The use of Wikipedia in Indonesian Education: Investigating Experiences and Challenges for Students and Educators

Context

Wikipedia is among the largest online repositories of information globally, comprising over 58 million entries in more than 300 languages and receiving over 16 billion visits each month worldwide. In Indonesia, the "Free Knowledge" initiative promoted by Wikimedia Indonesia advocates for public engagement in the creation and dissemination of open knowledge. Wikipedia's collaborative nature positions it as a significant educational resource in 21st-century learning, particularly in fostering digital literacy, critical thinking, and collaborative writing abilities.

Global research indicates that Wikipedia has been utilized in educational settings to enhance capabilities like information literacy, critical assessment, academic writing proficiency, and digital collaboration abilities (Brox, 2016; Calhoun, 2014; Vetter et al., 2019). In Estonia, systematic initiatives have been implemented to include Wikipedia in the curricula of primary and higher education, emphasizing new literacy and project-based learning (Remmik et al., 2024)

In Indonesia, official education has not extensively incorporated Wikipedia as an educational resource. The primary challenges include the digital divide, insufficient computer literacy, and unfavorable attitudes toward Wikipedia as a "non-academic" source. In higher education, online learning frequently functions merely as a collection of passive instructional resources and has not yet extensively embraced the crowdsourcing-based interactive model shown by Wikipedia (Wicaksono, 2012).

Interestingly, the potential of Wikipedia in providing credible information has also been proven through comparative studies with official government websites. A study of 548 local government websites in Indonesia shows that official sites still lag behind in terms of information completeness compared to Wikipedia and DBpedia, both in Indonesian and English versions. In fact, when searching for the names of local governments on Google, Wikipedia appeared as the top result in 88.6% of cases. The study concluded that improvements to official government websites are necessary to meet e-government objectives regulated by national regulations (Kurniawan et al., 2017). These findings indicate that Wikipedia has been recognized as a more accessible and comprehensive information reference by the public compared to official channels, including in the context of government.

Even though there have been many helpful projects, like training students to edit Wikipedia at SMA Negeri 1 Indralaya (Erina et al., 2024), creating Wiki Legenda Indonesia (Roosdiono & Mudjahidin, 2013), and digitizing local content in Bungko Lor (Sedjati et al., 2024), there is still no complete study that looks at how Wikipedia is used in education across Indonesia, including both high schools and universities. In fact, this Wikipedia has outstanding potential as a participatory medium that can encourage the active involvement of students and university students as producers of knowledge, not just as consumers. The use of Wikipedia is not only relevant in the context of collaborative learning, but it can also serve as a strategic tool to support the social inclusion of young people through community-based activities, such as edit-a-thons, digital literacy training, and local knowledge discussions (Prasetyo et al., 2025).

Wikipedia can be optimized to expand the documentation of local knowledge that has been underexposed in the formal knowledge ecosystem in Indonesia's cultural diversity.
An explicit instance of employing Wikipedia for the conservation of local culture is the initiative to establish the Balinese Wikipedia. The Balinese Wikipedia was created as a revival initiative to address the declining use and understanding of the Balinese language and culture among youth, engaging students, linguistic specialists, and the academic community. This program corresponds with the Bali government's goal via Nangun Sat Kerthi Loka Bali, which underscores the significance of safeguarding Balinese language and culture during the 4.0 industrial revolution (Aryasuari, 2019). The existence of the Balinese Wikipedia signifies an initiative to elevate regional languages to parity with other languages in the global digital arena.
This project seeks to empirically examine the utilization of Wikipedia for educational purposes in Indonesia. The primary emphasis is on examining the experiences, attitudes, and issues encountered by students, teachers, and lecturers in employing Wikipedia as an educational resource. This project, utilizing a literature analysis, surveys, and case studies, aims to establish a basis for open education policies and the incorporation of Wikipedia into the national curriculum in the future.

Articulation of the Problem

1. What are the experiences and perspectives of students and educators regarding the utilization of Wikipedia for educational purposes?
2. What are the obstacles and opportunities associated with incorporating Wikipedia into the curriculum and fostering digital literacy?
3. What technical and social strategies can facilitate the integration of Wikipedia in educational practices in Indonesia?

Research Aims

The research aims to examine the experiences and opinions of students and educators regarding the use of Wikipedia for educational purposes. We are also examining the challenges and opportunities associated with integrating Wikipedia into the curriculum and enhancing digital literacy. We are developing technological and sociological recommendations to facilitate the integration of Wikipedia into educational practices in Indonesia.

Advantages of Research

This research aims to deliver comprehensive insights regarding the utilization of Wikipedia within the educational context of Indonesia. This research provides policy recommendations for Wikimedia Indonesia, governmental entities, and educational institutions to improve Wikipedia's effectiveness as an educational tool. This initiative aims to facilitate the advancement of digital literacy among students and educators in Indonesia.

Methodology of Research

This research uses a mixed-methods approach that combines numbers and personal experiences to gain a complete understanding of how people in Indonesia feel about, face challenges with, and see the future use of Wikipedia in education.

1. Research Methodology

Research Classification: Exploratory-descriptive
Methodology: Mixed approaches (quantitative and qualitative). Researchers used this design to thoroughly investigate how students, educators, and lecturers utilize Wikipedia, while also quantitatively assessing their perceptions.

2. Participants and research sites
Research Participants: Secondary and tertiary education students' Secondary education instructor and university educator.
Research Locations: Ten high schools (SMA/MA) and five universities from diverse regions in Indonesia, accounting for geographical variability (urban and rural).

