Evaluation of a Health and Fitness Social Media Experience

Renee E. Frimming, Myles Jay Polsgrove, and Glenna G. Bower

ABSTRACT

Background: *University health and fitness faculty members are continually striving to enhance the health knowledge of their students.* ***Purpose:*** *The purpose of this case study was to survey student reflections of a social media experience.* ***Methods:*** *Students were placed into one of two groups: Learners (*N = *92) or Pre-Service Health and Fitness Professionals (*N = *35). The interaction with social media began when Learners posted health and fitness questions to a Facebook group site. Survey questionnaires were given to all participants.* ***Results:*** *The responses of the Learner group revealed that 51.1% believed long-term use of a social media site benefit their fitness routine. A supporting Learner response, "I feel more informed and aware of proper fitness." The responses of the Pre-Service Health and Fitness Professionals group revealed that 52.9% learned from peers. A supporting PSHFP response, "I learned that some of my peers are quick to establish more ways to improve a workout…"* ***Discussion:*** *Both Learners and Pre-Service Health and Fitness Professionals groups gave new insights into health and fitness needs.* ***Translation to Health Education Practice:*** *The University is an ideal setting to share health and fitness knowledge through social media.*

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BACKGROUND

Health and fitness faculty members are continually striving to enhance the health knowledge of their students. Consistent with the tenants of the Institute of Medicine, coursework should be geared toward helping students make informed decisions about health and fitness.[1] From this view, the curriculum should broaden students' understanding of basic health information through a variety of learning modalities.

In this digital age of increasing access to information, communication and resources, university instructors are continually encouraged to apply technology to enhance classroom experiences.[2,3] The use of technology for increasing educational opportunities can be thought to occur in two ways. The first category of using technology in the classroom is related to those advances, which increase the communication and the dissemination of course content. Examples of this use of technology include the use of course management sites such as BlackBoard, e-mail and PowerPoint® presentations. The second category of utilizing technology for educational enhancement are those occurrences that create novel interactions and expereinces.[4] Examples of this use of technology could include a low cost way to simulate real world situations, creative use of multimedia, or unique social interactions. For most, the use of technology in the classroom has dramatically improved opportunities for learning. Perhaps due to its ease of use, technology defined in the first category, increases the speed of communication and dissemination of course content that has become common practice for the contemporary instructor. However, the use of technology to create novel interactions and novel learning situations is a less common practice. One potential reason for the under utilization of educational events related to this second category of technology may be due to concern that such activities lack sound pedagogical outcomes.

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Learning activities are most effective when they are based on a proven learning theory. Thus, the application of technology for education best occurs when specific learning outcomes are directed through theory. One theory that could be used to guide the unique interactive opportunities afforded by technological is Brunner's "Folk Pedagogy."[4] He contends that education should be the process of fitting the learners' "ways of knowing" to meet the needs of the culture.[4(p. 43)] Further, the harnessing of this "way of knowing" can be used to facilitate the understanding of course content by the learner. Applying his insights is to recognize that the modern day students' "ways of learning" about the world centers largely on social networking. Adhering to the notion that technology affords new possibilities for sharing knowledge through social interaction can offer the instructor novel dimensions for classroom interaction.[5] Thus, e-learning may allow for novel learning opportunities that promote changes in attitudes, beliefs, capabilities, knowledge structures and skills.[6] If the pedagogical opportunities afforded by technology mirror the students' way of learning it can empower students to openly access and share course content. Ideally, an interactive environment could provide a structure that encourages students to become members of a knowledge generating community.

