

To use or not to use Wiki: Gen Z* Perception, Motivational Factors, and Use of the People's Encyclopedia in Course-Related

**Ian Roger Mabazza Francisco, Kristinne Joyce A. Lara and
Patrianne M. Padua**

Cagayan State University Carig Campus, Carig Sur, Tuguegarao City, Cagayan North,
Philippines 3500
ianrogerfrancisco@gmail.com

Received: 20-May-2023

Revised: 17-June-2023

Accepted: 09-July-2023

* This refers to the generation reaching adulthood in the second decade of the 21st century, perceived as being familiar with the internet from a very young age (Google) and colloquially known as zoomers, the majority of whom are children of Generation X (Wikipedia).

Abstract

The researchers examined college students' perceptions, motivation, and use of Wikipedia as a resource for their course-related research assignments. To obtain information on Wikipedia's usefulness, reliability, and accuracy, the researchers surveyed 210 senior students from the College of Arts and Sciences, Cagayan State University, Philippines. To understand the students' opinions on Wikipedia use and substantiate the survey results, the authors conducted a focus group discussion (FGD). Results of the survey revealed that students overall had a neutral perception of Wikipedia as a resource for their course-related writing assignments. These Gen Z digital natives use the site as a starting point to get an initial orientation on topics assigned to them. Results revealed that students consider themselves occasional users who visit the platform for quick help but only at the start of the research process. Results, however, showed evidence proving that those who worked with Wikipedia remained neutral in their opinion on the site's reliability and accuracy of information. The researchers also ran a Chi-Square test to assess the association between students' academic program and perception, motivation, and use of the people's encyclopedia. Results manifested a link between academic programs and perception of the accuracy of Wikipedia information. They concluded that students use Wikipedia and rely on it to get a head start on their course-related research assignments. While students believe that the site can be a goldmine in terms of preliminary research and literacy, they are still determining the accuracy of Wikipedia information. They provided appropriate recommendations in light of the emerging results.

Keywords: Wikipedia, course-related research assignments, uses and gratifications theory, research resource, research/writing process, online learning

1.0 INTRODUCTION AND BACKGROUND OF THE STUDY

When students of today are given course-related research assignments, teachers expect them to start their project by hitting printed materials such as books, newspapers, magazines, encyclopedias, dictionaries, and journals made available in academic libraries, which are essential to support not only faculty scholarly works but also student researches so that, when students get exposed to this hub, they would be able to develop their skills in locating, evaluating and using relevant information helpful to create logical and compelling writing outputs.

However, this is different from what is happening in schools. In a 2012 Pew Research Center (PRC) survey cited in an article by Desilver (2013), teacher-respondents from middle- and high schools said the most likely research resource of their students aside from Google (and YouTube) is Wikipedia, which 75% of teachers said their students were very likely to use. The teacher's observation bears testament to how Wikipedia has expanded its reach from what Rainie and Tancer (2007) and Spoerri (2007) describe as just a tool for casual searches of pop culture, politics, history, and entertainment by most people to a vital tool for academic purposes perceived by the students across levels including those doing graduate degrees.

Why are students using this free, open-content, rapidly evolving encyclopedia for academic or educational reasons?

Wikipedia for Educational Use

The authors who earlier examined how useful Wikipedia is in teaching and learning include Augar, Raithman, and Zhaou (2004). The three described the site as a valuable technology for teaching and learning online. The other scholars who recognized in their works the utility of Wikipedia as a legitimate learning tool in the educational setting were Chen, Cannon, Gabrio, Leifer, Toye, and Bailey (2005) and Evans (2006). Wikipedia started to be used in schools because some saw its good or worthwhile qualities that, to Baulos, Maramba, and Wheeler (2006), as cited in Parker and Chao (2007) and La France and Calhoun (2012), actively involved learners in their construction of knowledge. In their earlier investigation, Parker and Chao (2007) noted that Wikipedia could enhance learning. In 2010, Deters, Cuthrell, and Stapleton reported that the principal themes emerging from the data they had collected from students included potential uses of wikis as instructional tools.

To investigate more closely the increasing consumption of Wikipedia in the academic community, Lim ran a study in 2009 and reported that approximately one-third of college students said they had used Wikipedia for academic reasons, specifically for quick fact-checking and finding background information even if the users' perception of the quality of the information found in the site is low. Students' use of Wikipedia in their teacher-marked research assignments was also confirmed by Head and Eisenberg (2010), who concluded: "Wikipedia meets the needs of college students because it offers a mixture of coverage, currency, convenience, and comprehensibility in a world where credibility is less of a given or an expectation from today's students."

These and many others point to the fact that Wikipedia has been playing a paramount role in the academic lives of students, particularly at the undergraduate level (Selwyn & Gorard, 2016), and therefore, in the words of Konieczny (2016), should be considered as "not our foe, but rather, an ally a new and, perhaps, somewhat uncouth ally, but an ally nonetheless, and one that I will argue educators should embrace more wholeheartedly – for the good of our students and the wider society" (2).

