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Sherleena Ann Buchman

Patricia Burke Snider

Tian Luo
Old Dominion University

Kaboni Gondwe

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Using Twitter to Facilitate Case-Based Instruction in a Nursing Classroom

Sherleena Ann Buchman
Ohio University
United States
buchmans@ohio.edu

Patricia Burke Snider
Ohio University
United States
sniderp@ohio.edu

Tian Luo
Ohio University
United States
TI303308@ohio.edu

Kaboni Gondwe
Ohio University
United States
Kg206010@ohio.edu

Abstract: This paper is a report on the use of Twitter within a sophomore level course in the baccalaureate nursing program at a rural Appalachian university. Students enrolled in the Foundations of Nursing course were in their second year of a traditional nursing program. Meeting the challenge of providing students with a ubiquitous learning environment that extends beyond their rural environment is important in the education of many students in the Appalachian region. The preliminary study looks at the usability of Twitter as the medium that will assist nursing students to build the confidence that comes from completing a case study that required the use of cross-culturally based health care information. Twitter provided the students with valuable pieces of the case which allowed them to develop a plan of care.

Introduction

Twitter is a microblogging tool which provides text-based content that is displayed on the user's profile page and updates subscribers to the user's activities and thoughts. By allowing for no more than 140 words in a post the "tweet," enables users to publish brief text updates in real-time and in asynchronous communication. It creates online communities where interaction, discussion, and collaboration can take place among a group of users at different geographical locations (Java, Song, Finin, & Tseng, 2007) or as used in this case study, allows for information about healthcare in a different geographical region to be brought to the students. Although Twitter interaction and collaboration are often perceived as informal and even sometimes playful (Dunlap & Lowenthal, 2009), scholars have been conducting research examining the unique educational benefits of microblogging and exploring ways of incorporating it into a variety of learning scenarios (Gao, Luo, & Zhang, 2012).

It is believed that Twitter and other microblogging tools have great potentials in education. As indicated by research, the major educational use of these microblogging tools resides in resources sharing (Thames, 2009). Real-time and asynchronous communication supported by Twitter can help create informal learning communities that stimulate learning outside the classroom (Ebner, Lienhardt, Rohs, & Meyer, 2010; Junco, Heiberger, & Loken, 2011). As real-time social networking tools, Twitter and other microblogging tools are found to contribute to the success of collaborative learning (Junco, et al., 2011). Additionally, educators creatively use these tools in and outside of the classroom to enhance students' participation and engagement (Junco, et al., 2011; Rankin, 2009).

Research in Using Twitter to Promote Classroom Learning

Research studies have addressed in-class formal learning. Ebner and Maurer's (2009) conducted research in a master-level course designed to expand the traditional lecture format. They reported that the integration of microblogging increased the amount of reflection that occurred in the students. Microblogging increased use of peer review activities which allowed for more reflective opportunities and contributed to the students' writing skills. The microblogging approach in the classroom setting also provided just-in-time assistance to students who were having difficulty in completing the work of the course. Finally, microblogging offered multimedia content including visuals and audios which added more variety to the traditional text-and lecture-based content (Ebner, Maurer, 2009).

Perifanou (2009) conducted a series of microblogging-enhanced activities in an Italian language class to promote student learning. Although she characterized fun as a major theme of the microblogging-enhanced activities, students learned in a more engaging and positive means than the usual didactic lecturing. Perifanou stated that the use of microblogging provided unique communication channels for meaningful interactive learning and incorporated the simultaneous learning of higher-order thinking and fun. The integration of microblogging in the class enhanced motivation, participation, collaboration and largely supported students' Italian language learning.

Twitter may prove to be an innovative, new approach for the nursing education arena. Present day students, including nursing students are digital, technological learners. They are able to multitask and have an attention span of approximately fifteen minutes. These students also seem to have a need for almost constant repetitive stimulation: auditory, visual, and kinesthetic. New innovative methods of technological teaching must be developed in order to keep the students engaged (Campbell, S.H. & Daley, K.M., 2009).

Thyer, (2003) explains that the nursing workplace has been slow to embrace new, innovative communication strategies. This may be a result of the health care workplace sector's slowness in implementing new means of communication. In order for this concept to change, nurse educators must display the trend of technology as a means of communication in the classroom. Means such as simulation, use of twitter, virtual reality programs and other new communication strategies will set the stage for future nurse, thus, for the healthcare work place.

Many uses have been identified for the use of Twitter, including information sharing and teaching pedagogy, as well as marketing and sharing emergency information (Dreher, 2008). Twitter is appropriate for the education arena as one can regulate those that are approved to follow one's tweets. Unlike other social media sources which require a web based hardware device, Twitter is a text based. Therefore, Twitter is readily available via cell phone access, making Twitter feeds convenient for the typical nursing student.

A study conducted by Mistry (2011) showed that ease of use and ease of setting up Twitter accounts provided ease of access and was a motivational tool for students. Learners in higher education expect enhanced resources to support their learning experience. The application of Twitter stimulated not only the students, but also the teaching staff as a new form of interactivity was introduced. Twitter also offered alternative methods of assessment and also allows staff to better understand learning preferences and styles.

