

Using Blogs as a Strategy to Enhance Students' Participation and Learning in a Research Methods Course

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Abstract

Research has shown that active learning techniques increase students' ability to find solutions to problems and help students to think critically about problems. In a technology-driven global arena, in which students will have to compete after they matriculate, effective instruction should advocate effective use of technology incorporating active learning techniques. These techniques should enhance students' oral and written communication, technological competence, information literacy and critical analysis skills. The purpose of this study is to explore students' perceptions of blogging as an effective teaching and learning tool for research methods. The study explores if blogging increases students' performance, if it improves their appreciation of the subject matter and if it reduces their fear/anxiety of the material. The results indicate that blogging could be a viable and effective tool to engage and impact students' performance.

Keywords: blogging, research methods, technology, active-learning

Introduction

Preparing students to enter a technology-driven society requires faculty to adopt new and innovative strategies in the classroom. Research has shown that active learning techniques increase students' ability to find solutions to problems and help students to think critically about these problems (Sims, 2006). In a technology-driven global arena, in which students will have to compete after they matriculate, effective instruction should advocate effective use of technology incorporating active learning techniques. These techniques should enhance students' oral and written communication, technological competence, information literacy and critical analysis skills.

The scientific method is the cornerstone of research methods. Science is also the cornerstone of much resistance and anxiety among students on college campuses. Research methods and statistics courses have long been seen as challenging and unpleasant by students majoring in justice studies, criminal justice

or criminology (Briggs, Brown, Gardner & Davidson, 2009). Research methods and statistics courses are requirements in most criminal justice, criminology or justice studies curriculum. Many of these majors' disinterest in this scientific portion of the curriculum is based on their perception that their career direction will not entail using quantitative skills. Thus, most students just try to make it through to get the course completed. The general trend in criminal justice, criminology and justice studies job areas is not only the importance of technology but also the use of scientific research methodologies for evaluation and policy (Stocker, Griffin & Kocher, 2011). Consequently, it is imperative that the curriculum reflects these larger important trends and outcomes.

Many students do not recognize how valuable an analytical tool research methods is; it is for instructors to creatively and effectively engage students in the subject matter and help them recognize the importance of the subject. The quantitative nature of research methods is perceived by students as more difficult and antipodal than other courses. Consequently, they are fearful and this contributes to lack of motivation to excel. Students see these courses as an obstacle and just want to make it through. The negative attitudes of students expressed in complaints and lack of interest, impact the quality of the classes and in some instances the quality of teaching.

An important question is, in courses such as research methods, in which students' have to move beyond memorization and engage insightful, critical and systematic analysis, what active learning techniques incorporating technology could increase students' motivation, performance and participation? Specifically, in courses in which students tend to exhibit fear and trepidation to the subject matter before they are even exposed to the material, what techniques might help students not only lose their fear and anxiety but help students master the material more effectively? One approach that could be useful and should be explored more is blogging or weblogging.

Literature Review

Currently there are no published studies assessing the benefits of blogs in research methods courses in justice studies, criminology, and criminal justice disciplines. Further, there are no publishable studies examining the incorporation of blogging in research methods coursework. However, other disciplines have examined the use of blogs in other courses such as health education (Goldman, Cohen & Sheahan, 2008; Oomen-Early and Burke, 2007); language arts (Ajay, 2015; Beach, 2012); writing (Lee, 2010; McGrail & Davis, 2011); nursing (Epstein & Ray, 2014); history and music (Sheldrake & Watkin, 2013; Stewart, Reid & Stewart; 2014). Some studies have noted that blogging has merit for further exploration and testing (Goldman et al., 2008; Kerawalla, Minocha, Kirkup & Conole 2009). Kerawalla et al. (2009), noted the value of this strategy and presented a framework to assist educators considering using blogging their courses.

An early study conducted by Oomen-Early and Burke (2007) highlighted the importance of incorporating technology in the classroom experience. The study explored both faculty and students' perceptions of blogging in an undergraduate online women's health class. Their findings were important particularly as it relates to faculty's perceptions. Both faculty and students perceived blogging to be an effective teaching and learning tool. Specifically, 84 percent of the students thought the use of blogs should

be implemented in other courses. Most importantly, faculty thought the blog strategy increased students' critical thinking skills, sometimes with students being oblivious of the improvement.

