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Wikipedia and Pedagogy: The Experience of Graduate Students in Teacher Education

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Abstract: Although Wikipedia remains a widely utilised information resource for the population at large, its role in academic settings can be contentious. Characterising perceptions of and use of Wikipedia among graduate students in teacher preparation programs is essential for understanding how their experiences may influence their approaches to teaching information literacy to future students and how their

prior exposure as undergraduates may have shaped their relationships with Wikipedia. This quantitative study employed a questionnaire as the research instrument. The questionnaire was initially developed based on the extant literature and refined to its final form after review by a panel of content experts to examine the following issues: (a) how graduate students majoring in education used Wikipedia in their academic work, (b) why they use it, (c) how they perceived faculty guidance and support in their use of Wikipedia, (d) how they perceived faculty engagement with Wikipedia in their instructional and scholarly practices, (e) their perceptions of the educational value of Wikipedia, and (f) their interest in training to develop Wikipedia literacy skills. Participants were graduate students enrolled in introductory teacher education courses at an urban university in the United States. Of 92 questionnaires distributed, 78 were completed (85% return rate) and included in the analysis. Overall, the results indicated that respondents were ambivalent about Wikipedia's utility: they appreciated its convenience but desired more guidance in how to use it effectively. The lack of faculty support in this area represents a potentially significant missed opportunity to enhance information literacy among future teachers.

Keywords: Wikipedia, teacher education, graduate students, uses and perspectives, faculty guidance.

Introduction

The launch of Wikipedia almost 25 years ago fundamentally changed how knowledge is produced and disseminated. Due to its open, collaborative structure, it quickly gained popularity and became the world's most extensive online encyclopedia. Its influence is underscored by its consistent placement at the top of Google search results, reflecting a central role in online information access (Blikstad-Balas, 2016). Evidence of its success in achieving its goal of providing free access to information worldwide is that Wikipedia receives over 18 billion pageviews each month. "Despite early predictions that Wikipedia would be a short-lived Internet fad, it has become a key resource for the general public and for students" (Konieczny, 2021, p.152).

Research Problem

There is a noticeable gap in research addressing how students majoring in education, especially at the graduate level, engage with Wikipedia pedagogically. Examining Wikipedia use in this cohort is important for two reasons: (a) their attitudes towards, and abilities with, Wikipedia are likely to influence those of their own students when they begin their careers as educators, potentially influencing information literacy in the general population for decades to come, and (b) it is a starting point for teasing out the impact of exposure to Wikipedia (positive or negative) in undergraduate programs on their abilities and perceptions as graduate students. Ultimately, the findings may provide evidence-based data to develop strategies to enhance critical information literacy among current graduate students in teacher preparation programs and their future educational charges.

Research Focus

This study was designed to investigate how graduate students majoring in education used Wikipedia in their academic work and how they perceived issues related to Wikipedia in teacher education programs.

Research Questions

- How did graduate students majoring in education use Wikipedia in their academic work?
- What reasons motivated graduate students to use Wikipedia?
- How did graduate students perceive faculty guidance and support for using Wikipedia?
- What were graduate students' perceptions of faculty engagement with Wikipedia in their scholarly and teaching practices?
- What were graduate students' perceptions of the educational value of Wikipedia?
- What were graduate students' interests in training to develop Wikipedia literacy skills?

Literature Review

Unlike other academic sources that rely on contributions by subject-matter experts, Wikipedia is written and edited by a global community of volunteers, which allows for a breadth and depth of coverage unmatched by traditional refereed works (Thompson & Hanley, 2018). New content can be created and published within minutes. Additionally, registered users can modify existing entries so that the content remains dynamic and responsive. Jemielniak (2014) notes that this fluidity allows Wikipedia to respond rapidly to current events and emerging topics, making it one of the most up-to-date information sources available.

Wikipedia's reliance on crowd-sourced authoring and editing reflects a unique epistemology rooted in collective intelligence. According to Surowiecki (2004), the "wisdom of the crowd" concept posits that large groups of people, often non-experts, under the right conditions, can produce knowledge that rivals or exceeds that of experts. Additionally, Walker (2010) argues that "in place of a single 'expert' to write articles, Wikipedia uses a system of open editing by those members of the general public who choose to participate. These contributors freely and continually change the work previously uploaded, with content approaching a hypothetical "ideal state" asymptotically." The result is that "a growing number of professionals and academics endorse critical use of the site, and those who don't or won't endorse it publicly, privately admit to using it anyway" (Orlowitz, 2020, p.2). Indeed, it has been argued that "everybody in Academia uses Wikipedia. And when I mean 'everybody', I mean – well, everyone who has a computer, Internet access, and occasionally has questions that may have answers to in the body of human knowledge, while they are outside of his or her expertise" (Jemielniak, 2019, p.153). Thompson & Hanley (2018) found that Wikipedia covers more than 90% of topics taught at the undergraduate level in leading research universities and approximately 50% of topics at the introductory graduate level.

