

The Impact of Social Media on Social Presence and Student Satisfaction in Nursing Education

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Abstract

The purpose of this study was to determine if social media can enhance the student's learning experience by employing a medium in which they are already comfortable and familiar, and interact with on a daily basis. This study involved assessing 49 nursing students who used social media, or Facebook to be more exact, compared to when they used a traditional online learning platform. A counterbalanced research design, where participants were randomly assigned to systematically varying sequences of conditions, was used for the study, allowing for two groups of students to experience both social media and a traditional online learning platform over the course of 12 weeks of the 15-week semester. Undergraduate nursing students who used the online learning platform for the first six weeks and then began using social media combined with the traditional online platform for the last six weeks, scored significantly higher in social presence than the group that started with social media during the first six weeks. Implications for nurse education are discussed.

Instructors have been frequently confronted with the challenge of how to best communicate and reach the students in their classes (Hodges, 2011). The challenges of today's learning environment, "requires that a teacher look at not just course material but the technology involved and the ways in which they will communicate with their students" ("Online teaching strategies," 2011). Ultimately students must accept responsibility for their education and the instructor also has the responsibility of creating a learning environment that meets students' needs and characteristics. As younger generations become more immersed in the use of technology, and their daily lives become dependent on mobile devices or products such as the iPad, it becomes all the more important for instructors to become increasingly familiar with the current technology used by their students. The use of technology in the classroom is not new. Instructors have been using a number of different methods such as personal websites, wikis, and online tools such as Blackboard, Vista, and Desire to Learn, to assign work, communicate with students, and provide an online platform by which students can communicate, interact, and learn together in one setting (Koeniger-Donohue, 2008). However, there are limitations of these approaches, websites and wikis, such as not all students being unfamiliar with the format (Sturgen & Walker, 2009). Mikol (2005) noted that there has also been little to no improvement in communication between student and teacher, or peer-to-peer, for that matter. The primary method for communication outside of the class for the student and instructor is still the typical office visit or email. Additionally, communication between students via wikis and websites do not offer the ability for real time discussion and interaction. Many of today's students are "digital natives," and are very comfortable with the various forms of technology and for students it opens educational possibilities that oftentimes meet or exceed those found in a classroom setting (Corbeil & Valdes-Corbell, 2007). No longer are students simply taking notes from the blackboard and reading assigned texts, but are: searching for information in real time during class, and accessing information via the iPad, laptops, smart phones, and other wireless devices. Nursing education have embraced the use of technology in instruction. Streubert, Speziale, and Jacobson (2005) pointed out that, "As society finds new and innovative ways to use information to enhance our quality of life, technology will continue to be part of nursing education" (p. 231).

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The characteristics of social media, which point to its influence and potential use within the classroom, are vast, and, in many cases, astounding (Lenhart et al., 2010). Facebook is currently the second largest website, behind Google, in web traffic, with an estimated 500+ million users worldwide, and an estimated 10 million users joining the site every month (Bullas, 2011). These numbers point to a staggering statistic--1 in every 13 people throughout the world is a member of the Facebook community. More interesting still is that for 48% of young Americans, Facebook is how they receive their news on a daily basis, with the same percentage of young people saying that the first thing they do in the morning is check their Facebook account. For college students, a survey of Midwestern universities students found that 90% of students used or had used the site, spending an estimated 700 billion minutes per month on the site (Fournier & Clarke, 2011). Due to these statistics, among many other facets that will be discussed later in further detail, a case can be made that the use of social media in the classroom offers a better opportunity to not only reach students and help them expand their studies, but also further open up lines of communication between the instructor and students as well as between the students themselves. Social media allows for many benefits, not only for the student, but for the faculty and institution as well. Mikol (2005) stated, "Lecturing, with its emphasis on content and cognitive gain, too often creates passivity in students" (p. 87). This is exactly what the use of social media within the classroom seeks to prevent. Social media taps into a culture in which students are already well versed. Social media, while commonplace for many is still new and exciting, presenting multiple possibilities for educational enrichment and networking that will benefit students in and beyond the classroom. In a survey of students, four technology modules were presented to them. Of the four, the social media session was rated as having the highest impact on students (Rutledge et al., 2011).

