STUDENT PERCEPTIONS OF WIKIPEDIA AS A LEARNING TOOL FOR EDUCATIONAL LEADERS[*]

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Abstract

This non-experimental qualitative study examined archival survey data collected to evaluate the efficacy of a research assignment utilizing Wikipedia. Respondents were 14 doctoral students enrolled in Educational Leadership coursework during Fall 2011. There is limited research available on this topic, as Wikipedia has been minimally utilized as a legitimate learning tool in the education setting. Parker and Chao (2007) noted that Wikis are one of many Web 2.0 components that could be used to enhance the learning process. The primary purpose of this study was to investigate doctoral student's perceptions of Wikipedia as an instructional tool in Educational Leadership coursework. The researchers also examined if completing this assignment changed students' understanding and anticipated future use of Wikipedia. Students responded that they felt Wikipedia was as effective or more effective than traditional research assignments for meeting learning objectives. In addition, their perceptions and expected use changed as a result of this assignment. Data suggested that students anticipated use expanded from primarily personal use to applications in academic and professional settings.

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2 Sumario en español

Este estudio cualitativo no experimental revisó los datos de archivo de inspección reunieron para evaluar la eficacia de una tarea de investigación que utiliza Wikipedia. Los demandados fueron 14 estudiantes doctorales matriculados en deberes Educativos de Liderazgo durante Otoño 2011. Allí es limitado investigación disponible en este tema tan Wikipedia ha sido utilizado mínimamente como una herramienta de aprendizaje legítima en la colocación de la educación. Parker y Chao (2007) notó que Wikis son uno de muchos Web 2,0 componentes que podrían ser utilizados para aumentar el proceso de aprendizaje. El propósito primario de este estudio fue de investigar las percepciones de estudiante doctorales de Wikipedia como una herramienta instruccional en deberes Educativos de Liderazgo. Los investigadores también revisaron si completando esta tarea estudiantes cambiados que comprenden y anticiparon futuro uso de Wikipedia. Los estudiantes respondieron que sintieron Wikipedia fue como efectivo o más efectivo que tareas tradicionales de investigación para encontrar aprender objetivos. Además, sus percepciones y el uso esperado cambiaron a consecuencia de esta tarea. Los datos sugirieron que estudiantes anticipaban el uso expandió del uso principalmente personal a aplicaciones en el académico y ajustes profesionales.

NOTE: Esta es una traducción por computadora de la página web original. Se suministra como información general y no debe considerarse completa ni exacta.

3 Introduction

Oliver Wendell Holmes (as cited in Brown, 1989) suggested, "Man's mind, once stretched by a new idea, never regains its original dimensions" (p. 65). In the pursuit of new ideas for delivering content in doctoral level educational leadership coursework, the authors participated in Wikipedia Ambassador Training, part of the larger Wikipedia Global Education Program. The core function of the Global Education Program is to introduce faculty to Wikipedia and expand Wikipedia's use as a teaching tool. These Wikipedia assignments serve as tools for supporting and achieving learning objectives of the professor (Dunican, 2011).

After attending the training seminar on Wikipedia, the researchers learned about the legitimacy of this platform and ways it could be utilized to improve learning experiences in the classroom. Armed with this new knowledge, the researchers sought to gauge doctoral student's perceptions of Wikipedia as a learning tool in an Educational Leadership doctoral program at a Carnegie Doctoral/Research University in Georgia. Initially students conducted research on an administrative theory or theorist who has contributed to the knowledge base about leadership and organizational behavior. Then the students created or updated Wikipedia pages with their findings. Upon completing the assignment, students completed a survey to evaluate the assignment.

The initial purpose of the survey was to inform two faculty members about the efficacy of this assignment for future iterations of this course. Archival data from the assignment evaluation served as the basis for

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[1] http://www.ncpeapublications.org/latest-issue-ijelp.html

this study. Furthermore, data was examined regarding perceptions and expectations for future use after incorporating Wikipedia into the classroom assignment. Information gathered from this study will help to advance practices of teaching and learning. In addition, it will help to understand the perceptions of Wikipedia as a teaching tool for students enrolled educational leadership courses. Furthermore, the intent of the study was to see if exposure to Wikipedia impacted those perceptions.

4 Review of Literature

Educators have long sought varied means of learning for their students. While technology has in many ways made learning easier, it has also made educators more wary of the legitimacy of information found online (Bender, 2003). One online source that has come under scrutiny in the education world is Wikipedia.

4.1 Wikipedia Background

In the early 1990s web developers created an interactive website which users could add, edit, and delete content, and dubbed them wikis (Bergin, 2002). The term wiki literally means "fast" in the Hawaiian language. Originally part of an online encyclopedia project, Wikipedia was created in January 2001 by Larry Sanger and Jimmy (Jimbo) Wales. By incorporating the wiki concept into an educational format, Wikipedia developed into a collaborative, working encyclopedia (Dunican, 2011). The information found on Wikipedia is continuously changing and updating based on information supplied by anyone who creates an online account. Although some view open editing as an argument for a lack of quality, others see it opportunity for open peer review by a global audience (Parker & Chao, 2007). Since 2001, Wikipedia has become the fifth most popular website in the world and has over 400 million unique visitors each month (Dunican, 2011). The literature reveals a number of academic and nonacademic applications for Wikipedia.

4.2 Wikipedia Use

Wikipedia is often viewed as a tool used for nonacademic purposes. Rainie and Tancer (2007) found that most people used Wikipedia for casual searches of pop culture, politics, and history. Similarly, Spoerri (2007) examined the 100 most-visited Wikipedia pages between September 2006 and January 2007. This study revealed that over half of the Wikipedia pages visited during this time period were in the areas of entertainment, politics, and history.

