

Using Facebook as an Asynchronous Learning Environment for Students in an Associate-Degree
Nursing Program - A Pilot Study

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Abstract

Nursing educators are tasked with communicating and relaying information to a demographic of students that have changed over the recent years, the non-traditional student. One avenue of communication in which both students and faculty have demonstrated use in both professional and personal arenas is social media. A convenience sample of 20 students at a Southern Community College participated in an asynchronous facilitated study group using Facebook over a course of 10 weeks. Pre and post-content quizzes were given, as well as a survey at the conclusion of the course. *Communicate* and *Resource* were major themes extrapolated from the survey questions. A principal components analysis noted a variance of 46% with a Cronbach's Alpha of .945. Non-significant learning gains were found in three of the four content areas (Skin/Burns/Shock, Respiratory, Cardiac), $p > .012$. A significant knowledge increase was found for the Fluid and Electrolytes content area ($\Delta = 2.58, p = .001$). A significant main effect was found between the pretest and post-test composite scores for all content areas, ($\Delta = 5.20, p < .001$). Facebook can be utilized as an efficient and easy mode of collaboration among faculty and students.

The Practice Problem

College students have traditionally been defined as “one who enrolls in college immediately after graduation from high school, pursues college studies on a continuous full-time basis...and completes a bachelor’s degree program in four of five years” (Center for Institutional Effectiveness, 2004, para. 1). Other characteristics typically include being financially dependent on others, not having children, and living on campus (Center for Institutional Effectiveness, 2004; Deil-Amen, 2011).

The description of college students has evolved over the last decade in which non-traditional students have become the new majority (Bell, 2012). With a changing job market, and increase in second careers, older adults have become the typical student, the non-traditional student. While there are many definitions for a non-traditional student, characteristics include: having dependents, being a single parent, being employed full time, financially independent, attending school part time, and being over the age of 24 (National Center for Education Statistics [NCES], 2002). “In 2011, there were 4.1 million graduate students and 82 percent of them worked” (Davis, 2012, p. 2), suggesting that many of the student’s socioeconomic status is of great concern while attending school. Research has described a positive relationship between the health of the individual and their socioeconomic status, that is the more advantaged one is, the healthier that person tends to be (Adler & Ostrove, 1999; Guadagnoli, Cleary, & McNeil, 1995; Stockwell, 1962).

College students have been faced with academic inflation, driven by the changing value of a degree in the job market (Collins, 2002). “College degrees went from possessions of a tiny elite of professionals and the wealthy at the beginning of the twentieth century, to being held by over a fifth of the U.S. population today” (Collins, 2002, p. 24). This over-emphasis in college

education has created a wealth of college graduates, of which a percentage accept positions that require high school education (Yi & McMurtrey, 2013). Students have to consider advanced degrees in order to obtain a ‘college-level’ job (Yi & McMurtrey, 2013), which has created an abundance of overly-qualified individuals in professions that did not require that level of education in previous years. However, college students who obtain their degree have shown to have better job security than their high school counter parts, suggesting that education can provide an avenue to change one’s socioeconomic status.

The job market has shown improvement over the last year, and is showing signs of sustained growth with a decrease in unemployment and an increase in retail spending (Whitefoot, 2015). Schools are working to provide more programs for the nontraditional student in order to meet this increased need for workers. For example, a steel worker may come back to school in an accelerated program in order to receive specialized training that would allow growth in his/her respective field. There has also been a demand for online programs to meet the needs of non-traditional students.

Shortages of educators have been projected to rise due to an impending faculty retirement, a required decrease in classroom size and increasing student enrollment (Voke, 2003). Specifically, nursing schools have shown faculty shortage rates of 6.9% (American Association of Colleges of Nursing [AACN], 2014), which has, and will continue to, contribute to increased stress as educators work to meet the demands of the students while overstressing their responsibilities.

Students, particularly non-traditional students, require learning opportunities and support through other avenues. Support includes “one-stop-shopping” coupled with web-based services and extended office hours, parking, online registration, and help with realistic goals (Fairchild,

2003). These resources are beneficial to both traditional and nontraditional students. Nontraditional students typically do not live on campus, are juggling multiple responsibilities and have significant time constraints which can make difficult or complex procedures overwhelming (Fairchild, 2003). Technology has proven to be beneficial to both the nontraditional, traditional student and faculty. Specifically, social media has been used for a myriad of reasons, not only to connect with friends, but to learn, ask questions, link to other resources, and much more.

Nontraditional students are driven by their desire to succeed and to improve their socioeconomic status. They must be able to incorporate education with other responsibilities. To facilitate this desire, frequent communication with faculty and creating attainable educational goals are crucial elements that should be incorporated into curricula. Consequently, educators need resources in which to reach out to students through communication and assistance while working within the confines of their job requirements. The confines that are created from the nontraditional student in which to receive assistance and guidance is severely limiting, while educators continue to work within their required boundaries as set by their place of employment. The gap in communication and learning opportunities between educators and students will continue if changes are not implemented.

Background

Nursing, one of the fastest growing occupations in the United States, and currently the largest health care profession (American Association of Colleges of Nursing [AACN], 2011), extends to a variety of settings, including schools, home health, military, education, and others. The demand for educated, skilled, competent nurses continues to rise as the socioeconomic and family structure adjusts to a large aging population. It has been projected that over 1 million job

openings for nurses will be available by 2022, due to growth and replacement of the baby boom era nurses (AACN, 2011). The number of multiple health conditions managed by Medicare beneficiaries and medical providers have continued to increase. Over half of these stated beneficiaries have several comorbidities (Wolff, Starfield, & Anderson, 2002). Therefore, Associate, Baccalaureate, and graduate level nurses will need to work together as the complexities of disease processes in conjunction with co-morbidities become the normal encounter, not the extreme.

The primary goal of education has been to prepare an individual for what will be encountered in his/her specified career. Education is not meant to prepare a person for every situation and solution for a professional field, but to teach him or her to utilize the building blocks that will allow an individual to process and integrate knowledge to achieve a desired outcome.

Nursing educators must be able to convey content (Billings & Halstead, 2013), how to critically think, use intuition, develop skills, communicate effectively, and understand the basic pathophysiology of many disease processes, medications, and other various interventions. Moreover, nursing faculty have a responsibility in “curriculum development and evaluation, development of student evaluation methods, and graduation requirements, ...create standards for promotion and tenure of faculty” (Billings & Halstead, 2013, p. 3).

The holistic approach the nursing profession embraces stems from four accepted nursing metaparadigm concepts initially identified by Fawcett: human being, health, environment/society, and nursing (Butts & Rich, 2013). To this end, the nursing educator has been tasked with a tremendous responsibility; to instill in the student the fortitude and honesty that prevails in the profession, as evidenced by 13 years of being named most ethical and honest by the Gallup Pole

(American Nurses Association [ANA], 2015) and the Code of Ethics, a guideline created by the American Nurses Association (ANA) which provides responsibilities for quality nursing care (American Nurses Association [ANA], 2015).

The profession of nursing “is projected to grow 19 percent from 2012 to 2022, faster than the average for all occupations” (United States Department of Labor: Bureau of Labor Statistics, 2014, para. 5). Nursing schools in the United States denied “68,938 qualified applicants from baccalaureate and graduate nursing programs in 2014 due to an insufficient number of faculty, clinical sites, classroom space, clinical preceptors, and budget constraints” (American Association of Colleges of Nursing [AACN], 2014, para. 3). In order to support this ever growing nursing profession, more educators are needed and an increased utilization of technology will be required.

As previously noted, non-traditional students have become more prevalent, and the program of nursing is no different in acceptance this type of student. According to the National League for Nursing (NLN) (2013), over 65% of RN students who attended an Associate degree or Baccalaureate degree program were over age 30. Students in this age group have been tasked with managing family, career, school, and financial and religious responsibilities (Ascend Learning, LLC, 2012; Giancola, Grawitch, & Borchert, 2009; Sandler, 2002).

Project Purpose

The need for technology on behalf of both the educators and the students is no longer a suggestion, but a required integration into curricula in order to meet the demands placed upon all involved. Utilizing web-based technology for communication with students in a quick, efficient manner has been needed. Students require opportunities to network and support one another, as this has been shown to decrease stress and attrition in nursing programs (Bryer, 2012; Giancola

et al., 2009; Glossop, 2001). Facebook has been the most utilized social networking site for adults age 18 to 62 (Giordano & Giordano, 2011; Moran et al., 2012). Data has shown that other social networking sites such as Twitter and Vine are used more often by teens (Jaffray, 2014). The purpose of this project was to determine if the use of a web-based technology, Facebook, provided learning and networking opportunities to students, and if it could meet the needs of all students (traditional and non-traditional) who attended an Associate of Nursing Degree program.

Web-based Technology

Educators and students are able to gain a wealth of information from the internet. The current generation (Millennials/Generation Z) uses the internet as a fundamental skill, not knowing a world before this technology. Students therefore have indicated that the primary source of information has been via online sources (Fernandez-Aleman et al., 2014), and more specifically online media (Giordano & Giordano, 2011). Faculty has also been shown to use web-based technology, particularly social media, for personal and professional use (Moran, Seaman, & Tinti-Kane, 2012). An asynchronous learning environment, such as one from a web-based technology, allowed students and faculty to communicate and collaborate together during their opportune learning time, which increases critical thinking (Campbell & Mayer, 2009; Gokhale, 1995).

Facebook

Facebook has been shown to be the primary source of online media used in both professional and personal arenas, with some students using it multiple times a day (Giordano & Giordano, 2011; Moran et al., 2012). While using Facebook, members were found to be highly engaged, with over half of them sharing, posting, or commenting on Facebook (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). With a means to attach articles and news stories, the ability

to relay information through one venue has created a platform for learning. It has developed into a network that the individual has created in which he can communicate with others, preferring the quick and frequent engagement rather than face-to-face (Fowlkes, 2012). Because this medium of interaction has demonstrated easy accessibility, whether at home or at school, the following has been addressed: Did nursing students who used Facebook as a source of knowledge in conjunction with traditional learning compared to not using Facebook, create more intraprofessional relationships with a broader understanding of content?

Description of Outcomes

The project evaluated if learning was enhanced as a result of a faculty facilitated asynchronous learning environment, and determined if an atmosphere for networking and intraprofessional relationships among students was created. A survey was disseminated at the end of the study. The survey consisted of fill in the blank questions regarding the student's demographics, use of Facebook, questions with a Likert-style response, and a qualitative section. The outcome was to determine if the use of Facebook increased students' understandings and interactions when compared to the traditional classroom.

Project's Importance to Nursing Practice and Leadership

Utilizing a common resource allowed faculty and students opportunities to quickly and efficiently communicate. Teaching students and other educators how to use technology correctly alleviated the fear that inhibits growth and presented others with effective tools to be utilized in any career. Facebook has been used in both professional and personal arenas, and as such, one should be aware of appropriate or unethical postings. Best practices have been outlined through various associations, namely the American Nurses Association (ANA) and the National Council of State Boards of Nursing (NCSBN) in order to facilitate guidelines and ensure safety and

privacy (National Council of State Boards of Nursing [NCSBN], 2011; Schmitt, Sims-Giddens, & Booth, 2012). Consideration and precision are required to protect and provide a constructive learning environment.

The healthcare arena utilizes social media; nursing students who become nursing professionals will continue to communicate via these avenues. Embracing the opportunities that Facebook provides with regards to communication and networking will support practicing nurses, leaders, and educators by providing tools that other technology has yet to supply with such ease.

PICOT

Does the use of Facebook enhance and clarify traditional learning through scenario based situations and interprofessional communication among nursing students and faculty in an Associate Degree program compared to not using Facebook within three months?

Theoretical Framework

A widely accepted learning theory by Neil Fleming proposes learning styles (Visual, Auditory, Kinesthetic), of which people possess a preferred learning style (James Cook University [JCU], n.d.). In a technology-based world, new theories have emerged in an effort to address and conceptualize how learning effectively takes place in a classroom and in an online environment. Mayer (2009) has proposed a multi-media learning theory, in which concepts of dual-channel processing, limited capacity, and active learning takes place. Using two channels, visual and auditory, one processes information, can move information between the two channels, combine the information with past experiences, and create active learning (Mayer, 2009).

Reading, for example, uses the visual channel to gather information. However, that channel may become overloaded with words, and key concepts can be lost. Reading the same

words and saying them out loud uses both the auditory and visual channel, increasing the focus and attention, so the reader can process the information, determine what is important, and construct knowledge (Mayer, 2009) (See Appendix A). Mayer (2009) investigated 12 features within this theory to determine the effectiveness of constructing knowledge and retaining what is learned. One such feature found that extraneous pictures, other visual representation such as many words, or sounds had a poor effect on the student, primarily students with low-working memory (Mayer, 2009). Each channel has limited capacity, in which if overused or overwhelmed, will not take in additional information. For example, if a person reads a section of text, but does not remember or understand what has been read.