Most importantly, social media is a known commodity with familiarity among most students and faculty alike. According to research done by Bullas (2011), Facebook is currently the second largest website behind Google in web traffic, with over 500 million users worldwide, and an estimated 10 million users joining the site every month. Bullas continued by offering more staggering numbers to evidence the popularity of Facebook by stating that 1 in every 13 people throughout the world is a member of the Facebook community, and that for 48% of young Americans, Facebook is how they receive their news on a daily basis (Bullas, 2011). The same percentage of young people stated that the first thing they do in the morning is check their Facebook account. Businesses have also seen the impact of Facebook, which should be of huge importance to all students who are soon to graduate. According to a study done by the University of Massachusetts, 289 (58%) Fortune 500 companies were on Facebook in 2011, allowing companies to further broaden their customer base and provide information on products and services to those same customers on a daily basis (Barnes & Andonian, 2011). With data such as this, it is no wonder that educational institutions are becoming increasingly interested in how Facebook might be able to improve the educational experience of students. For many students, learning in a digital environment is all they have ever known; therefore, it would be beneficial to continue in a forum with which they are familiar and adept at using. For the ones who are not, it is imperative that students become proficient in the tool as it seems obvious they will be using it long after their education is complete. The purpose of this study was to determine if social media can be an effective learning tool tapping into a medium in which they are already comfortable and familiar and interact with on a daily basis. Social media has the potential to change the overall dynamic of the traditional lecture classroom, opening up new avenues of communication and learning that lecture classes alone are not able to offer. Social media is also a cost effective tool for the institution, as it costs nothing for the faculty or student to join.

The idea of social media is an important and valued tool within the classroom. A survey of 606 Facebook users in 2010 found that over 50% of those involved in the study felt that Facebook was an appropriate and comfortable platform by which to discuss education or business, those things which are not for the sole purpose of entertainment. The study also pointed to the high volume of young people, over 70% of those users surveyed, who use Facebook and state they would use it more than just as an entertainment tool (Mazman & Usluel, 2010). Other studies have found similar findings, all which seek to back the purpose of this study (Borup, West, & Graham, 2011). One study looking at how video, which Facebook allows easily to be placed and used on their site, found that online learners, and learners in general, felt that being able to more openly communicate with their professor and colleagues in the class helped with not only their study but improved communication as well, leaving students with a positive outlook and reaffirmed the idea of social media in the classroom for the author.

In another study, 300 undergraduate students at University Sains Malaysia were surveyed to get their responses to social media within the classroom, finding that Facebook, in particular, had the effect of getting 70% of the participants more enthusiastic about their studies, with a majority of participants feeling that they had a positive experience, emotionally and educationally, with social media in the classroom (Marchand & Gutierrez, 2011).

The research hypotheses addressed are as follows:

H₁: Undergraduate nursing students who use social media combined with a standard online platform during a segment of the course will have higher grades compared to those using the standard online platform during a segment of the course.

H₂: Undergraduate nursing students using social media combined with a standard online platform will report greater levels of social presence versus those using a standard online platform during the same segment of the course.

H₃: Undergraduate nursing students using social media combined with a standard online platform earlier in the course versus late will report greater course satisfaction compared to those using only a standard online platform earlier in the course versus late.

Methods

Research Design

A counterbalanced research design, where participants were randomly assigned to systematically varying sequences of conditions, was used for the study, allowing for two groups of students to experience both social media and a traditional online learning platform over the course of 12 weeks of the 15-week semester. Both groups experienced the traditional online learning management system or platform. Group A used social media (Facebook) during the first six weeks followed by six weeks of traditional online learning management. Group B used the traditional online learning platform only for the first six weeks and then began using social media (Facebook) the following six weeks.