Commenting on the acceptance and integration of Wikipedia in schools, LaFrance and Calhoun (2012) write:

"While most publications about formal educational uses of wikis originate from fields related to computer sciences (Gabrilovich & Markovitch, 2006; Guzidal, 1999; O'neal, 2005; Raitman, Augar, and Zhou, 2006), Wikipedia is slowly being incorporated into formal college classroom settings (Choy & Ng, 2007; Martin & Premadasa, 2010; Notari, 2006) similar to that of what LaFrance and Calhoun (2012) did when they attempted to integrate Wikipedia use in the course and investigated its impact on the students' perceptions."

Both say that despite researchers' attempts to discuss Wikipedia as a legitimate learning tool, the need for more research regarding its use as an instructional tool leaves a gap in this knowledge base. In addition, the authors add that 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.

Accuracy and Reliability of Wikipedia

The earlier mentioned PRC survey results, according to Desilver, mirror teachers' views that their students' research tools are "shallower than those of prior generations — using search engines and readily available references like Wikipedia perceived by learners as a cool place in the internet to search needed information the quickest way possible to complete a research-based writing assignment."

It is why, Jaschik (2007) tells in a separate opinion that some teachers have become increasingly concerned about this online, peer-and reader-produced encyclopedia as it has become increasingly popular among students on campus.

Many teachers have complained about the lack of accuracy or completeness of entries, reliability, and intellectual rigor of Wikipedia, issues tackled by today's academic debates usually concerning whether college students should use it in their course-related assignments. Some have even discouraged or tried to prohibit students from using the resource, continuously explaining to the learner-users why materials on Wikipedia, while convenient, may need to be more trustworthy.

On the accuracy and trustworthiness of the platform, LaFrance and Calhoun (2012) have this to say:

“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, and Gasser, 2005). Konieczny (2007) made the point, “Wikipedia has faced its share of controversies, concerning its reliability and accuracy primarily; it has been criticized for its susceptibility to vandalism, uneven quality and inconsistency, systematic bias, and preference of consensus or popularity over credentials” (p.1).

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

1. Accuracy: Not knowing which content is accurate, 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 non-independent sources.

“With these issues in mind, many studies have followed 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 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.”

In 2009, Calkins and Kelly, who explored the online encyclopedia's accuracy, reputability, ease, and accessibility with their world history students as respondents and subjects, claimed: "...many students advocated the idea that, even if Wikipedia is not credible *yet*, it will become credible over time as more and more contributors revise, edit, and continually update the content. For many students, one of Wikipedia's greatest strengths is that knowledge could come from the bottom up: One does not have to be an academic with traditional credentials to weigh in on a subject.”

A 2013 research followed the path of probing Wikipedia's content quality. It was the work of Reyes that showed that "the online encyclopedia anyone can edit" bridges certain generational divides, serving as a standard reference for everyone—from students to Supreme Court Justices—engaged in the textualization of ideas" and showed "how variations in the appreciation of the quality of Wikipedia's content may evidence less a laxity in academic rigor with age than a shift in academic discourse where sources are emphasized before content."

Uses and Gratifications Theory

Despite the many questions against Wikipedia, why are students still continuously consuming and depending on this free site? The Uses and Gratifications Theory introduced by Katz, Blumler, and Gurevitch (1974) explains students' behavior toward using Wikipedia. This theory focuses on how people use media or adopt an innovation/technology for personal purposes and gratifications. This theory emphasizes the motives and self-perceived needs of the people who actively use media.

If this theory is applied to the present investigation, students, taking their viewpoints, utilize Wikipedia to gather information, which is a vital process in academic writing or research. Students accept the value of

Wikipedia as a learning tool and continue actively seeking help from this online encyclopedia to their advantage because it satisfies or fulfills their dire need for information.

It is clear that many academics and educators have demonstrated their strong opposition to the use of Wikipedia, the people's encyclopedia in the words of Okoli et al. (2012), as students' research resource due to its perceived downside. This solid objection against this unique online resource, which now includes 6.4 million articles (Wilkins, 2021), comes even in the face of several research findings indicating that the online encyclopedia has some value, particularly for those just getting started with course-related research assignments such as an extended essay or term paper, discursive paper, case study, thesis, persuasive or argumentative paper, annotated bibliography, book report, proposals, book review, capstone paper, and other similar major course-related research assignments.

This ongoing tension building up between the two different findings reported by content probes of the open platform prompted the authors to explore how and why today's college students and including those who belong to Generation Z, use Wikipedia in their course-related research assignments. It is hoped that, with this exploration, the authors would be able to contribute to the existing body of knowledge about the current perception of Wikipedia in the academic community, particularly in understanding the reasons for its unpopularity among some and the reasons for its growing acceptance among other people.

1.1 Objectives of the Study

The study's general objective was to explore how and why college students use Wikipedia in their course-related research assignments. Specifically, it answered the questions that followed.

1. What is the perception of students on Wikipedia as a research resource?
2. What are students' motivations for using Wikipedia in their course-related research assignments?
3. What is the frequency of students' use of Wikipedia?
4. At which stage of the research process do students use Wikipedia?
5. Is there a significant relationship between students' academic program and their perception, motivation, and use of Wikipedia in course-related research assignments?