By using methods in the classroom in which both learning channels are utilized, and carrying those concepts in to the Facebook arena, students can continue to generate learning through short, factual information. Moreover, one can use both visual and auditory channels with Facebook by simply reading the statements out loud, or by posting links that have an auditory component.

Nursing educators are unable to describe, teach, and evaluate every skill, disease process, medication, intervention, and evaluation on every patient that the student will encounter in his career. Wittrock's generative theory supports the notion that meaningful learning occurs when selection, organization, and integration of knowledge are mentally connected with previously gained understanding (Mayer, 2010b). Taking the time to connect experiences from long-term memory and concepts currently being taught, allows for construction of knowledge that is easier to recall. Concepts, in conjunction with assessment, will lead the nurse to make decisions based on priority and need. Instead of reading a chapter, the student needs to pull out important information, and generate critical thinking in order to provide successful interventions.

Social media is a platform in which quick, short questions and comments are made in an effort to collaborate with others. It has been shown to be an effective tool for gaining information quickly and effectively (Din, Yahya, Haron, 2012). This study evaluated the use of Facebook as a learning environment using Mayer's theory of multi-media learning for a framework to guide conversation and create collaboration among students.

Organizational Assessment

This project took place at a community college in Eastern Tennessee. This college promotes instruction through various delivery methods, including distance learning (Pellissippi State Community College [PSCC], 2011). This college has been known for providing up-to-date technology advancements to the students and faculty in order to prepare the students for their careers.

Within the community college, the Department of Nursing has a mission to "produce graduates with necessary skills and competencies to assist individuals and families in achieving optimal levels of functioning and independence" (PSCC Department of Nursing, 2015, p. 11). Moreover, it strives to provide education that values excellence and professional growth and integrity (PSCC Department of Nursing, 2015).

This project supported both the community college's mission in using technology to help students achieve their goals as well as the Department of Nursing's mission and vision by promoting the use of correct communication and collaboration among others to achieve competency, growth, and integrity. Additionally, this project helped facilitate teaching and learning opportunities among faculty and students in regards to correct principles when 'commenting' or 'writing a post' and alleviate fears and concerns about the use of social media.

If used correctly, Facebook can promote learning and networking and can empower and allow students to receive the education they are seeking.

This community college has many technological resources. Every campus has a computer writing lab for student use. Additionally, the Department of Nursing has laptops in each classroom and iPads in each laboratory, allowing access to the internet and Facebook when on campus.

The Dean of Nursing and a few faculty members have been facilitators in this project, and value the efforts of using technology in various ways to reach the students' needs. Faculty members involved in the project have committed to commenting and asking questions often, creating a learning atmosphere with different dynamics and strengths.

A barrier for this project was locating the students on Facebook. With so many Facebook members, and the freedom to create individualized profiles, identifying enrolled students posed a challenge. This researcher addressed this barrier by asking each student to provide their Facebook profile name. After this method was exhausted, this researcher asked the student to aid in identifying his or her page during laboratory the first week of the summer semester.

A challenge for this project was the lack of full faculty support. The summer term included less faculty and staff than the traditional fall and spring semesters. Several faculty members identified what they perceived to be pitfalls, such as student comments that are illegal or inappropriate, or using Facebook and 'becoming their friend.' This researcher had addressed this challenge by educating the faculty on the correct use of Facebook and that as this researcher was a facilitator on the page, and the relationship with students continued to remain professional.

This researcher met with the Dean of Nursing and other faculty members at the end of the semester to discuss all findings as well as successes and shortcomings of this project.

Implementing of the use of Facebook in the fall and future semesters would be considered based on the results found. Additionally, the community college received results regarding this project, and further research and education opportunities regarding implementation in other programs were to be discussed at a future date. A request for a social media policy has been made in an effort to provide guidelines for others in the pursuit of using this technology.

Analysis of the Evidence-based Literature

This researcher began the literature review by searching in five different databases: CINAHL, Cochrane, Nursing and Allied Health – Full text, Sage, and Science Direct. This researcher reviewed over 100 articles, and found 20 that directly pertained to the research question. Appendix B provides the complete table of studies that were accepted for this research question with a detailed description. Appendix C offers a list of theoretical articles with a brief statement regarding each theme as it pertained to the research topic.

Findings

Social media as a tool

Numerous articles described the use of social media as a learning tool (Din, Yahya, & Haron, 2012; Drake & Leander, 2013; Ferrara-Love, 2013; Tower, Latimer, & Hewitt, 2014). Using Facebook as an online social networking tool, Din et al. (2013) determined that self-directed learning had a positive effect on information retrieval, and adult learners tended to be dedicated self-directed learners. Moreover, the analysis from this study of 59 adult learners concluded that networking via this social media platform enhanced “information retrieval” and provided a direct correlation to improved “academic performance” (Din et al., 2012, p. 267).

Ferrara-Love (2013) also determined that Facebook was beneficial to students for learning. This analysis consisted of a randomized controlled study (RCT) on 81 participants in a

nursing course, who were considered “high-risk,” to determine if the utilization of Facebook as a private study group would increase grades and decrease failures at the end of the semester.

Results among these “high risk” students demonstrated that the experimental group increased their academic performance to a level of outperforming the control group (Ferrara-Love, 2013).

Another significant investigation that used Facebook as a learning tool was conducted by Tower, Latimer, and Hewitt (2014). A Facebook study group consisting of 373 students was organized to support and reinforce what was learned in the classroom. The majority of students reported that they experienced greater collaboration among peers and that the Facebook page was “an effective way to learn” (Tower et al., 2014, p. 1014). Facebook was shown to be a beneficial tool for students in learning arenas (Din et al., 2012; Ferrara-Love, 2013; Tower, Latimer, & Hewitt, 2014). It was determined that using innovative methods to support learning, such as the use of social media sites, provided a positive experience and allowed students to control the pace of their learning (Din et al., 2012; Tower et al., 2014).

Drake and Leander (2013) assessed the use of Ning, an online platform in which one can create custom social networks, among 11 Baccalaureate nursing programs. The results demonstrated that the majority of students and faculty felt the use of the social networking website intensified their learning experience from the classroom through in an increase in critical thinking experiences. A significant finding of deeper conversations than in the classroom was noted (Drake & Leander, 2013), perhaps because the students felt more comfortable opening up in an online environment. Morley (2014) studied the effects of additional online communication during a five week clinical placement. Students expressed that they appreciated the academic presence on the social media sites, and Facebook was the preferred method of communication

over a wiki (a community site), email and traditional methods via email and/or telephone (Morley, 2014).

Collaborative Learning

Six studies were selected in regards to this research question as they sought to determine the correlation between interaction among others and gaining knowledge (Ashley & O'Neal, 1994; Bristol & Kyarsgaard, 2012; Campbell & Mayer, 2009; Gokhale, 1995; Hessler & Henderson, 2013; Tippin & Arnold, 2012). Ashley and O'Neal (1994) studied the effectiveness of faculty-driven study groups in an effort to prepare nurse candidates for NCLEX-RN. The “at-risk” Group (those who met one or more of the following: GPA below 2.4, a ranking below the 20th percentile on the Mosby Assess test, and a diagnosed learning disability, outperformed the control group in both statistical and practical significance, suggesting that study groups that are faculty-driven can be of great help and support for “at-risk” students (Ashley & O'Neal, 1994).

Campbell and Mayer (2009) further confirmed this concept in a study conducted using two lab experiments, using randomly assigned groups to participate in a lecture with communication between the lecturer and students, or a lecture without that group participation. Campbell and Mayer (2009) suggested that allowing students to answer questions and receive feedback allows students to “process material more deeply and store the material in a more retrievable form” (Campbell & Mayer, 2009, p. 756).

Hessler and Henderson (2013) examined the effects of interactive case studies versus hand-written case studies, with a total of 99 students who were randomly assigned a group placement. The students preferred the interactive approach as a way to integrate information that they learned in lecture, and the use of technology and interactive approaches “in nursing education has the potential to enhance student learning and retention” (Hessler & Henderson,

2013, p. 9). Tippin and Arnold (2012) found that nursing students enjoyed watching a patient progress through pregnancy on Facebook. The students stated that they were able to research information not found in the textbook and hear real-life questions, allowing the students to apply the knowledge that they learned in the classroom setting (Tippin & Arnold, 2012).

Gokhale (1995) supports the benefit of group interaction and learning in a study comprising of 48 students, in which the effectiveness of individual learning versus collaborative learning was assessed. Collaborative learning was found to be more beneficial in enhancing critical-thinking skills and problem-solving skills (Gokhale, 1995). Group size was not found to be a factor in a study performed by Bristol and Kyarsgaard (2012), however a smaller group will allow for a more detailed and focused discussion.

Obtaining Information

In a survey performed by the Babson Survey Research Group and Pearson, Facebook was found to be a top social media for communicating with peers and students (Bart, 2010).

Fernandez-Aleman et al. (2014) and Giordano and Giordano (2011) found that a large percentage of faculty and students use online resources to obtain information. Moreover, Facebook is found to be used in both professional and personal arenas (Giordano & Giordano, 2011), making it one of the most used social media sites. It was proposed that faculty and administration could use Facebook as a platform to engage and inform the students (Giordano & Giordano, 2011).

Pearson, a leading education services company, researched the use of social media among personal and professional use, and found in those surveyed, up to 40% of the faculty in Humanities and Arts use social media (Moran et al., 2012). Professions and Applied Sciences replied with approximately 35% of faculty using social media (Moran et al., 2012), indicating opportunities for growth and further implementation.

Using the internet has become an invaluable resource for both the lay person and the nursing student (Green, 2010). Because of this, students have been able to utilize these avenues in creating another opportunity to teach patients and communicate through a means that has become very common and readily available (Green, 2010). By using various sites, namely Facebook, Ning, and YouTube, students were able to communicate education in lay terms rather than use posters or pamphlets (Green, 2010).

Perceptions

This research question required the analysis of student perceptions in an online environment, to determine if an asynchronous environment would be beneficial to the learner. A sense of community “can enhance student engagement and improve learning outcomes” (Gallagher-Lepak, Reilly, & Killion, 2009, p. 133) in the online setting. Wu (2014) noted that social networks can improve interaction when they are used in a constructive way, and that students and educators developed a positive attitude and satisfaction after implementing social media in to their curriculum. Moreover, the careful design and deliberate delivery of content is needed to be successful (Pittenger, 2013). In a study involving three separate groups that interacted in an online social networking platform for a period of 15 weeks, Pittenger (2013) determined that “the use of learning technologies to create a meeting space not dependent on time or place is a potential solution to the logistical barriers” (p. 8).

A study performed on the basis of a web-based multimedia lesson noted that students performed well with the written word when the study was learner-paced, as they could dictate the amount of time spent on each portion of content (Tabbers, Martens, & VanMerriënboer, 2004). This demonstrated applicability of using social media to enhance learning, as the student can evaluate and focus on content that is relevant to their individual needs.

Theoretical Implications

Many studies that have been selected for this research question evaluate the effectiveness of collaborative learning as a valuable way to store and retrieve information (Ashley & O'Neal, 1994; Campbell & Mayer, 2009; Gokhale, 1995; Hessler & Henderson, 2013; Marnocha, Marnocha, & Pilliow, 2015; Mayer, 2010a; Mayer, 2010b) Situations among students and faculty, where the utilization of teamwork is apparent, provides insight as to the benefit of this intervention. Moreover, the use of technology is shown to be enthusiastically received among students as it allows them to direct their individualized learning and study habits (Tabbers et al., 2004). Integrating the use of one's ears and eyes while learning information has been shown to greatly increase the cognitive process, as determined by the above mentioned studies through the use of technology as well as research performed by Mayer (2010a). Collaboration with others allows students to generate information and participate in meaningful learning as each student selects, organizes, and integrates the information with past or learned experiences (Mayer, 2010b). Students who are able to ask questions, generate summaries and analogies are able to apply what they know in different situations (Mayer, 2010b), thereby allowing a person to generate and transcribe knowledge, as opposed to the standard regurgitation of information.

