examined in

this study included: (1) participants' comfort levels in using social networking sites (SNS), (2) participants' attitudes towards online health promotion, and (3) participants' competence levels in creating online health promotion sites.

## METHOD

In this section, the methods used in the study are described. For this study, the following design, procedures, sample size and composition, and data collection were used.

### Research Design

This study used a pre- and post-survey design in which participants' comfort levels and attitudes were recorded before and after the SNS training. To determine participants' competence levels, the documentation of students' projects grades from the instructor were used.

### Training Procedures

To meet the purpose of the study, the training was conducted into two ways. First, the training was conducted in class for three hours. After in class training, students learned independently outside of the classroom from a Ning video tutorial designed and developed to aid participants in creating their Ning pages. The video was designed and developed by a professor and graduate student in the Instructional Design and Technology Department. They used the nine *events of instruction* suggested by R. Gagne (in Smith & Ragan, 2005). The nine events were: (1) gaining attention, (2) informing the learner of the objective, (3) stimulating recall of prerequisite learning, (4) presenting stimulus materials, (5) providing learning guidance, (6) eliciting performance, (7) providing feedback, (8) assessing performance, and (9) enhancing retention and transfer. The nine events are explained as follows.

The first event is gaining attention. The main purpose of this event is for learners to focus their attention on the training materials provided in the video. The second event is informing the learner of the objective of video. Telling the learners what they will learn can facilitate their learning. Learners' expectation of what they will learn from the video can direct their cognitive ener-gies. The third event is stimulating recall of prerequisite learning or prior knowledge. In this event, the learners are stimulated to retrieved knowledge from long-term memory that can help the learners in learning the new objective. The fourth event is presenting stimulus materials. After stimulating learners' prior knowledge, the next event is presenting stimulus materials. During this event the learners encounter the material they will learn provided in the video. Presenting information from its definition then followed by the example (expository sequence) or presenting information from its example then followed by the definition (discovery sequence), both can stimulate learners to learn the concepts. The fifth event is providing learning guidance. Providing guidance to the learners in their learning is essential. The video guides the learners to learn step-by-step in creating the online health site. The sixth event is eliciting performance. In this event, learners are encouraged to practice the information they have gained to create online health site with or without help from instructor. The seventh event is providing feedback. Feedback is very crucial in instruction. The video were completed with some examples of online health site's pages. Critical feedback of the site was provided. The eighth event is assessing performance. The purpose of this event is to find whether or not the objectives of instruction have been achieved by the learners. The assessment is very important for the instructional designer and technologist to revise the instruction provided in the video. The last event is enhancing retention and transfer. In this event, learners' retentions to learn the new knowledge and skills and their abilities to transfer the new knowledge and skills they have achieved in another real-life situation are enhanced.

The video was distributed to the participants in the form of CDs. Also, the participants can access the video online at http://www.wiu.edu/users/lppm100/

Through collaboration of teachers of the Health Sciences Department and Instructional Design and Technology Department, the implementation of effective instructional design, as both a process and product (in the health-related area) were explored and strengthened. This mutual corporation, opened a new approach for health educators and students to integrate technology to enhance the teaching and learning in health-related field. Conversely, the technology designers applied design and instructional methodologies to meet the need of professionals and students in the health education.

### Sample Size and Composition

In this study, data were collected from the instructor and 11 health professionals enrolled in the graduate course, *Community Health Education Techniques and Procedures* in the Department of Health Sciences at Western Illinois University. The 11 health professionals came from the disciplines of medicine, public health, counseling, nursing, and dietetics. The students were international students from many different countries including Uzbekistan, Tajikistan, Turkmenistan, India, and Nepal, as well as from the United States.

### Data Collection

To collect the data, pre- and post-surveys instruments were used. To determine participants' comfort levels in using SNS, the participants were asked about how comfortable they were in using Ning in promoting health related information, before and after the training. Their comfort levels were categorized into five levels: very uncomfortable, uncomfortable, neutral, comfortable and very comfortable.

In determining participants' attitudes, the participants' were asked to answer the following questions: (1) Does learning through the SNS help you to better understand the use of public health education instruction?; (2) does learning through the SNS encourage you to participate more than you would have using a non-technology assignment?; (3) does integrating SNS into your learning support your collaboration with your classmates?; and (4) did you gain additional knowledge and skills in learning through the SNS and learning materials?