Despite this purported relevance to academia, Wikipedia has sparked debate regarding the reliability and credibility of its content since its inception. Critics point to its lack of traditional academic gatekeeping mechanisms to control the quality of its information (Bayliss, 2013; Brown, 2011; Dunn, 2018; Greenstein & Zhu, 2018; London et al., 2019; Luyt & Tan, 2010; Polk et al., 2015; Rector, 2008; Soylu, 2009). Valenza (2019) notes "Wikipedia lacks [the] rigorous peer review process in controlling the quality of its articles, academic publications normally do" while Rector (2008) argues that Wikipedia is "less reliable than other reference resources" with an accurate rate of 80% compared to approximately 95% for other reference sources.

Luyt and Tan (2010) also view Wikipedia's openness as a drawback. Because contributors to Wikipedia are not required to disclose their real names, credentials, or subject expertise, it is impossible to evaluate the qualifications of authors, thus raising concerns about the accuracy, authority, and comprehensiveness of their

articles. Furthermore, they argue that Wikipedia's openness makes it vulnerable to vandalism: "it is a system open to abuse, including the deliberate or inadvertent insertion of inaccurate information" (p. 715). For these reasons, Wikipedia is often categorised as a "non-credible" or "non-academic" source in educational settings, particularly for high-stakes research (Mercer, 2018).

However, advocates claim that the quality of Wikipedia is high in its coverage of various topics (Jemielniak, 2019; Mesgari et al., 2015; Michelucci & Dickinson, 2016; Read, 2006; Reavley et al., 2012; Rector, 2008; Rosenzweig, 2006; Thompson & Hanley, 2018; Valenza, 2019) and that "Wikipedia's coverage may not be perfect, but . . . its accuracy is much better than we might suppose" (Brown, 2011, p.342). Furthermore, the platform's transparency regarding edit history and discussion pages allows users to track changes and assess editorial consensus, a feature absent from most print encyclopedias. Brown (2011) noted that various studies conducted to verify Wikipedia's accuracy in subjects across the sciences and humanities affirm that Wikipedia's accuracy rate is comparable to other reference sources and that "studies of Wikipedia's accuracy have generally found worries about its credibility to be overblown" (p.339).

Although Wikipedia can obviously contain errors, the perception that it is not accurate is "shaped much more by spectacular blunders and hoaxes" (Jemielniak, 2019, p.154). However, Wikipedia's large and diverse editorial base contributes to ongoing real-time refinement. As Rector (2008) points out, "any inaccuracies, inadvertent or malicious, may be corrected in a matter of hours," thanks to the vigilance of its massive volunteer community (p. 8). "If a user posts bad information on Wikipedia, other users are authorised and empowered to remove that unencyclopedic content. It's a striking contrast to Twitter, which allows lies and inflammatory statements to remain on its platform for years" (Harrison, 2019, p.1).

Despite evidence to the contrary, concerns about Wikipedia's quality have created a negative atmosphere surrounding its use in higher education. Many institutions and schools implement policies to restrict student use of Wikipedia in assignments (Hough, 2011; Konieczny, 2021; Park & Bridges, 2022): "There is a common classroom refrain, 'Don't use *Wikipedia*; it's unreliable'" (Park & Bridges, 2022, p.4).

This negativity notwithstanding, it remains popular among university students. Research shows that a significant portion turn to Wikipedia for academic purposes (Amina et al., 2021; Head & Eisenberg, 2010; Knight & Pryke, 2012; Lim, 2009; Selwyn & Gorard, 2016; Shen et al., 2013; Todorinova, 2015; Wang & Harmer, 2025). The reach of Wikipedia in higher education is highlighted by three large-scale studies involving more than 5,000 students across three continents that found between 75%-88% used Wikipedia for academic purposes (Head & Eisenberg, 2010; Knight & Pryke, 2012; Selwyn & Gorard, 2016).

The widespread use of Wikipedia by university students suggests that, rather than strictly adhering to institutional rules against using it as an academic resource, they have developed strategies for engaging with it academically and incorporating it innovatively into their intellectual activities.

Materials and Methods

This is a quantitative study. The research instrument is a questionnaire. The questionnaire was initially developed from the extant literature and refined to its final form after review by a panel of content experts to explore the following issues: (a) how graduate students majoring in education used Wikipedia in their academic work, (b) why they use it, (c) how they perceived faculty guidance and support in their use of Wikipedia, (d) how they perceived faculty engagement with Wikipedia in their instructional and scholarly

practices, (e) their perceptions of the educational value of Wikipedia, and (f) their interest in training to develop Wikipedia literacy skills.