There is limited research available on the use of Wikipedia for instructional purposes, as Wikipedia has only recently been utilized as a legitimate learning tool in the educational setting (Chen, Cannon, Gabrio, Leifer, Toye, & Bailey, 2005; Evans, 2006). Parker and Chao (2007) noted that wikis in general are one of many Web 2.0 components that could be used to enhance the learning process. Boulos, Maramba, and Wheeler (2006) also suggested that wikis have educational merit because they actively involve learners in their own construction of knowledge.

While most publications about formal educational uses of wikis originate from fields related to computer sciences (Gabrilovich & Markovitch, 2006; Guzidal, 1999; O'Neill, 2005; Raitman, Augar, & Zhou, 2005), slowly Wikipedia is being incorporated into formal college classroom settings (Choy & Ng 2007;Martin & Premadasa, 2010; Notari, 2006). In 2009, Lim found that that one-fourth of the college students she studied used Wikipedia for academic reasons.

Despite researchers' attempts to discuss Wikis as a legitimate learning tool, the dearth of research regarding the use of Wikipedia as an instructional tool leaves a gap in this knowledge base. In addition, while it is clear that Wikipedia is being used within higher education settings for both learning and instruction, there are still questions related to its usefulness for instruction.

4.3 Accuracy of Wikipedia

Given the nature of Wikipedia, whereby anyone can add or edit data, many questions have been raised regarding the reliability of this platform (Lucassen & Schraagen, 2010; Stvilia, Twidale, Smitch & Gasser,

2005). Konieczny (2007) made the point, "Wikipedia has faced its share of controversies, concerning primarily its reliability and accuracy; it has been criticized for its susceptibility to vandalism, uneven quality and inconsistency, systemic bias, and preference of consensus or popularity over credentials" (p. 11).

Denning, Horning, Parnas, and Weinstein (2005) found that people perceived some risks in using Wikipedia. These risks included:

1. Accuracy: Not knowing which content is accurate; often exacerbated by lack of references.
2. Motives: Not knowing the motives of editors, who may be biased for various reasons.
3. Expertise: Not knowing the expertise of editors.
4. Stability: Not knowing the stability of an article and how much it has changed since the last viewing.
5. Coverage: Spotty coverage of topics.
6. Sources: Cited information may come from hidden or nonindependent source.

With these issues in mind, many studies have followed in order to measure and enhance the credibility of Wikipedia (Adler, Chatterjee, de Alfaro, Faella, Pye, & Raman, 2008). In 2005, Giles claimed that Wikipedia showed virtually the same level of reliability and accuracy as the Encyclopedia Britannica. Similarly, Rosenzweig (2006) found evidence that Wikipedia is comparable in accuracy to respected academic sources such as Encarta and American National Biography Online.

While it is important to be cautious of the educational merits of Wikipedia, it is no more of a risk to use it than other, accepted tools. Rosenzweig (2006) touched upon this problem and offered a thoughtful analysis when he stated the following:

4.3.1

Should we blame Wikipedia for the appetite for predigested and prepared information or the tendency to believe that anything you read is true? That problem existed back in the days of the family encyclopedia. And one key solution remains the same: Spend more time teaching about the limitations of all information sources, including Wikipedia, and emphasizing the skills of critical analysis of primary and secondary sources. (p. 137)

Once instructors get beyond the credibility issues, it is important to determine how Wikipedia can be used as a learning tool, specifically for those in educational leadership. To accomplish this, instructors must critically evaluate potential benefits and challenges of a Wikipedia project. One way to accomplish this is by having students actively contribute and/or edit meaningful literature in Wikipedia. Wikipedia policy dictates that only a "neutral point of view" will be accepted. Multiple sides of an issue must be presented in order for it to be allowed to remain as part of Wikipedia (Dunican, 2011). This policy makes any contributions and/or edits ready-made for student learning, as critical thinking and objectivity are paramount to sound academic writing. Furthermore, the expectations and style of encyclopedic writing are similar to those of research reports (Grauerholz, 1999). What better way for students to hone their writing skills than by putting their work on display to be commented on and improved by those around the world? Essentially they are undergoing a global peer review process.

By teaching students proper ways to utilize Wikipedia and showing them how contribute to the online learning community the researchers hoped to evaluate Wikipedia's use as a learning tool. The purpose of this study was to investigate doctoral student's perceptions of Wikipedia before and after using Wikipedia in a class project. The primary research questions were:

1. What are educational leadership doctoral students' perceptions of Wikipedia use as a learning tool?
2. Has completing this assignment changed students' understanding and future use of Wikipedia?

5 Methodology

5.1 Population

A study regarding students' perceptions of Wikipedia as a learning tool was conducted in the fall of 2011. The population consisted of doctoral students at a large Carnegie Doctoral Research University in Southeast Georgia. The study sample consisted of students in two sections of an Administrative Theory course. All 14 students were contacted after the course ended to request access to their reflections for this study. Among the respondents, seven (50%) were female and seven (50%) were male. The racial make-up of the group included a nine (64%) white and five (36%) black students. The respondents were between the ages of 27 and 49 with a mean of 39. Five (36%) of the students worked in Higher Education settings and nine (64%) worked in K-12 organizations.

5.2 Assignment

Students conducted research on an administrative theory or theorist who contributed to the knowledge base about leadership and organizational behavior. Initial research was conducted outside of class. Then, students in one class edited Wikipedia pages during a face to face class period with technology support from the University. The second group of students edited pages individually at home. To support student learning digital and hard copy versions of Welcome to Wikipedia (Wikimedia, 2010) and Using Wikipedia: Evaluating Wikipedia Article Quality (Wikimedia, 2011) were distributed and the assignment was discussed in class. Student contributions to the online encyclopedia included a minimum of ten minor edits to existing pages or major contributions to a single page. Students were assessed solely on their reflection of this experience due to the potential influence of external factors on student work due to the open nature of Wikipedia.