Another consistent finding throughout the various studies has found that faculty appear to be hesitant to use social media sites as a resource in teaching and facilitating group efforts among students (Barry & Hardiker, 2012; Cronquist & Spector, 2011). One concern that faculty have in implementing this sort of change was the opportunity for the students to breach privacy and confidentiality, "which can be intentional or inadvertent and can have serious implications" (Barry & Hardiker, 2012, p. 8). However, Marnocha, Marnocha, and Pilliow (2015) found that "the majority of nursing school deans surveyed were aware of students posting unprofessional

content and at a higher rate than found in studies conducted among medical and pharmacy schools” (p. 122), indicating a need to educate both students and staff regarding appropriate posting of information. Cronquist and Spector (2011) noted that 26 of 33 state boards took disciplinary action against nurses who had violated patient privacy by posting information on social networking sites. Health professionals therefore need to be educated “about how to use all forms of social media responsibly” (Green et al., 2014, p. 181).

Faculty must be taught the implications of property rights, privacy policies, Health Insurance Portability and Accountability Act (HIPPA) regulations, and legality concerns, including accessibility to deleted posts, in a court of law (Haigh, 2009; Ressler & Glazer, 2011; Spector, 2012). As electronic social media advances gain popularity among healthcare workers, “guidelines for protecting personal health information (PHI) need to be reassess and tailored to meet the needs of an increasingly electronic and technologic environment” (Englund, Chappy, Jambunathan, & Gohdes, 2012, p. 242). Faculty and students should be educated on the use of the website prior to the beginning of the course, and educators must accept responsibility of implementing web based tools in their course (Drake & Leander, 2013; Morley, 2014; Wu, 2014). Assisting students in setting up accounts and navigating through websites are key components in creating a positive learning experience (Morley, 2014; Tower et al., 2014). However, educators are hesitant to adopt the integration of social media due to legal and ethical considerations (Giordano & Giordano, 2011; Moran et al., 2012).

Inconsistencies

The articles found in this literature review display some inconsistencies with results of technology as a medium for educational purposes. While many articles were first noted on the initial search, it was quickly realized that the majority were not specific to the research question. Moreover, this researcher determined that while some articles were associated with other health professions, and would not correlate directly with the nursing program's curriculum that utilizes Bloom's Taxonomy, understanding what concerns and integrations have been made is paramount in determining strengths and weaknesses in using social media. Concerns regarding how to incorporate social media into dental hygiene programs and ensure professionalism was an overall theme according to Henry and Pieren (2014). Less than half of the respondents confirmed that a social media policy was in place, and the majority of violations with regards to social media were by students (Henry & Pieren, 2014).

The Annals of Emergency Medicine and Academic Life in Emergency Medicine began a "joint social media-based global medicine journal club" in 2013 (Hayes et al., 2015, p. 573). This forum determined that with strong educator experience, teaching and learning could transform in to a more learner-centered model. Moreover, learners agreed that reading and listening online was a natural tendency in supplementing their education (Hayes et al., 2015).

Addressing the concern for information overload, the utilization of social media correctly can train others with decision making and information management (Hayes et al., 2015). Benetoli, Chen, and Aslani (2015) found that Facebook, used as an educational tool in pharmacy classes, was a valuable resource that students enjoyed. Other groups have also used Facebook to connect with others and share knowledge. Zhang et al. (2013) found that groups of people who share common disease processes, such as diabetes, could unite and learn from one another. In

fact, one such group was international, and the group members highly valued each other's suggestions and advice (Zhang et al., 2013).

Studies found were generally small in nature and included many other social media sites. Moreover, fears regarding implementation of a social media site into a curriculum emerged from the literature. Implications for these findings include replication of these studies on a larger scale to ensure validity and reliability. Additionally, further research could evaluate the effectiveness of the qualitative themes that have emerged from the various studies in an effort to validate the comments that were provided by the participants.

This project incorporated the findings from the literature review by using the most viewed social media site, Facebook, and provided an asynchronous learning environment to all students where collaborative learning and cognitive functioning occurred. Previous studies have focused on "high-risk" students, but have not address the needs of all adult learners and how they could benefit from an online study group. Using Facebook in this manner created insight and breadth to its possibilities.

Project Design and Implementation Plan

The adult learners who participated in this study were dedicated, often working individuals who have a complex knowledge from which to draw and make the most of their class time due to their career commitment (Fairchild, 2003; Orton, 2011). Students accepted into this program and courses were ranked by two different faculty and staff, and everyone was given a fair evaluation in conjunction with meeting the requirements of the school and program. Those enrolled in this course have all received certificates and licenses, and some of them had working knowledge; these characteristics created a different dynamic in teaching than the traditional

program. While the traditional program did have LPN's and Paramedics, the number of unexperienced students outweighed those with a working knowledge of the medical field.

Setting

The setting for this project involved a program at a local community college in Eastern Tennessee. The program is designed for Licensed Practical Nurses (LPN) and Paramedics that were furthering their education. Upon successful completion, these students obtained their Associate Degree in Nursing. The students were enrolled in courses throughout three semesters. Upon completion of the first course (NURS 1170- Bridge to RN Practice), the students combined with the previous year's cohort to finish the last two semesters. NURS 1170 incorporated key elements from the traditional curriculum's first two semesters, Fundamentals of Nursing and Lifespan Nursing I. NURS 1170 lasted approximately 10 weeks, 5 weeks less than a traditional semester.

Sample

The participants for this study were the students enrolled in NURS 1170 (Bridge to RN Practice) during the summer of 2015. This course was much smaller than the traditional courses, having only admitted a maximum number of 24 students. Of those 24 students, it was anticipated that some would not turn in the proper documentation in order to take the course, or chose not to accept entrance into the program. Twenty-one students were enrolled, and 20 students chose to participate in the study.

Due to a small sample ($N < 30$) and constraints within the program, convenience sampling was the method of drawing representative data. As this was a pilot study, the sample size and course selected provided relevant data that demonstrated the ease and use of social media as a learning tool.

Procedure

The students were given time on the first day of class to receive this project's details and review the consent. Time was permitted to ask questions. Details were given to the students regarding permitted discussion and content. The computer lab was accessible by all students for internet access. The students had the opportunity choose to participate or not without penalty. This project was not reflected in their grades during the course. The students who agreed to participate and sign the consent were given a copy for their records (informed consent - Appendix G).

The participants then provided their Facebook profile name in order for this researcher to locate and invite them to join the private Facebook page. The page was private in order to facilitate the conversation more easily and provide replies that are consistent with the content in the curriculum. Having an open page could potentially create ethical and legal concerns as only students enrolled in this course have signed a consent. A reminder of the HIPPA and FERPA regulations regarding posts were placed at the top of the main page for students and faculty.

Events and reminders were provided on the Facebook page with due dates of assignments and upcoming quizzes or exams. Web addresses to the various sites that offer some of the required quizzes were also provided in the event postings.

All faculty for the course were invited and encouraged to participate. There was no recommended number of posts that faculty must make each day; however, it was viewed by faculty multiple times per day. This researcher provided questions, scenarios, case studies, and audio clips throughout the semester based on the content being taught at that time. This researcher also monitored and comment on posts every day to ensure that HIPPA and FERPA laws are upheld. The participants were free to ask questions and faculty can also provide

scenarios, questions, situations, and any other pertinent information to relay to the students. A total of eight quizzes with no grade value and a survey was given during the course of the project. See Appendix D for the Project timeline.

Human Subjects Protection

An expedited IRB application was sent to the community college (approval letter- Appendix E). A HSRR request was then sent to King University with the above mentioned approval letter (approval letter- Appendix F).

All hard copies, including the consents and surveys were kept in a locked cabinet in this researcher's desk. The data from the quizzes has been kept on a password protected Excel sheet, and kept for the required number of years in accordance with the community college's policy. The names of the subjects were removed and a randomized number system created a new identity for each subject that only this researcher will know.

Data Collection

The participants were given eight quizzes throughout the semester in conjunction with this project. Four primary sections were taught: fluid and electrolytes, skin/burns and shock, respiratory and acid base, and cardiac. Each content section had two associated quizzes. The first quiz of each section was administered pre-lecture and the second quiz was administered post-lecture and post Facebook discussion. The quizzes were posted through the community college's online learning platform, desire to learn (D2L). If a student chose not to participate in this study, he/she was allowed to take the quiz; however, his/her grades on the quizzes were not entered into the Excel spreadsheet, nor were they included in the sample.

The quizzes included questions from various expert test banks (Pellico, 2013; Lewis, Dirksen, Heitkemper, & Bucher, 2014), which are reviewed for accuracy of content and level of

difficulty by multiple faculty to provide validity and reliability. The participants were not able to see their missed questions or rationale until a set time after the post-discussion quiz in order to decrease a testing effect, where the improvement is due to remembering the answers to questions that were previously missed (Mitchell & Jolley, 2009). However, the participants were able to see their missed questions and rationales prior to their exam on that specific content.

The data collected from these quizzes were kept on a password protected Excel spread sheet, in a locked office. Only this researcher had access to the full spreadsheet in which the names of the subjects appear. Moreover, a codebook describing numbers that were used to represent variables will be defined in the Excel spread sheet. The data was then uploaded to SPSS version 21 at the end of the study for further analytics. When the data is to be destroyed, all paper copies will be shredded and contents from the Excel spread sheet and SPSS will be erased.

At the end of the semester, the participants who have agreed to participate received a survey that was adapted from one created by Ferrara-Love (2013). Dr. Ferrara-Love utilized her study in an effort to determine if students felt more comfortable asking questions on Facebook or in the classroom as well as the student's feelings regarding their use of Facebook and their study habits. Approval from Dr. Ferrara-Love to use and adapt her survey was obtained March 2015. Questions were modified by expert reviewers to address differences in the research. This survey included 3 questions regarding the participants use and frequency of being on Facebook, 13 questions with a Likert-scale response, 2 qualitative questions, and demographic information (Appendix H). Participants returned the paper survey to this researcher the day they were given it to complete and did not receive any points for finishing it, nor were there any consequences for not completing the survey.

Cost Analysis and Recommendations

There were no financial reimbursements for participating in this study. The benefits of a study group are evident as noted previously, and the potential of cost avoidance for the student due to passing the course is appreciated. While a study group cannot guarantee that one will pass or fail a course, if implemented correctly, this study group could help to achieve higher levels of functioning and various points of view that may be beneficial to the student. Each student had paid for the course, but implementation of a strong study group could affect their chance of failing, which would be a cost savings to the student who would need to retake the course.

At the time of the study, The Department of Nursing did not have an official tutor or remediation program in place; however, faculty encouraged remediation to those students who do not pass an exam or have questions. Office hours were required in an effort for the faculty to be available to the students. It was unclear if using Facebook as a means to tutor and remediate did provide cost savings in the form of time when needing to meet with a student who has various other responsibilities. This could be an avenue for further research.

Costs associated with faculty time to develop pre and post quizzes as well as to monitor Facebook were incorporated into their workload. Due to confidentiality, the amount cannot be recorded. One potential recommendation would be to segment the work of the faculty on Facebook so that each faculty member monitors the page for a specific length of time. The use of Facebook as a study group did not require a budget or business plan.

Data Analysis

Qualitative results were measured to gather themes regarding the use of Facebook as an asynchronous learning environment. Sub-themes were also extrapolated as necessary.

Skewness and kurtosis statistics were used to test for the assumption of normality for all continuous and Likert-type items. Skewness or kurtosis statistics above an absolute value of 2.0 were assumed to violate the assumption of normality. Frequencies were used to establish prevalence of categorical variables. Medians and interquartile ranges were used for Likert-type and continuous data that was not normally distributed in order to provide a measure of prevalence. Means and standard deviations were used as measures of prevalence for Likert-type data and continuous data that met the assumption of normality.

Spearman's rho correlation was used to establish bivariate associations between age and years of experience with continuous variables. Within-subjects' comparisons were conducted using repeated-measures t-tests when the assumption of normality of difference scores were met. A principle component analysis was used to determine how many of the questions measured for my construct, the use of Facebook as an asynchronous learning environment. This variance helped to determine how much of my survey effectively addressed my PICOT. A Cronbach's Alpha was used to determine the internal consistency reliability of the questions that made up my variance from the principle component analysis.

A Bonferroni corrected alpha value was used to adjust for multiple comparisons of content areas. Statistical significance of the composite pre- and post-test scores were assessed using an alpha value of .05. All analyses were conducted using SPSS Version 21 (Armonk, NY: IBM Corp.).

Results

Qualitative Results

As previously mentioned, two qualitative questions were presented to the participants in the end of the semester survey. The first question was: Did Facebook change the amount of time you studied with a group? If yes, describe how it changed. Of the 20 results, two answered “N/A”, one “no answer” and 10 “No.” Themes were extrapolated from the remaining responses.

Communicate was a major theme found in the comments, and *feedback* and *study groups* were sub-themes. Comments such as “*liked having questions on Facebook to discuss*” and “*it was an easier way to communicate with my classmates*” were noted.

Resource was a major theme as well, and *content*, *information relayed*, *questions*, *participate in a study group*, and *ability to discuss* were sub-themes. “*I did all questions on Facebook,*” and I “*had more knowledge of different study groups being conducted*” were noted.