2.0 METHODOLOGY

This study used a mixed-methods sequential explanatory design. The authors surveyed to obtain information from the respondents' first-hand experiences in using Wikipedia, what course-related research assignments were assigned to them by their instructors and professors, their perception of the use of this site, frequency of use, and which part of the research process they thought they had used the online encyclopedia. The authors arranged a survey schedule based on the student's class schedule to collect the data comprehensively from all concerned. Before the survey was administered, the researchers explained the purpose of the survey and provided the respondents with written information. They skipped the need for explicit consent from the students by considering the return of the completed survey as consent to participate.

Before the data collection, the authors asked their colleagues to review the instrument and give feedback to improve it. The authors, too, piloted the survey with a group of non-College of Arts and Sciences (CAS) students for feedback and for them to gauge the time required to complete the survey and ascertain its validity and reliability.

On the question on the perception of Wikipedia and frequency of use, the student-respondents were asked to tick 'Strongly Agree' (SA), 'Agree' (A), 'Neutral' (N), 'Disagree' (D), and 'Strongly Disagree' (SD) (for perception) and 'Always,' 'Frequently,' 'Occasionally,' 'Rarely,' 'Never,' and 'I Do not Know' (for frequency of use) as their answers. For the rest of the survey questions (previous experience, course-related research assignments, reasons for use, stage of research when Wikipedia is used), students were provided a pool of choices and a space to specify their answer not given in the pool.

A sample of 210 fourth-year college students enrolled in the College of Arts and Sciences - Cagayan State University Carig Campus (CAS-CSU) during the second semester of the School Year 2018-2019 participated in the survey. Of this total number, 179 responded that they had previous experience with Wikipedia. The 31 others who responded negatively were then asked not to proceed with the survey and were requested to return the instrument to the researchers.

The 179 students belonged to the Guidance and Counselling (1), Physics (6), Chemistry (9), English (14), Industrial and Commercial Communication (6), Biology (37), Psychology (49), Mathematics (10), Environmental Science (7), Political Science (16), Economics (4), and Mass Communication (20) programs. They were taken as samples and participants because they are the college groups with more experience in and exposure to course-related research assignments needing research than the lower-level students. They were considered in the study because they are more likely acquainted with the research writing process than the students in the first-year, second-year, and third-year levels.

To gain an in-depth understanding of the student's thoughts and opinions on using Wikipedia and to cross-validate the data obtained from the survey, the authors performed a focus group discussion (FGD). The FGD that lasted for 60 minutes provided qualitative data about the use of the free online encyclopedia, its reliability, and its significance to the students' course-related research assignments.

Eight (8) students from the different programs of CAS-CSU participated in the session, which began at 10 a.m. and concluded at 11 a.m. Sought informed consent, these participants were chosen due to their unique views and experiences using the search engine for course-related research, as shown in their responses to the survey before the FGD. Only eight students took part in the FGD due to the unavailability of those others invited who, at that time, were preoccupied with thesis writing and fulfilling other graduation requirements.

The authors, one serving as moderators and the other as assistant moderators, relied on a guide prepared to ensure that all topics of interest were covered. During the session, they asked the participants pivotal and emerging questions that got them to the meat of the discussion.

Descriptive statistics such as frequency, percentage, and mean were used to describe the data collected from the survey. The chi-Square test assessed the potential significance between students' academic program and their perception, motivation, and behavior on using Wikipedia in their course-related research assignments.

3.0 RESULTS AND DISCUSSION

3.1 Students' Perception of Wikipedia

A primary interest of the study is describing students' perceptions of the use, reliability, and accuracy of Wikipedia as a learning tool. Based on the analysis shown in Table 1, the students in all 12 programs surveyed reported that Wikipedia is useful as a research resource, as proven by the grand mean of 3.56. They, too, agreed that Wikipedia supports their learning activities (3.70) and that Wikipedia contains articles that include significant facts or details relevant to their topics (3.40).

These findings substantiate the claim that Wikipedia has been integrated and utilized as a learning tool in the educational setting (Chen, Cannon, Gabrio, Leifer, Toye, and Bailey [2005] and Evans [2006] as cited in Lim [2009]) including universities (Knight & Pryke, 2012) and has been playing a role in the academic lives of students particularly in the undergraduate level (Selwyn & Gorard, 2016).

These also validate the point of Augar, Raithman, and Zhaou (2004) that the site is a valuable technology supporting online teaching and learning. These likewise strongly support Selwyn & Gorard's finding that 24% of the students who reported using Wikipedia considered the site "very useful" in their academic work. In addition, the findings confirm Head and Eisenberg's (2010) conclusion: "Wikipedia meets the needs of college students because it offers a mixture of coverage, currency, convenience, and comprehensibility in a world where

credibility is less of a given or an expectation from today’s students.”