5.3 Survey

The initial purpose of this survey was to inform two faculty members about the efficacy of this assignment for future iterations of this course. The archival data used in this study was collected to evaluate the assignment as part of the normal curriculum for the course. Students were informed that there were no "right" or "wrong" answers. Students were also informed that the purpose was to gain valuable feedback regarding the efficacy of this assignment in the future. As such, only the name of students and the setting (Higher Ed. or K-12) were asked as demographic questions. Students received credit for completing the survey for this assignment. After the conclusion of the course, IRB compliance forms were completed for this archival data and consent forms were distributed to the students by another faculty member. At that time additional demographic information was requested including age, sex, and race/ethnicity. Students responded to Likert questions items focused on their perceptions of Wikipedia prior to and after completing the assignment, use of Wikipedia prior to and after taking the course, and feelings regarding Wikipedia as a learning tool. Open ended response questions asked how they planned on using it in their setting, the effectiveness of the assignment, and the most challenging/easy parts of the assignment. In addition, students were asked for suggestions regarding the assignment.

5.4 Procedures

This was a non-experimental qualitative study. Archival data collected using Survey Monkey was analyzed using descriptive statistics for closed items and an inductive analytical approach for open-ended responses (Thomas, 2006). The purpose for using the inductive approach was to condense the raw text data into a brief, summary format, to establish clear links between the research objectives and the summary findings and to develop a theory about the underlying structure of experiences. This approach is evident in several types of qualitative data analyses including grounded theory (Strauss & Corbin, 1990; Miles & Huberman, 1994; Pope, Ziebland, & Mays, 2000). Open ended responses were read several times to identify themes. After a discussion, a coding frame was developed and transcripts were coded in a hierarchal fashion (Figure 1). Themes included Perception of Wikipedia and Use of Wikipedia. Perception of Wikipedia was further

categorized by time; Before Assignment and After Assignment. An additional level of sub-categories included positive, negative, and no/limited knowledge. Sub-categories for Use of Wikipedia included Before Assignment and Projected Use. The next level of sub-categories was coded as Academic, Personal, and Professional.
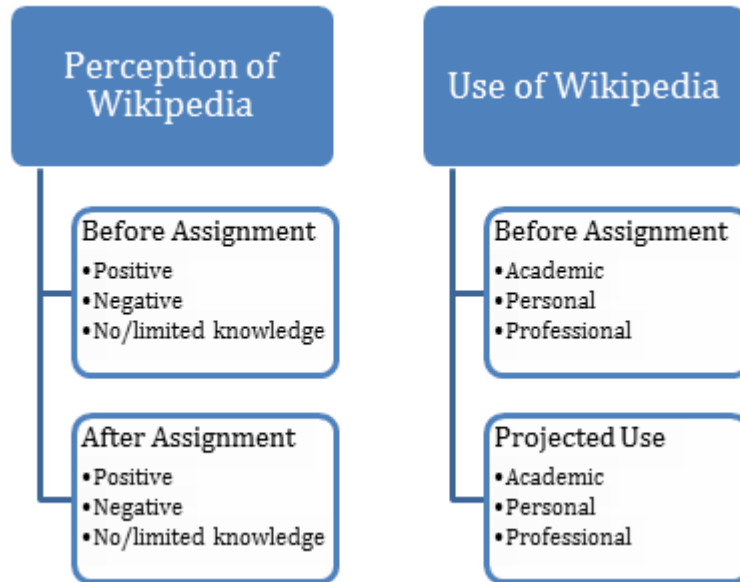

Figure 1: Thematic Framework for this study.

5.5 Findings

The findings are arranged by research question. The first section addresses Research Question 1; what are educational leadership doctoral students' perceptions of Wikipedia use as a learning tool? The second section addresses Research Question 2; has completing this assignment changed students' understanding and future use of Wikipedia?

Perception of Wikipedia

Initially the researchers analyzed descriptive data from Likert response items regarding to perceptions prior to completing and after completing the assignment. In addition, open-ended responses were analyzed. The purpose of these survey items was to evaluate general perceptions regarding Wikipedia and the research question, "What are educational leadership doctoral students' perceptions of Wikipedia use as a learning tool?"

Perceptions Before

When asked about their perception of Wikipedia prior to the course, student responses varied. Despite this variance there appeared to be a general perception that Wikipedia was not accurate, articles were not well written, articles included bias, and they were not as reliable as a print encyclopedia is (see Figure 2).
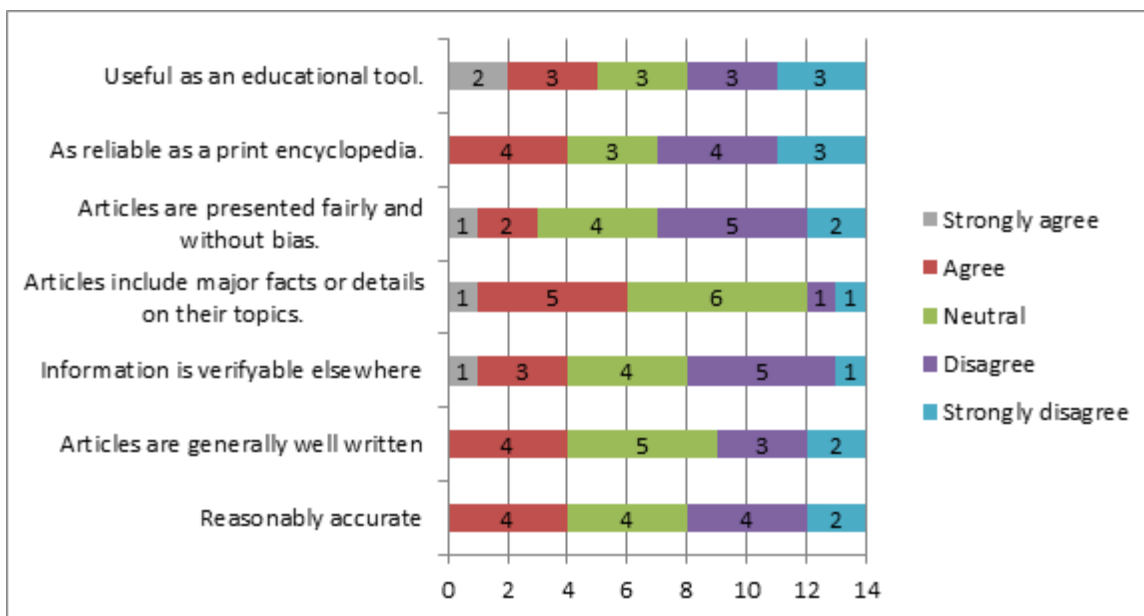
Figure 2: Perception of Wikipedia prior to this assignment.