The questionnaire is anchored on two 5-point Likert scale: (a) Tables 1 and 3 (Never – Quite Often), and (b) Tables 2, 4-6 (Strongly Disagree – Strongly Agree).

Tables 1 and 3 use the following parameters: Never = 0%; Occasionally = >0%<30%; Sometimes = >30%<50%; Frequently = >50%<70%; Quite Often = >70%.

Tables 2, 4-6 use the following scoring: Strongly Disagree = 1; Disagree = 2; Unsure = 3; Agree = 4; Strongly Agree = 5.

Sample and Participants

This project involved graduate students in teacher education programs at a U.S. state university. Of the 92 students invited to participate from multiple sections of an introductory course in teacher education, 78 returned the research questionnaire (85% response rate), providing complete data for analysis.

Data Analysis

Descriptive data (frequencies and means (rounded to one decimal place)) were calculated to summarise participants' responses and identify general patterns in the data.

Results

Wikipedia Uses

Table 1 showed that graduate students in teacher education tended to consult Wikipedia for background information or idea development but avoided utilising it for formal academic writing or in-depth research. For example, approximately 56% of students reported using it at least occasionally to generate ideas and about 70% did so for background information. However, a majority of students reported never using it for research or writing papers (56.4% and 67.9%, respectively).

Table 1

Wikipedia Uses

	Never	Occasionally	Sometimes	Frequently	Quite Often
I used Wikipedia for my assignments (projects, papers, and presentations).	29 37.2%	33 42.3%	10 12.8%	3 3.8%	3 3.8%
I used Wikipedia to get ideas for my assignments.	34 43.6%	31 39.7%	10 12.8%	2 2.6%	1 1.3%
I used Wikipedia for research.	44 56.4%	21 26.9%	6 7.7%	4 5.1%	3 3.8%
I used Wikipedia to obtain background information.	23 29.5%	32 41.0%	11 14.1%	8 10.3%	4 5.1%

I used Wikipedia in writing papers.	53 67.9%	18 23.1%	5 6.4%	1 1.3%	1 1.3%

Reasons for Using Wikipedia

Students used Wikipedia primarily for its convenience: (a) ~ 80% agreed/strongly agreed it was a quick way to obtain information (Mean = 4.0), b) 70.5% agreed/strongly agreed it was easily accessible (Mean = 3.9), and c) 68% agreed/strongly agreed it was easy to navigate (Mean = 3.9) (Table 2). However, Wikipedia's visibility in Google search results played a significant role in motivating students' use of Wikipedia, as approximately 65% of students agreed/strongly agreed that they used Wikipedia because it often appeared at the top of search results (Mean = 3.7).

Table 2

Reasons for Using Wikipedia

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Mean
It is easily accessible.	4 5.1%	3 3.8%	16 20.5%	28 35.9%	27 34.6%	3.9
It always appears on the top of the hits through Google search.	5 6.4%	4 5.1%	18 23.1%	32 41.0%	19 24.4%	3.7
It contains rich information.	7 9.0%	15 19.2%	35 44.9%	16 20.5%	5 6.4%	3.0
It contains comprehensive information.	7 9.0%	10 12.8%	29 37.2%	23 29.5%	9 11.5%	3.2
It contains most updated information.	7 9.0%	13 16.7%	34 43.6%	18 23.1%	6 7.7%	3.0
The information fits my need.	6 7.7%	2 2.6%	29 37.2%	34 43.6%	7 9.0%	3.4
It is easy to navigate through the pages.	2 2.6%	1 1.3%	22 28.2%	33 42.3%	20 25.6%	3.9
The information is well structured.	4 5.1%	7 9.0%	25 32.1%	28 35.9%	14 17.9%	3.5
The information is well formatted.	4 5.1%	10 12.8%	26 33.3%	22 28.2%	16 20.5%	3.5
It is a quick way to obtain information.	2 2.6%	1 1.3%	14 17.9%	36 46.2%	25 32.1%	4.0
It has what I need for my assignments.	5 6.4%	11 14.1%	35 44.9%	22 28.2%	5 6.4%	3.1

In contrast, responses were mixed or neutral about the quality and depth of the Wikipedia content. Although 41% (Mean = 3.2) agreed/strongly agreed that Wikipedia information was comprehensive and fits their needs (52.6%; Mean = 3.4), "unsure" was the most common response for perceptions of the richness and currency of Wikipedia information (44.9%, Mean = 3.0; 43.6%, Mean = 3.0, respectively).

Faculty and Student Use of Wikipedia

Faculty appeared to do little in guiding graduate students on how to use Wikipedia in academic work (Table 3). Across nearly all survey questions, a majority indicated that discussions about Wikipedia never occurred in their courses. For instance, over 70% of students reported that their professors never provided guidance on how to use Wikipedia (71.8%) or discussed how to select appropriate information from it (69.2%). Similarly, large majorities indicated that faculty never addressed how to assess credibility (65.4%), evaluate information (62.8%), or judge quality (61.5%) in Wikipedia articles.