The second question was as follows: Did using Facebook change the way you studied? If yes, please describe how it changed. Of the 20 responses, one answered “N/A,” and six answered “No.” Three major themes were extrapolated from this question.

Resource was a main theme found in the comments and *re-access information*, *away from home*, and *enhanced learning* were sub-themes. “*Using Facebook helped enhance learning*” and “*allowed me to re-access information if I forgot or wanted to relearn*” were apparent in the comments.

Communication was a major theme with *opinions*, *sharing*, and *connected* as sub-themes. A few comments were “*it allowed us to share study material with each other*” and “*see others opinions and points of view.*”

Focused material was the third major theme. A large amount of participants commented on this theme with responses such as: “*gave focus to certain content,*” *helped with what material to study,*” and “*helped go over main topics.*”

These themes support the PICOT question and lend credence to Facebook being used in an academic setting to increase communication and intraprofessional relationships. Faculty who participated in this study appreciated the quick mode of communication and that “all students could see an answer to a question” which doesn’t happen via email. Students readily used Facebook to communicate with each other and study, and it allowed them to fit study sessions in their own time.

Quantitative Results

For categorical variables, 75% of the sample had a Facebook account prior to class. Several of the Likert-type items violated the assumption of normality and prevalence was therefore calculated using medians and interquartile ranges. For non-normal variables, the median tended to be negatively skewed with a median of 5 out of a possible 5 (5/5). Prevalence was established for other items using means and standard deviations. All prevalence values are presented in Table 1.

A principal components analysis found that the questions which correlated the highest to each other account for 46% of the variance. A Cronbach’s Alpha of .945 determined that these five questions were reliable and consistent in measuring for this construct.

Non-significant correlations were found between age and years of experience for both the pretest and post-test scores, $p > .05$. Non-significant learning gains were found in three of the four content areas (Skin/Burns/Shock, Respiratory, Cardiac), $p > .012$. A significant knowledge increase was found for the Fluid and Electrolytes content area ($\Delta = 2.58$, $p = .001$). A significant

main effect was found between the pretest and post-test composite scores for all content areas, ($\Delta = 5.20, p < .001$). Descriptive statistics for these analyses are presented in Table 2.

The use of pre and post-tests supported the themes that were extrapolated in the qualitative results and reaffirm previous research which suggested the benefits of facilitated study groups. By allowing students to study when it was feasible and on their own time, this asynchronous learning environment showed an increase in knowledge gains through these tests. While other variables also have an impact (individual study time, previous knowledge, etc), the positive correlations between previous understanding and the intervention supported the concept of participating in a study group. The correlations recognize the class as a whole, further indicating the applicability to classes with traditional and non-traditional students.

Table 1

Prevalence of Survey Items

Survey Items	M (SD)	Median (IQR)
I discussed content with classmates of Facebook.	4.25 (1.07)	
I participated in a study group on campus.	3.95 (1.36)	
I participated in a study group on Facebook.	3.10 (1.17)	
Discussed content with an instructor at school.	4.16 (1.12)	
Discussed content with an instructor on Facebook.	4.20 (1.15)	
Having my instructor use Facebook was beneficial.		5.0 (0.0)
My instructor encourages students to ask questions in class.		5.0 (0.0)
My instructor encourages students to ask question on Facebook.		5.0 (0.0)
My instructor relates course content to broader applications on Facebook.		5.0 (0.3)
I discussed content with classmates at school.		5.0 (1.0)
Quizzes and discussion on Facebook are connect to material covered in the lecture.		5.0 (0.3)
I have gained a better understanding of course material by utilizing the Facebook page associated with this class.		5.0 (1.0)
My instructor displays an interest in my learning and overall success.		5.0 (0.0)

*Note: M – Mean, SD – Standard Deviation, IQR – Interquartile Range

Table 2

Means and Standard Deviations for Within-Subjects Comparisons

Content Areas	Pretest	Post-test	p-value
FE	8.42 (2.57)	11.00 (2.71)	.001*
Skin	4.37 (1.38)	4.95 (1.55)	.17
Resp	6.13 (1.55)	7.13 (1.46)	.11
Cardiac	6.22 (2.18)	6.56 (1.50)	.48
Composite	24.87 (3.82)	30.07 (3.92)	< .001**

Note: *p < .05, **p < .001

Limitations

The sample size (n<30) was perhaps the greatest limitation to this study as results could only measure 46% of the construct being tested. A larger sample size would give a clearer understanding of the impact that Facebook could have on learning. Replication of the study would not only provide additional reliability and validity to the survey questions, but could also look at other variables such as time frame and demographics.

Another limitation noted was the vague time frame that was given in taking the pre and post-tests. As stated in the IRB, the pre-test would be pre lecture, and the post-test would be after lecture and post discussion on Facebook. After the first pre and post-tests were administered (Fluid and Electrolyte) many students began taking their exams during downtime in lab or during breaks. This researcher questions if the other content would have shown a significant increase if the participants were required to take all quizzes at home as they did with the first pre and post-test. Further study would need to be done to determine if this was the case or if there were other extraneous variables that affected these outcomes.

While this researcher noted the importance of teaching students how to correctly use and post on social media, it is unclear if this aspect of learning took place. As this study was not designed as a longitudinal study, this data cannot be compiled at this time. Moreover, no

questions were given in the survey to determine if over the course of the semester the individual participants gained additional insight and knowledge regarding the appropriate ways to communicate and post on social media. This would be another avenue for further study.

Lastly, the group of students who participated in this study are elite as this program only afforded a small number of students. These students scored high on all of the application requirements and therefore this study did not address those who may have academic challenges or are considered high-risk. While my study did not suggest the characteristics of the student, replication on a larger scale would also produce results that could show a correlation among high-risk students and the use of Facebook as a study group.

Discussion

The results of this small pilot study indicate that the use of Facebook as an asynchronous learning environment did increase knowledge in one content area and in the overall composite score. The demographics of the participants were appropriate and accurate for the general population as 75% of the sample had a Facebook account, 70% of the participants were women, and 90% were Caucasian. In nursing, the majority of students are found to be Caucasian women (Robert Wood Johnson Foundation, 2010), indicating that while this sample is small, it represents the current nursing workforce.

Five statements that were rated with a Likert-type scale from the survey yielded an alpha coefficient of 0.95, indicating that these five statements measured were reliable for measuring the construct. The five items were:

- My instructor encourages students to ask questions in class.
- My instructor relates course content to broader applications on Facebook.
- I discussed content with classmates at school.

- Quizzes and discussion on Facebook are connected to material covered in lecture.
- My instructor displays an interest in my learning and overall success.

The pre and post test scores were normally distributed, and repeated measures t-tests were run to determine if there was a significant increase for learning in these areas. While only the Fluid and Electrolytes test scores showed a statistically significant increase in learning, it is noted that the overall test scores also indicated a statistically significant increase in learning, showing that an asynchronous learning environment allows for an asynchronous learner-driven study experience can be very beneficial. Non-traditional students require opportunities to learn and study based on their schedules, and Facebook provides this opportunity and can ensure that the information provided is accurate and on topic.

As this study was facilitated by faculty, students were able to quickly communicate and engage in learning that provides confidence and support. This was evident in the qualitative themes such as *communication* and *resource* that were extrapolated from the survey. Students appreciated reading others comments and points of view, and go back to previous threads if desired with ease. In conversation with faculty who participated in this study, it was reported that they appreciated posting quickly and knowing that participants saw it by the check-mark at the bottom of the post. It was helpful to clarify anything that may have been confusing in lecture, and ensure that the students were focused on the right material and that learning had occurred. Many students questioned topics being discussed and would post varying points of view. It is important to teach students how to be life-long learners as well as how to communicate via social media. Moreover, it is important to help students learn on a deeper level prior to an exam and do so in a safe environment (Tower, Latimer, & Hewitt, 2014). This also engages the student and provides a stronger relationship between faculty and student.

Analysis of the statistics showed that the construct measured via quantitative analysis supported the qualitative comments. Themes of *Communicate, Resource, and Focused Material* support the five questions listed above and validated the benefit of this learning environment for the students involved. This gave further credence to both types of measurements, and supported the use of Facebook as a supportive, learning avenue in academia.

Conclusion

The use of Facebook and other social media sites continues to grow in both the professional and personal arenas. It is beneficial for education to learn and utilize this powerful source of communication and networking. Students use technology every day and in various ways. Many professions require the use of technology, and nursing is no different. Preparing our students by teaching nursing process is not enough, we must teach them how to safely and effectively communicate without disregarding the rights of others.

The student population continues to change and evolve, bringing into it a mixture of young, old, second degree, and job required individuals who need mentoring and guidance in order to succeed. The use of Facebook allows for all types of students to participate in learning outside of the classroom, regardless of any extraneous responsibilities. Faculty are tasked with advising students and being available to help, yet it is becoming more common to hear from a student, "I'm sorry, but I can't meet with you today. I have to work." Facebook allows for another avenue to communicate that is readily available for most and easier to log on to than email.

Implications for Practice

Faculty can engage with multiple students at the same time, with the click of one button, either on a phone or the computer. Students can support one another and ask questions in a safe

environment and engage in learning while having many other responsibilities. As Facebook is one of the most widely used social media site, it is becoming necessary to find ways to communicate that is not limited to face-to-face, email, or phone. By implementing an asynchronous learning environment that the majority of students use for personal reasons, it can improve opportunities for study groups and provide education for correct and safe posting guidelines.

Most schools have a learning platform in which content is given, grades are published and attendance is reported. Many of these also have areas in which to engage in conversation. However, multiple clicks are required to navigate to the respective area, which requires time. With a Facebook app, or even going through the web, one sign on will provide the student with the various conversations. Additionally, students can ask Facebook to alert them when new things are posted, providing yet another avenue for busy students to stay focused and engaged.

Lastly, it is important to recognize the role that faculty have in not teaching students proper etiquette with regards to social media. HIPPA guidelines are of the utmost importance in practice, and many places of employment now search for an applicant's personal page to assess what things are being posted. As noted above, State Boards of Nursing will not tolerate inappropriate postings of patients or situations. Ignorance is not an acceptable response to these situations. Nursing faculty need to teach disease processes as well as electronic charting. Facilities are tasked with teaching electronic charting and institutional policies. In this current set-up, no one has taken responsibility to teach the correct use of social media, something which could affect their licensure. Nursing faculty should learn and educate their students in this regard, as the purpose of nursing school is to sit for NCLEX and prove that they are safe, competent nurses.

Future Studies/Research

Many opportunities for further research in this area are needed to provide credence to the value of using this avenue for the purpose of learning. As stated above, replication of this study with larger and ongoing cohorts would be extremely valuable in validating these findings or giving further examination to this topic. Research including possible longitudinal studies would help to determine if the use of Facebook in this manner did in fact provide education on how and what to post on social media sites.

Assessing the faculty's point of view with regards to the correct implementation of social media would be another avenue of research. Disseminating whether the faculty felt they connected with their students and if this was cost saving for programs would also be important to analyze further.

Lastly, using Facebook as an opportunity to network with multi-state nursing programs and/or other medical professions could give students a well-rounded idea of current trends, practices, and focuses. Nursing is the largest profession in healthcare, and as such, could join together and provide a wealth of evidence, learning, discussion, and support to one another. Providing an opportunity for this to happen in academia will then follow through to the profession, creating more unity, support, and knowledge at the bedside.

Dissemination

A poster presentation regarding this project was given at the National League of Nursing (NLN)/Sigma Theta Tau International (STTI) conference in Washington, DC, April 2016. The literature review regarding this project has been submitted for publication. This project will also be presented at King University's Colloquium III, August of 2016. This study has relevance in academia today, and the need for faculty to reach students will continue to increase. It is

imperative therefore, to continue this research and disseminate findings in an effort to support faculty. The demographics of both students and faculty are and will continue to change, and new resources will need to be made available for communication and networking. As this is a pilot-study, it is important to publish these findings to further the work in other areas and other disciplines.