Forty-three percent (n=6) of the students either disagreed or strongly disagreed with the statement, "Wikipedia is reasonably accurate" while 29% (n=4) agreed that it is accurate. Twenty-nine percent (n=4) students were neutral. Thirty-six percent (n=5) of the students disagreed or strongly disagreed with the statement, "articles are generally well written." In contrast, twenty-nine percent (n=4) felt that they were well written. Thirty-six percent (n=5) of the students were neutral. Forty-three percent (n=6) expressed some level of disagreement with the statement, "Information on Wikipedia is verifiable elsewhere" as opposed to 29% (n=4) who expressed some level of agreement. Twenty-nine percent (n=4) were neutral. For the statement, "Wikipedia includes major facts or details on relevant topics", 43% (n=6) of the students either agreed or strongly agreed, while only 14% (n=2) of the students indicated some level of disagreement. A high percentage of students (43%, n=6) were neutral. Fifty percent (n=7) of the students either disagree or strongly disagreed with the statement, "Wikipedia articles are presented fairly and without bias." Only 21% (n=3) responded that the articles were unbiased. Twenty-nine percent (n=4) were neutral. There was also a perception that Wikipedia was not as reliable as a print encyclopedia based on 50% (n=7) indicating disagree\strongly disagree for the statement, "Wikipedia articles are presented fairly and without bias". Twenty-nine percent (n=4) agreed while 21% (n=3) were neutral. The final statement regarding Wikipedia's use as an education tool garnered relatively evenly divided responses with 43% (n=6) disagreeing with the statement, "Wikipedia is useful as an educational tool". Thirty-six percent (n=5) agreed and the remaining twenty-one percent (n=3) were neutral.

Open ended responses were organized into themes. An example of a positive response was, "I believe Wikipedia is a great jumping off point for students to quickly become familiar with a topic, and to utilize the citations and references included to verify the source data." A response that suggested a negative view of Wikipedia was, "In the past, when I have 'Googled' a topic to be researched and a Wikipedia reference has come up, I have rejected that article because I perceived it to be unreliable and/or inaccurate." A third category was formed to include text that suggested limited or no knowledge of Wikipedia. This included students commenting, "I never really gave much thought to Wikipedia" and "Previously I didn't know much about this resource." These responses accurately describe students' perceptions regarding Wikipedia use for learning prior to completing the assignment.

Perceptions After

The next question was developed to collect data on their perception of Wikipedia after completing this assignment. The vast majority of students responded in agreement or strong agreement to most of the
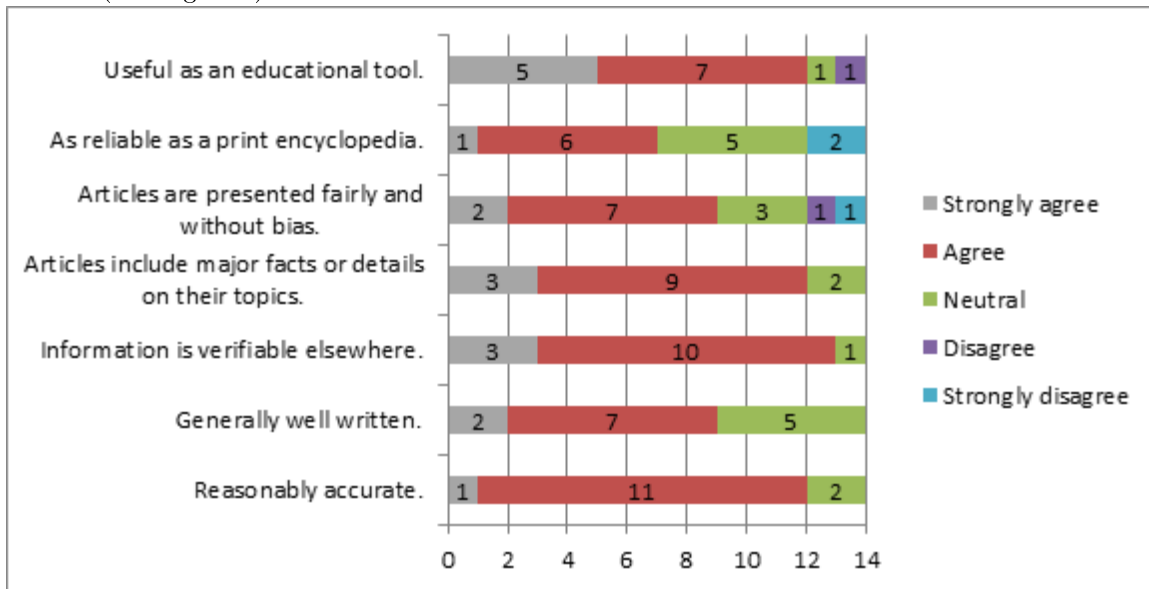
statements (See Figure 3).