Further, Goldman et al. (2008) observed similar perceptions in their study using web blogs in a large graduate level public health school class, found that 60 percent of the students described their blog participation as both enriching and a great learning experience. The authors concluded that "seminar blogs" seem to be effective and appealing and allow for greater student participation and learning. Indeed, Chamberlain (2017) found weblogging to be instrumental in the learning process and improving critical literacy skills. Other studies have pointed to the effectiveness of classroom blogging in the development of specific disciplinary literacy (Buehl, 2011; Colwell, 2012; Wickens, Manderino & Glover, 2015).

Researchers have offered many suggestions and approaches, which they view as the most effective mode of teaching research methods. For example, both Benson & Blackman (2003) and Gjestland (2008) recommended both a problem-based learning and student-centered learning approach. They argued that these approaches can make the course content less theoretical and esoteric. Others argued that active learning experiences work to increase students' motivation and interest (Ball & Pelco, 2006). However, the limited literature on effective teaching approaches to research methods has not addressed how to incorporate technology in the process. Further, the literature has not explored blogging as active learning techniques, to examine if this approach would be helpful in mitigating students' anxiety about the subject matter and improving students' performance. These are unique pedagogical questions that this research study attempts to explore.

Scholars in criminology and criminal justice have called for varied pedagogical approaches in teaching research methods to alleviate anxiety and help motivate students to embrace the subject matter (Brown, 1982; Gordon, Barnes, & Martin, 2009; Lanier, 2002). Brown (1982) argued that applied instructional methods "reduce anxiety and may also accelerate learning" (p. 13). Lanier (2002) also pointed to the importance of utilizing computers to prepare students for the workplace in contemporary society. He sees the internet as central in active learning, as he argued that the "applied and interdisciplinary nature of the discipline demands that instructors provide students the requisite analytical and computer skills" (Lanier, 2002, p. 155-6).

As computers continue to change societies and interactions among individuals within societies, Myers and Myers (1995) noted that "innovative teaching approaches should be developed around the computer literacy component of criminal justice courses and in developing assignments" (p. 291). Gordon et al (2009) in a study examining a hybrid approach to teaching research methods—"lecture and smaller recitations" (p. 228), found that utilizing student-centered techniques resulted in high level of student engagement and learning. Stocker et al. (2015) also argued the importance of this pedagogical strategy.

Current Study

There exist some evidence to suggest that college learners may improve and develop analytical and critical thinking skills through the use of blogging (Oomen-Early and Burke, 2007). This study is a pedagogical exploration of how to incorporate blogging as an effective teaching and learning tool in research methods. The study explored, not only, if blogging increases students' performance, but also if it

improves their appreciation of the subject matter and reduces their fear/anxiety of the material. To this end, several research questions were explored:

- (1) Can blogging provide a more appreciable impact on students' who blog overall course grades compared to students who do not use web blogs?
- (2) Can blogging help to reduce students' anxiety about coursework/research methods content?
- (3) Can blogging improve students' knowledge and appreciation of course content?

Methodology

The goal of this study is to explore students' perceptions of blogging as an effective teaching and learning tool for research methods. This study focuses on the improvement of students' performance, reducing students' anxiety about research methods content and improvement of students' knowledge and appreciation of research methods. The study provides a descriptive examination of students' responses to 14 survey questions and also provides a comparison of grades between the two classes involved in the study.

Procedure

The study involved two sections of research methods courses that were offered in Fall 2017. One section (Section B) were assigned blogging assignments and one section was not (Section A). While students in both sections of the course were required to write a comprehensive research paper incorporating data analysis in their paper, only students in one section (Section B) created a web blog. Students in (Section B) were given help in creating "blogspots" using "Wordpress.com", a free blogging webtool. Students used their blogs to post each step of the research process, for example, introduction or literature review. Each week each student presented a section of the paper for class discussion. The section (Section B) that was required to create a blogspot also had to post comments on their classmates' postings. Students had to read and comment on two (2) classmates' postings each week. Students were graded on their individual assignments and the substantiveness of their posted comments on classmates' work. The posted comments constituted a heavy component of the class participation grade. To examine performance, Section B class participation grades and final paper grades were compared to Section A.

Section A students were graded on their comments during in class presentations each week. Students were told that they were being graded on the substantiveness of their comments on their classmates' work. These comments were equivalent to the posted comments on the weblogs. Students' grades on the final research paper were used to assess the differences, if any, between both sections. Additionally, students' participation grades were also used to assess performance differences between the two groups.