Table 3

Faculty Practices in Courses

	Never	Occasionally	Sometimes	Frequently	Quite Often
Professors discussed how to evaluate information in Wikipedia with us.	49 62.8%	14 17.9%	6 7.7%	5 6.4%	4 5.1%
Professors discussed how to judge the quality of information in Wikipedia with us.	48 61.5%	14 17.9%	5 6.4%	7 9.0%	4 5.1%
Professors discussed how to assess credibility of information in Wikipedia with us.	51 65.4%	11 14.1%	8 10.3%	4 5.1%	4 5.1%
Professor discussed how to select appropriate information in Wikipedia with us.	54 69.2%	10 12.8%	8 10.3%	3 3.8%	3 3.8%
Professors provided guidance on how to use Wikipedia.	56 71.8%	12 15.4%	4 5.1%	2 2.6%	4 5.1%
Professors discussed the pitfalls of Wikipedia with us.	34 43.6%	19 24.4%	11 14.1%	9 11.5%	5 6.4%
Professors discussed how to cite Wikipedia as a source with us.	67 85.9%	4 5.1%	3 3.8%	1 1.3%	3 3.8%
Professors discussed benefits of Wikipedia.	58 74.4%	13 16.7%	3 3.8%	2 2.6%	2 2.6%
Professors encouraged us to contribute to Wikipedia.	72 92.3%	2 2.6%	2 2.6%	1 1.3%	1 1.3%
Professors discuss why Wikipedia is not to be used in our assignments with us.	34 44.2%	14 18.2%	8 10.4%	11 14.3%	10 13.0%
Professors banned us from using Wikipedia for our assignments.	39 50.0%	9 11.5%	8 10.3%	12 15.4%	10 12.8%

Professors told us not to use Wikipedia for our assignments.	1 44.9%	13 16.7%	8 10.3%	9 11.5%	13 16.7%

When it came to specific discussions about Wikipedia's potential or limitations, the pattern remained consistent. Nearly three-quarters (74.4%) reported that faculty never discussed the benefits of Wikipedia, and 92.3% said they never encouraged their students to contribute to Wikipedia. Overall, faculty seemed biased against student use of Wikipedia in their coursework, with 50% of respondents reporting that their professors explicitly banned its use.

Student Perceptions of Faculty Wikipedia Use

Respondents generally perceived that professors rarely engaged with Wikipedia in scholarly contexts (Table 4). The majority agreed/strongly agreed with the statements "Professors do not cite Wikipedia in their academic papers" (71.8%; Mean = 4.1), "Academic journal papers are not allowed to cite Wikipedia" (68%; Mean = 4.0), and "Serious scholars do not use Wikipedia in their scholarly work" (67.9%; Mean = 4.0). Student responses indicated that they believed Wikipedia was not an acceptable resource for academic work. More than half of respondents agreed/strongly agreed that faculty do not refer to Wikipedia in their research (58.9%; Mean = 3.7) and did not use Wikipedia in preparing lectures (57.6%; Mean = 3.6).

Table 4

Student Perceptions of Faculty Wikipedia Use

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Mean
Professors do not use Wikipedia in preparing teaching.	1 1.3%	7 9.0%	25 32.1%	31 39.7%	14 17.9%	3.6
Professors do not refer to Wikipedia in their research.	1 1.3%	7 9.0%	24 30.8%	26 33.3%	20 25.6%	3.7
Professors do not cite Wikipedia in their academic papers.	0 0%	2 2.6%	20 25.6%	24 30.8%	32 41.0%	4.1
Serious scholars do not use Wikipedia in their scholarly work.	0 0%	3 3.8%	22 28.2%	26 33.3%	27 34.6%	4.0
Conference papers are not allowed to cite Wikipedia information as references.	0 0%	2 2.6%	26 33.3%	25 32.1%	25 32.1%	3.9
Academic journal papers are not allowed to cite Wikipedia information as references.	0 0%	3 3.8%	22 28.2%	25 32.1%	28 35.9%	4.0
Professors are positive about Wikipedia.	17 21.8%	16 20.5%	42 53.8%	3 3.8%	0 0%	2.4
Professors are negative about Wikipedia.	0 0%	4 5.1%	37 47.4%	20 25.6%	17 21.8%	3.6
I am negative about Wikipedia because professors are negative about Wikipedia.	10 12.8%	17 21.8%	37 47.4%	11 14.1%	3 3.8%	2.7

Professors' attitudes towards Wikipedia influence my opinions about Wikipedia.	11 14.1%	7 9.0%	37 47.4%	19 24.4%	4 5.1%	3.0

While "unsure" was the mode response to the questions "Professor are positive about Wikipedia/negative about Wikipedia" (53.8% and 47.4%, respectively), there was a clear indication that students perceived that professors as more negative to Wikipedia than positive. There were 42.3% of students who disagreed/strongly disagreed with the statement "Professors are positive about Wikipedia" and 47.4% who agreed/strongly agreed with the statement "Professors are negative about Wikipedia".