Bristol (2010) explains that Twitter is a growing social media that has growing potential in health care and education. The author tells that Twitter is a useful tool to post information for students and staff and is used to develop "a sense of community" (p. 200). Twitter is a form of communication has potential to create networks outside of the classroom and is a tool to provide support in a social sense. Both instructors and students post valuable information and questions that are of benefit to all involved.

Nurses need to be aware of what is going on with social media and be prepared to assist our patients through the means that they have available. Patients are communicating and interacting via social media including Twitter (Chinn, 2013). Although there are risks with using social media in regards to confidentiality and assurance of the accuracy of tweets, the benefits outweigh the risks. According to Fisher (2012) healthcare workers are already using twitter to communicate with groups of patients' at one time. Eysenbach (2009) suggests Twitter is already being used as a tool in in healthcare to gather information and look at diseases for syndrome surveillance. Updates are provided with the assistance

of twitter. Twitter can be used to provide information on specific content including the following list provided by Fisher in 2012:

- Diabetes management
- Blood glucose monitoring
- Drug safety alerts
- Diagnostic brainstorming
- Chronic condition self-management
- Rare disease tracking and resource
- Infant care tips
- Post discharge follow up care

A 2012 study by Fisher indicates that users of Twitter are between the ages of 18 years old and 65 years old. This age group spans the majority on nursing students. A further breakdown of their study shows that the highest twitter use among those polled were the 18 to 25 year olds. Traditional BSN programs across the nation are full of students within this age range. Five common themes for twitter use were identified by Fisher. The first theme is that Twitter could be used by healthcare providers to give patients appointment reminder. A second theme emerging was that healthcare providers communicate with patients regarding diagnostic labs or test results amongst the health care team or to the patients. The third theme was that health care providers could send tweets regarding the need for prescription drug refills and that perhaps even the patients could tweet the physicians when they need prescription drug refills called in. A fourth theme that could also be applied to student nurses was that health care information could be delivered in the form of education and teaching to the patients. And finally, the fifth theme to emerge was that Twitter could be used as a general forum for anyone interested to ask questions.

The Study

In May 2012, Ohio University faculty and graduate students collaborated on a cross-cultural based case study that addressed on oxygenation, vital signs, and nursing measures. Twitter was used to explore the effectiveness of its use as an in-classroom teaching tool. The purpose of this study was to explore the benefits of providing small amounts of new information via Twitter to one group of students and to contrast the care provided to the Twitter-based patient case verses the care provided to group that described care for the non-Twitter-based patient case. The project was also designed to provide students with cultural information that contrasted the care of a patient with a pulmonary embolism in America with that of a Malawian patient. Project objectives included the evaluation of:

- an increase in knowledge regarding oxygenation while using Twitter.
- an increase in knowledge regarding vital signs while using Twitter.
- an increase in knowledge regarding nursing measures while using Twitter.
- the students' attitude toward the use of social media in a classroom setting.
- the utilization of the services offered through social media.
- whether Twitter would promote student learning.
- whether social media would be considered a teaching methodology.
- the cultural comparisons between care practices in the United States and Malawi, Africa.

Design and Methodology

The study used a convenience group consisting of 90 sophomore Foundations of Nursing students. Students were assigned readings on oxygenation, vital signs, and nursing measures prior to class lecture as well as 170 pre-assigned exam questions to complete electronically. At the start of class, each student was provided with a pretest to assess knowledge level of oxygenation, vital signs, and nursing measures. The class was then presented a lecture regarding oxygenation, vital signs, and nursing measures via PowerPoint presentation (PPP). All students received the same PPP. Students were divided into four groups. The four groups were presented a case study involving the care of a patient suffering a pulmonary embolism. Two groups were given care parameters that are standard in the United States. The other two groups were given care parameters that are standard in Malawi, Africa. One of the American patient groups was given specific care and assessment assistance via Twitter (Group A: n=22), the second American patient group did not receive information assistance via Twitter (Group B: n=23). The same division took place with the Malawi groups: one group receiving Twitter feeds (Group C: n=22), and a group not receiving Twitter fed information (Group D: n=23). Each group answered specific questions which completed the case study. The responses were collected and evaluated. Each student was given a post test that tested the same content as the pretest.

Conclusions

Twitter is a social media blogging tool that when compiled with a group of students from a rural community allowed for an interesting transformation of a cultural case study within a nursing classroom. Nursing is currently embracing social media as a form of education as evidenced by the current literature. It is believed that twitter as a microblogging tool has great potential in education and specifically nursing education. Nurses need to be able to communicate with patients on a daily basis and Twitter is a great tool to help maintain the constant relationship between nurse and patients. Twitter is not limited to nurses or nurse educators as physicians and other members of the health care team could benefit and also use Twitter as a tool to communicate together. This study is a prime example of how Twitter can be used in the classroom setting.

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