At the end of the semester, students enrolled in Section B were asked to complete a survey pertaining to their perceptions of technology as a teaching and learning tool, focusing specifically on blogging. The data was coded and computed using SPSS statistical software. The survey was pretested in another course within the discipline in the Fall 2017 semester.

Data & Sample

The data for this study was collected during the Fall 2017 semester. The sample consisted of students enrolled in a research methods course that is offered each year in the fall semester. To examine the impact of blogging on students' performance, data (grades) from a class, (Section A), which did not use web blog, was used as a comparison group. Students in Section B were asked to complete a survey after they turned in their final research paper. They were advised that they could decline to participate in the study. They were given a consent sheet. The questionnaire tapped into the two research questions that focused on reduction in anxiety and improving appreciation and knowledge of course content. The questionnaire was only administered to section B. The survey consisted of 12 close-ended questions and 2 open-ended questions. The development of items to examine these research questions was derived from the literature (Oomen-Early & Burke, 2007; Goldman et al., 2008) and from attendance at an action research seminar offered by the University's teaching and learning center. There were 15 students enrolled in Section B and they all completed the survey.

Measurement

Dependent Variables

Three specific outcomes were measured: students' performance, reduction of students' anxiety, and students' appreciation and knowledge of course content. Thus, three research hypotheses were formulated: H₀₁: Students who blogged performance will be better than students who do not blog H₀₂: Blogging will reduce students' anxiety about research methods content

H₀₃: Blogging will improve students' appreciation and knowledge of the course content

The first hypothesis dealt with students' performance. It was measured by comparing students' participation and students' grades on the final research paper. In Section A, students' participation was measured by commentary on students' in class presentations and in Section B students' participation was measured by the comments students posted to each other's blogs. Both groups were required to make substantive comments on the work of their classmates, Section A did it in a classroom presentation setting, while Section B did it on their classmates' blog page. While Section A was not required to have a blog, their participation grade was based on their comments during in class presentations each week.

The following questions were used to assess hypotheses 2 and 3:

“Was the experience in the course less intimidating with the use of blogs?” And “can blogging help to reduce students' anxiety about research methods content?” were used to test hypothesis 2, while “how much did blog participation enrich your learning?”, “if you were required by an instructor to use blogs, did you find the comments from fellow students useful?”, “did those comments help you in the learning process?” and “did you learn the subject matter more from posting comments on fellow classmates' blog?” were used to test the third hypothesis.

Independent Variable

The predicting variable in this study is web blogging. Students were given help creating their blog by the department's library liaison using "wordpress.com". The analyses consisted of primarily descriptive statistics.

Findings

The results indicate hardly any qualitative difference in the performance levels of students in section A (students who did not blog) and section B (students who blogged). There were 10 students enrolled in section A, the average on the final paper was a C. One student got an A, two students got a B and seven students got Cs. Only one student failed the course. Students in section B performance on the paper were more proficient. Four students got As, four got Bs, four got Cs and three students made a D or worse on the paper. Based on the sample converting these grades to numbers using A = 4, B = 3, C=2, D=1 & F=0; we would have the following where: Section A = $(1 \times 4) + (2 \times 3) + (7 \times 2) + (2 \times 1) + (0 \times 0) / 10 = 24/10 = 2.4$ and Section B = $(4 \times 4) + (4 \times 3) + (4 \times 2) + (2 \times 1) + (0 \times 0) / 15 = 38/15 = 2.5$. Consequently, hypothesis one was not confirmed as the two groups performed almost similarly. There was also no apparent difference in participation level. The grades for participation in both sections were comparable. In fact, based on open-ended responses students in section B thought that the "...participation level from fellow classmates were not strong enough."

Analyses on the questions representing hypotheses 2 and 3 were done and the findings are presented in the following section. Figure 1 shows the result of one of the questions used to test the second hypothesis, "how much did blog participation enrich your learning?" The findings show that 40% of the class strongly agreed or agreed that using blogs made the experience in the course less intimidating. The same percentage was neutral with regard to the question. Only 20% of the respondents disagreed with the statement.