To grade the students' projects of creating SNS page to promote health related information, the instructor used the following requirements. Each student designed and developed an online educational page on a health topic/agency of his/her choice. The contents must have been designed specifically for a health education/promotion agency and should have been based on information obtained from that agency. Participants' projects should also have met with the following indicators: (1) the creation of visual design, logo, layout of Ning health-focused social network; (2) the creation of minimum four text boxes, a blog, and three hyperlinks; (3) upload minimum two videos and their photos; and (4) invitation to other classmates.

## FINDINGS AND DISCUSSION

### Participant's Comfort Level in Using Social Networking Site (SNS)

Several findings emerged from this study and showed interesting changes of participants' comfort levels before and after the training. As can be seen on Figure 1 and 2 below, before the training, 55% (n=6) were very uncomfortable in using SNS and only 9% (n=1) claimed to be very comfortable. This situation changed considerably after the training when 6 participants were very comfortable in using SNS, and only 1 participant claimed uncomfortable. Reasons why participants felt more comfortable included the fact that SNS gave the participants opportunities to create the pages that they wanted. Also they said that they were able to manipulate the page and layout of their Ning sites. Additionally, during the class and through a video training, they became familiar with the features of the Ning and used them appropriately.

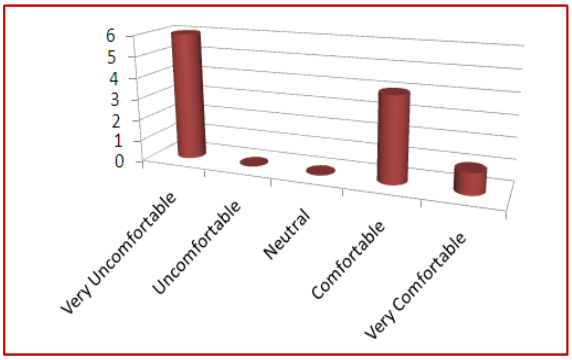


**Figure 01. Participants' Comfort Levels in Using SNSs Before the Training**

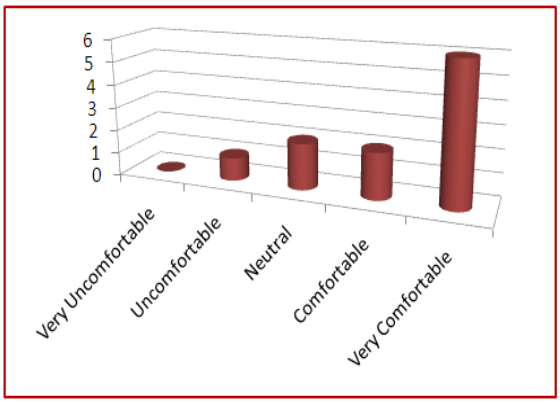


**Figure 02. Participants' Comfort Levels in Using SNSs After the Training.**

**Participants' Attitudes towards Online Health Promotion**

To determine participants' attitudes toward online health promotion the following four aspects were used. The aspects were: (1) participants' attitudes regarding the SNS for better understandding the use of public health education instruction; (2) participants' attitude regarding the SNS for encouragement of participation; (3) participants' attitude regarding the SNS for collaboration; and (4) participants' attitude regarding the SNS for additional knowledge and skills.

The findings of the four aspects are presented and discussed as follows. First, participants' attitudes regarding SNS for Better Understanding the Use of Public Health Education Instruction. Seventy three percent participants said that learning through the SNS helped them to better understand the use of public health education instruction. The participants realized that instruction that integrated SNS provided so many possibilities to deliver instruction in the area of public health education. Participants' responses to this item can be seen on Figure 3.

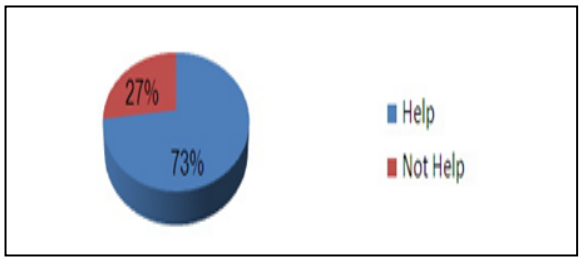


**Figure 03. SNS for Better Understanding the Use of Public Health Education Instruction.**

Second, participants' attitude regarding the SNS for encouragement of participation. Fifty-four percent participants stated that learning through the SNS encouraged them to participate more than they would have using a non-technology assignment. Participants said that learning thro-ugh SNS provided them more technology methods of learning compared to non-technology one. In addition, the students stated that using SNS in completing their assignments and gave them a wide array of opportunity to keep update with current technologies used in health education and related areas. Participants' res-ponses to this item can be seen below.