The notion that technological based social interaction works to actively construct knowledge suggests that technology could be used to facilitate learning in novel ways. Support for connection between social networking and health and fitness knowledge is limited; however, it has been suggested, more generally, that students use Internet resources to increase health knowledge. For instance, recent research suggests that 95% of adults aged 18-29 use the Internet, 83% look for health and medical information online and 72% use social networking.[7] Additionally, research regarding student Internet use has found that 63% to 74% have learned health and exercise information.[8-10]

College students who are more health and fitness literate are those who may be able to bring richer understandings to the community and professional setting. Because universities attempt to initiate, promote and empower students to assume responsibility for their future, social media appears to be the ideal setting to support student learning of health and fitness information. In fact, *Healthy Campus 2010* states the leading public health concerns for U.S. college students include physical activity, overweight and obesity.[11] One approach to facilitating the health and fitness knowledge of the college aged individuals could be in helping them to establish healthy habits early in their education. In particular, the lifestyle shift from home to college appears to be critical. Recent data has reported that first year college student experiences a decline in physical activity as they transition from high school.[12,13] Additionally, those students who are nearing the end of their education and are aspiring to be health and fitness professionals often lack polished skills for providing leadership.

Preliminary research found students had a positive experience by discussing health and fitness information with a classroom partner through emails.[14] Social interactions are common ways students share knowledge and come to know about the world. The establishment of a collaborative experience between first year students and fourth year student might well foster an increase in health and fitness knowledge and the ability to better apply that knowledge. Such a setting may provide an opportunity for overcoming barriers to construct health and fitness knowledge, especially for persons of college age.

PURPOSE

The purpose of this case study was to survey student reflections of a social media experience. More specifically, the study focused on the following researcher questions: (1) What were the Learners reflections of the social media experience related to health and fitness?, and (2)What were the Pre-Service Health and Fitness Professionals (PSHFP) reflections of the social media experience related to health and fitness?

METHODS

Participants

A group of students enrolled in two different physical education department courses from a midwest university were recruited for this study ($N = 127$). Of the 127 participants, 72.5% ($N = 92$) were students from a Personal Health Science course and 27.5% ($N = 35$) were students enrolled in a Principles and Application of Fitness Training class. The research participants were selected based upon purposeful sampling. According to Rossman and Rallis, purposeful sampling provides the researcher with "reasons (purpose) for selecting specific participants, events, processes."[15(p. 137)] More specifically, convenience sampling was the technique chosen to identify participants during the 2009-2010 academic calendar year. Students enrolled in the Personal Health Science course were designated as "Learners" and the Principles and Applications of Fitness Training students were identified as the PSHFP. The majority of "Learners" were freshman (33.6%) and sophomores (46.7%) majoring in Pre-Elementary Education (51.1%). Learners were predominately female (68.5%) and male (31.5%) with an average age of 21 years, 9 months. The majority of PSHFP were juniors (17.1%) and seniors (82.9%) majoring in kinesiology and exercise science (80.0%) and male (54.3%) and female (45.7%) with the average age of 24 years, 3 months.

Procedures

There were several steps before the implementation of the social media experience. First, the researchers sought and received Institutional Research Board (IRB) approval from the University of Southern Indiana. Second, the Facebook group page entitled "Ask BOOTS" was created by a physical education faculty member. Facebook was chosen because of its accessibility and immense popularity among college students. The group page entitled BOOTS is an

acronym for Boost Optimal Outcomes through Social media. A student volunteer from the PSHFP group maintained the page and faculty members supervised it. Third, faculty members added the "Ask BOOTS" activity to their curriculum as a required assignment. Fourth, students were informed about the assignment and their role as learners or PSHFPs in either the Personal Health Science or the Principles and Applications of Fitness Training Course. Student learners and the PSHFP groups were asked to "friend" the Ask BOOTS group forum using their personal Facebook page. If participants did not want to use their personal Facebook page, they were encouraged to create a separate account.

Fifth, a social media discussion began when members of the Learner group posted health and fitness questions on the group site. The Learners were instructed to formulate three "general fitness" questions over a six-week period. The questions had to be directly related to health and fitness and they had to be formulated in as much detail as possible. During the same time period, PSHFPs were instructed to review the forum regularly and evaluate current postings for relevance. PSHFPs were required to respond to a minimum of six different learner-postings apiece. The PSHFP were equipped with specific criteria for selecting postings to which they would respond. They were to respond only to questions they felt were relevant to their areas of fitness expertise, questions they could answer confidently, because they utilized their respective bases of knowledge; however all questions were answered. Responses to Learner posts by multiple PSHFP were allowed. Finally, survey questionnaires containing nine items were distributed to all participants at the end of six-week periods for both the fall and spring semesters.