When asked about their thoughts on Wikipedia's reliability, the students responded with a neutral response, as demonstrated in the grand mean of 3.12. The respondents were undecided on whether the articles in Wikipedia are pretty presented and without bias (3.07) and whether these articles are generally well written (3.30).

Recording a grand mean of 3.17, the respondents still needed to decide if Wikipedia is as reliable as a print encyclopedia. They also felt that, at the moment, they could not say whether the information they read in Wikipedia is verifiable elsewhere (3.26) and that this free online encyclopedia is reasonably accurate and precise in facts (3.18).

The data suggests that the respondents needed more information to make an informed choice or response. They have yet to see more evidence that the pieces of information they read on the site are superior and accurate and that Wikipedia content is supplied by sources that can be trusted. They avoided responding against or for Wikipedia's credibility and reliability, perhaps because they are torn between two differing findings reported by content probers of the open platform.

Based on the results of the FGD, the study participants believed that Wikipedia is reliable. They offered three main points to support this belief: 1) many people use Wikipedia, 2) It is teeming with information that comes from books, and 3) It provides a list of references at the end of the article, which, to their mind, is something that makes Wikipedia reliable. Although they hesitate to use it because of the stern warning they get from their instructors and professors against its reliability, students still rely on it. Some are aware that the site contents can be edited by anyone at any time and can be maintained through an open collaboration of a community of volunteers, but that becomes irrelevant to them anymore because they still end up using it for a practical purpose—serve as a starting point in research, provide an initial orientation on the chosen topic.

The researchers followed up to clarify the students' first point (i.e., Many people use Wikipedia). They quizzed them on their view: "So when many people use it, it makes Wikipedia reliable?" Only a few participants responded in the affirmative. These participants explained that since many people use Wikipedia, it follows that the online encyclopedia can be trusted. They are convinced that it is so because those users include some of their teachers who, they confessed, are even using Wikipedia in explaining class lessons and citing Wikipedia as a reference in some teacher-student authored scientific research they chanced upon in the library. So, while studies have proven the unreliability and untrustworthiness of Wikipedia as a resource (Rector, 2008), students still use it because it helps them in learning and writing, and it is free.

Table 1. Perception of Students on Wikipedia

		Bio	Chem	Econ	English	Env Sci	Guidance	ICC	Mass Com	Math	Physics	Pol Sci	Psychology	Grand mean
<i>Wikipedia is useful as a research resource.</i>	Mean		3.5										3.3	
	Scale	3.65	3.0	3.25	3.79	2.71	4.00	3.33	3.75	3.90	4.00	3.50	3.9	3.56
<i>Wikipedia supports learning.</i>	Mean		3.5										3.7	
	Scale	3.73	3.0	3.75	3.93	2.86	4.00	3.50	3.85	4.00	4.00	3.50	3.6	3.70
<i>Articles in</i>	Mean	3.22	3.0	2.75	2.71	3.57	3.00	3.00	3.05	3.40	3.67	2.81	2.6	3.07

<i>Wikipedia are presented without bias.</i>	n	0											7	
	Scale	N	N	N	N	A	N	N	N	N	A	N	N	N
<i>Wikipedia is as reliable as the print encyclopedia</i>	Mea n		3.1										2.6	
		2.97	0	2.50	3.50	3.86	3.00	3.33	3.15	3.80	3.33	2.88	7	3.17
	Scale	N	N	D	A	A	N	N	N	A	N	N	N	N
<i>Information is verifiable elsewhere.</i>	Mea n		2.8										2.8	
		3.24	0	3.00	3.36	3.86	3.00	3.33	3.35	3.70	3.67	3.00	4	3.26
	Scale	N	N	N	N	A	N	N	N	A	A	N	N	N
<i>Articles are generally well-written.</i>	Mea n		3.0										3.0	
		3.05	0	3.00	2.93	3.86	4.00	3.33	3.25	3.60	3.83	2.75	2	3.30
	Scale	N	N	N	N	A	A	N	N	A	A	N	N	N
<i>Articles include significant facts or details on their topics.</i>	Mea n		3.3										3.3	
		3.38	0	3.25	3.36	4.00	3.00	3.17	3.45	3.50	4.00	3.13	1	3.40
	Scale	N	N	N	N	A	N	N	A	A	A	N	N	A
<i>It is reasonably accurate and precise in facts.</i>	Mea n		3.2										2.7	
		3.19	0	2.75	2.86	3.86	3.00	3.17	3.30	3.60	3.67	2.75	8	3.18
	Scale	N	N	N	N	A	N	N	N	A	A	N	N	N
<i>The sources are reliable.</i>	Mea n		3.1										2.7	
		3.08	0	2.75	2.86	3.86	3.00	3.17	3.35	3.60	3.17	2.81	1	3.12
	Scale	N	N	N	N	A	N	N	N	A	N	N	N	N

3.2 Students' Motivation for Wikipedia

Another aspect central to the study is identifying students' motivations for using Wikipedia. Students' reasons for using Wikipedia were diverse. However, based on the results (see Table 2) of the analysis, the top four motivations or reasons students have for their Wikipedia use are 1) they used the online encyclopedia to find the meaning of terms, (2) they utilized the informational site to get them started with an assignment, (3) visited the Wikipedia to obtain a summary about a topic, and 4) they went to the site to look up a quick fact. Using Wikipedia for nonacademic and nonacademic personal needs, for current, up-to-date entries, and for meeting teacher expectations are at the bottom of the list.