Figure 3: Perception of Wikipedia after taking this course.

To the statement that the Wikipedia is reasonably accurate, 86% (n=12) agreed, 14% (n=2) were neutral, and no one disagreed. To the statement that articles are generally well written, 64% (n=9) showed agreement or strong agreement, 36% (n=5) were neutral, and no one disagreed. Ninety-three percent (n=13) of the respondents agreed or strongly agreed that Wikipedia is verifiable elsewhere. Only 7% (n=1) were a neutral. Eighty-six percent (n=12) agreed that Wikipedia articles include major facts or details on their topics. The remaining students (n=2) felt neutral about that statement. After completing this assignment 64% (n=9) indicated some level of agreement with the statement that Wikipedia articles are presented fairly and without bias. Twenty-one percent (n=3) were neutral and 14% (n=2) showed some level of disagreement. Half (n=7) of the students felt that Wikipedia was as reliable as a print encyclopedia. Thirty-six percent (n=5) were neutral and 14% (n=2) strongly disagreed. For the last statement regarding Wikipedia's use as an educational tool, 86% (n=12) agreed, 7% (n=1) were neutral, and 7% (n=1) disagreed.

Open ended responses to this question were coded into the positive and negative categories during the analysis of data. Due to the nature of the assignment, it is not surprising that no student responses were coded as "no/limited knowledge." The majority of the open ended responses were positive. One student stated:

5.5.1

What surprised me most is that there are actual editors for the web pages and that other users continuously check for errors. I was pleased to find out that there is a good deal of fact checking that goes on.

Another student added:

5.5.2

After this assignment, my perception of Wikipedia has changed. Although, I would not list it in a reference list for a scholarly assignment, I would use it as a source of information and then take the information that I have learned to cross-reference and to do further research.

A third student concurred, "Wikipedia is still not respected by the academic community but it is a tool for researching that I will not hesitate to use in the future."

A fourth student also corroborated these positive comments:

5.5.3

I love learning new views on topics that I thought I understood. I had a very strong bias against any use of Wikipedia. I enjoyed having new ideas presented and beginning to open my mind to a new way of viewing things.

These statements corresponded with positive perceptions of Wikipedia and indicate that the assignment had a positive impact.

Negative perceptions also existed. One student added, "Although this has opened my eyes to possible uses of Wikipedia I have not had enough opportunities to verify accuracy for myself to make decisions about its use as an educational tool or its level of bias." It was clear that this student is still hesitant and cautious about using Wikipedia. This type of caution is advised when evaluating all sources of research given the bias in much of the information that is available today through various for profit and non-profit sources.

To further investigate student perceptions of the assignment to support learning, an additional question was asked. These results can be seen in Figure 4. Only 21% (n=3) of the students felt that it was much more effective, 43% (n=6) felt that are slightly more effective, 29% (n=4) felt it was equally effective, and 7% (n=1) felt that it was slightly less effective than traditional assignments. These findings were consistent with open-ended responses. Open-ended responses were coded as positive and negative. Since part of the assignment included learning about Wikipedia, there were no responses coded as no/limited knowledge. One positive response was, "The interactive nature of this assignment allows the application of information and allows the student to feel as though they made a useful contribution to the field of academia."
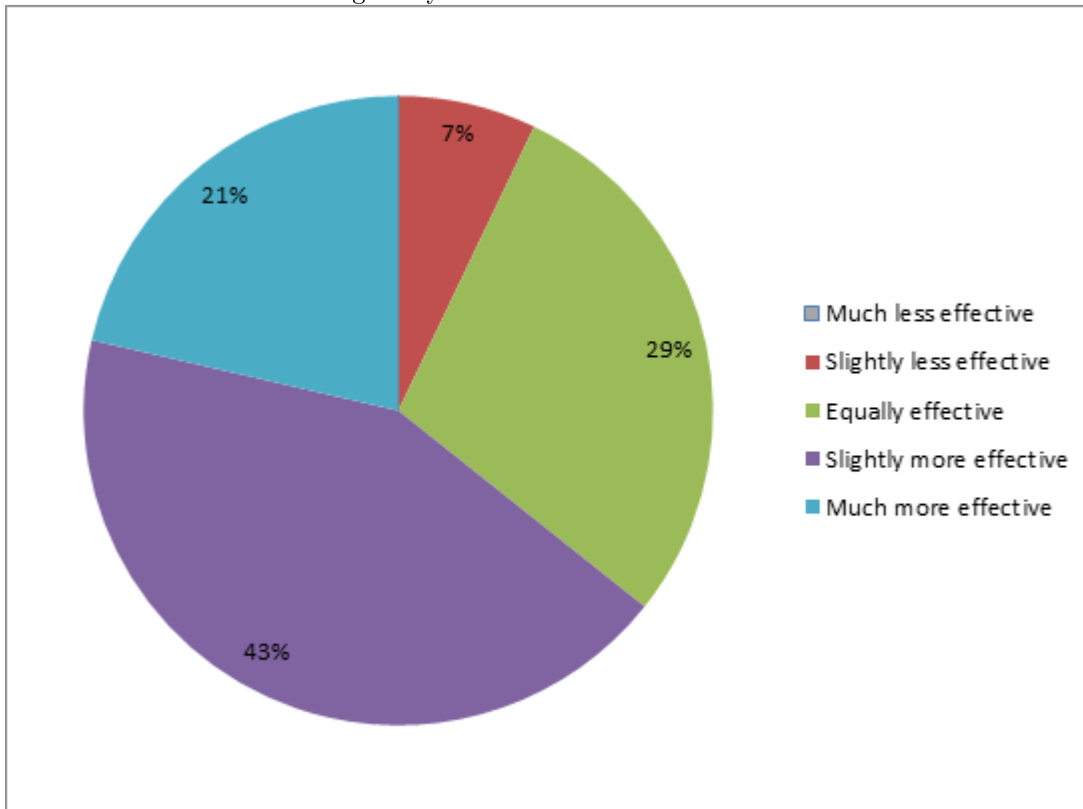

Figure 4: Effectiveness compared to traditional assignments.