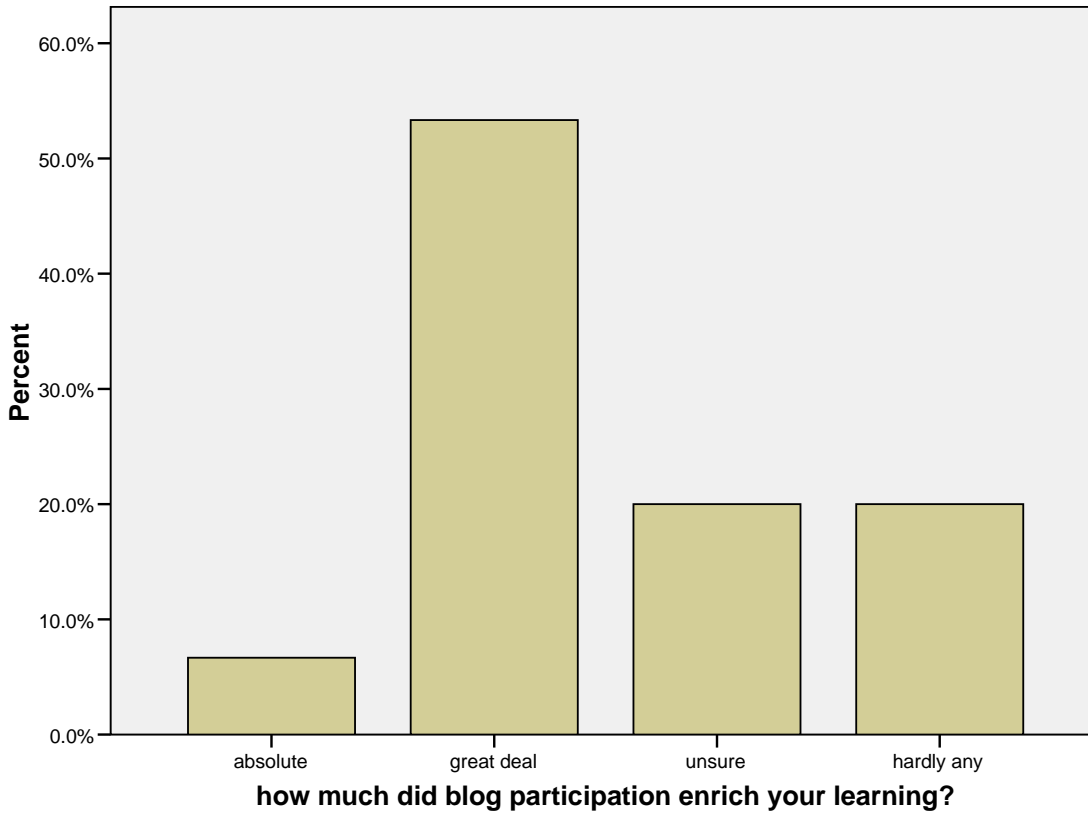


Figure 1

Figure 2 shows the descriptive statistics for the question, “can blogging help to reduce students’ anxiety about research methods content?” The findings show that 60% of the sample agreed or strongly agreed that blogging could help reduce students’ anxiety toward the course content. It is interesting to note that no respondent chose the “strongly disagree” response category, however 20% of the sample did respond neutrally to the question.