This finding is consistent with Lim's claim in 2009 that students use Wikipedia to obtain background information and check facts even with the reported students' low perception of the information in the online free encyclopedia. It, too, strengthens the results of a more recent study by Head & Eisenberg (2010), who found out that a majority of their respondents surveyed and engaged in focus groups frequently used Wikipedia for background information even though this "expediency-based practice" as described by Judd & Kennedy (2011) is "less often than they used other common resources such as course readings and Google."

Table 2. What Motivates Students to Use Wikipedia

Motivation/Reason	Frequency	Percentage
Obtain a summary or synopsis	73	13.64
Begin or get started with an assignment	81	15.14
Search the meaning of words or phrases	94	17.57
The interface is easy to use	15	2.80
Thoroughdescription/explanation	22	4.11
Citations appear at the end of the article	27	5.05
Figure out search terms/concepts	25	4.67
Latest/current entries	8	1.50
More credible than other websites	5	0.93
Peer influence/pressure	12	2.24
Meets professor expectations	3	0.56
Library visits are not needed	28	5.23
Contribute by adding, writing, or editing	30	5.61
For entertainment/leisure/pop culture	11	2.06
NonacademicNonacademic personal needs/concerns	10	1.87
To look up a quick fact/information	62	11.59
Find sources for course-related research	29	5.42
Total	535	100.00

Based on the study's results, no evidence suggests that the respondents are hardcore users of Wikipedia since the grand mean recorded is 2.91. Data in Table 3 show that most respondents considered themselves occasional users of the online encyclopedia. These respondents came from chemistry, economics, English, guidance, industrial communication, mass communication, mathematics, and political science programs. Students from the biology (3.57) and physics (3.67) programs revealed that they had frequently used the online site. In contrast, students from psychology (2.47) and students from environmental science claimed that visiting Wikipedia for research purposes was a rarity.

These findings affirm the earlier studies' claim that many students are Wikipedia users. These also demonstrate that many students are more likely to turn to the site once assigned by their teachers to do a course-related writing task for quick initial help. Notably, most "occasional users" students came from the major arts and social sciences disciplines. One possible reason for not depending mainly on the site is that the students may need more teacher-generated course readings and helpful links. Alternatively, they may settle for other sites and online platforms because they supply information.

Reporting students doing a degree in physics and biology as "frequent users" of Wikipedia is a testament to Head and Eisenberg's finding in 2010 that students majoring in science are more likely to use Wikipedia for course-related research than respondents in other fields. One explanation for this observation is that these groups of students, more than students in other specializations, may need to read up more on the subject matter of their research assignments as these may be unfamiliar or unknown. The students likely create a better grasp of or a working knowledge of the focus of their assignments if they make extra efforts for additional background using Wikipedia.

Table 3. Frequency of Wikipedia Use

Program	Mean	Scale
Biology	3.57	Frequently
Chemistry	2.80	Occasional
Economics	2.75	Occasional
English	3.07	Occasional
Environmental Science	2.14	Rarely
Guidance and Counselling	3.00	Occasional
Industrial and Commercial Communication	3.00	Occasional
Mass Communication	2.83	Occasional
Mathematics	2.90	Occasional
Physics	3.67	Frequently
Political Science	2.69	Occasional
Psychology	2.47	Rarely
Grand Mean	2.91	Occasional

3.3 Students' Consumption of Wikipedia

All respondents were asked which part of their course-related research assignments where they usually use Wikipedia. The results presented in Table 4 show that most students (64 or 35.36%) usually used Wikipedia at the beginning of their research/writing activities. Twenty-four percent (24.31%) utilized Wikipedia near the beginning of their academic tasks. A few reported using the crowd-sourced site toward the end (3.87%) or at the end of the research process (2.21%).

Table 4. Research Writing Stage Where Wikipedia is Utilized

Stage of Research/ Writing	Frequency	Percentage
Very Beginning	64	35.36
Near Beginning	44	24.31
Toward Middle	36	19.89
Toward End	7	3.87
At the End	4	2.21
Do not use	9	4.97
I Do Not Know	17	9.39
Total	181	100.00

Results of the FGD strengthen this as study participants confirmed that they use Wikipedia for research in research like term papers and theses. They added that all the time, they utilize it even in doing other assignments.

These findings support the earlier discovery noted in the report that, to get started with their writing assignments, students explore Wikipedia first to help them with the "brainstorming" phase of their project, also called by Salonga (2004) as the invention stage of writing and with the "organization" phase described by Calderonet al. (2011) as the pre-writing stage. The findings of Camacho et al. (2016) show similarities in how students use the data source – they used Wikipedia to develop their topics or work.