Data Collection

Data were collected through two survey instruments. The Learner and PSHFP surveys were developed by pulling together nine questions from previous research studies.[5,8,9] An expert panel of health and kinesiology professors ($N = 3$) examined both survey instruments for content validity and avoidance of bias items. The researchers independently coded the data to assess inter-rater agreement by calculating Cohen's kappa index and single and average score intra-class correlation coefficients using SPSS 15.0. The Learner and the PSHFP surveys included demographic information (gender, age, academic major and academic classification) and open-ended questions related to student reflections of a social media experience.

The Learner group survey included the following questions: (1) What type of information posted on Ask BOOTS was most helpful to you?; (2) Did the Ask BOOTS interaction help you to feel more comfortable asking question of fitness professionals?; and (3) What other forms of social media (Facebook, discussion board, Twitter) do you use to find answers to your lifestyle questions? The PSHFP group survey included the following questions: (1) How do you feel that fitness concepts are best conveyed through social media?; (2) What fitness concepts are best conveyed?; and (3) Do you think this use of social media could be used in other health settings? Responses to the questions were coded and summarized into common themes. The inter-rater agreement amongst the researchers ($N = 3$) were independently coded to determine an interclass correlation. Common themes where then tallied and calculated as a percentage of total responses.

Data Analysis

The means were calculated for the demographics using frequency data. The researchers also used Wolcott's four-step approach to organize the qualitative data for each survey.[16] First, the researchers organized the data by entering qualitative responses into a database. Second, each researcher read and reread the qualitative responses from the students' answers to the open ended-questions. Third, the constant comparative analysis was utilized to begin to "identify similarities and differences among the data through coding and sorting into appropriate categories."[15(p. 273)] Phrases were used for classifications purposes because some sentences contained two or more divergent ideas. Each phrase was assigned to a single category. Finally, the researchers coded the data looking for themes that emerged through intensive analysis and categorization of the data. The researchers used a predetermined coding scheme to identify whether they assigned the same or different codes to the themes. Rates were developed for the percentage of codes that were similar and reliability statistics (kappa) were computed for systematic data comparisons to determine an intra-class correlation coefficient.

Validity of Data

Multiple strategies were utilized to strengthen the validity of the study. The credibility or internal validity was supported by "authenticity" of the data which is described as giving a "fair, honest and balanced account of social life from the viewpoint who lives it every day."[17(p. 31)] The constant comparative analysis was also used to strengthen the validity by establishing categories and developing themes. Transferability or external validity was provided through the "thick description" of comments provided by the Learner and PSHFP, which may be found in the results section of the paper.[19] The dependability or reliability of the study was supported by researcher debriefing. Each researcher met to examine the data and discuss the themes and categories. Following the meetings the researchers met to determine final themes and categories. Conformability or objectivity was the abilities of the researchers to limit bias by not making premature conclusions on themes and/or categories by using the constant comparative analysis, reading and rereading the data, and the researchers debriefing.

RESULTS

The study resulted in themes for each questions and are illustrated in the responses. Questions were coded and common themes were then tallied and calculated as a percentage of total responses resulting in several themes. Both the Learners and the PSHFP reflections are discussed.

Research Question #1–Learners Reflections

Research question one focused on the Learners reflections of the social media experience related to the health fitness. The

first theme resulted in 56.5% of the Learners received helpful w health and fitness information. Workouts and nutrition were most often reported as the most beneficial information. For example, a response from a student included, "I feel more informed and aware of proper fitness" (Figure 1).

The second theme resulted in 51.1% believed their fitness routine would benefit from long-term access to this site. For example, "It is a lot easier to ask questions on Facebook since I use it all the time anyways." "It was cool to have a more personal answer rather than trying to Google it." Finally, theme three resulted in 45.6% the Learners felt more comfortable asking questions of fitness professional in the future. An example included, "It helped me ask questions I would have not usually asked" (Figure 2). The Learners claimed to have gained a better understanding of health and fitness information with Ask BOOTS. Example of a Learners response, "It helped me understand what I need to know about working out and health." "It helped me to learn some different kinds of helpful exercises."