Table 1 Research Design and Sequence of Experimental Condition

Groups	Weeks 1-6	Weeks 6-12
A	Traditional online learning + Social media	Traditional online learning only
B	Traditional online learning only	Traditional online learning + Social media

Sample

For this study, a random numbers table was used to assign participants to one of two groups, 25 in Group A (Facebook followed by traditional online learning management) and 24 in Group B (traditional online learning management), for a total of 49 of fourth semester undergraduate nursing students at a small, liberal arts college. The class was open to all students within the fourth semester from all demographic backgrounds and all interested students were encouraged to enroll and participate. Two groups of students participated in the study: Group A had 25 students (51%) and Group B had 24 students (49%), for a total of 49 participants. The majority of participants were females (95.9%, n = 47) and 4.1% (n = 2) were males. Regarding age, 57% (n = 28) were 18-30 years old, and 43% (n = 21) were 31-55 years of age. Age group is presented in Table 2.

Table 2: Age Group

Age Group	N	%	Cumulative %
18 to 21	6	12.2	12.2
22 to 25	11	22.4	34.7
26 to 30	11	22.4	57.1
31 to 35	10	20.4	77.6
36 to 40	5	10.2	87.8
41 to 45	2	4.1	91.8
46 to 50	2	4.1	95.9
51 to 55	2	4.1	100.0
Total	49	100.0	

Regarding class rank, 44.9% (n = 22) of the participants were sophomores, 2% (n = 1) were juniors, and 53.1% (n = 26) were seniors. In terms of employment status, 38.8% (n = 19) were employed part-time, 8.2% (n = 4) were employed full-time, and 53.1% (n = 26) were not employed. Most respondents (89.8%, n = 44) were registered as full-time students, and 10.2% (n = 5) were part-time.

Procedures

On the first day, students were divided into their assigned groups--to either the A group, experiencing both social media (Facebook) and a standard online learning platform, or Group B experiencing only the standard online learning platform followed by social media (Facebook) combined with the traditional online learning platform. Class content was the same, the exception being the way students were accessing the course content. If a student chose not to participate in the study for any reason, such as them not agreeing with or to the idea of social media, then the student was excluded from the study all together (14 of them actually declined), and participated in only the online learning platform the entire time (these students were not included in the study). Group A used social media (Facebook) in combination with the online learning platform for the first 6 weeks and answered four discussion questions with personal interactions from the researcher during set times. The second group (Group B) spent that same 6 weeks using only the online learning platform with no personal interaction with the researcher. On week 3 of 6, each group took the same course exam and the groups remained the same--Group A continued to work with social media (Facebook), and Group B continued on with the online learning platform for another 3 weeks. At the end of week 6, the groups swapped formats and Group B began using social media (Facebook), while Group A switched to the online learning platform only. Both groups continued using the online learning platform throughout the 12 weeks of the 15-week semester, even when using social media (Facebook), thus allowing each group to have an equal amount of interactions with the researcher via Facebook. Switching the formats allowed for both social media (Facebook) and online learning platform users to have the same opportunities within the course.

Utilizing a counterbalanced design allows for recurring measurements or observations to be realized by the researcher, and can offer an overall comparison of grades at the end of the course between both groups. The researcher had an opportunity to look at and compare course grades of the groups at the end of the study to examine the success of each format and make a determination on what was, and was not, successful (Fraenkel, Wallen, & Hyun, 2012). Should a student not have had access to social media (Facebook) or find they were not familiar with, or a current adopter of the tool, they were excluded from the study. Facebook offers the ability to create a space within the platform specifically to be used by only those people asking or wanting to be involved. This is called the group page. Creating a group page is a simple matter of the instructor constructing it, then inviting the students to come and join. Once joined, students have the ability to communicate with peers, communicate with the instructor, post relevant information to the class, and access any information pertaining to the class through the group page. Creating this group followed the idea of creating a learning community where participants can join together to accomplish the learning goals. It also allows students to create a social presence by putting them directly into the conversation (Shea & Bidjerano, 2010). Students not only post their own ideas, but also respond to peers so as to further the discussion. The group page provided the perfect template by which to utilize social media (Facebook) in the classroom.