Echoing the claims of Head & Eisenberg (2010) and Knight & Pryke (2012) that Wikipedia use is confined to the initial stages of the student research process, these findings also clearly muscle up the report of Selwyn & Gorard (2016), who pointed out that, students described Wikipedia, for the most part, as "an introductory and supplementary source of information—providing initial orientation and occasional clarification on the topics."

The small number of students who reported that they had used Wikipedia "toward the end" and "at the end" of their course-related research assignment proves that, while the free online encyclopedia may have been integrated into the classroom setting and may be referred to as a helpful resource, only a few students seriously adopt it as a formal reference in their academic work (Schweitzer, 2008).

In the conduct of student research, the study participants in the FGD provided at least three reasons why they use Wikipedia. They answered that they usually use the online encyclopedia to (1) gain information about their assignments or course-related tasks. Wikipedia, according to them, gives background or basic information on specific topics. Some topics mentioned that students search on Wikipedia are wars, especially in China, new technology in Physics, and documentaries or films. They commented that they rely on Wikipedia because it (2) provides them with definitions of terms. They added that, although dictionary applications (e.g., Merriam, Webster) can be a handy tool for them, Wikipedia is still preferred because it provides them with detailed information (sometimes with illustrations, synonyms, and pronunciation) about the words or phrases they look up. Also, the participants said they use Wikipedia because they find it (3) accessible anytime. Using it, they said, is straightforward because it does not require log-ins, passwords, or e-mail accounts.

To determine if they have embraced such a practice (i.e., teacher-student authored research citing Wikipedia as a reference), the researchers asked the participants: "Do you use Wikipedia as a reference in writing your thesis?" In reply, the participants admitted using Wikipedia as a tentative source of information rather than a primary material reference to be included later in the final bibliography. They consider Wikipedia as an initial step when writing their thesis proposals. They said they do this because the free online encyclopedia is the quickest and easiest way to get information related to their chosen topic, often the first result of a Web search. According to them, Wikipedia offers links that lead the participants to navigate "better" and more reliable sites where they can access related studies that form an integral part of the review of related literature chapter of their proposals, following the appropriate guidelines taught to them by their thesis advisers (not thesis teachers). Others, however, pointed out that they need to pay more attention to these links or references Wikipedia supplies and would instead take the time to take the extra steps to visit other sources that are not Wikipedia. This "ignore" behavior may have developed by one of the participants. This Physics major shifted from Wikipedia sources and settled on other "better" sources following an experience where he spotted some flawed Wiki information he carefully compared with data from an online journal.

This revelation prompted the researchers to ask the students if they would still use Wikipedia in future research works or assignments despite the observed pitfalls of the crowd-sourced potential inaccuracies. The participants said they would still get help from Wikipedia but only to gain background information about a topic. If they cannot find other sources elsewhere, they will still rely on Wikipedia but with an effort to make extra clicks to fact-check what they see there against the evidence or details available online and offline. The student responses reinforce the conclusion of Menchen-Trevino and Hargittai (2011): "Although many study participants had been advised by their instructors not to cite Wikipedia articles in their schoolwork, students nonetheless often use it in their everyday lives." It also strengthens the claim of Meseguer-Artola et al. (2020) that students positively perceive the value of the people's encyclopedia as a primary learning resource.

3.4 Test of the Relationship Between Students' Academic Program and Their Perception, Motivation, and Consumption of Wikipedia

The chi-Square test was used to examine the possible link between students' academic program and students' perception, motivation, and use of Wikipedia in their course-related research assignments.

For a systematic presentation, the researchers grouped the items in column one of Table 5 according to significant themes. Items 1 and 2 were classified under "Usefulness of Wikipedia." Items 3, 5, 6, and 7 were grouped under "Objectivity of Wikipedia." Items 4 and 9 were marked to belong to "Reliability of Wikipedia." Items 8, 10, 11, and 12 were considered under "Accuracy and Conciseness of Wikipedia," "Reasons for Using Wikipedia," "Frequency of Use of Wikipedia," and "Research Stage Where Wikipedia is Used," respectively. Based on this grouping, the researchers worked on the following null hypotheses.

Ho 1 There is no relationship between the academic program of students and their perception of the usefulness of Wikipedia.

Ho 2 There is no relationship between the academic program of students and their perception of the reliability of Wikipedia.

Ho 3 There is no relationship between the academic program of students and their perception of the objectivity of Wikipedia.

Ho 4 There is no relationship between the academic program of students and their perception of the accuracy of Wikipedia.

Ho 5 There is no relationship between student's academic program and their motivations in using Wikipedia.

Ho 6 There is no relationship between the academic program of students and their frequency of use of Wikipedia.

Ho 7 There is no relationship between the student's academic program and the research stage where Wikipedia is used.

The decisions/conclusions made on these null hypotheses are as follows.

The researchers accepted null hypothesis 1 and concluded that there is no relationship between the academic program of students and their perception of the usefulness of Wikipedia as a learning tool. It is because the p-values in items 1 and 2 are more significant than the significance level set to .05. The same decision was rendered for items 4 and 9, which yielded p-values more significant than the alpha. The researchers, therefore, accepted null hypothesis 2 and concluded that the sample data contained no sufficient evidence that students' perception of the reliability of Wikipedia depended on the academic program they were pursuing.