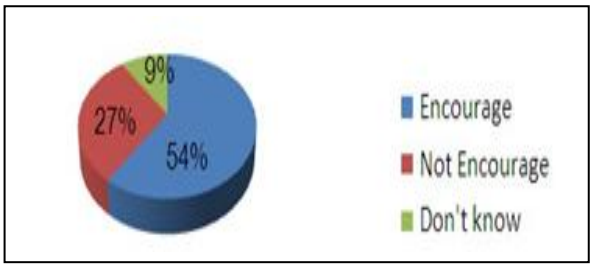


**Figure 04. SNS for Encouragement of Participation**

Third, participants' attitude regarding the SNS for collaboration. All participants said that the SNS supported their collaboration with their classmates. By integrating SNS into their projects they could easily shared information, worked together online, learned from each other, and gave feedback one to another. Participants' responses to this item can be seen on-Figure 5.

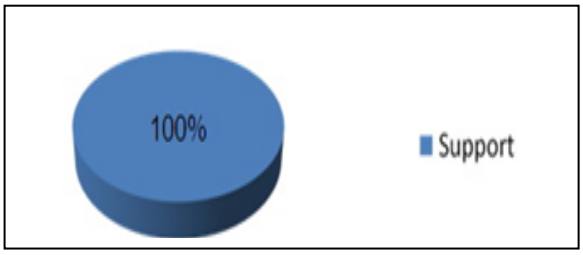


**Figure 05. SNS for Collaboration**

Fourth, participants' attitude regarding the SNS for additional knowledge and skills. Eighty-two percent participants gained additional knowledge and skills in learning through the SNS and learning materials. The participants strongly stated that they have gained additional knowledge and skills. They learned how to organize health related information in a new way, get to know what social networking site are and their benefits, how to create a health related sites to post health information, and they became more familiar with current technologies. Participants' responses to this item can be seen below.

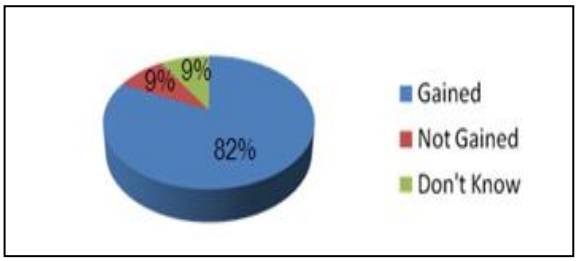


**Figure 06. SNS for Additional Knowledge and Skills.**

**Participants' Competence Levels in Creating Online Health Promotion Sites**

Based on the indicators used to grade participants' competence levels, the instructor's data revealed that all the participants (100%) successfully completed the activity and received scores between 90 and 100%. This demonstrated a high level of competence in designing online health promotion sites.

In their sites, the participants invited their friends as members of the site, uploaded photos, uploaded videos, and created forum, events and blogs. The following are the samples of page of participants' online health promotion site entitled Palliative Care.