Instruments/Assessments

There were eight weekly assessments throughout the semester, which consisted of daily work, such as independent homework and study, as well as group participation on forums and any other assigned work as needed throughout the class. Examples of weekly work included discussion questions, a primary variable used in grading that consisted of lecture content covered during that week, group discussion in forums, and any given daily work determined to be relevant to the class by the instructor. Participation was part of the graded work as well. These scores were combined to offer weekly assessment scores and provided the opportunity for the instructor to note patterns of success and those areas that may need to be explored or corrected to fit student needs. Following these assessments, a unit exam was given every 3 weeks, on weeks 3, 6, 9, and 12 covering the topics discussed in the previous 2 weeks of study. Exam scores were also evaluated so that a comparison of overall grades from both Group A and Group B could determine if one format produced higher overall scores than the other and increased student retention of the information. Social presence was measured using The Community of Inquiry Instrument (CoI) ®. (CoI) encompasses both a blended (hybrid) learning environment versus a fully online learning environment utilizing the CoI Model, which includes direct effects of social presence and teaching presence on cognitive presence, mediated by self-efficacy. This instrument was used to assess students' perceptions related to faculty presence of the quality of their online learning experiences.

The original 34-item instrument labeled responses on a 5-point Likert-type scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree (Arbaugh et al., 2008; Shea & Bidjerano, 2008; Swan et al., 2008). Previous studies aimed at validating the measure have found that the variance among the items is best explained by three overarching traits: teaching (13 items), cognitive (12 items), and social (9 items) presence. The Chronbach's Alphas of the three subscales, based on the current samples from the study, which assessed students' perceptions of the quality of their online learning experience, were .95, .92, and .93, respectively. The results of the Col indicated a p value of < .001 for a blended learning environment with teaching presence on cognitive presence via self-efficacy, and social presence on cognitive presence via self-efficacy at .037. A p value of < .001 for a fully online learning environment comprised both elements above thus showing that students prefer the blended (hybrid) to fully online (Shea & Bidjerano, 2010). For this study, permission was obtained from the originators of the survey and revised to encompass what was hoped to be seen measured by the researcher thus assessing student and faculty communication by discovering what learning style or method the student preferred. This survey was given at the completion only of each 6-week period to both groups: Group A after the first 6 weeks and Group B at the end of the second set of 6 weeks, or 12 weeks.

The second survey, which was used to address student satisfaction of the overall course, was one that was currently utilized at this liberal arts college. Student satisfaction related to the course was measured with an end-of-course evaluation that the institution currently used to assess overall course satisfaction. It is given at the completion of every semester to each and every nursing course and student. The researcher posited that this tool was relevant to the study because it is used routinely and completed by most participants. Several additional questions were added to ensure adequate measurement of the hypotheses. This survey was completed at the completion of the semester to all students that partook in the study and was administered in person via the researcher. A duplicate second survey was administered to the participants again. This entailed a good indication of adequate results and elicited whether students perceived that the addition of social media (Facebook) was helpful in conjunction with the online learning platform, as opposed to the online learning platform only. During the semester, the fourth semester course coordinator had no access to all of the material being discussed in the course. A separate Facebook account was opened so that the primary researcher could interact and monitor the students' activity and the study itself. The coordinator was involved in grading discussion questions and other work for the course and was responsible for the overall grading of coursework and the scoring of the overall class.

Setting/Instructional Method

The setting was a small, liberal arts college and took place in the class of Nursing- Tertiary Prevention and Synthesis of Care Across the Lifespan. It was held over the course of 12 weeks of the total 15 weeks of the semester for fourth semester undergraduate students at the college. Because many colleges utilized a standard online learning platform, students accessing this platform saw no real change in how the site functioned within the classroom. Students had access to pertinent information to the class, such as schedules and the syllabus, could participate in forum discussions over the topics being discussed in class, and access their discussion questions for the week. Forum discussions consisted of students participating in a dialogue concerning any relevant topic the instructor, or the students, might pose regarding a subject being discussed in class. These forums provided the opportunity for students to offer their own feedback to other students as well as benefit from what others had learned and shared. These online learning platform students also had access to normal office hours with the instructor in their office to address any needs the student might have had. Instructor/student communication for the online learning platform users was done after each discussion question was submitted individually and graded (as is the typical format) for that particular week and the instructor assessed any needs this group of students may have had as indicated in their actual discussion question responses and overall grade. Any problems posed were handled individually with the instructors, the researcher and the course coordinator, and the student(s) from that group. For those using social media (Facebook), they found that private messages and the class group page was where information was posted pertaining to the class. Students were able to access the schedule and syllabus on the regular online learning platform, as well as any changes to the class such as content or assignment due dates for example. Forum discussions were made available on the group discussion page with the added benefit of them being in real time, similar to that of a chat room. Students were able to log on to the class discussion through an invite on Facebook, the topic was posed by the instructor and/or primary researcher who was participating, and the students then took lead of the discussion.