References

- Adler, N. E., & Ostrove, J. M. (1999, February). Socioeconomic status and health: What we know and what we don't. *Annals of the New York Academy of Sciences*, 4(31), 2-15.
<http://dx.doi.org/10.1111/j.1749-6632.1999.tb08101.x>
- American Association of Colleges of Nursing. (2011). *Nursing Fact Sheet* [Fact sheet].
Retrieved from <http://www.aacn.nche.edu/media-relations/fact-sheets/nursing-fact-sheet>
- American Association of Colleges of Nursing. (2014). *Nursing faculty shortage*. Retrieved from
<http://www.aacn.nche.edu/media-relations/fact-sheets/nursing-faculty-shortage>
- American Nurses Association. (2015a). *Code of ethics for nurses*. Retrieved from
<http://www.nursingworld.org/codeofethics>
- American Nurses Association. (2015b, May 16). Welcome in the 'year of ethics': RNs named most honest for 13 years. *The American Nurse*. Retrieved from
<http://www.theamericannurse.org/index.php/2015/03/01/welcoming-in-the-year-of-ethics/>
- Ascend Learning, LLC. (2012). *Student attrition: Consequences, contributing factors, and remedies*. Retrieved from www.atitesting.com
- Ashley, J., & O'Neal, J. (1994, October). Study groups: Are they effective in preparing students for NCLEX-RN?. *Journal of Nursing Education*, 33(8), 357-364. Retrieved from
www.healio.com
- Barry, J., & Hardiker, N. R. (2012, September). Advancing nursing practice through social media: A global perspective. *Online Journal of Issues in Nursing*, 17(3), 1-16. Retrieved from www.nursingworld.org/ojin

- Bart, M. (2010, May 13). Social media usage among college faculty. *Faculty Focus*. Retrieved from www.facultyfocus.com
- Bell, S. (2012, March 8). Nontraditional students are the new majority: From the bell tower. *Library Journal*. Retrieved from <http://lj.libraryjournal.com/2012/03/opinion/nontraditional-students-are-the-new-majority-from-the-bell-tower/>
- Benetoli, A., Chen, T. F., & Aslani, P. (2015). The use of social media in pharmacy practice and education. *Science Direct, 11*, 1-46.
<http://dx.doi.org/http://dx.doi.org/10.1016/j.sapharm.2014.04.002>
- Billings, D. M., & Halstead, J. A. (2013). *Teaching in nursing: A guide for faculty* (4th ed.). St. Louis, MO: Saunders.
- Bristol, T. J., & Kyarsgaard, V. (2012, November/December). Asynchronous discussion: A comparison of larger and smaller discussion group size. *Nursing Education Perspectives, 33*(6), 386-390. Retrieved from www.nlnjournal.org
- Bryer, J. (2012). Peer tutoring program for academic success of returning nursing students. *Journal of the New York State Nurses Association, 43*(1), 20-22.
- Butts, J. B., & Rich, K. L. (2013). *Philosophies and theories for advanced nursing practice* (1st ed.). Sudbury, MA: Jones & Bartlett Learning.
- Campbell, J., & Mayer, R. E. (2009). Questioning as an instructional method: Does it affect learning from lectures?. *Applied Cognitive Psychology, 23*, 747-759.
<http://dx.doi.org/10.1002/acp.1513>
- Center for Institutional Effectiveness. (2004). *A fresh look at traditional and nontraditional undergraduates at KSU*. Retrieved from

http://ir.kennesaw.edu/EIMWebApps/vic/analytic_studies/documents/pdf/study_trad_non_trad_ug_200308.pdf

Collins, R. (2002). Credential inflation and the future of universities. In S. G. Brint (Ed.), *The future of the city of intellect* (pp. 23-46). Stanford, CA: Stanford University Press.

Cronquist, R., & Spector, N. (2011, October). Nurses and social media: Regulatory concerns and guidelines. *Journal of Nursing Regulation*, 2(3), 37-40. Retrieved from www.journalofnursingregulation.com

Davis, J. (2012). *School enrollment and work status: 2011* [Survey Briefs]. Retrieved from U.S. Department of Commerce: United States Census Bureau: <https://www.census.gov/prod/2013pubs/acsbr11-14.pdf>

Deil-Amen, R. (2011). *The "traditional" college student: A smaller and smaller minority and its implication for diversity and access institutions*. Retrieved from Stanford University: https://cepa.stanford.edu/sites/default/files/2011%20Deil-Amen%2011_11_11.pdf

Din, N., Yahya, S., & Haron, S. (2012). Information retrieval and academic performance among Facebook users. *Procedia-Social and Behavioral Sciences*, 68, 258-268. <http://dx.doi.org/10.1016/j.sbspro.2012.12.225>

Drake, M., & Leander, S. A. (2013, July/August). Nursing students and Ning: Using social networking to teach public health/community nursing in 11 Baccalaureate nursing programs. *Nursing Education Perspectives*, 34(4), 270-272. Retrieved from www.nlnjournal.org

Duggan, M., Ellison, N. B., Lampe, C., Lenhart, A., & Madden, M. (2015). *Frequency of social media use*. Retrieved from Pew Research center: <http://www.pewinternet.org/2015/01/09/frequency-of-social-media-use-2/>

- Englund, H., Chappy, S., Jambunathan, J., & Gohdes, E. (2012). Ethical reasoning and online social media. *Nurse Educator*, 37(6), 242-247.
<http://dx.doi.org/10.1097/NNE.0b013e31826f2c04>
- Fairchild, E. E. (2003, Summer). Multiple roles of adult learners. *New Directions for Student Services*, 102, 11-16.
- Fernandez-Aleman, J. L., Sanchez, A. B., Lopez, M. J., Marques-Sanchez, P., Bayon, E., & Perez, F. J. (2014). Exploring the use of information and communication technologies and social networks among university nursing faculty staff. An opinion survey. *Invest Educ Enferm*, 32(3), 438-450. Retrieved from www.scielo.org
- Ferrara-Love, R. (2013). *Does Facebook have a role in helping "high-risk" nursing students in a diploma program? A pilot study* (Doctoral dissertation, Carlow University). Retrieved from
http://media.proquest.com/media/pq/classic/doc/3106726051/fmt/ai/rep/NPDF?_s=rNKAkqq3zwsbQjBBUAFQCJeQOPs%3D
- Fowlkes, J. (2012, October 11). Viewpoint: Why social media is destroying our social skills. *USA Today*. Retrieved from <http://college.usatoday.com/2012/10/11/opinion-why-social-media-is-destroying-our-social-skills/>
- Gallagher-Lepak, S., Reilly, J., & Killion, C. M. (2009, April-June). Nursing student perceptions of community in online learning. *Contemporary Nurse*, 3(1-2), 133-146. Retrieved from www.tandfonline.com
- Giancola, J. K., Grawitch, M. J., & Borchert, D. (2009, May). Dealing with the stress of college: A model for adult students. *Adult Education Quarterly*, 59(3), 246-263.
<http://dx.doi.org/10.1177/0741713609331479>

- Giancola, J. K., Grawitch, M. J., & Borchert, D. (2009, May). Dealing with the stress of college: A model for adult students. *Adult Education Quarterly*, 59(3), 246-263.
<http://dx.doi.org/10.1177/0741713609331479>
- Giordano, C., & Giordano, C. (2011, Summer). Health professions students' use of social media. *Journal of Allied Health*, 40(2), 78-81. Retrieved from
<http://www.asahp.org/publications/journal-of-allied-health/>
- Glossop, C. (2001). Student nurse attrition from pre-registration courses: investigating methodological issues. *Nurse Education Today*, 21, 170-180.
<http://dx.doi.org/10.1054/nedt.2000.0525>
- Gokhale, A. A. (1995, Fall). Collaborative Learning Enhances Critical Thinking. *Journal of Technology Education*, 7(1). Retrieved from www.vt.edu/ejournals
- Green, B. (2010). Promoting clinical competence using social media. *Nurse Educator*, 35(3), 127-129. Retrieved from www.nurseeducatoronline.com
- Green, J., Wyllie, A., & Jackson, D. (2014, April-June). Social networking for nurse education: Possibilities, perils and pitfalls. *Contemporary Nurse*, 47(1-2), 180-189. Retrieved from www.tandfonline.com
- Guadagnoli, E., Cleary, P. D., & McNeil, B. J. (1995, May). The influence of socioeconomic status on change in health status after hospitalization. *Soc Sci Med*, 40(10), 1399-406.
Retrieved from <http://www.journals.elsevier.com/social-science-and-medicine/>
- Haigh, C. (2009). Legality, the web and nurse educators. *Nurse Education Today*, 553-556.
<http://dx.doi.org/10.1016/j.nedt.2009.11.008>
- Hayes, B. D., Kobner, S., Trueger, N. S., Yiu, S., & Lin, M. (2015, May). social media in the emergency medicine residency curriculum: Social media responses to the residents'

- perspective article. *Annals of Emergency Medicine*, 65(5), 573-583.
<http://dx.doi.org/10.1016/j.annemergmed.2015.01.018>
- Henry, R. K., & Pieren, J. A. (2014, August). The use of social media in dental hygiene programs: A survey of program directors. *The Journal of Dental Hygiene*, 8(4), 243-249.
Retrieved from www.adha.org/jdh
- Hessler, K. L., & Henderson, A. M. (2013). Interactive learning research: Application of cognitive load theory to nursing education. *International Journal of Nursing Education Scholarship*, 10(1), 1-9. <http://dx.doi.org/10.1515/ijnes-2012-0029>
- James Cook University. (n.d.). *Visual, auditory and kinesthetic (VAK) learning style model*.
Retrieved from http://www.jcu.edu.au/wiledpack/modules/fs1/JCU_090460.html
- Kim, M. J., & Mallory, C. (2013). *Statistics for evidence-based practice in nursing* (10th ed.). Burlington, MA: Jones & Bartlett Learning.
- Lewis, Dirksen, Heitkemper, & Bucher (2014). *Medical-Surgical nursing: Assessment and management of clinical problems* (9th ed.). St. Louis, MO: Mosby: Elseiver.
- Marnocha, S., Marnocha, M. R., & Pilliow, T. (2015). Unprofessional content posted online among nursing students. *Nurse Educator*, 40(3), 119-123.
<http://dx.doi.org/10.1097/NNE.000000000000123>
- Mayer, R. E. (2009). *Multi-media learning* (2nd ed.). New York, NY: Cambridge University Press.
- Mayer, R. E. (2010a). Applying the science of learning to medical education. *Medical Education*, 44, 543-549. <http://dx.doi.org/10.1111/j.1365-2923.2010.03624.x>
- Mayer, R. E. (2010b). Merlin C. Wittrock's enduring contributions to the science of learning. *Educational Psychologist*, 45(1), 46-50. <http://dx.doi.org/10.1080/00461520903433547>

- Mitchell, M., & Jolley, J. (2009). *Research design explained* (7th ed.). Belmont, CA: Wadsworth, Cengage Learning.
- Moran, M., Seaman, J., & Tinti-Kane, H. (2012). *Blogs, Wikis, Podcasts, and Facebook: How today's higher education faculty use social media*. Retrieved from Pearson PLC: <https://www.pearson.com>
- Morley, D. (2014). Supporting student nurses in practice with additional online communication tools. *Nurse Education In Practice*, 14(1), 69-75.
<http://dx.doi.org/10.1016/j.nepr.2013.06.005>
- National Center for Education Statistics. (2002). *Nontraditional undergraduates*. Retrieved from U. S. Department of Education: <https://nces.ed.gov/pubs2002/2002012.pdf>
- National Council of State Boards of Nursing. (2011). *ANA and NCSBN unite to provide guidelines on social medial and networking for nurses*. Retrieved from www.ncsbn.org
- National League for Nursing. (2013). *Percentage of basic RN students and US college students over age 30 by program type: 2005 to 2012 (selected years)*. Retrieved from <http://www.nln.org/newsroom/nursing-education-statistics/nursing-student-demographics>
- Orton, S. (2011, February). Re-thinking attrition in student nurses. *Journal of Health and Social Care Improvement*, 1-7. Retrieved from <http://www.wlv.ac.uk/research/research-institutes-and-centres/centre-for-health-and-social-care-improvement-chsci/journal-of-health-and-social-care-improvement/>
- Pellico, L. H. (2013). *Focus on adult health: Medical-Surgical nursing*. Philadelphia, PA: Wolters Kluwer Health: Lippincott Williams & Wilkins.
- Pellissippi State Community College. (2011). *About PSCC: Mission Statement*. Retrieved from <http://www.pstcc.edu/about/mission.php#.VY3OsfIVhBc>