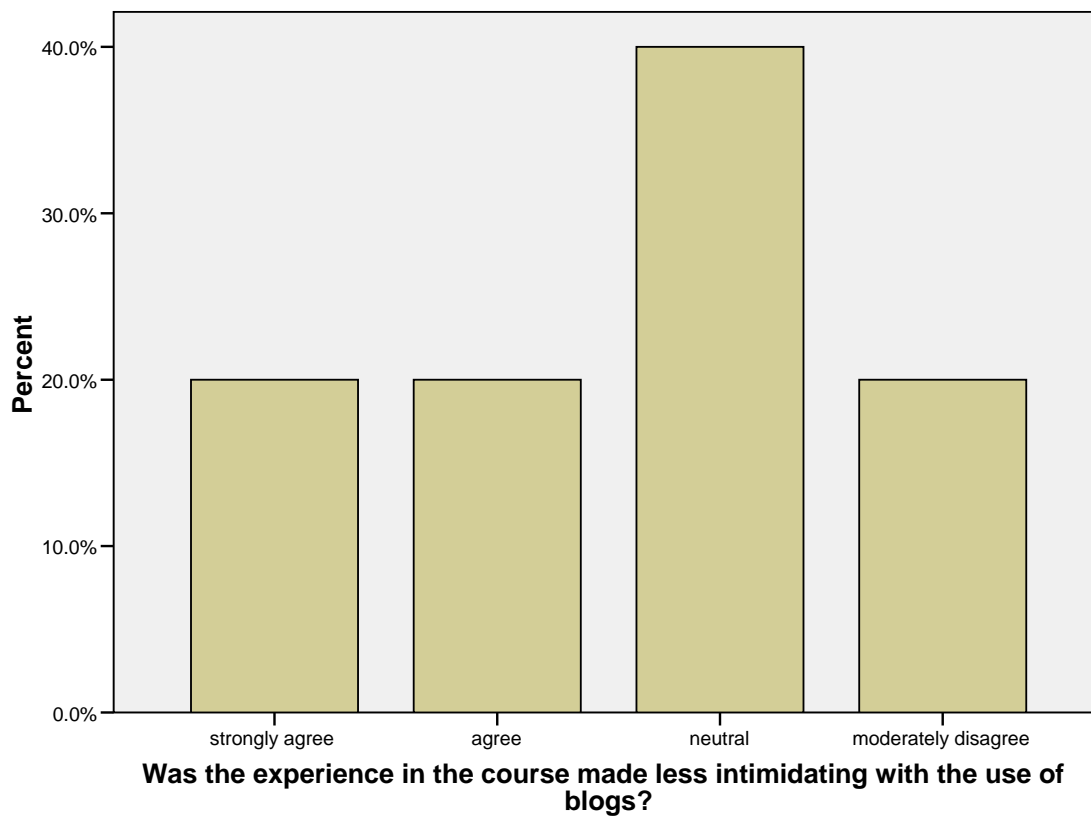


Figure 2

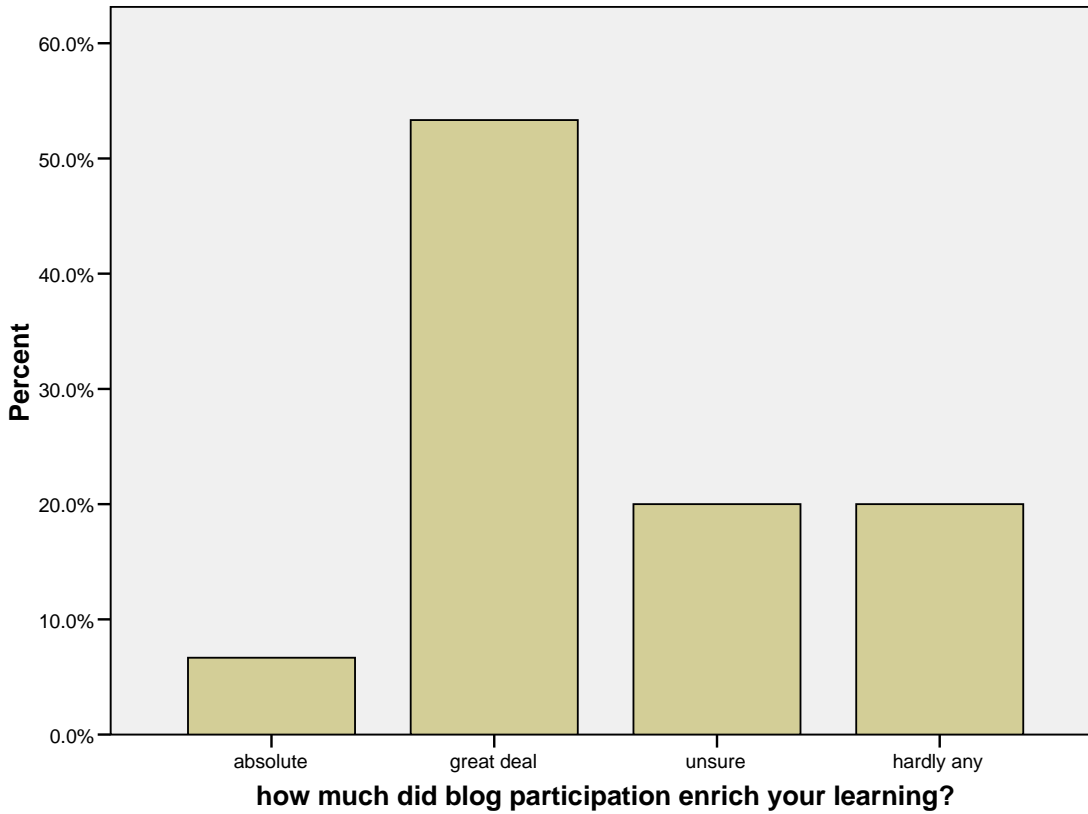


Figure 3

Figure 3 presents the statistics on the question, “how much did blog participation enrich your learning?” A majority of the class (60%) responded that the blog participation enriched their learning. Fifty-three percent of the respondents agreed that blog participation absolutely enriched their learning experience; with only 20% choosing the “hardly any” response category. Over 73% of the sample agreed that blogging was useful in enhancing their learning. Twenty-seven percent did not find it useful in enhancing their learning. Figure 4 presents the descriptive statistics for the question “if you were required by an instructor to use blogs, did you find the comments from fellow students useful?”