Figure 1. Learner Response to Most Common Health and Fitness Information

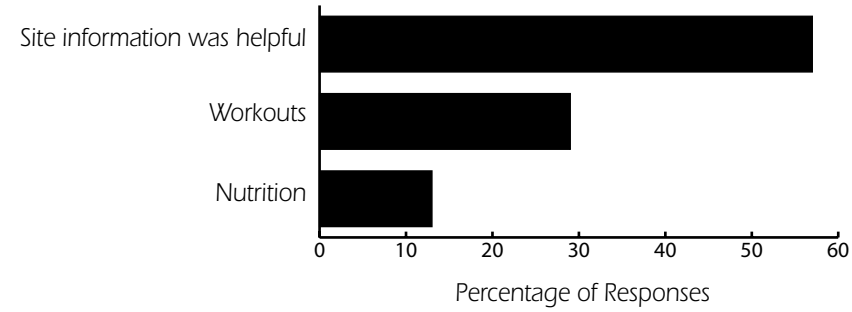
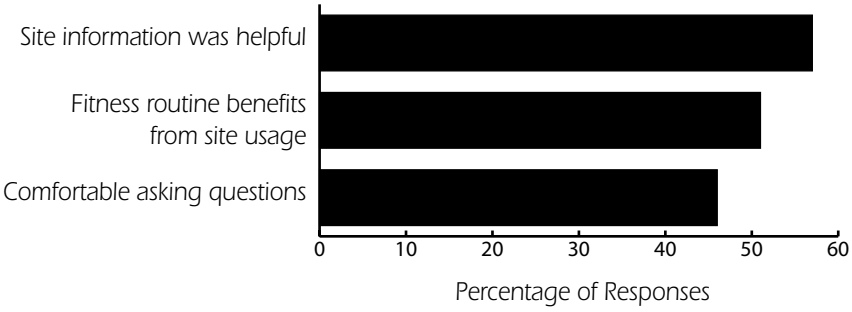


Figure 2. Learner Response About Ask BOOTS Site



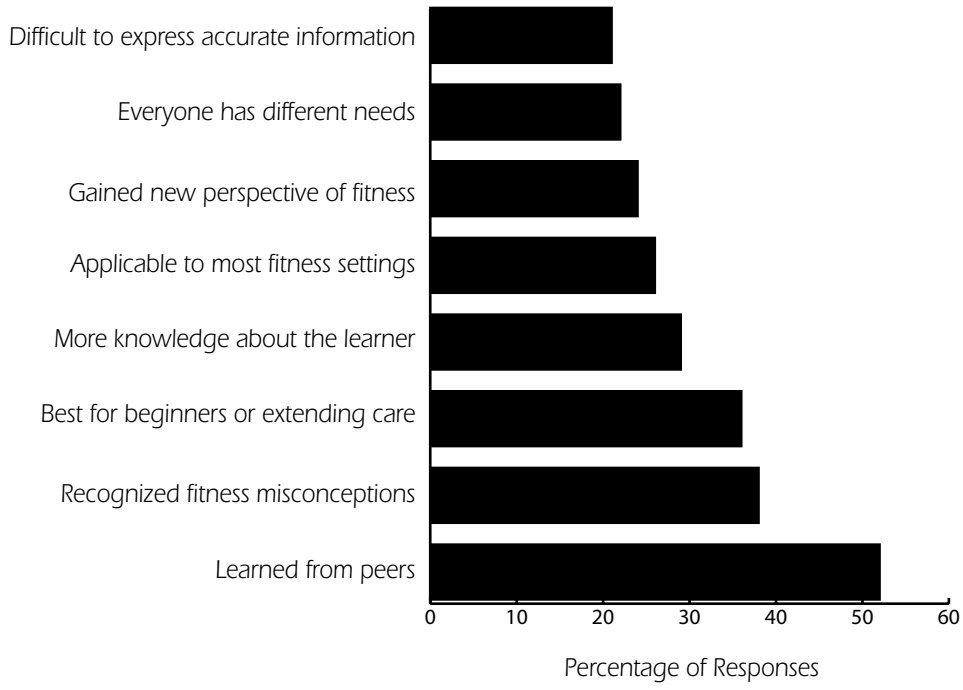
Research Question #2–Pre-Service Health and Fitness Professionals