The researchers accepted null hypothesis 3, considering that the chi-square statistic calculated in items 3, 5, 6, and 7 (50.51, 51.22, 51.06, 39.49) are less than the observed values (60.48, 60.48, 60.48, 60.48). Based on these data, the researchers concluded that there is no association between the academic program of students and their perception of the objectivity of Wikipedia.

The sample data ran for the Chi-Square test, however, obtained sufficient evidence to show a relationship between the academic program of students and their insights on the accuracy of Wikipedia. It shows that a higher percentage of students from the natural sciences and mathematics department believed that data from Wikipedia were accurate and precise. While on the contrary, a higher percentage of students from the social sciences department (psychology and political science) doubted the accuracy and clarity of Wikipedia information.

The p-value, less than the significance level, convinced the researchers not to support null hypothesis 4.

Association between the (1) academic program of students and their motivations for using Wikipedia, (2) academic program of students and their frequency of use of Wikipedia, and (3) academic program of students and the stage of the research process where they seek support from Wikipedia does not exist. The researchers noted that the sample data for items 10, 11, and 12 provided expected values that were less than the critical or observed values ($178.42 < 207.95$, $102.71 < 110.90$, $85.96 < 77.98$). Hence, null hypotheses 5, 6, and 7 are likely true in these respects.

Table 5. Decisions/Conclusions on the Chi-Square Test

Students' View of Wikipedia Use	Critical Value	Chi-square Statistic	Degrees of Freedom	p-value	Decision
1. Usefulness as a research resource	60.48	36.42	44	0.7844	Accept Ho
2. Support for learning	60.48	37.85	44	0.7315	Accept Ho
3. Fair presentation of articles	60.48	50.51	44	0.2319	Accept Ho
4. Reliability comparable to a print encyclopedia	60.48	44.55	40	0.4483	Accept Ho
5. Verifiability of information elsewhere	60.48	51.22	44	0.2115	Accept Ho
6. Manifestation of effective writing	60.48	51.06	44	0.2158	Accept Ho
7. Inclusion of significant facts or details	60.48	39.49	44	0.6653	Accept Ho
8. Accuracy and conciseness of facts	60.48	61.76	44	0.0396	Reject Ho
9. Reliability and competence of sources	60.48	43.69	44	0.4847	Accept Ho
10. Reasons for use	207.95	178.42	176	0.4349	Accept Ho
11. Frequency of Wikipedia use	110.90	102.71	88	0.1352	Accept Ho
12. Research stage where Wikipedia is used	77.98	85.96	66	0.1480	Accept Ho

4.0 SUMMARY, CONCLUSION, AND RECOMMENDATION

In summary, the survey results reveal that students overall had a neutral perception of Wikipedia as a resource for their course-related research assignments. They use the free online encyclopedia as a starting point to get themselves oriented very quickly on the topic assigned to them by their teachers. The students, who consider themselves occasional site users, admit they seek help from Wikipedia, but this is done only at the beginning of their research work. The study, however, finds evidence to show that students, who worked with Wikipedia for their course research, generally remained neutral regarding the site's reliability and accuracy of information. The Chi-Square test results manifest a link between the academic program of students and their perception of the accuracy and conciseness of information contained in the open platform.

Considering these significant results, the researchers conclude that students are Wikipedia users who rely on the site to get a head start on their course-related research assignments. While students believe the platform can be a goldmine regarding preliminary research and literacy, they are still determining the accuracy of the information on Wikipedia.

Based on the findings and conclusion, the researchers recommend that:

1. Faculty members should allow students to use Wikipedia to help them improve their media literacy and gain initial insights on their research topics.
2. Faculty members should teach students how to use Wikipedia wisely and effectively instead of teaching them to avoid it.
3. A study may examine whether students cite Wikipedia as a source in major teacher-marked writing assignments.
4. A study may be conducted to determine which type or group of students are more likely to trust the accuracy and conciseness of Wikipedia as a source using a broader population.