Statements such as,"There is something satisfying about contributing to the knowledge pool" and "Taking part in researching and contributing changes helped us to have a better global view in an applied manner" suggest that students appreciated the importance of their work having an impact beyond the classroom. Another positive response mentioned the importance of evaluating material:

5.5.4

Wikipedia is a great quick reference tool. They key is knowing how to evaluate the quality of the material presented, such as by clicking on the links to sources. I believe faculty should teach students how to effectively utilize the tool; not simply avoid it like the plague.

This touched on the importance of skills embedded in this assignment such as critical thinking and evaluating information. This is of increasing importance in a digital age where information is abundant and information regarding content quality is scarce.

A comment that was coded as a negative perception was, "More class discussion on this topic would have been necessary for it to be an effective research assignment." This response clarified why one student felt the assignment was "slight less effective" that traditional assignments (based on Likert responses).

The next question addressed the students' feelings about using Wikipedia as a learning tool (See Figure 5). Ninety three percent (n=13) of the students felt they were more confident in evaluating the quality of the Wikipedia articles after completing this assignment. Fifty seven percent (n=8) of the students of thought that it helped them develop a better understanding of the required material for the course, while one student disagreed, and another one strongly disagreed with this statement. The next question asked students if they would recommend this assignment for future implementation. Fifty seven percent (n=8) of the students strongly agreed with this statement and 36% (n=5) agreed. One student indicated a neutral response. These findings suggest that the majority of the students found this to assignment to be of value for educational purposes.
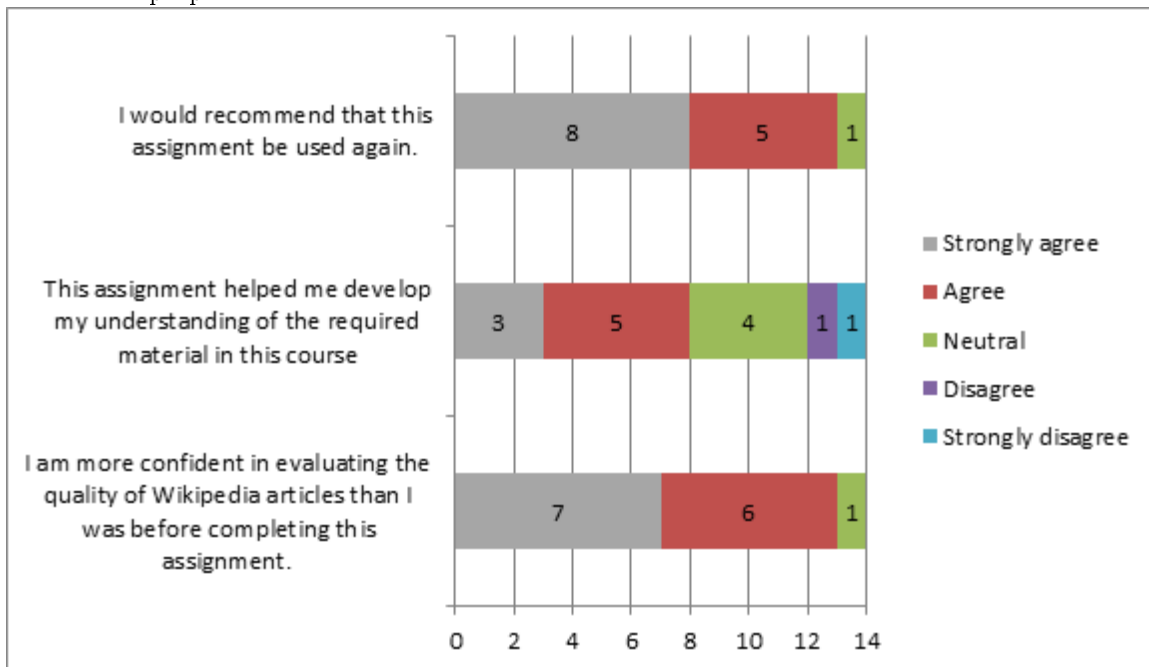

Figure 5: Student perceptions of Wikipedia as a learning tool.

The next two questions were designed to collect data regarding students' prior use of Wikipedia and anticipated use in the future.

Use of Wikipedia

To answer the second research question, the researchers analyzed descriptive data from Likert response items and open-ended questions regarding to students' actual and anticipated use of Wikipedia prior to and after completing the assignment.