- Pittenger, A. L. (2013, October 14). The use of social networking to improve the quality of interprofessional education. *American Journal of Pharmaceutical Education*, 77(8).
<http://dx.doi.org/10.5688/ajpe778174>
- PSCC Department of Nursing. (2015). *2014-2015 PSCC Nursing Student Handbook* [Handbook]. Knoxville, TN: PSCC Nursing Department.
- Ressler, P. K., & Glazer, G. (2011). Legislative: Nursing's engagement in health policy and healthcare through social media. *Online Journal of Issues in Nursing*, 16(1).
<http://dx.doi.org/10.3912/OJIN.Vol16No01LegCol01>
- Robert Wood Johnson Foundation. (2010). *Facts about the nursing workforce*. Retrieved from
<http://www.rwjf.org/en/library/research/2010/07/facts-about-the-nursing-workforce.html>
- Sandler, M. E. (2002). *A structural examination of academic integration, perceived stress, academic performance, and goal commitment from an elaborated model of adult student persistence*. Retrieved from American Educational Research Association website:
www.aera.net/
- Schmitt, T. L., Sims-Giddens, S. S., & Booth, R. G. (2012, September 30). Social media use in nursing education. *OJIN: The Online Journal of Issues in Nursing*, 17(3), Manuscript 2.
<http://dx.doi.org/10.3912/OJIN.Vol17No03Man02>
- Spector, N. (2012, September/October). What nurse educators should consider when developing social media policies. *Dean's Notes*, 1-3. Retrieved from
<http://ajj.com/services/publication-services/deans-notes>
- Stockwell, E. (1962, January). Infant mortality and socio-economic status: A changing relationship. *The Milbank Memorial Fund Quarterly*, 40(1), 101-111.
<http://dx.doi.org/10.2307/3348613>

- Tabbers, H. K., Martens, R. L., & vanMerriënboer, J. J. (2004, March). Multimedia instructions and cognitive load theory: Effects of modality and cueing. *British Journal of Educational Psychology*, 74(1), 71-81. Retrieved from <http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%292044-8279>
- Tippin, S., & Arnold, L. (2012). Social networks: Bringing a high-fidelity simulator to life on facebook. *Nurse Educator*, 37(4), 148-149. <http://dx.doi.org/10.1097/NNE.0b013e31825a8770>
- Tower, M., Latimer, S., & Hewitt, J. (2014, June). Social networking as a learning tool: Nursing students' perception of efficacy. *Nurse Education Today*, 34(6), 1012-7. <http://dx.doi.org/http://dx.doi.org.ezproxy.king.edu/10.1016/j.nedt.2013.11.006>
- United States Department of Labor: Bureau of Labor Statistics. (2014). *Registered Nurses*. Retrieved from <http://www.bls.gov/ooh/healthcare/registered-nurses.htm>
- Voke, H. (2003). Responding to the teacher shortage. In M. Scherer (Ed.), *Keeping good teachers*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Watson, J. (2012). *Human caring science: A theory of nursing* (2nd ed.). Sudbury, MA: Jones & Bartlett Learning, LLC.
- Whitefoot, J. (2015, June 19). U.S. economic outlook for 2015: Economy strong but markets unstable. *Profit Confidential*. Retrieved from <http://www.profitconfidential.com/economic-analysis/u-s-economic-outlook-2015/>
- Wolff, J. L., Starfield, B., & Anderson, G. (2002, Nov 11). Prevalence, expenditures, and complications of multiple chronic conditions in the elderly. *Archives of Internal Medicine Journal*, 162(20), 2269-76. Retrieved from <http://archinte.jamanetwork.com/journal.aspx>

Wu, T. (2014). Using smart mobile devices in social-netowrk-based health education practice: A learning behavior analysis. *Nurse Education Today*, 64, 958-963.

<http://dx.doi.org/http://dx.doi.org/10.1016/j.nedt.2014.01.013>

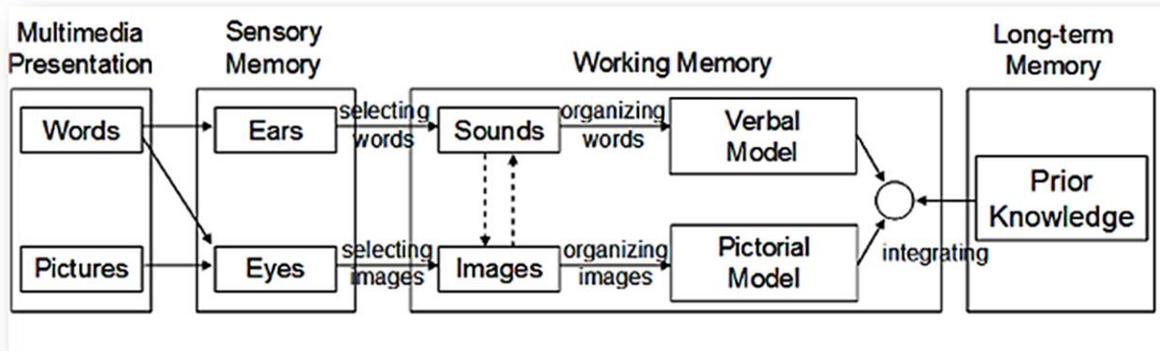
Yi, G., & McMurtrey, M. E. (2013). The impact of academic inflation on the labour market: if everyone has a PhD, who will be the custodian?. *International Journal of Electronic Finance*, 7(34). <http://dx.doi.org/10.1504/IJEF.2013.058605>

Zhang, Y., He, D., & Sang, Y. (2013, April 16). Facebook as a platform for health information and communication: A case study of a diabetes group. *J Med Syst*, 37, 1-12.

<http://dx.doi.org/10.1007/s10916-013-9942-7>

Appendix A. Theory of Multimedia Learning

Source: extracted with permission from Mayer 2009.



Appendix B. Evidence Table

Reference	Purpose/Design/ Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/ LOE
Ashley, J., O’Neal, J. (1994). Study groups: Are they effective in preparing students for NCLEX-RN?	Nonrandomized , posttest-only design; pass- fail status of the candidate on NCLEX-RN as the dependent variable	N= 125 (65 subjects in 1991 – intervention group, 60 subjects from 1989 – control group	NGPA, TGPA, SAT-V, SAT-M, Not-at-risk, At-risk	2 researcher- developed questionnaire at conclusion of study group; research- developed questionnaire to control group. Data from NCLEX regarding pass-fail	Mean, Standard Deviation, Pearson correlation, t test, chi-square, qualitative, frequency	No statistically different measurements between control and experimental group except in the at-risk group. The results did show practical importance however in all groups that the intervention did achieve higher results	At-risk groups will benefit from study groups that are facilitated by faculty. Study groups don’t need to last a long time	Level 2 – quasi- experimental. N = Adequate. Strong statistics. The control group may not have had the importance of certain tests explained the way the experimental group did.
Bart, M. (2010). Social media usage among college faculty.	Survey of Pearson customers regarding use of social media	Random sample; N - 939	Professional and personal use of social media; top social media for comm- unicating with peers, students; watching a video or listening to a podcast	Survey	Frequencies	Using a video or podcast is most often used in a classroom; communicating with peers – Facebook; communicating with students: YouTube, Facebook	Social media is being used; barriers and age play a role in integration	Level III – non- experimental. N = Strong. Poor analytics with no description or details

Reference	Purpose/Design/Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/LOE
Bristol, T., Kyarsgaard, V. (2012). Asynchronous discussion: A comparison of larger and smaller discussion group size.	Group size and engagement of students in AD in nursing program.	N – 23. 1 group of 23, 2 smaller groups of 11 and 12	Group size, discussion strategy	2 surveys with 4 point Likert-type scale; SPSS version 14; paired t-test; open-ended questions	Mean, standard deviation; qualitative	No significant difference in size of group for engagement of students; however, faculty can encourage to dig deeper in smaller groups.	Guidelines for educators in continuing the conversation; pre-test and posttest phenomenon played a part in participant responses. Students appreciated conversation that helped them develop as a nurse.	Level 2 – Quasi-experimental. N = Small. Need to replicate on a larger scale.
Campbell, J., Mayer, R. (2008). Questioning as an instructional method: Does it affect learning from lectures?	2 experiments which tested questions during a PPT and use of interaction with relation to retention tests	1 st group: random; N – 43. Retention test. 2 nd group: random; N = 38	1 group had questions and a PRS. Test had 4 retention questions, 4 near transfer questions, and 6 far transfer questions	Question test book; evaluation survey – Likert-type items	Independent-samples t-tests; mean, standard deviation	1 st experiment: some questions were ambiguous. Primarily freshman. Questioning group = Higher in short-answer retention question. 2 nd experiment: questions reworded. Higher level students. Questioning group = Higher in short-answer near transfer questions.	Questions were beneficial to students (survey). Students learn better when they answer questions and get feedback. Should be done in classroom setting, not lab setting.	Level I – RCT. N = Adequate. Needs to be replicated on a larger scale and in a classroom setting.

Reference	Purpose/Design/ Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/ LOE
Din, N., Yahya, S., Haron, S. (2012). Information retrieval and academic performance among Facebook users.	Experiment to determine relationship with social media/learning/ adult learner.	N – 59; Random sampling; Descriptive quantitative methodology	Information retrieval; self-directed learning readiness; academic performance	32-item questionnaire	Cronbach’s alpha coefficient; Pearson correlation; mean; standard deviation; Regression analysis	Adult learners have higher levels of self-directed learning readiness; ability to retrieve information and academic achievement – high; Facebook “very useful” to support information retrieval	Facebook is a good avenue for adult learner to gain information; needs to be done on a larger setting	N – Average. Larger study needed. Strong stats and data analytics.

Reference	Purpose/Design/Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/LOE
Drake, M. A., Leander, S. (2013). Nursing students and Ning: Using social media networking to teach public health/community nursing in 11 Baccalaureate nursing programs.	Study to determine if social media site assisted with learning and communication among students	Open invitation to faculty and students. 100 students and 11 faculty participated. N = 41	Interactions among students, added to knowledge, faculty helpful, contributions among students in other regions, comfort in using new technology	Survey Monkey	Frequencies	Majority of students and faculty felt the use of the website intensified their learning experience from the classroom	Need to think outside the box with teaching; more education on the front end of technologies	Level II – quasi-experimental. N= Adequate. Needs to be replicated.
Englund,H., Chappy, S., Jambunathan, J., & Gohdes, E. (2012). Ethical reasoning and online social media. <i>Nurse Educator</i> , 37(6), 242-247. http://dx.doi.org/10.1097/NNE.0b013e31826f2c04	Study to determine students' sensitivity to posting clinical information on social media sites.	N – 125; Survey	Statements based on the 9 provisions of the ANA Code of Ethics using representative language by the target population.		Mean scores; t test; Cronbach alpha	Difference in knowledge base between the students and what was allowable to post. Policies regarding appropriate postings on social media was vague to many students.	Ethically, nurses need to understand what is appropriate to post on social media sites. Nurse educators need to incorporate this learning in the curriculum.	Level 3 – non-experimental. N = strong. Strong data analytics. Should be replicated to other schools. Tool should also be validated through other schools.

Reference	Purpose/Design/Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/LOE
<p>Fernandez-Aleman, J.L., Sanchez, A. B., Lopez, M.J., Marques-Sanchez, P., Bayon, E., Perez, F.J. (2014). Exploring the use of information and communication technologies and social networks among university nursing faculty staff. An opinion survey.</p>	<p>Survey to determine use of information and communication technologies among nursing faculty in Spain</p>	<p>N – 165; Survey</p>	<p>Tech-nologies being used; if they use technology for teaching and research</p>	<p>24-item questionnaire; Likert-type scale; SPSS package</p>	<p>Frequencies; Percentages; Standard deviations; means; t test; ANOVA; Kolmogorov-Smirnova; Levene test; binary logistic regression; Exploratory factor analysis with Varimax rotation; Kaiser-Meyer-Olkin test; Bartlett’s test; Cronbach’s alpha coefficient; intra-class correlation coefficients</p>	<p>Majority of faculty over 33 – negative impact to learning; Faculty did access digital resources to enhance teaching work but didn’t feel that had a high skill set with relation to ICT</p>	<p>More education and usage of ICT for successful implementation</p>	<p>Level 3 – non-experimental; N = Strong. Strong stats. Could use qualitative as well to understand various components</p>

Reference	Purpose/Design/ Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/ LOE
Ferrara-Love, R. (2013). Does Facebook have a role in helping “high-risk” nursing students in a diploma program? A pilot study	Randomized control trial to determine if high-risk students benefited from a study group on Facebook	N – 81. 34 in intervention group (N202), 47 in control (N204). They rotated as the semester progressed	Grades, failures, withdrew	Grades, GPA, Excel sheet that recorded # times accessed as well as length of time. Likert type question survey about Facebook with qualitative section	Mean, Standard deviation, frequencies, percent, chi-square, median, interquartile range, Mann-Whitney test, one way analysis of variance, Scheffe test, paired samples t-tests, Kolmogrov-Smirnov, independent samples t-test, Fisher’s Exact test	N202 had no students fail or withdraw, N204 – 5 students failed, 1 withdrew. Grades improved by 1.5 percentage points	Facebook was beneficial to the students for learning and outperformed those in the control group. Need to evaluate if the groups switching between control and experimental played a part in the study as it progressed?	Level 1 – Experimental. N = Adequate. Strong statistics. Should be replicated with larger N and group that doesn’t become experimental

Reference	Purpose/Design/ Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/ LOE
Gallagher-Lepak, S., Reilly, J., Killion, C. (2009). Nursing student perceptions of community in online learning.	5 focus group sessions held with online student to explore online learning environments	N – 18. Each of the 5 focus groups had 3-4 participants	Connected, isolated, build community in online class, what do instructors do to facilitate community	Responses to questions in focus group on the phone	Codebook developed based on responses. Code validation	15 themes emerged: class structure, required participation, teamwork, technology, becoming, commonalities, disconnects, mutual exchange, online etiquette, informal discussions, aloneness, trepidation, unknowns, nonverbal communication, anonymity	Sense of community is important in a virtual classroom. Ideas are given, yet there are many unknowns as to what would work in such a diverse learning environment. More studies would need to be done with regards to the themes and components	Level 3 – Qualitative. N = Adequate for qualitative. Themes are strong. Need quantitative studies to support themes.
Giordano, C., Giordano, C. (2011). Health professions students’ use of social media.	Survey to determine primary source of info and what type of source used most often	Survey 644 1 st -year students and 413 graduating students. N = 1057	Types of media, decisions based on ads, type of social media	Survey Monkey	Frequencies; Mean	Online media was primary source of information; Facebook was used most often. Students use Facebook to connect and network	Facebook has potential to be an effective tool in the classroom.	Level III – non-experimental. N = Strong. Need more analytics to determine why people pick one social media over another.