The social media (Facebook) students also had the benefit of links and relevant media, such as videos or journal articles, which could be useful to the student. Those students using social media (Facebook) also had virtual office hours set at particular times with the instructor, allowing for the ability to Skype face-to-face, speak through instant messaging, or simply send a private message. While each platform offered the student the ability to access class information, the primary difference in the two was in the real-time aspect social media (Facebook) offered in terms of communication, as well as the ability social media (Facebook) offered, which the current standard online learning did not at the time of this study, to accessing differing forms of media. Facebook students found they had more access to the instructor, be it through the virtual office hours or the fact the instructor was more hands on due to participating in forum discussions and the possible posting of relevant media that online learning platform users did not do.

Results

Participants scored the highest on Exam 3 ($M = 78.95$, $SD = 6.30$), followed by Exam 4 ($M = 77.55$, $SD = 7.36$) and Exam 2 ($M = 75.75$, $SD = 6.88$). Scores were the lowest on Exam 1 ($M = 74.65$, $SD = 5.99$). Descriptive statistics are presented in Table 3.

Table 3: Descriptive Statistics

Scores	N	Minimum	Maximum	M	SD
Exam 1	49	62.35	89.06	74.65	5.99
Exam 2	49	63.53	90.24	75.75	6.88
Exam 3	49	66.35	93.41	78.95	6.30
Exam 4	49	59.65	92.24	77.55	7.36
Social Presence Total	49	115.00	180.00	162.02	16.66
Course Evaluation Total	49	53.00	70.00	62.57	5.14
Discussion Total	49	94.25	99.75	97.62	1.17

The data were screened for normality with skewness and kurtosis statistics. In SPSS, skewness and kurtosis values that are within two times the standard error are considered to be normal distributions. Skewness coefficients were within normal range for all the variables with the exception of discussion total, which had a significant, negative skew. Instrument reliability was examined with Cronbach's alpha. For social presence, as measured by the CoI, $\alpha = .973$. For course evaluation, $\alpha = .913$. The minimum acceptable reliability is .70 (Brace, Kemp, & Snelgar, 2009). Based on the review of literature, the internal consistency of the CoI has ranged from .93 to .95. Therefore, the reliability of the CoI for the sample is consistent with prior research.

Research Hypothesis 1

H_1 stated that undergraduate nursing students who use social media combined with a standard online platform during a segment of the course will have higher grades compared to those using the standard online platform during a segment of the course. Because the same unit exam was administered to both groups every 3 weeks as part of the course, it was theorized that Group A would show better scores on Exams 1 and 2, and Group B on Exams 3 and 4. H_1 was answered with two mixed design ANOVAs and one independent samples t test. The repeated measures for the mixed design ANOVAs were test performance on Exams 1 and 2 for the first ANOVA, and test performance on Exams 3 and 4 for the second ANOVA, which were the dependent variables. The discussion score total was the dependent variable for the independent samples t test. The independent variable was group assignment for all of the analyses. Group means for the first mixed design ANOVA (Group A, or weeks 1 to 6) are presented in Table 5.