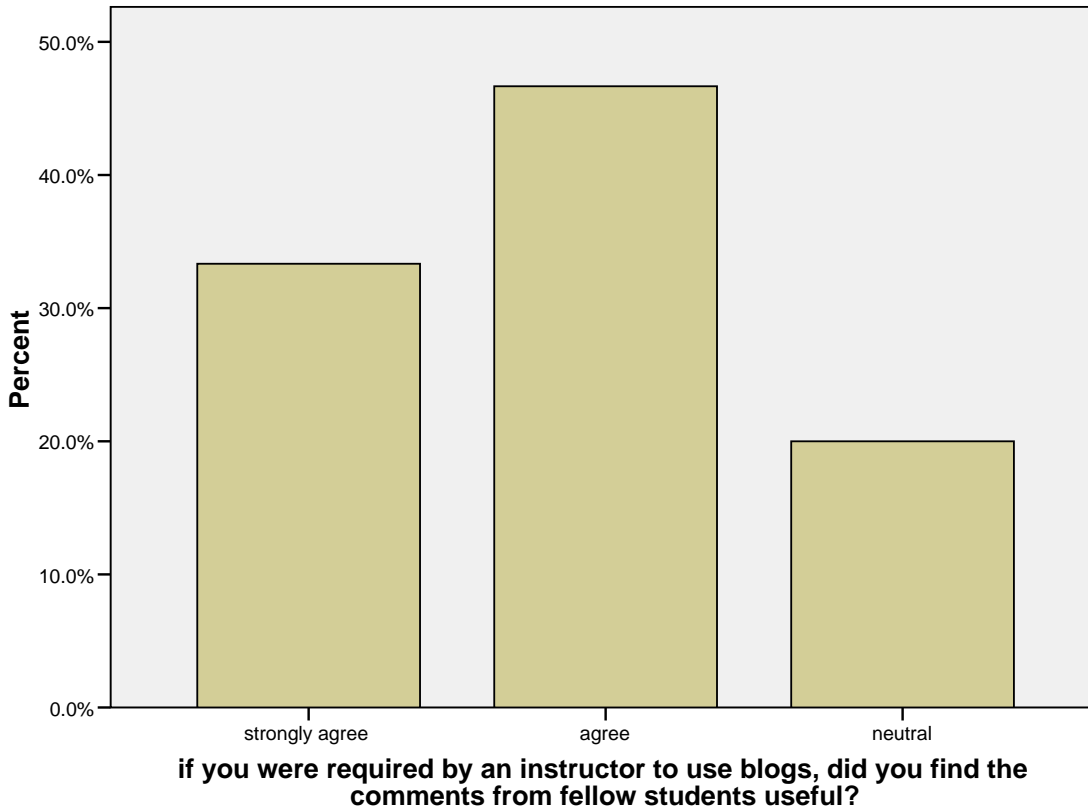


Figure 4

Almost 80% of the sample agreed or strongly agreed that they found comments from fellow classmates useful. It is important to note that 20% of the sample selected the neutral category for this question; however none of the respondents reported that this was a negative experience. Examining question 5 “did those comments help you in the learning process?” almost a third (67%) of the respondents noted that classmates’ comments helped them in the learning process (see figure 5). However, a third of the sample did indicate a neutral response to this question.