REFERENCES

1. Augar, N., Raitman, R. & Zhou, W. (2004, December 5-8). Teaching and learning online with wikis is beyond my comfort zone. *Proceedings of the 21st ASCILITE Conference, Perth, Australia*, 95–104.
2. Calderon, T. et al. (2011). *The right way: Academic writing for first-year students*. Quezon City: Cornerstone of Arts and Sciences.
3. Calkins, S., & Kelley, M. R. (2009). Who writes the past? Student perceptions of Wikipedia knowledge and credibility in a world history classroom. *Journal on Excellence in College Teaching*, 20 (3), 123–143.
4. Camacho, M., et al. (2016). Using a wiki to promote students' learning in higher education (Degree in Pharmacy). *International Journal of Educational Technology in Higher Education*, 13 (23).
5. Denning, P., Horning, J., Parnas, D., & Weinstein, L. (2005, December). Wikipedia risks. *Communications of the ACM*, 48(12), p. 152.
6. Desilver, D. (2013, July 30). Few students are likely to use printed books for research. Retrieved from <https://www.pewresearch.org/fact-tank/2013/07/30/few-students-likely-to-use-print-books-for-research/>
7. Deters, F., Cuthrell, K., & Stapleton, J. (2010, March). Why Wikis? Student perceptions of using Wikis in online coursework. *MERLOT Journal of Online Learning and Teaching*, 6(1), 122–134.
8. Head, J. & Eisenberg M. (2010, March 1). How today's college students use Wikipedia for course-related research. *First Monday*, 15(3).
9. Holman Rector, L. (2008). Comparison of Wikipedia and other encyclopedias for accuracy, breadth, and depth in historical articles. *Reference Services Review*, 36(1), 7–22.
10. Jaschik, S. (2007, January 26). A stand against Wikipedia. Retrieved on January 27, 2014, from <http://www.insidehighered.com/news/2007/01/26/wiki>.
11. Judd, T. & Kennedy, G. (2011, March). Expediency-based practice? Medical students' reliance on Google and Wikipedia for biomedical inquiries. *British Journal of Education Technology*, 42(2), 351–360.
12. Knight, C., & Pryke, S. (2012). Wikipedia and the university, a case study. *Teaching in Higher Education - TEACH HIGH EDUC*. 17. 1–11. 10.1080/13562517.2012.666734.
13. Kim, J. (2013, November 1-6). Wikipedians From Mars: Female Students' Perceptions Toward Wikipedia. *ASSIST 2013*.
14. Konieczny, P. (2016). Teaching with Wikipedia in a 21st-century classroom: Perceptions of Wikipedia and its educational benefits. *Journal of the Association for Information Science and Technology*. Pp.n/a-n/a. 10.1002/asi.23616 hal-01580960
15. LaFrance, J., & Calhoun, D.W. (2012). Student perceptions of Wikipedia as a learning tool for educational leaders. *International Journal of Educational Leadership*, 7(2).
16. Lim, S. (2009). How and why do college students use Wikipedia? *Journal of the American Society for Information Science and Technology*, 60(11), 2189–2202. doi:10.1002/asi.21142.
17. Menchen-Trevino, E, & Hargittai, E. (2011). Young adults' credibility assessment of Wikipedia. *Information, Communication & Society*, 14(1), 24-51. DOI 10.1080/13691181003695173.
18. Mendes, T., et al. (2021). Wikipedia in health professional schools: from an opponent to an ally. *Medical Science Educator*, 31.

19. Meseguer-Artola, A., Rodríguez-Ardura, I., Ammetller, G., & Rimbau-Gilabert, E. (2020). Academic impact and perceived value of Wikipedia as a primary learning resource in higher education. *Profesional de la información*, 29(3) e290329. <https://doi.org/10.3145/epi.2020.may.29>
20. Okoli, C. et al. (2012). The People's Encyclopedia under the Gaze of the Sages: A systematic review of scholarly research on Wikipedia. *SSRN Electronic Journal*. 10.2139/ssrn.2021326.
21. Parker, K., & Chao, J. (2007). Wiki as a teaching tool. *Interdisciplinary Journal of Knowledge and Learning Objects*, 3(57-72). DOI:10.28945/386
22. Rainie, L., & Tancer, B. (2007, April). 36% of online American adults consult Wikipedia. *Pew Internet and American Life Project*, pp. 1–7.
23. Rector, L. (2008). Comparison of Wikipedia and other encyclopedias for accuracy, breadth, and depth in historical articles. *Reference Services Review*, pp. 36, 7–22. 10.1108/00907320810851998.
24. Reyes, M. P. P. (2013, May 29-31). Wikipedia: Misinformation for all ages? *Generations Program and Book of Abstracts of the Seventh National Social Sciences Congress, PSSC Center, Diliman, Quezon City*, p. 27.
25. Salonga, A. (2004). *Problems in rhetorics*. Quezon City, Philippines: University of the Philippines Open University, Office of the Academic Support and Instructional Services.
26. Selwyn, N. & Gorard, S. (2016, January). Students' use of Wikipedia as an academic resource – Patterns of use and perceptions of usefulness. *The Internet and Higher Education*, pp. 28, 28–34.
27. Sophocles, S. P. & Yerou, C. (2012). Using Wikis in an English specific for academic purposes (ESAP) context: University students' perceptions and reflections. *Teaching English with Technology*, 13(2), 23-54.
28. Spoerri, A. (2007, April). Visualizing the overlap between the 100 most visited pages on Wikipedia for September 2006 to January 2007. *First Monday*, 12(4). DOI:10.52.v12i4.1764.
29. Wikipedia The Free Encyclopedia (2014, January 14). History of Wikipedia. Retrieved on January 30, 2014, from http://en.wikipedia.org/wiki/History_of_wikipedia
30. Wilkins, M. (2021, November 4). 5 reasons to encourage students to use Wikipedia. *Edutopia*. <https://www.edutopia.org/article/5-reasons-actually-encourage-students-use-wikipedia/>