Table 5: Group Means for Exams 1 and 2

	Group	M	SD	N
Exam 1	Social Media (Group A)	75.12	6.90	25
	Control (Group B)	74.16	4.97	24
	Total	74.65	5.99	49
Exam 2	Social Media (Group A)	74.82	7.62	25
	Control (Group B)	76.73	6.01	24
	Total	75.75	6.88	49

There was no significant within-subjects effect for exam, $F(1, 47) = 1.09$, $p = .302$. In other words, for both groups, there was no significant change from Exam 1 to Exam 2. There was no significant within and between group interaction, $F(1, 47) = 1.75$, $p = .192$. In other words, the degree of change from Exam 1 to Exam 2 did not significantly differ by group. There was no significant, between subjects effect for group, $F(1, 47) = .101$, $p = .752$. This means that there was no significant group difference relative to Exam 1 or Exam 2. Group means for the second mixed design ANOVA (Group B, or weeks 6 to 12) are presented in Table 7.

Table 7: Group Means for Exams 3 and 4

	Group	M	SD	N
Exam 3	Control (Group A)	77.68	6.27	25
	Social Media (Group B)	80.27	6.18	24
	Total	78.95	6.30	49
Exam 4	Control (Group A)	77.86	7.63	25
	Social Media (Group B)	77.23	7.22	24
	Total	77.55	7.36	49

There was no significant within-subjects effect for exam, $F(1, 47) = 1.60$, $p = .212$. In other words, for both groups combined, there was no significant change from Exam 3 to Exam 4. There was no significant within and between group interaction, $F(1, 47) = 2.04$, $p = .16$. In other words, the degree of change from Exam 3 to Exam 4 did not significantly differ by group. There was no significant, between subjects effect for group, $F(1, 47) = .372$, $p = .545$. This means that there was no significant group difference relative to Exam 3 or Exam 4. An independent samples t test was conducted for discussion total by group. Group A ($M = 97.79$, $SD = 1.12$) did not significantly differ in points earned for their discussion from Group B ($M = 97.45$, $SD = 1.22$), $t(47) = 1.02$, $p = .156$, one-tailed. Because none of the statistical tests was significant, H_1 is not supported. H_2 stated that undergraduate nursing students using social media combined with a standard online platform will report greater levels of social presence versus those using a standard online platform during the same segment of the course. Social presence was measured with a specific assessment regarding student perceptions and online learning, The Community of Inquiry Instrument (CoI)®, that the researcher administered. This assessment was given at separate times to both Groups A and B and only when each group completed the social media intervention, so Group A at 6 weeks and Group B at 12 weeks. H_2 was investigated with an independent samples t test. The dependent variable was social presence measured using The Community of Inquiry Instrument (CoI)®. Group B ($M = 167.63$, $SD = 13.77$) scored significantly higher in social presence than Group A ($M = 156.64$, $SD = 17.67$), $t(47) = -2.42$, $p = .01$, one-tailed. Therefore, H_2 is supported. There was a mean difference of 10.99. Group B, which only used the online learning platform for the first 6 weeks and then began using social media combined with the traditional online platform for the last 6 weeks, scored significantly higher in social presence than Group A, which used social media during the first 6 weeks. The significance seen between Groups A and B could be attributed to how the (CoI)® assessment was administered by the researcher. Each group received this assessment, which again, is relative to students' perceptions related to faculty presence of the quality of their online learning experiences, at the completion of each social media intervention (Group A at 6 weeks and Group B at 12 weeks), but neither group received it prior to the start of the intervention, or simultaneously. Group A received the survey after the first 6-week period, while Group B continued with the traditional or standard online learning platform, and Group B obtained the assessment at the completion of the study, or at 12 weeks.

Both groups received the survey at differing times throughout the study, and at the conclusion for each. Had the researcher administered the assessment before the intervention also, as opposed to just after, these particular results may in fact have been more accurate. H_3 stated that undergraduate nursing students using social media combined with a standard online platform earlier in the course versus later will report greater course satisfaction compared to those using only a standard online platform earlier in the course versus later. H_3 was investigated with an independent samples t test. The dependent variable was course satisfaction as measured by a student course evaluation survey. Group A ($M = 62.64$, $SD = 5.37$) did not significantly differ from Group B ($M = 62.50$, $SD = 5.00$) relative to course satisfaction, $t(47) = .094$, $p = .463$, one-tailed. The survey was administered to both Groups A and B at the same time by the researcher at the completion of the overall study, or 12-week period. The survey had to be administered twice to the participants. The first time, it was conducted in person via the researcher and was done anonymously by each participant. This was not useful to the researcher for purposes of entering and then analyzing the data into SPSS. The same student end-of-course evaluation survey was then emailed individually to each participant in June (1 month after graduation) and asked them to please complete the survey a second time; however, this time included the last four digits of the student's assigned identification number in order to help the researcher identify them. Participants were assured again that only the researcher would view these surveys and the importance of how they pertained to the study. A turnaround time of 4 days was given for completion of the survey. All participants completed the survey and emailed it back to the researcher as instructed within the 4-day timeframe. The introduction of social media earlier in the course versus later did not impact course satisfaction. Therefore, H_3 is not supported.