Despite their perception of faculty's negative attitudes toward Wikipedia, most students did not think that this negativity impacted their own views. Only 17.9 % of students and 29.5 % agreed/strongly agreed" with the statements "I am negative about Wikipedia because professors are negative about Wikipedia" and "Professors' attitudes about Wikipedia influence my opinions about Wikipedia".

Educational Value of Wikipedia

Although ambivalence was the continuing theme in terms of respondent perceptions of the educational value of Wikipedia, with "unsure" as the mode response to every question in this section within the range of 35.9%-51.3% (Table 5). More students thought it was useful rather than not: 35.9% agreed/strongly agreed that it "is a useful educational resource" versus 21.8% who disagreed/strongly disagreed and 37.2% disagreed/strongly disagreed that it "is not academically valuable" versus 21.8% who agreed/strongly agreed.

Table 5

Educational Value of Wikipedia

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Mean
Wikipedia is a useful educational resource.	6 7.7%	11 14.1%	33 42.3%	19 24.4%	9 11.5%	3.2
Wikipedia is not academically valuable.	5 6.4%	24 30.8%	32 41.0%	11 14.1%	6 7.7%	2.9
Wikipedia should be integrated as an educational resource in university courses.	13 16.7%	17 21.8%	31 39.7%	16 20.5%	1 1.3%	2.7
Wikipedia should be banned in university courses.	11 14.1%	28 35.9%	28 35.9%	7 9.0%	4 5.1%	2.6
Professors should endorse the use of Wikipedia in student assignments.	7 9.0%	21 26.9%	40 51.3%	9 11.5%	1 1.3%	2.7
Wikipedia should not be accepted in student assignments.	5 6.4%	18 23.1%	29 37.2%	21 26.9%	5 6.4%	3.0

Despite this pattern valuing Wikipedia's educational utility, students were clearly conflicted when it came to an "official" endorsement of Wikipedia in curriculum – 38.5% disagreed/strongly disagreed that it

"should be integrated as an educational resource in university courses" but 50% disagreed/strongly disagreed it "should be banned in university courses". However, there seemed to be more consensus regarding acceptance in coursework with 35.9% disagreeing/strongly disagreeing that faculty "should endorse the use of Wikipedia in student assignments" and 33.3% agreeing/strongly agreeing that it "should not be accepted for student assignments".

Wikipedia Training

In contrast to the variations and contradictions in response in previous sections, the majority of respondents agreed/strongly agreed for most of the questions (8/9) related to improving Wikipedia skills (range: 43.6%-60.3%); the item "I would like to learn how to select Wikipedia information" was the only one where disagree/strongly disagree (39.8%) was comparable to agree/strongly agree (38.4%)) (Table 6). Learning how to assess the credibility of Wikipedia information was the most important skill students desired to learn (60.3%; Mean = 3.4).

Table 6

Wikipedia Training

I would like to learn how to:	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Mean
select Wikipedia information	6 7.7%	25 32.1%	17 21.8%	21 26.9%	9 11.5%	3.0
evaluate Wikipedia information	6 7.7%	23 29.5%	13 16.7%	25 32.1%	11 14.1%	3.2
assess credibility of Wikipedia information	4 5.1%	16 20.5%	11 14.1%	36 46.2%	11 14.1%	3.4
cite Wikipedia information	5 6.4%	20 25.6%	15 19.2%	27 34.6%	11 14.1%	3.2
check the edit history of Wikipedia information	4 5.1%	15 19.2%	16 20.5%	31 39.7%	12 15.4%	3.4
contribute to Wikipedia information	5 6.4%	19 24.4%	20 25.6%	26 33.3%	8 10.3%	3.2
utilize Wikipedia for academic uses	4 5.1%	15 19.2%	18 23.1%	32 41.0%	9 11.5%	3.4
Wikipedia differs from other online encyclopedias	6 7.7%	16 20.5%	16 20.5%	29 37.2%	11 14.1%	3.3
Wikipedia is administered	5 6.4%	12 15.4%	17 21.8%	36 46.2%	8 10.3%	3.4

Discussion

As an open-access and collaboratively constructed online resource, Wikipedia offers immediate access to a vast range of topics**,** making it indispensable to many students. Nevertheless, its use in higher education continues to be debated, especially regarding its reliability, authority, and role in scholarly work.

This study investigated a wide range of issues related to how graduate students in teacher education use Wikipedia and their perceptions of various aspects of Wikipedia in the context of higher education.