Reference	Purpose/Design/ Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/ LOE
Gokhale, A. (1995). Collaborative learning enhances critical thinking.	Effectiveness of individual learning versus collaborative learning	N – 48. Self-selection. Group size of 4 Worksheets given to 2 groups after a lecture. Posttest given to both groups	Method of instruction: Individual learning and collaborative learning.	Pretest and posttest using Bloom’s taxonomy	Cronbach Reliability Coefficients; Alpha; Mean; Written comments from the collaborative learning group	Comments regarding process of collaborative learning, social and emotional aspects far out way the negative aspects/	Collaborative learning fosters the development of critical thinking, problem-solving skills. Teachers should facilitate learning	Level 3 – Qualitative. N = Small. Needs Experimental to support data.
Hessler, K., Henderson, A. (2013). Interactive learning research: Application of cognitive load theory to nursing education.	Quasi-experimental pre-test post-test design with random group assignment to determine if students quizzes and enjoyment increased with interactive case study group	N – 99. 50 in Intervention group (electronic), 49 in control group (written).	Perceived cognitive load, interactivity/ fun, functionality	Survey, quiz score data, retention data	One-way ANOVA, percentages, mean, standard deviation, t-test	No statistically different results, possibly due to small N, effect size found to be small; practically significant results; students enjoyed electronic/interactive better than written	No statistically different results could be due to smaller N or that students are working hard on their own, regardless of methods used.	Level 2 – Quasi-experimental. N = Adequate. Strong statistics. Should be replicated with larger N.

Reference	Purpose/Design/Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/LOE
Marnocha, S., Marnocha, M. R., & Pilliow, T. (2015). Unprofessional content posted online among nursing Students. <i>Nurse Educator</i> , 40(3), 119-123. http://dx.doi.org/10.1097/NNE.0000000000000123	Determine presence, intensity, and content areas of cyberprofessionalism incidents among nursing students via nursing school Deans across the country.	N – 293; Survey	Two open-ended questions, and quantitative questions		Percent, themes	Incidents with the highest percentage included students posting negative and inappropriate comments on social media. More than 91% of respondents rated their concern about such postings at least “moderate.”	Cyber-professionalism is a continued concern; Students and faculty need to be educated on how to report and address issues or concerns.	Level 3 – non-experimental. N = Strong. Should be replicated.

Reference	Purpose/Design/Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/LOE
Moran, M., Seaman, J., Tinti-Kane, H. (2012). Blogs, Wikis, Podcasts, and Facebook: How today's higher education faculty use social media.	Survey to examine impact of social media sites for both personal and professional use	Surveyed "anyone who teaches at a higher education institution – full time or part time, tenured or non-tenured, tenure tract or adjunct". N = 3875	Personal use/type; professional use/type; Frequency; Age of teacher; use of social media in classroom; type of instruction; online/blended/face-to-face; barriers to use social media	Survey	Graphs; narrative; frequencies; Carnegie Classification	Professional use of Facebook has declined; use of social media site relates to age; Faculty look at Facebook the most for personal reasons. 1/3 of teachers teach with social media (age related) and type of instruction. Applied Science was high on using social media. Greater use with online. Barriers noted; integrity of student submissions = most serious barrier	The use of Facebook continues to be the highest social media site for personal use; Linkden is now 1 for professional use. Age relates to use in the classroom. Teachers don't use it because of the time it takes, no education, or other barriers/concerns	Level III – non-experimental. N = Strong. No random or control group. Unknown information about the N group (specifics that would help to determine if N was reflective of population).

Reference	Purpose/Design/ Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/ LOE
Morley, D., (2014). Supporting student nurses in practice with additional online communication tools.	Study to determine if web based support groups for students strengthened clinical learning	2 first year groups; voluntarily recruited. N =52. Each group was subdivided in to 2 more groups; communication tools were allocated randomly	Interactions among students and faculty in Facebook, Wiki, Email, Traditional	Survey (university and online)	Frequencies; Narrative	Poor results from online survey. 13 responses. Appreciated academic presence	Appropriate awareness of unprofessional conduct. Students use Facebook regularly	Level II – quasi-experimental. N = Strong but poor results
Pittenger, A. (2013). The use of social networking to improve the quality of inter-professional education.	Inter-professional groups on social-media site for 15 weeks and create recommendation for using social media in education	N = 18; 3 groups of 6 students (varying healthcare avenues).	1 group was minimally structured; facilitated, and highly structured	IEPS and RIPLS surveys before and after 15 week experience. Likert-scale. Survey Monkey;	MANOVA, t test and mean scores for pre and post surveys	Students used other personal social networking sites. The more structured the group, the more engaged and interested the students were.	If integrating social media in to a curriculum, it should be highly structured. Quantitative not used as number of posts do not necessarily relate to engagement	Level 3 = Qualitative. N = Small. Would be good to replicate with intra-professional groups

Reference	Purpose/Design/ Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/ LOE
Sharma, V., Aymen, D., Nahida, S., Yonten, R. (2013). A study to assess the pattern of use and the effect of online social networking on student nurses in a selected college of nursing in Delhi.	Non-experimental, descriptive study	N – 50; students in 2 nursing programs selected through systematic random sampling technique	Questions – positive, negative, neutral	Semi-structured questionnaire	Frequency, percentage	50% students had neutral effect of social networking, 48% had positive effects, 2% showed negative	Social media is used often. Facebook is a part of students life, it can be a resource for education	Level 3 – non-experimental. Small N = Small. Few statistics. Would need more information as to why 50% said “neutral.”
Tabbers, H., Martens, R., van Merriënboer, J.J.G. (2004). Multimedia instructions and cognitive load theory: Effects of modality and cueing.	Study to test the modality effect via 4 versions of multimedia instructions	4 randomly divided second-year students between 19-25 years. 16M, and 95F; N = 111	Visual text, no cues; visual text, cues; audio, no cues; audio, cues	Self-report measure; retention test; transfer test	Cronbach’s alpha; sum; correlation; ANOVA, mean, standard deviation	Those that had visual did better than auditory in all categories	Visual better if the learner can reflect on information; visual more effective in learner-paced situations. Should compare system-paced with learner-paced instructions	Level II – quasi-experimental. N = Strong. Strong data analytics;

Reference	Purpose/Design/ Framework	Sample/Methods	Variables	Measurement of Variables	Data Analysis	Results	Author Conclusions	Strengths/Weaknesses/ LOE
Tower, M., Latimer, S., Hewitt, J. (2014). Social networking as a learning tool: Nursing students' perception of efficacy.	Using Facebook as an online study group monitored by faculty among in Medications and Safe Administration. Facebook was lacking in for this type of learning	N - 373 students joined voluntarily. N - 89 students responded to the survey	Innovation Guiding learning Peer Learning Engaging with staff	A survey was sent out at the end of the semester with quantitative and qualitative questions 19 questions using a 5 point Likert scale and qualitative questions.	Percentages, frequencies, and means	Largest percentage of responses in agree and strongly agree area. Facebook was a platform that can be used to engage students in their learning	Can be used to help reflect, articulate, and manage learning in a supportive environment, low response, no Facebook account, reluctance of group	Level II – Quasi-experimental; Good quality. N = Adequate. Poor stats.
Wu, T. (2014). Using smart mobile devices in social-network-based health education practice: A learning behavior analysis.	Using a tablet PC and Google + to analyze the sequence and frequency of learning behaviors during the social-network-based learning process	N = 36 fourth-year students, voluntarily. 2 groups of 18, control and experimental. Same nursing educator for both groups	Hardware and software services, learning interest, learning module, teacher-student interaction, learning attitude, and learning effectiveness	5-point Likert scale; Interviews	Sequences, frequencies, learning portfolio was classified, and lag sequential analyses were conducted. Z score, Cronbach's a	Interest in using google + and tablet; enhanced interaction among peers, tools available, confidence. Time in learning how to use software/hardware. It increased interaction, communication and sharing. Nursing educator could communicate quickly	Computer-assisted instruction helps educators and students solve problems, foster understanding, and develop high level of learning effectiveness. Not familiar with software	Level 1- Experimental (did not say random); High quality. N = Low. Strong stats

Appendix C. Literature Table

Reference	Type	Results
Arnold, J. (2011). Generation @ & digital education.	Theoretical	Digital media education is growing and a way for more people to go to school.
Barnes, N. (2012). Potential liability of social media in higher education marketing.	Theoretical	Communication standards (FERPA, how and when to delete comments).
Cronquist, R., Spector, N. (2011). Nurses and social media: Regulatory concerns and guidelines.	Theoretical	Professional, ethical and legal implications for use of social media
Green, B., Hope, A. (2010). Promoting clinical competence using social media.	Theoretical	Students felt that they were able to synthesize knowledge gained through class via alternate technology routes and platforms.
Green, J., Wyllie, A., Jackson, D. (2014). Social networking for nurse education: Possibilities, perils, and pitfalls.	Theoretical	Facebook use; allow students to personalize page, complex ideas may be hard to relate; Should use resources that Facebook provides.
Spector, N. (2012). What nurse educators should consider when developing social media policies.	Theoretical	Resources to use when developing social media guidelines
Tippin, S., Arnold, L. (2012). Social Networks: Bringing a high-fidelity simulator to life on Facebook.	Theoretical	Students enjoyed using a Facebook assignment with a simulator to apply knowledge gained in a practical and real-life situation.
Mayer, R. (2010). Applying the science of learning to medical education.	Theoretical - Learning	Learning recommendations using the theory of multimedia learning
Mayer, R., (2010). Merlin C. Wittrock's enduring contribution to the science of learning.	Theoretical - Learning	Wittrocks's contributions and ideas for using generative theory in education.
Haigh, C. (2010). Legality, the web and nurse educators.	Theoretical: Legality	Property rights, privacy, read sites terms of use before sanctioning any group related social networking activity
Ressler, P.K., Glazer, G. (2011). Legislative: Nursing's engagement in health policy and healthcare through social media.	Theoretical: Legality	Organizational pages can protect others by "liking" the page. Social media is integral component of lives and ability to practice competently, effectively and collaboratively

Reference	Type	Results
Barry, J., Hardiker, N (2012). Advancing nursing practice through social media: A global perspective.	Literature Review	Pitfalls and suggestions for success are outlined (ANA, NCSBN).
Schmitt, T.L, Sims-Giddens, S.S., & Booth, R.G. (2012). Social media use in nursing education.	Literature Review	The use of social media in the classroom has been endorsed by many groups (NLN, ANA, etc) and can be a great source for learning.