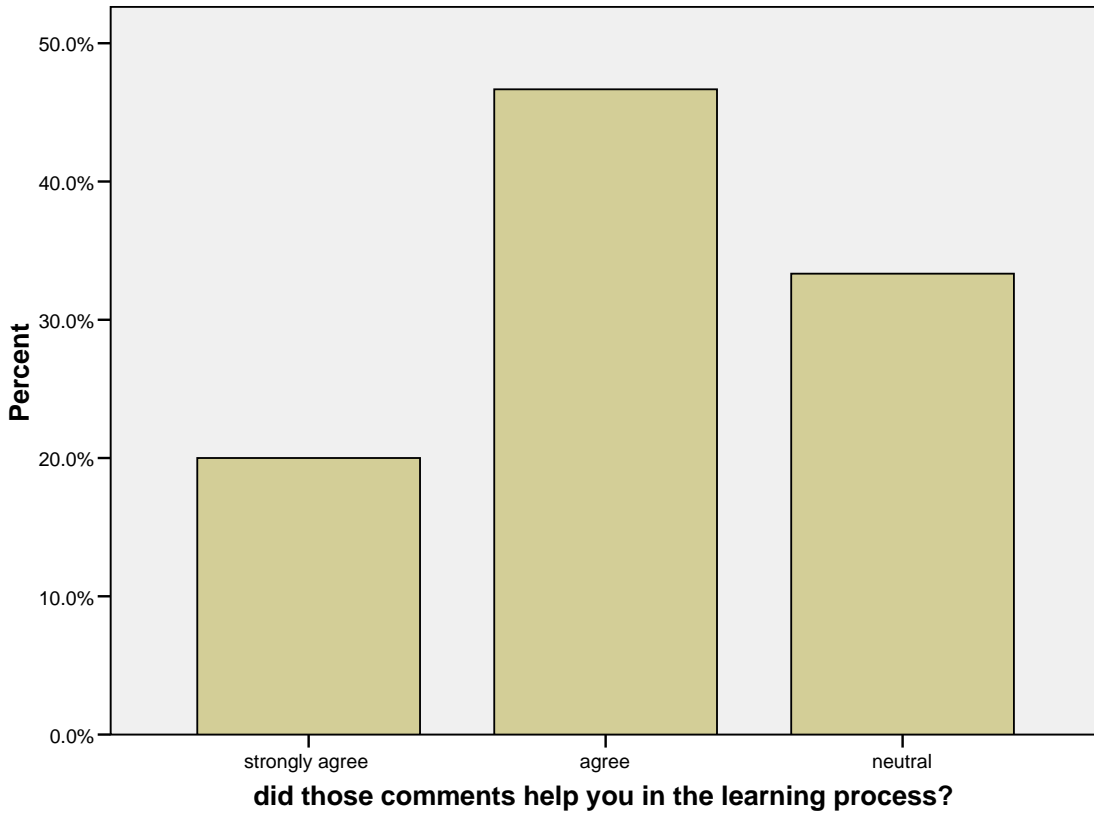


Figure 5

The final question “did you learn the subject matter more from posting comments on fellow classmates’ blog?” results are highlighted in figure 6.