Discussion

Undergraduate nursing students using a combination of social media and a standard online learning platform will differ in terms of social presence from those using social media first, followed by only the standard online learning platform during the same segment of the course. Specifically, Group B, which only used the online learning platform for the first 6 weeks and then began using social media combined with the traditional online platform for the last 6 weeks, scored significantly higher in social presence than Group A, which used social media during the first 6 weeks. This significance may, however, be related to the times at which the (COI)® assessment was administered by the researcher. Undergraduate nursing students who used social media combined with a standard online learning platform earlier in the course versus later, or for the first 6 weeks, did not report significantly greater course satisfaction compared to those using only a standard online learning platform earlier in the course versus later, or during the first 6 weeks. The results were congruent in the first (given in class by the researcher) and second identical course evaluations administered via email for student identification purposes. Undergraduate nursing students who use social media combined with a standard online platform during a segment of the course did not have significantly higher grades compared to those using the standard online platform during a segment of the course. Prior research has suggested that incorporating social media with a standard online platform improves academic performance (Kabilan et al., 2010). For example, a study to determine if Facebook could improve the process of learning English in 300 undergraduate students found that these communities do foster an improvement in language learning and saw subject retention increase in students (Kabilan et al., 2010).

This was not supported in the current study. Perhaps academic improvement is dependent on the type of course being taught. The setting for the current study was a small, liberal arts college and took place in the class of Nursing 2904: Tertiary Prevention and Synthesis of Care across the Lifespan, which is more technical than learning English. While social media taps into a culture in which students are already well-versed, cultural differences may have also played a role in the improvement in language learning in the Kabilan et al. (2010) study, and may also have influenced the lack of improvement in grades in the current study. Culture encompasses race and ethnicity, which were not collected in the current study. Undergraduate nursing students using social media combined with a standard online platform reported significantly greater levels of social presence versus those using a standard online platform during the same segment of the course. Specifically, Group B, which only used the online learning platform for the first 6 weeks and then began using social media combined with the traditional online platform for the last 6 weeks, scored significantly higher in social presence than Group A, which used social media during the first 6 weeks. The significance shown between the groups was discussed in chapter 4 regarding the validity of the actual results based on researcher administration of the assessment. Each group received this assessment at the completion only of the social media intervention, and not prior to (Group A at 6 weeks and Group B at 12 weeks), nor did they receive it concurrently.

The outcome of this hypothesis, although favorable, is supported by prior research; however, the differing times as stated above at which the COI[®] assessment was administered to both groups by the researcher could have made an impact on the results and their overall validity. A study by Richardson (2003) was conducted at Empire State College by having students fill out a survey on their thoughts pertaining to online learning and social presence. It was determined that those saying they had a high level of social presence also had a high retention rate in regard to what they had been studying or discussing. It was found that instructor likability plays a huge part as well. Finding that students with low social presence also had low likability marks for their instructor, points to the importance of the instructor within the class and the growing of social presence within the students. This suggests that undergraduate nursing students using social media combined with a standard online platform will have higher retention rates than students using only the standard online platform, and will also have greater likability marks for their instructor. Although Richardson (2003) found that age had no overall effect on social presence, age cannot be ruled out as a possible contributing factor in the significant results in the current study, because the majority of respondents were 18-30 years of age, and they were presumed to be more tech savvy than older students (Pew Research Study, 2010). It was determined that undergraduate nursing students who used social media combined with a standard online platform for the first 6 weeks did not report significantly greater course satisfaction compared to those using only a standard online platform during the first 6 weeks. This assessment, again, was completed at the end of the course or semester and, only once both groups completed the experimental condition, and was given concurrently to both groups at the same time. This outcome is not supported in the literature.