Student Use of Wikipedia

In this study, a majority of students (62.8%) reported using Wikipedia for course assignments. Students mainly used Wikipedia to generate ideas (59%), access background information (70.5%), and seek quick facts (71.8%). These findings showed that students used Wikipedia to develop a general understanding of unfamiliar topics. However, student Wikipedia use dropped for more formal academic tasks, such as writing papers (43.6%) or conducting research (32.1%).

The lower frequency of student Wikipedia use in writing or research positioned Wikipedia as a supplemental rather than primary academic resource. Wikipedia served as a "gateway source," providing useful leads, references, and content summaries that shaped the trajectory of student research. Rather than viewing Wikipedia as a threat to academic rigour, students approached it as a strategic stepping stone - a resource that familiarised them with new topics before they moved to in-depth scholarly investigations.

Most graduate students in this study demonstrated a cautious, practical approach to Wikipedia use, treating it not as a replacement for scholarly sources but as a complementary tool for specific purposes. This engagement pattern indicates that graduate students are capable of selecting sources not only on the basis of availability but also on their suitability for specific academic tasks.

Key Motivators

Convenience and accessibility were the most salient reasons for using Wikipedia. Nearly 80% of participants agreed or strongly agreed that they used Wikipedia because it was a quick way to obtain information (Mean = 4.0). Other top-rated reasons included its easy accessibility (Mean = 3.9) and ease of navigation (Mean = 3.9).

Wikipedia's visibility in Google search was another strong motivator. The mean score was relatively high for the item "I use Wikipedia because it appears at the top of Google search results" (M = 3.7). The prominence of Wikipedia pages in Google search results helped shape student information-seeking behavior. Research shows that students rely heavily on Google for information retrieval, often clicking on the first few search results (Cross & Gullikson, 2020; Georgas, 2014; McClure & Clink, 2009; Olsen & Diekema, 2013).

As Wikipedia consistently appears among the top search results for many Google queries, it naturally becomes a resource students frequently visit, even when they are not intentionally seeking it.

However, most student responses were neutral on statements about whether Wikipedia is useful for course assignments. Although students recognised that Wikipedia has certain benefits, they were unsure whether it met the rigorous demands of graduate-level academic work.

These findings indicate that graduate students view Wikipedia as a functional rather than a scholarly resource. In students' view, Wikipedia serves as a convenient gateway for obtaining baseline information. Although its content may not always meet the standards for formal scholarly work, it plays a valuable role in bridging the gap between general inquiry and deeper scholarly engagement.

Faculty Engagement with Wikipedia in Courses

Although Wikipedia was a resource students frequently visited, nearly three-quarters (74.4%) reported that professors never discussed its benefits in their courses. Professors' engagement with Wikipedia was minimal. They either never or rarely discussed how to evaluate Wikipedia content (80.7%), assess its quality (79.4%), and select appropriate Wikipedia materials (80.0%).

This finding is unfortunate because faculty-led discussions are essential in building student information literacy skills, as Park and Bridges (2022) pointed out: "Engaging students in complex conversations about this information source is one way to improve students' information literacy skills" (p. 4). Critical discussion is an important component in student learning. In the discussion, professors can guide students to explore critical issues surrounding Wikipedia and develop student information literacy skills, such as selecting, assessing, and referencing Wikipedia content. Through critical discussion, students learn both the strengths and limitations of Wikipedia in academic contexts.

Faculty resistance to Wikipedia may stem from discomfort with its open authorship and editing model. Institutional norms endorse peer-reviewed publications as the gold standard of content credibility. Within academic hierarchies, Wikipedia is often dismissed as unreliable and not trustworthy (Di Lauro & Johinke, 2017; Jemielniak, 2019; Jemielniak & Aibar, 2016; Konieczny, 2021; Park & Bridges, 2022). Many professors perceive Wikipedia as lacking academic rigour. Furthermore, many faculty members have a limited understanding of how Wikipedia operates, which reinforces their scepticism and discomfort (Edwards, 2023).

Contributing to Wikipedia – Wikipedia-based Assignments

In this study, most professors (92%) never encouraged students to contribute to Wikipedia. Nevertheless, Wikipedia has been increasingly integrated into course assignments in educational settings. Wikipedia is not only a tool but also a learning environment. Research shows that Wikipedia-based assignments benefit student learning in multiple ways (Evenstein Sigalov & Konieczny, 2025; Gareis et al., 2022; McDowell & Stewart, 2019; Schlesner Alves et al., 2025; Vetter et al., 2019).

Unlike traditional assignments reviewed solely by instructors, Wikipedia-based assignments enable students to share their work with a global audience, motivating them to engage in learning more deeply: "Publishing in the well-known and widely-used online encyclopedia has been shown to have a lasting impact on student motivation" (Humer & Schnetzer, 2022, p. 43).

Wikipedia provides a learning environment where students practise and develop a range of critical skills.