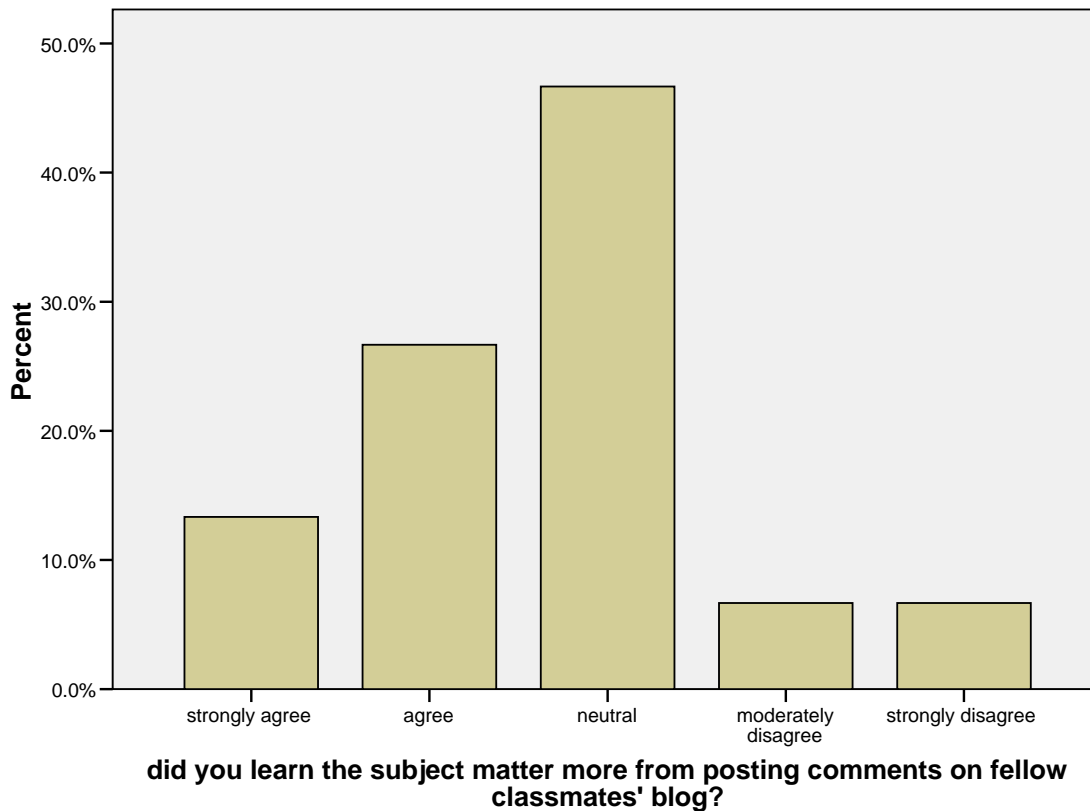


Figure 6

Only 40% of the class agreed or strongly agreed that posting comments helped them learn the subject matter more. In fact, more students choose the neutral category for this question (46.7%).

Discussion and Conclusion

Overall, the results seem to show mixed results as to the benefits of using blogs. Based on the grade on the final paper, the blogging exercise had no differential impact on the final paper of the students who blogged compared to those who did not. It also did not improve participation. It must be noted that this could have been impacted by the procedure: equality of respondents [two sections that may have had students with differing abilities] and the small size of sample. It could be class presentations maybe a more effective approach to class participation than the blog posting exercise. However, a winning pedagogical strategy could be a combination of both approaches. This is just one study and this issue needs further evaluation.

The study found some support for both hypotheses 2 and 3. Students agreed that blogging reduced their anxiety and improved their knowledge of the course content. Although this is a small sample and hardly generalizable, there are some interesting implications generated from the research. First, 53.3% of the respondents stated that blogging is a useful tool for instructors to use. Second, 73.4% of the sample strongly agreed or agreed that blogging kept them engaged in the course content. Third, 80% of the sample strongly agreed or agreed that they found the comments made by fellow students on their blogs useful.

Further, almost 70% (66.7%) strongly agreed or agreed that comments made by their fellow classmates helped them in the learning process. Additionally, 40% of the respondents strongly agreed or agreed that posting comments on their classmates' blog helped them in learning the material. The survey also asked respondents if they found blogging useful in enhancing learning, 73.3% said it did.

Based on both the results of hypotheses 2 and 3, blogging could have the potential for enhancing and enriching student's learning. It could be a useful tool in not only getting students to be more engaged learners but also helping students become critical thinkers and academic critics. The exercise allowed students to comment on other students' blog assignments and forced them to make substantive comments to help improve fellow students' blogs. Although 46.7% of the sample chose the neutral response to the question "did you learn the subject matter more from posting comments on fellow classmates' blog?" students did find the exercise useful. Eighty percent (80%) of the sample thought that the comments they received from fellow classmates were useful.

Students did complain about their peers posting habits and this might have affected these results. In citing something they did not like about blogging, students commented that "*people don't always comment*" and "*I actually really liked the blog, it would have been better if classmates had commented on postings.*" This is an area that could be further explored and utilized by instructors, as over 53% (53.3%) of the respondents thought this was a tool that instructors should use in the learning process. Students also thought the experience made them engage more in the course and that is important in pedagogical approaches to research methods.

There are fundamental differences in the learning style of students and classroom programs must offer a workable approach to deal with this diversity among students (Doyle & Rutherford, 1984). Teaching experts note the importance of "preferences for modality of learning (visual, auditory or kinesthetic)" (Doyle & Rutherford, 1984; pg. 21; Dunn & Dunn, 1978), but they also note that the most effective instructional strategy seems to be an approach that has a combination of "task clarity, feedback and opportunities for practice" (Doyle & Rutherford, 1984; pg. 22). The research also noted that effectively activating the intellectual processes is the most important step in effective learning (Doyle & Rutherford, 1984). Teaching is difficult and teaching certain subject matter more so. What students have to do in their coursework—task—are central in shaping what they learn and how they think (Doyle & Rutherford, 1984). To do this effectively, innovative approaches that engage and immerse students in the subject matter are central to effective teaching. This is just one study's results highlighted here, but it suggests incorporating blogging in teaching research methods could be a viable and effective pedagogy strategy.

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