Appendix D. Timeline

ID	Task Name	Duration	Start	Finish	Resource Names	Completed By	% Complete	November 21	February 11		July 1		November 21		April 11		September 1		Janu
								11/9	1/18	3/29	6/7	8/16	10/25	1/3	3/13	5/22	7/31	10/9	12/18
1	Translational Project Timeline	410 days	Tue 1/20/15	Mon 8/15/16			36%												
2	Literature Review	40 days	Wed 1/21/15	Tue 3/17/15	Multiple Databases	Jessica Belnap	100%												
3	Development of PICOT Question	9 days	Fri 2/20/15	Wed 3/4/15	Literature Review	Jessica Belnap	100%												
4	Creation of Consent and Evaluation	18 days	Mon 3/16/15	Wed 4/8/15	Literature Review	Jessica Belnap, Dr. Roache	100%												
5	IRB Application to PSTCC	51 days	Fri 3/20/15	Fri 5/29/15	Literature Review	Jessica Belnap/Nancy Ramsey	100%												
6	CITI Training	2 days	Fri 4/24/15	Sat 4/25/15	Online Training	Jessica Belnap	100%												
7	IRB Application to King	17 days	Fri 5/29/15	Sat 6/20/15	PSTCC IRB Approval Letter	Jessica Belnap/Vanessa Fitsanakis	100%												
8	Project Start and End	47 days	Mon 5/11/15	Tue 7/14/15	Facebook	Jessica Belnap	100%												
9	Proposal (Framework, Problem)	22 days	Fri 5/15/15	Sun 6/14/15		Jessica Belnap	100%												
10	Proposal (Framework, Problem) - Review	6 days	Mon 6/15/15	Sun 6/21/15		Dr. Roache	100%												
11	Proposal (Literature Review, Procedure)	6 days	Mon 6/15/15	Sun 6/21/15	Literature Review	Jessica Belnap	100%												
12	Proposal (Literature Review, Procedure) - Review	6 days	Mon 6/22/15	Sun 6/28/15		Dr. Roache	100%												
13	Proposal (Data Collection, Feasibility)	6 days	Mon 6/29/15	Sun 7/5/15		Jessica Belnap	100%												
14	Proposal (Data Collection, Feasibility) - Review	6 days	Mon 7/6/15	Sun 7/12/15		Dr. Roache	100%												
15	Proposal Defense	5 days	Mon 7/13/15	Fri 7/17/15	Comittee	Jessica Belnap	100%												
16	Data Analysis	125 days	Mon 8/24/15	Fri 2/12/16	SPSS,Excel	Jessica Belnap, Dr. Hiedel	100%												
17	Manuscript (Data, Conclusions, Implications)	103 days	Mon 1/11/16	Wed 6/1/16	Proposal,Data Analytics	Jessica Belnap	25%												
18	Revisions of Manuscript	76 days	Fri 4/1/16	Fri 7/15/16	Manuscript	Jessica Belnap/Dr. Roache	0%												
19	Project Presentation/Defense	6 days	Mon 7/25/16	Mon 8/1/16	Manuscript	Jessica Belnap	0%												

Project: Jessica Project.mpp
Date: Tue 3/15/16

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline
Split		External Tasks		Inactive Summary		Manual Summary		Progress
Milestone		External Milestone		Manual Task		Start-only		Finish-only
Summary		Inactive Task		Duration-only		Finish-only		Finish-only

Appendix E. PSCC IRB

**PELLISSIPPI STATE
COMMUNITY COLLEGE**

INSTITUTIONAL EFFECTIVENESS, ASSESSMENT AND PLANNING

May 1, 2015

Jessica Belnap MSN, RN
10915 Hardin Valley Road
Knoxville, TN 37933

Dear Ms. Belnap,

The Institutional Review Board at Pellissippi State Community College has received your application for permission to conduct a pilot project, *Can Facebook be Used as an Asynchronous Learning Environment for Students in an Associate Degree in Nursing Program? A Pilot Study...* The Board believes the design of your proposal meets the Federal requirements for protection of human participants. Your application has received approval as required by PSCC Policy 08:02:01 Conducting Research at Pellissippi State.

The College strongly encourages maintenance of anonymity regarding student quiz scores. Any significant changes in the research project must be reviewed by the IRB at Pellissippi State. Please submit any changes in writing. The College looks forward to seeing the results of the study. Any request for student emails may be submitted to me.

Sincerely,

A handwritten signature in black ink that reads "Nancy A. Ramsey".

Nancy A. Ramsey, Chair
Institutional Review Board

Appendix F. King IRB

Memorandum

To: Jessica Belnap
CC: Amber Roache and Tracy Slempp
From: Vanessa A Fitsanakis, PhD
Chair of the Human Subject Research Review Committee
Date: 6/10/2015
Re: HSRR Approval

Dear Ms Belnap:

Thank you for the recent submission of your IRB application packet and approval letter from Pellissippi State Community College to the Human Subject Research Review Committee. I am pleased to inform you that the committee is satisfied with your proposal and your approval. You are approved to begin your research as the date stipulated in your documentation. Please note that if any changes are made to the consent forms or the study, we will also need notification for our records. If you have any additional questions, please don't hesitate to contact me further. Sincerely,

Vanessa A Fitsanakis, PhD



Vanessa A Fitsanakis

Appendix G. Consent Form



This informed Consent Form is for men and women who are currently students in NURS 1170: Bridge to RN Practice, and are invited to participate in research regarding the use of Facebook as a study group that is facilitated by a course instructor.

Jessica Belnap, MSN, RN
(865)805-8426

jsbelnap@pstcc.edu

Pellissippi State Community College

Does Facebook enhance and clarify traditional learning through scenario-based situations and interprofessional communication among nursing students and faculty?

This Informed Consent Form has two parts:

- **Information Sheet (to share information about the research with you)**
- **Certificate of Consent (for signatures if you agree to take part)**

You will be given a copy of the full Informed Consent Form

PART I: Information Sheet

Introduction

I am Jessica Belnap, and am a Lead Instructor at Pellissippi State Community College. I am studying the effect that Facebook can have on learning and incorporating it into curricula as a study tool. I am going to give you information and invite you to be part of this research. Before you decide, you may talk with anyone you feel comfortable with about the research.

If there are any words that you do not understand, please ask me to stop as we go through the information and I will take time to explain. If you have questions later, you can ask me, or any of the other faculty.

Purpose of the research

The purpose of this study is to determine if the use of Facebook could be a valuable tool for students and faculty with regards to learning and studying. Facebook is the most used social media site. As such, studies have confirmed that many people look at it often, and will receive information from others or links that are posted. Facebook could be used to help students study with others while not having to meet physically. It may also be a good avenue to ask questions among one another and to the instructor.

Type of Research Intervention

This research will involve becoming a member of Facebook, and participating in a closed group with your peers and faculty members.

Participant selection

I am inviting all students in this course (NURS 1170) to participate in this research.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. Whether you choose to participate or not, all traditional learning opportunities you receive will continue. You may change your mind later and stop participating even if you agreed earlier. Your course grade will not be affected by refusing to participate in this research. Your grades are compiled by exam scores, as noted in your syllabus. Any data collected prior to withdrawal from the study will be destroyed.

Description of the Process

I will invite you all to a private Facebook page that will be monitored by myself and other faculty. There will be guidelines that must be followed, such as: HIPPA, appropriate conduct in communication, and respect. This Facebook page is for everyone to post comments, questions, and illicit discussion. Periodically, I will post questions, and case studies to help further information learned in lecture. I will also post up to 8 quizzes throughout the semester, covering content learned in lecture. These quizzes will not be part of your grade, but for teaching and tracking purposes only. At the end of the course, you will be asked to fill out a survey regarding your experience with the Facebook page.

Duration

The study will take place over the course of the NURS 1170 class, which is 10 weeks long. You are not required to log in and participate any certain number of days or times. At the end of 10 weeks, the research will be completed.

Risks

Professional standards must be maintained while on Facebook. Potential risks include: violating HIPPA laws or posting inappropriate content that could lead to disciplinary action. Increased stress may be associated with use of new learning methods, or taking quizzes on-line.

Benefits

If you participate in this research, you will have the following benefits. You will be able to communicate with your classmates in an online format that you can refer to as often or as little as you like. You will also have access to information, critical thinking exercises, case studies, and opportunities for learning you're your faculty and class mates. Future classes may also benefit from this research.

Reimbursements

There will not be any reimbursement to participate in this study.

Confidentiality

With this research, it is possible that others in the community may ask you questions. We will not be sharing the identity of those participating in the research. The information that we collect from this research project will be kept confidential. Any information collected will have a number on it instead of your name. Only the researcher will know what your number is, and will only be shared with More Herington (committee member). All data collected will be kept in a locked file cabinet in the researchers locked office at Pellissippi State Knoxville, Tennessee.

Sharing the Results

The final results that we obtain from doing this research will be shared with you and may be made available through presentations, journal articles, or information sessions. No identifying information will be shared. We will publish the results in order for other people to learn from our research.

Right to Refuse or Withdraw

You do not have to take part in this research if you do not wish to do so and refusing to participate will not affect your traditional learning in any way. You will still have all the benefits that you would otherwise have in this course. You may stop participating in the research at any time that you wish without losing any of your rights as a student here.

Who to Contact

If you have any questions you may ask them now or later, or even after the study has started. If you wish to ask questions later, you may contact: Jessica Belnap. Phone: (865)805-8426. Email: jsbelnap@pstcc.edu

This proposal has been reviewed and approved by Pellissippi State Community College IRB , which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact:

(Pellissippi): Director of Institutional Effectiveness, Research and Planning
 Pellissippi State Community College
 10915 Hardin Valley Road, Goins Building Room 256
 Knoxville, TN 37933-0990.
 (865)694-6526.

PART II: Certificate of Consent

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this research.

Print Name of Participant _____

Signature of Participant _____

Date _____
 Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

1. A Facebook page will be created and maintained by the researcher.
2. Questions and discussion will used to strengthen learning done in the classroom.
3. A survey will be conducted at the end of the class.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this ICF has been provided to the participant.

Print Name of Researcher/person taking the consent _____

Signature of Researcher /person taking the consent _____

Date _____
 Day/month/year

Appendix H. Survey

Please answer the following based on your use of Facebook:

Did you have a Facebook account prior to this class? _____Yes _____No

If you did have Facebook prior to this class how often were you on it?
 _____ times/day

During this course, how often were you on the Facebook page for the class?
 _____times/day

On average, how many hours per day were you the Facebook page for the class?
 _____hr/day

Did Facebook change the amount of time you studied with a group? If yes, describe how it changed.

Did using Facebook change the way you studied? If yes, please describe how it changed.

Demographics

Age: _____

Gender: _____Male _____Female

Ethnicity: _____Asian _____Black _____Hispanic _____Pacific/Islander _____White _____Other

Years of Work Experience: _____

Please answer the following based on the answers from **Strongly Agree** to **Strongly Disagree** for having used Facebook in NURS1170 Bridge to RN Practice:

Questions	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Having my instructor use Facebook was beneficial.					
My instructor encourages students to ask questions in class.					
My instructor encourages students to ask questions on Facebook.					
My instructor relates course content to broader applications on Facebook.					
I discussed content with classmates at school.					
I discussed content with classmates on Facebook.					
Quizzes and discussion on Facebook are connected to material covered in lecture.					
I participated in a study group on campus.					
I participated in a study group on Facebook.					
Discussed content with an instructor at school.					
Discussed content with an instructor on Facebook.					
I have gained a better understanding of course material by utilizing Facebook page associated with class.					
My instructor displays an interest in my learning and overall success.					

Appendix I. Acceptance of Poster Presentation

STTI/NLN Nursing Education Research Conference -- Notification Letter for Poster

Presentations

machelle@stti.org [machelle@stti.org]

This message was sent with Low importance.

Sent: Friday, November 20, 2015 9:04 AM

To: Belnap, Jessica S; jsbelnap@pstcc.edu

Congratulations, Jessica Belnap, RN (155243)! The abstract you submitted for STTI/NLN Nursing Education Research Conference, "Using Facebook As an Asynchronous Learning Environment," has been selected for a Poster presentation. The abstracts submitted were exceptional! The presentations selected are an excellent reflection of current nursing research and timely issues. We look forward to your participation in this prestigious event.

YOUR ABSTRACT:

- Poster Presentation Title: Using Facebook As an Asynchronous Learning Environment

ID#: 77727

- Password: 142410

You are required to complete the intent-to-present form for each presentation accepted. If the intent-to-present form is not completed by the deadline of 16 December 2015, the presentation will be removed from the program.

PLEASE NOTE: Our software does not allow us to include co-authors on the notification emails. Please be sure to communicate with any of your co-authors regarding the decision of the reviewers.

To submit the intent-to-present form, please go to
<http://stti.confex.com/stti/nln16/researchpop/extra/index.cgi?EntryType=Paper&username=77727&password=142410>.

Submissions will not be scheduled until after the intent-to-present deadline, to ensure that all available presentation slots are filled. Information on the STTI/NLN Nursing Education Research Conference can be found on our website at <http://nln.org/nerc>.

If you have any questions, please contact abstracts@stti.org, 888.634.7575 (U.S./Canada toll-free), or +1.317.634.8171 (International).

Thank you,

Matthew S. Howard, MSN, RN, CEN, CPEN, CPN

Director, Educational Resources

Honor Society of Nursing, Sigma Theta Tau International

For a more immediate response, please contact Machele Fisher with questions or concerns at abstracts@stti.org.