Research question two focused on PSHFP reflections of the social media experience related to health and fitness. The first theme resulted in 52.9% of the PSHFP reported they learned from their peer postings. For example, "I learned that some of my peers are quick to establish more ways to improve a workout, or modify a workout rather than to look at other factors in some situations." The second theme resulted in 38.2% believed the site could be helpful in overcoming health and fitness misconceptions. For example a student responded by saying, "Especially if a person is starting their fitness routine at a beginning level. As a person progresses they will develop more questions and might need ways to increase the resistance of their activity." Theme three resulted in 35.3% thought that beginners or individuals needing extended fitness care would benefit the most from this site. For example, "The social network media such as Facebook could be beneficial in physical therapy settings and medical health care…Facebook could contact their doctor on the weekends or other occasions where the doctor is not in to learn information on a condition or an illness in necessary" (Figure 3).

DISCUSSION

This case study explored how a social media lesson supported student learning and sharing of health and fitness knowledge of college-aged students. By using Facebook, a forum was established for students to engage in interactions about health and fitness. In particular, how the respective groups could benefit from this experience. After six-weeks of participation in the shared experience, the Learners and the PSHFP group reported a positive response based on the findings above. In particular, members of the Learners group reported they would feel more comfortable asking questions to fitness professionals in the future. Additionally, Learners claimed to have expanded their knowledge about nutrition and exercise as a result of taking part in the Ask BOOTS forum. Similarly, members of the PSHFP group also reported participation in the Ask BOOTS as beneficial. They reported this social media experience gave them new insights into individual fitness needs and also helped them recognize common fitness misconceptions others may have. Members of this group also reported that when reviewing the group site they also learned from peers. Participants in both groups believed using the Facebook forum could be valuable long-term resources for sharing and discussing health and fitness information. Respondents speculated if more community sites like these existed; it would be most

Figure 3. Pre-Service Health and Fitness Professionals (PSHFP) Response



useful to the novice who wanted to enhance his or her fitness knowledge. Interestingly, the PSHFP felt the experience would have been improved if the Learners could have formulated their questions more precisely. Conversely, the Learners believed the PSHFP were able to provide useful and meaningful insights. Results from this investigation suggest college student health literacy can be enhanced through social media. In particular, Learners enhanced their health and fitness understanding and PSHFP were able to explain health and fitness concepts to others more effectively.

Limitations

There were several limitations to the study. The study population was a convenience sample of college students enrolled in physical education classes. The findings may not be generalized to other college students. A second limitation was the written responses to questions. A focus group or interviews may have provided more insight into the social media experience. A third limitation was the PSHFP served as the experts in disseminating information. This was a limitation for the study because they may not have all the knowledge to answer the questions. Finally, the study was conducted during a six-week period and my not reflect a true representation of the social media experience.

TRANSLATION TO HEALTH EDUCATION PRACTICE

University professors have an important role in educating students. The college health course is one way to provide college students with important information regarding health and fitness issues.[19] Pearman et al.[20] found an increase in health knowledge after students participated in health courses in college. The increase in health knowledge is not only due to content taught within the course but also the faculty member teaching the material. Faculty members often seek innovative ways to promote and disseminate health and fitness curriculum. One innovative way that is becoming a choice among faculty is through the use of social media. This case study explored how faculty members used social media to support student learning and sharing of health and fitness knowledge. Results of this study suggest students believed their health and fitness routine would benefit from long-term access to a health and fitness media site. It was also suggested social media forums could be used to establish learning opportunities for students. Future research may explore the potential influence of the approach over traditional classroom teaching. In addition, researchers may want to examine long-term use of a social media site that extends beyond the classroom. Ideally, a social media site could be used to enhance health and fitness knowledge outside the classroom to other areas of campus life such as recreational sports, athletics and health services.

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