For instance, 300 undergraduate students at University Sains Malaysia were surveyed to get their responses to social media within the classroom. It was determined that Facebook, in particular, had the effect of getting 70% of the participants more enthusiastic about their studies, with a majority of the participants feeling that they had a positive experience with social media in the classroom, emotionally and educationally (Marchand & Gutierrez, 2011). When it comes to faculty self-disclosure on social media, a study done by Mazer et al. (2009) showed how students feel more comfortable with instructors willing to open up and become more personable. This study, done by Mazer et al. (2009), was conducted by the authors to determine how students viewed faculty with high self-disclosure on social media, meaning what information they posted, pictures, and the basic overall layout of the page. Students determined that faculty that utilized social media and had a high self-disclosure page scored higher levels on student assessments of the instructor than those who had a medium and low self-disclosure page. Students felt more comfortable and relatable to the faculty that opened up and revealed information, which is a two edged sword seeing as just like the students, faculty would prefer to, and should, keep their personal life separate from their academic life. What is unknown in the current study, however, is the degree of faculty self-disclosure on social media, the level of comfort students felt with the instructor, and whether these factors impacted course satisfaction, which could be a future recommendation for this study. Another issue of concern that possibly impacted the non-significant outcome relative to course satisfaction is associated with ethical considerations. Students and the instructor might have had some concerns about the invasion of their privacy and this can hinder the rapport between students and faculty in a social media environment. Also of concern is what the student posts on the site and what consequence there might be for doing so. As Lee and Bacon (2010) suggested, although the use of social networking sites has grown immensely in the last few years, students and health professionals need to carefully consider their future employer prior to ever posting anything personal; posts regarding an actual work day or just about something personal, in general, can have repercussions on current or future employment. The authors warn that many employers view the use of these "sites" as unprofessional, even if used for personal reasons and will look at someone's social networking site if warranted.

Limitations

The setting for the study was a small, liberal arts college in the Southeast. The study took place in the class of Nursing-Tertiary Prevention and Synthesis of Care Across the Lifespan, therefore, the results may not be generalizable to other colleges, to other regions of the country, or to other courses. The study employed the use of survey research. Survey research assumes that participants answer the questions honestly. However, it is unknown whether or not participants were honest in their responses to the questions. The timing of the assessments, both the COI[®] and the course evaluation, could have been scheduled more effectively.

To effectively show true significance for Hypothesis 2 with Group B, the COI® survey should have been administered both before and after the start of the social media intervention to both groups simultaneously, instead of just at completion and to only the experimental group each time. The course evaluation may have shown to be of more importance in Hypothesis 3, or exhibited something more than it did, if perhaps this assessment had been administered at the completion of the intervention of each group, as opposed to at the end of the entire course as a whole. Possible threats to the validity of the study could have resulted from overall familiarity with Facebook and social media in general. Depending on the learner and their previous use with technology and differing social media sites, those that operate these sites regularly are at an advantage because maneuvering any of these sites, may come very easily to them. Due to there being two separate groups, with each group being the independent variable at two different time frames, the Hawthorne Effect may be demonstrated. Both groups knew they were involved in a study and when, so overall behavior of any subject may be intentionally changed since they were aware they were being studied.

Implications and Recommendations

It was postulated that cultural differences may have played a role in the lack of improvement in grades in the current study. Culture encompasses race and ethnicity, which were not collected in the current study. Future studies might examine cultural differences for their role in student grades, social presence, and course satisfaction. What is unknown in the current study is the degree of faculty self-disclosure on social media, the level of comfort students felt with the instructor, and whether these factors impacted student perception of course satisfaction. Future studies might also incorporate mixed methods research designs adding a qualitative strand to explore these topics in more detail. Based on the quantitative findings, participants might be interviewed for deeper meaning. A qualitative study and methods in general, may prove more significant, as interviewing the participants could help to further understand the actual processes, experiences, and feelings of those involved with social media and Facebook.

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