Use Before

This section included ten items to describe students' use of Wikipedia for academic, personal, and professional reasons. There were four items targeted academic use, three items focused on personal use, two items

that focused on professional use, and one item focused on overall use. Figure 6 encapsulates the student responses regarding their use of Wikipedia prior to the course.
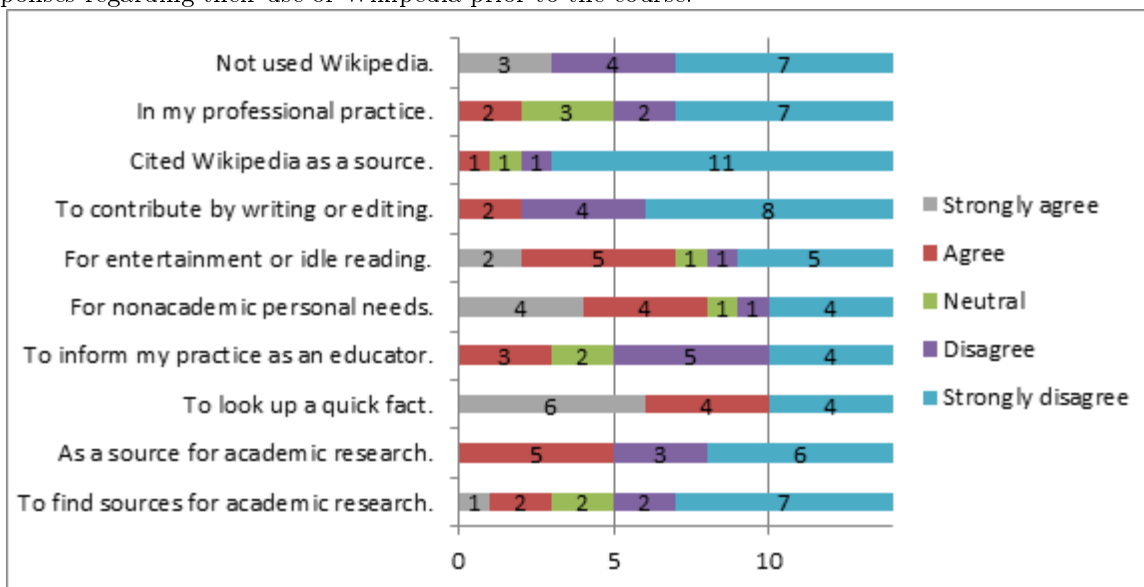

Figure 6: Use of Wikipedia prior to the assignment.

Responses were coded as academic, personal, or professional. Prior to this assignment, 79% (n=11) of students had used Wikipedia. Analysis of individual questions suggested that students primarily used Wikipedia personal reasons such as looking up a quick fact, for entertainment, or for other nonacademic personal needs. This is consistent with past research. There was a strong indication that students had not used Wikipedia for academic or professional reasons. Sixty-four percent (n=9) of the students indicated that they had not used Wikipedia for academic purposes. Sixty-four percent (n=9) of the students indicated they had not used the Wikipedia for professional reasons.

Open ended responses provided further insight. One comment that was coded as "Personal" and "Academic" was, "Prior to the class, I used Wikipedia only as a basic reference source for personal use or on the periphery of an academic assignment." Although this suggested limited use, this response was one of the few that suggested use of Wikipedia for academic purposes. Another response touched on personal and academic use, "I was under the impression that Wikipedia was for quick references or entertainment, not academic research." Although this statement indicated perception of use, it supports the conclusion that students did not use Wikipedia for academic purposes prior to engaging in this activity.

This statement summarized the feeling of some of the students and may be reflective of many educators perceptions, "Terrible to say so but I had opinions about it without ever really checking it out in any depth!" Another added, "My professors have warned me about using Wikipedia so I have made a concerted effort to avoid it in my professional and private practices." These responses give some insight into the earlier findings that students have not used Wikipedia for professional and personal purposes. These responses were for students who had used Wikipedia, as some indicated that they had not used it before.

Projected Use

The next section included 10 items to determine students' plans for using Wikipedia after taking this course (see Figure 7). Seventy-nine percent (n=11) of the students indicated that they would use Wikipedia in the future, while two students (14%) were neutral. One (7%) would not use Wikipedia. For the three items regarding personal use, the majority of the students indicated if that they would continue to use Wikipedia. Eight (57%) of the students indicated that it planned to use it in some fashion in their professional practice. Approximately a third of the students were neutral and about 10% of the students felt they would not use Wikipedia.
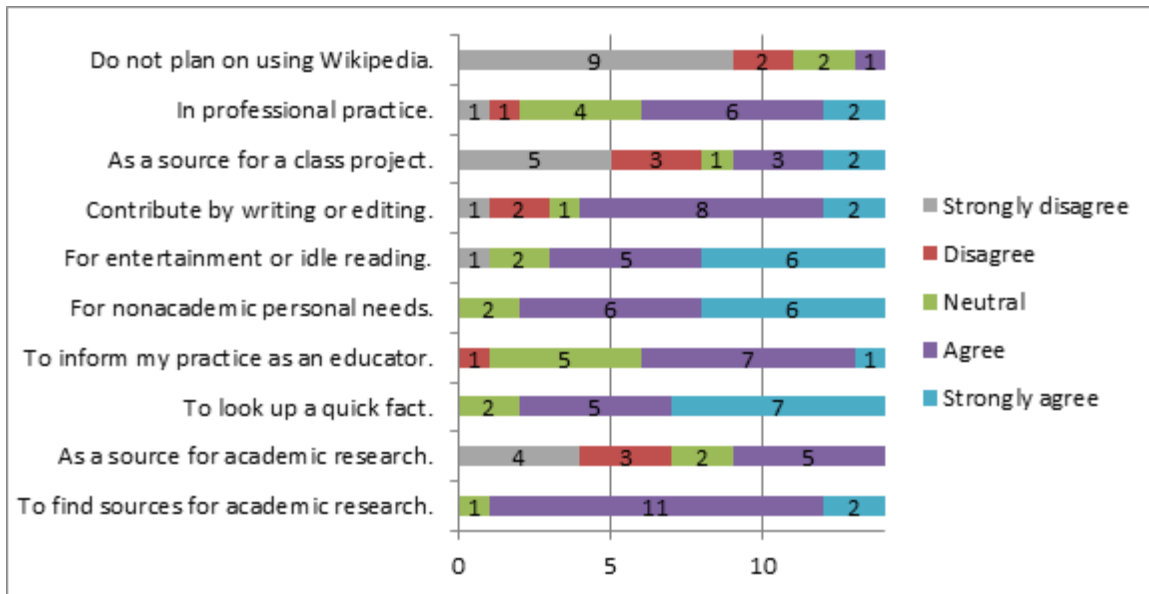
Figure 7: Plans for future use of Wikipedia.