3. Data Collection Techniques

Research Objective	Technique	Instrument	Type of Data
To identify the experiences and perceptions of students, teachers, and lecturers	Online and offline surveys	Likert-scale questionnaires and open-ended questions	Quantitative and narrative
To explore the challenges and opportunities of integrating Wikipedia into learning	In-depth interviews and focus group discussions (FGDs)	Interview guidelines and audio recorders	Qualitative
To formulate technical and social recommendations	Data triangulation	NVivo and SPSS	Thematic

4. Analytical methods for data
We will examine quantitative data using descriptive statistics (frequency, mean, and percentage) in SPSS software. Qualitative data from interviews and focus group discussions will be analyzed using thematic content analysis with NVivo software to identify patterns and themes related to the research questions.

5. Data Integrity
This research employs various ways to ensure the data's validity and reliability: Method triangulation: Integrating surveys, interviews, and focus group discussions to enhance findings.
Member checking: Verification of interpretative findings with select responders. Instrument trial: Executed prior to the primary data collection to ascertain the clarity and appropriateness of the measurement instrument.

Academic Strategy
This research comprises two primary studies examining the utilization of Wikipedia in the educational context for both students and educators.

Research 1: Students' Experiences with Wikipedia
This study seeks to investigate how students utilize Wikipedia during the learning process, particularly in the context of fulfilling academic obligations.
Method: Online and offline questionnaires comprising many sections (Likert scale and open-ended inquiries). The sample consisted of approximately 500 to 600 students from ten high schools and five universities.
Sampling Method: Convenience sampling, accounting for geographical diversity. Analysis: A quantitative methodology employing SPSS to elucidate students' perspectives regarding the reliability and utility of Wikipedia.
Study 2: Educators' and Instructors' Perspectives on Wikipedia
This study examines the viewpoints of educators regarding the utilization of Wikipedia as a resource in the teaching and learning process.
Method: Comprehensive interviews and focus group discussion (FGD). The study involved approximately 50 to 60 educators from the same university as Research Study One. Analysis: A qualitative method using NVivo software to identify the main stories about the possibilities, challenges, and views of Wikipedia in education.

Research Findings
This research focuses on a scientific article published in a peer-reviewed journal. The research findings have led to the development of a policy suggestion document for the ministry, educational institutions, and Wikimedia Indonesia. The document serves as a comprehensive manual for the integration of Wikipedia into educational institutions, catering to both schools and universities.

Timeline of Implementation (August 2025 – July 2026)

Period	Activity
August – October 2025	Literature review, development of research instruments
October – January 2026	Data collection (surveys and focus group discussions)
January – March 2026	Quantitative and qualitative data analysis
March – May 2026	Preparation of academic articles and policy documents
May – July 2026	Finalization, publication, and dissemination of results

The writing process is relatively lengthy, as all project team members are undertaking this work in addition to their primary professional responsibilities. Given the extended publication timeline (with peer review potentially taking up to three months and publication up to six months), it is unlikely that the article will be published by the end of July. However, we guarantee that the article will be submitted to an open-access academic journal no later than July 2025.

Dissemination Plan
We will submit a scientific article in English, indexed and peer-reviewed, to an international open-access journal as an output of this research. We will also share the research results at national and international workshops or conferences, as possible. A summary of the research findings will also be conveyed through articles on Wikimedia Diff and the Citizen Media blog

in Indonesia as an effort to disseminate knowledge to the broader public outside the academic community.

Budget

The research budget is designed to support the entire process of conducting the research over ten months, from the preparation stage, data collection, and analysis to the dissemination of the results. The budget is mostly allocated for additional honoraria for the three main researchers (Kanyadibya Cendana Prasetyo, Tri Astari, and Vivi Uvaira) who are actively involved throughout the duration of the research. Tri Astari, in addition to being a researcher, also serves as the project coordinator and receives additional payment for 12 months.

Two undergraduate students will be engaged as research assistants to support the data collection and analysis processes over a six-month period. The research team also comprises two external consultants: one specializing in methodology and the other in Wikipedia-related expertise. Each consultant will receive a one-time lump sum honorarium. The budget allocation includes honoraria for data analysts and field coordinators. Data will be collected through both online and offline surveys, as well as focus group discussions (FGDs), which require transportation funds for both team members and participants.

The purchase of NVivo and SPSS software licenses, as well as SurveyMonkey and Zoom meeting services, is considered essential for both qualitative and quantitative data analysis. We have allocated the publication costs for articles in peer-reviewed international open-access journals. If a journal with lower or no publication fees is available, the budget difference will be redirected to support the team's participation in national or international educational conferences as a form of result dissemination. Other supported activities include scientific writing training, manuscript translation and editing, production of souvenirs, and online communication costs. Institutional overhead is calculated as a percentage of the total non-personnel operational expenses.

Summary of Budget Allocation:

1. Logistics and Space: $2,576.69
2. Merchandise (Souvenirs): $2,208.59
3. Communications and Materials (Internet and Communication Fees): $3,067.48
4. Travel and Accommodation (Writing Boot Camp, FGD with Lecturers, and Transportation): $12,269.94
5. Open Access Publishing Costs: $6,134.97
6. Salary or Stipend (Researchers, Consultants, Assistants, Analysts, Coordinators): $22,760.74
7. Institutional Overhead (max 15%) & Bank Transfer Charges: $960.12

Total Estimated Budget: $49,978.53

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