(a) By contributing to Wikipedia, students hone information literacy skills: identifying gaps and biases, verifying facts, assessing content credibility, synthesising information, and citing and referencing sources

correctly (Edwards, 2023; Evenstein Sigalov & Konieczny, 2025; Kahili-Heede et al., 2022; Thomas et al., 2021; Vetter et al., 2022; Azar, 2023).

(b) Wikipedia-based assignments engage students cognitively, enhancing higher-order thinking skills (Gareis et al., 2022; Finkel & Kleiman, 2024; McDowell & Stewart, 2019; Pavanaja, 2024; Vetter et al., 2019). Pavanaja (2024) found that students showed "marked improvement" in skills such as critical thinking, logical reasoning, and problem solving.

(c) Wikipedia-based assignments increase students' understanding of course content (Edwards, 2023; Liu et al., 2024; Schlesner Alves et al., 2025; Vetter et al., 2022). As students contribute to Wikipedia articles, they explore course-related topics, read relevant scholarly literature, follow reference links, and develop an analytical and synthetic understanding of the content.

(d) Another significant benefit is the development of Wikipedia literacy (Apollonio et al., 2018; Blumenthal, 2017; Edwards, 2023; McDowell & Stewart, 2019; Vetter et al., 2022). Students often lack understanding of how Wikipedia is governed - what standards they must follow and how knowledge is constructed in digital spaces. Wikipedia-based assignments are "eye-opening" (Edwards, 2023), and "…as a result, many viewed this resource more critically" (Apollonio et al., 2018, p. 6).

When professors ignore Wikipedia not only as a resource but also as a learning platform, students lose the opportunity to write for a global audience and make meaningful contributions to public knowledge. They also miss valuable contexts for developing critical skills and academic growth. Without exposure to Wikipedia-based assignments, students retain misconceptions about Wikipedia. Most importantly, they remain passive consumers of information rather than being empowered to become active contributors and creators of knowledge.

Student perceptions of faculty use of Wikipedia

Faculty behaviours in courses reflected their negative attitudes towards Wikipedia, which students noticed. Most students perceived that professors were largely sceptical of Wikipedia's value in academia. In students' eyes, professors viewed Wikipedia as inappropriate or unacceptable in academic settings. This finding is consistent with previous research reporting that faculty generally hold negative attitudes toward Wikipedia (Jemielniak, 2019; Jemielniak & Aibar, 2016; Park & Bridges, 2022; Sariyev, 2024).

Students correctly understood that Wikipedia was not accepted as a reference in scholarly publications such as peer-reviewed journals (Mean = 4.0) and conference papers (M = 3.9). Professors were expected to follow established academic rules and regulations regarding source credibility. Therefore, students reasonably inferred that professors did not use Wikipedia in preparing lectures (M = 3.6) and in conducting research (M = 4.0).

Contrary to student speculations, research shows that many professors do use Wikipedia in teaching and research, although they do not publicly acknowledge it. Like students, faculty access Wikipedia to check facts, obtain information about unfamiliar topics, and follow reference links for further readings (Duić, 2024; Konieczny, 2021; Malik et al., 2025; Sariyev, 2024). In academic environments where the use of Wikipedia is

stigmatised or shamed (Valenza, 2019), faculty Wikipedia use is pushed underground just as student Wikipedia use is.

Although students stated that professors' distrust of Wikipedia did not influence their own attitudes, the overall patterns of faculty behaviours may subtly shape student perspectives. How professors engage with Wikipedia sends strong signals about its place in the academic hierarchy. When professors are hostile or dismissive, students may speculate that Wikipedia has no educational value, despite its numerous benefits as a teaching and learning tool.

Wikipedia's Educational Value

Student positions were ambivalent regarding the educational value of Wikipedia. They leaned toward agreeing that Wikipedia was a valuable educational resource (Mean = 3.2). However, they did not support the idea of integrating Wikipedia into university courses as an educational resource (M = 2.7). This position falls somewhere between acceptance and scepticism. Although students found practical uses for Wikipedia, they were keenly aware of its contested status in academic contexts. Their position reflects a conflict between its informal practical use and formal academic disapproval. This tension may explain why about 42% of respondents selected "Unsure" when asked whether Wikipedia was a valuable educational tool, but an equal percentage were also unsure whether Wikipedia is not academically valuable.

Students' other responses also illustrate this complexity. Students did not support banning Wikipedia altogether from university courses (M = 2.6). While bans on Wikipedia were not uncommon in academic institutions, students found such restrictions impractical or overly rigid, given Wikipedia's prominence in the digital information landscape. Meanwhile, they disagreed that professors should endorse the use of Wikipedia in course assignments (M = 2.7). This finding showed that students were reluctant to ratify Wikipedia's role in academic contexts. Students may have internalised institutional norms that endorse peer-reviewed knowledge as the only acceptable source for credible knowledge.