The four items regarding academic use resulted in interesting responses depending on the specific academic purpose. Ninety three percent (n=13) of the students indicated that they would use Wikipedia to locate sources, which might be useful for academic research, while the majority (n=9) of the students felt that they would not cite Wikipedia as a source. This was an important delineation as Wikipedia should not be used in academic research but may be useful in identifying relevant sources. After completing this assignment 71% (n=10) of the students felt that they would contribute to an article in the future. Another important point to note is that some students indicated that they would use Wikipedia as a source for a class project. Further teaching should be done to clarify that this is not recommended practice for academic writing.

Open ended questions helped explain some of the Likert responses. Students indicated they had a better understanding of how it could be used for academic purposes after completing this assignment. Some students viewed Wikipedia as a possible source for future research. "While I do use Wikipedia to inform my educational projects, I would not be comfortable citing Wikipedia. It is not a primary source. However, it does help lead me to quality primary sources."

In support of personal use, a student responded, "I do think I will likely try to contribute to Wikipedia frequently. I feel compelled to contribute since I do use it and benefit from it". Another comment regarding personal use was, "Now that I know how to edit and add to articles, I may do that as I see fit." The desire to contribute further suggests that the student found this assignment relevant and had a personal connection to the outcomes. Other students expressed no change in their future use. "I still cannot see myself utilizing Wikipedia for professional or academic needs at this time."

Other responses suggested future professional use in their own teaching practices, "Although I will not use Wikipedia as a resource for academic research, I will use it with my students, to find basic info, and for entertainment." An additional comment included:

5.5.5

Although I would still never use Wikipedia as a source on an assignment, I will incorporate it into my practice more often. I plan on using a very similar (but watered down) assignment next time I teach my course. I struggle with students using Wikipedia as an academic source on papers and I think this assignment will help them to use Wikipedia in a more beneficial way.

Another stated, "Great assignment! I'm going to 'steal' the idea for my own students." These responses indicated ways students felt they might be able to use Wikipedia in their professional practice. Further

investigation was conducted to analyze ways students believed they could use Wikipedia to support learning in their specific setting (K-12 or Higher Education).

One comment from a practitioner in Higher Education was:

5.5.6

I think of Wikipedia as being the 'first responder' in the field of research. It can be used first to research an unfamiliar topic to serve as a foundation for a more specific key term search. The different sections of the search can be to gain a greater understanding of the topic.

In a course that another student teaches, they stated:

5.5.7

I always teach that students must learn to be sources of knowledge rather than be victims of fourth party information. I plan to duplicate this assignment to give them a feel on how they can contribute to the common stock of knowledge in their academic and social environments.

In K-12 settings, one student responded, "I feel that Wikipedia would be beneficial to my third graders as an introductory tool to doing research. It would greatly help when researching their topics during our informational writing unit."

Others maintained their belief that Wikipedia is solely for personal use, "I will use it for the purpose of entertainment or non-academic personal needs only. I cannot overcome the years of being told by my professors that Wikipedia is unreliable. My perception has changed but not completely." Another skeptically responded, "I'm unsure. I'd have to evaluate possible options for teachers to use this resource." These comments provided insight to the changing perceptions that occurred as a result of this assignment.

5.6 Discussion

In conceptualizing this assignment, the authors decided to include this assignment in lieu of a traditional research assignment. One consideration was that effective teaching calls for broadening the horizons of our students and exposing them to diverse thoughts so that they can make informed decisions. In addition we desired to give the students an authentic learning experience in which they could contribute to the global knowledge base directly. For this assignment the peer review group was a global audience rather than a single person who was assigned to teach the course. Given the responses to this assignment, it appears that this goal was achieved. Feedback from the assignment was generally positive.

This study examined educational leadership doctoral students' perceptions of Wikipedia use as a learning tool and whether completing this assignment changed these students' understanding and future use of Wikipedia. Prior to completing this assignment students viewed Wikipedia as a resource for general use in their personal lives, but had not considered professional or academic applications. This was also reflected in their use of Wikipedia prior to the course. Data suggests that student's understanding and use of Wikipedia changed as a result of completing this assignment. Students indicated that they enjoyed this authentic learning experience and saw potential for utilizing it for academic and professional purposes.

5.7 Conclusions

While this study was limited to 14 students in two sections of a doctoral level class, results suggests that this project may be useful as an authentic learning experience for graduate students. In addition, the results of the qualitative inductive analysis have helped us better understand that students in this course valued the inclusion of this authentic learning assignment. The findings of this study may help school and university leaders make more informed decisions about its use in educational settings. In addition, through exposing and educating school and university leaders to Wikipedia (including how to add and gauge the accuracy of content), we have a better understanding of how Wikipedia can be used appropriately in educational settings.

5.8 Recommendations / Suggestions for Future Research

Based on this study we make the following recommendations:

1. Additional research is needed on the use of Wikipedia for learning. Differences in learning patterns based on the comfort level with technology, academic program (i.e., Masters, Specialist, Doctoral), or course delivery (face to face, blended, or fully online) should be explored.
2. Quantitative longitudinal analysis on ways to measure retention of material using this practice would be beneficial.
3. Faculty should explore the possibility of integrating a similar assignment into their teaching as they advance practices of teaching and learning. Instruction regarding appropriate evaluation techniques for articles and use of Wikipedia should be included.
4. Research regarding actual use of Wikipedia after utilizing Wikipedia for instruction would be useful. In addition, future research should evaluate the level which this experience influences practicing leaders school based activity.

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