**Figure 07. Login Page of the Palliative Care Site.**


**Figure 08. Main Page of the Palliative Care Site**


**Figure 09. Invite Page Palliative Care Site**

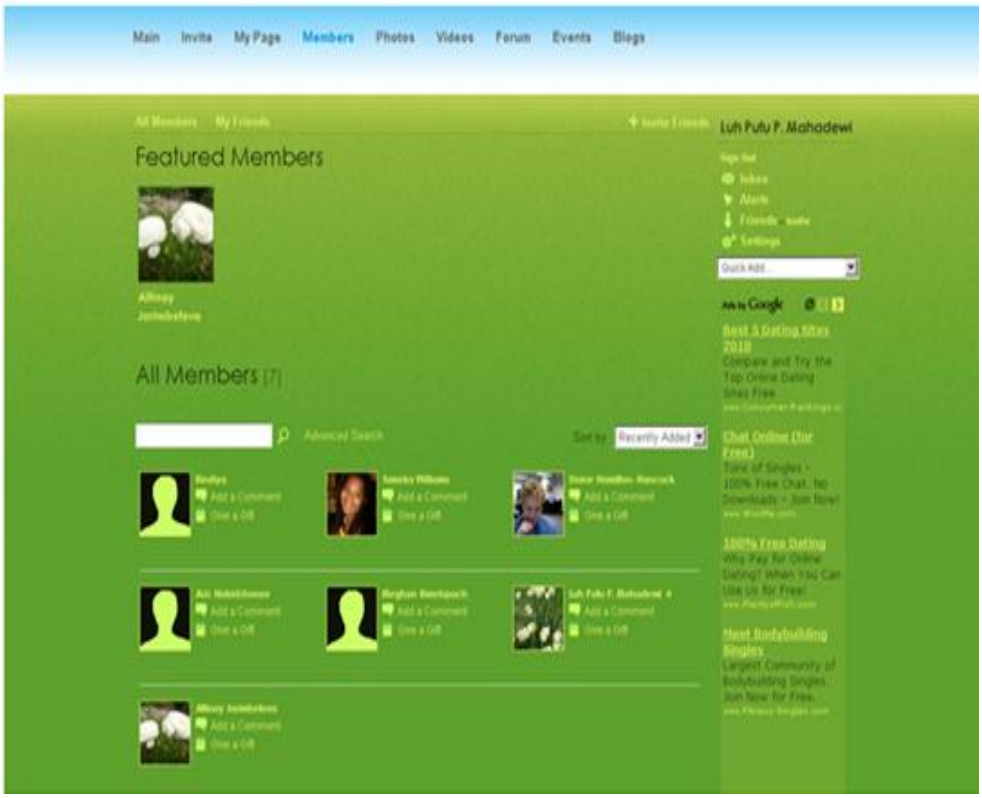


**Figure 10. Members Page of the Palliative Care Site**


**Figure 11. Photos Page of the Palliative Care Site**


**Figure 12. Video Page of the Palliative Care Site**


**Figure13. Forum Page of the Palliative Care Site**

## CONCLUSION

Based on the results, the following conclusions were made: (1) in general, participants reported a high comfort level in using SNS. Participants felt more comfortable in using the SNS to complete their projects online. The site gave the participants opportunities to create the pages that they wanted, manipulate the page and layout of their Ning sites, became familiar with the features of Ning and use theses skills effectively after in-class training and through a video. (2) Participants indicated positive attitudes toward online health promotion. Learning through the SNS project helped them to better understand the use of public health education instruction, encouraged them to participate more than they would have using a non-technology assignment, supported their collaboration with their classmates, and provided additional knowledge and skills in learning through the SNS and learning materials. (3) Participants became highly competent in creating online health promotion sites. All participants demonstrated a high level of competence in designing online health promotion sites by the conclusion of the project.

Conclusions resulted in some important implications. The following are some implications: (1) Social networking sites can be used to educate health professionals to develop their online projects as well as provide health related information to consumers. (2) The attitudes and readiness of health professionals for online social networking sites should be considered as part of integrating this technology into online collaborative projects. (3) Pertinent training should be provided to health professionals to keep them current with online technologies, like social networking sites that are being widely used by consumers.

## REFERENCES

Boyd, D.M., & Ellison, N.B. 2007. *Social Network Sites: Definition, History, and Scholarship*. (Online), (http://consommacteurs.blogs.com/files/socialnetworksites_boyd-ellison_2007.pdf, retrieved January 19, 2010).

Cobus. L. 2008. Integrating Information Literacy into the Education of Public Health Professionals: Roles for Librarians and Library. *Journal of the Medical Library Association*, 96(1): 28-33.

Luevorasirikul, K., Gray, N.J., & Anderson, C.W. 2007. Developing a Consumer Evaluation Tool of Weight Control Strategy Advertisements on the Internet. *Oxford Journals Health Education Research*, 23(3): 567-575.

Luo, J.S. 2007. Health 2.0: What You Need to Know. *Primary Psychiatry*, 14(8): 31-34.

Ning. 2010. *About Ning*. (Online), (http:// about.ning.com/, retrieved on March 23, 2010).

Pew Internet Project and American Life Project. 2009. *The Social Life of Health Information*. (Online), (http://www. pewinternet.org/Reports/2009/8-The-Social-Life-of-Health-Information/11-Health-issue-not-listed-in-the-survey.aspx?view=all, retrieved January 10, 2010).

Smith, P.L., & Ragan, T.J. 2005. *Instructional Design* (3rd. ed.). Hoboken, NJ: Wiley & Sons.

Wolfe, R.M., & Sharp, L.K. 2005. Vaccination or Immunization? The Impact of Search Terms on the Internet. *J Health Commun*, 10: 539–553.