Student ambivalent stance reveals a gap between students' actual use of Wikipedia and their perceptions of its academic legitimacy. As discussed earlier, many students used Wikipedia to seek background information, generate ideas, and check facts, even when it was considered academically "illegitimate." This conflict creates a dilemma in which students—and even some faculty—use Wikipedia academically but hesitate to acknowledge its educational value.

Wikipedia Literacy Training

Students expressed a desire to develop information literacy skills through training such as selecting (M = 3), assessing (M=3.4), and citing (M=3.2) Wikipedia information. They were interested in receiving training on using Wikipedia for academic purposes. These findings showed that students were not content to use Wikipedia merely as a convenient gateway, but wanted to learn to take full advantage of it. Students were aware of the complexities of online information systems like Wikipedia and were clear that they needed instructions on how to use them effectively. They needed guidance on maximising its benefits for academic learning.

Although professors rarely taught students how to contribute to Wikipedia. However, students considered it important for them to receive training on how to contribute effectively to Wikipedia (M = 3.2).

Contributing to Wikipedia benefits student learning in multiple ways. Furthermore, they could gain a sense of ownership because their contributions may be read and used by people around the world, which students deemed as more meaningful learning experiences.

Students also expressed a desire to learn about Wikipedia itself – its operational (M = 3.4) and editorial (M = 3.4) processes. Learning Wikipedia's internal functions can deepen students' understanding of how digital knowledge is constructed, verified, and shared, helping students develop a more balanced view of Wikipedia as a digital information source. Knowing how Wikipedia is administered demystifies the platform and can increase student confidence in evaluating Wikipedia content.

Conclusion

Graduate students approached Wikipedia with a mix of caution and pragmatism. They valued its convenience and accessibility, used it selectively to complete academic tasks, and expressed a clear desire for guidance on how to maximise its benefits.

Faculty attitudes towards Wikipedia were largely negative. They rarely engaged students in Wikipedia-related activities within their courses. This lack of engagement deprived students of valuable opportunities to learn and develop a range of critical skills. Furthermore, faculty attitudes and practices were consistent with the widespread institutional culture that labelled Wikipedia illegitimate and excluded it as a helpful resource.

Research shows that Wikipedia not only serves as a gigantic repository of information but also provides unique learning contexts. With the aggressive development of technologies, Wikipedia will continue to grow not only as an important information resource but also as a powerful learning platform. It will play an increasingly important role in shaping how knowledge is constructed and disseminated.

Higher education has the responsibility of equipping students with the necessary skills to engage critically with digital information resources such as Wikipedia. Introducing Wikipedia into academic discourses as a subject of critical inquiry is a necessary step toward that goal.

Suggestions for Future Research

Wikipedia-based assignments should be incorporated into graduate-level studies. In such assignments, graduate students can be assigned to evaluate existing Wikipedia articles, edit or create articles, or check and validate citations in Wikipedia entries. Through participating in Wikipedia-based assignments, students can develop Wikipedia literacy - how Wikipedia operates, its editorial policies and processes, and the strengths and limitations of Wikipedia as an online information resource. This study, therefore, recommends employing Wikipedia-based assignments as a framework for future research.

- Future studies should examine how participation in Wikipedia-based assignments influences graduate students' patterns of use and perceptions of Wikipedia. Comparative research designs can reveal changes in student engagement with Wikipedia before and after student participation. Comparisons can be made across disciplines, degree levels (master's vs. doctoral), and institutions to increase the generalizability of findings.

- Faculty plays a critical role in shaping how graduate students use and view Wikipedia in academic contexts. Future research should investigate how structured training and experiences in implementing Wikipedia-based assignments affect faculty members' use of and attitudes toward Wikipedia. Research can focus on changes in faculty's perceptions of Wikipedia's credibility and pedagogical value, as well as their own use in teaching practices.

- Wikipedia-based assignments provide a rich, diverse context for research (e.g., their impact on student cognitive development and understanding of course content). Applying robust research methodologies is essential to strengthen the credibility and validity of findings. Design-based research is particularly well-suited for studying Wikipedia-based interventions. Design-based research is a popular methodology for studying interventions in student learning in technology-supported learning environments. According to Wang and Hannafin (2005), design-based research has five unique characteristics: (a) pragmatic, applying theory to guiding practice and applies practice to refining theories; (b) grounded, as educationally sound theories inform it; (c) iterative, involving multiple iterative cycles of design, implementation, investigation, and re-design; (d) integrative, allowing the use of diverse methodologies across different phases of research; and (e) contextual, emphasizing that findings must be interpreted in relation to its context where the research is conducted – its design, setting, and implementation process. All details in the research are well documented so that they can be modified, adapted, and applied by other instructors in new contexts. When applied to research on Wikipedia-based projects, design-based research can effectively capture their complexity and nuances in each phase.

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