Development of Future Learning Models Based on Ki Hajar Dewantara's Ideas: A Bibliometric Evaluation of Recent Research

Ali Anhar Syi'bul Huda1*, Syahidin2, Wawan Hermawan3

^{1,2,3}Islamic Religious Education Study Program, Universitas Pendidikan Indonesia Email: alianhar99@upi.edu^{1*}, syahidin@upi.edu², wawan.h1960@upi.edu³

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Abstract:

This study investigates the application of Ki Hajar Dewantara's ideas in the development of future learning models through a bibliometric approach. By analyzing 500 publications from Google Scholar, Scopus, and Web of Science spanning the period 2014-2024, the study identifies key trends, highlights the contributions of leading researchers, and explores central themes in the related academic discourse. The findings reveal a significant increase in publications related to Dewantara's ideas, with a notable peak in 2023. Key topics identified include character education, independent curricula, and value-based learning. Additionally, the research underscores the global relevance of Dewantara's educational philosophy, aligning with the humanistic principles espoused by John Dewey and Paulo Freire. The implications for Indonesian education involve reinforcing the role of the Tri Center of Education and enhancing the integration of character values within the national curriculum. The study further recommends the development of technology-driven research and the adoption of hybrid learning models.

Abstrak:

Penelitian ini menyelidiki penerapan gagasan Ki Hajar Dewantara dalam pengembangan model pembelajaran masa depan melalui pendekatan bibliometrik. Dengan menganalisis 500 publikasi dari Google Scholar, Scopus, dan Web of Science yang mencakup periode 2014-2024, penelitian ini mengidentifikasi tren utama, menyoroti kontribusi peneliti terkemuka, dan mengeksplorasi tema-tema sentral dalam diskursus akademik terkait. Temuan menunjukkan adanya peningkatan signifikan dalam publikasi yang berkaitan dengan gagasan Dewantara, dengan puncak yang mencolok pada tahun 2023. Topik-topik utama yang teridentifikasi meliputi pendidikan karakter, kurikulum mandiri, dan pembelajaran berbasis nilai. Selain itu, penelitian ini menegaskan relevansi global dari filosofi pendidikan Dewantara, yang sejalan dengan prinsip humanistik yang diajarkan oleh John Dewey dan Paulo Freire. Implikasi untuk pendidikan Indonesia mencakup penguatan peran Tri Center of Education dan peningkatan integrasi nilai karakter dalam kurikulum nasional. Penelitian ini juga merekomendasikan pengembangan riset berbasis teknologi dan adopsi model pembelajaran hybrid.

Keywords:

Bibliometrics, Ki Hajar Dewantara, Character Education

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Introduction

The development of educational models has become a central focus of research and innovation, particularly in the context of adapting to future learning needs. With the shift in educational paradigms towards more inclusive, adaptive, and student-centered approaches, the integration of historical educational philosophies with modern pedagogical practices is increasingly relevant (Black-Hawkins & Amrhein, 2014; Keppens, Consuegra, Maeyer, & Vanderlinde, 2021). This is particularly true in the Indonesian context, where the educational ideas of Ki Hajar Dewantara, a prominent figure in Indonesian education, continue to influence contemporary educational strategies. His emphasis on freedom, individuality, and respect for each student's unique potential aligns with current educational trends that prioritize differentiated learning and inclusivity (Wiryopranoto, Herlina, Marihandono, & Tangkilisan, 2017; Wicaksono, 2019; Nugroho, Nimran, Musadieq, & Solimun, 2020; Sumarlam, Winarni, Setiawan, & Masjid, 2023).

Ki Hajar Dewantara's educational philosophy, which advocates for "education that liberates students," remains highly relevant in the context of differentiated learning within the Independent Curriculum. This approach values each student's uniqueness and potential, allowing them the freedom to develop according to their talents and interests. Dewantara's ideas are not only historically significant but also provide a robust framework for modern educational practices aimed at fostering independence and character development. His perspective on self-learning and its connection to character education underscores the importance of cultivating cognitive abilities, comprehension, and the practical application of knowledge (Ferary, 2021; Sugiharto, 2021).

Empirical studies suggest that Ki Hajar Dewantara's concepts, such as the "among system" and the "Tri Center of Education," can be effectively applied in designing character-based learning models and innovations for the 21st century. Furthermore, research also explores the transformation of education through the integration of technology and local cultural values, which align with the challenges of the modern curriculum, such as the Independent Curriculum. Other studies indicate that bibliometric evaluation offers a valuable tool for tracking the latest research trends in the context of philosophy-based education derived from Dewantara's ideas (Nurhalita & Hudaidah, 2021; Baga, Suprapto, & Sinaga, 2023)

Theoretically, Dewantara's concepts provide a philosophical foundation for creating an inclusive and adaptive learning environment. His emphasis on freedom, equality, and respect for individual uniqueness is reflected in various learning practices that promote inclusion and equality in access to education. These theoretical foundations support the development of a student-centered learning environment that aligns with the

spirit of Dewantara's educational philosophy. The integration of these principles into modern educational models can lead to the advancement of character education, fostering virtuous, intelligent, and capable individuals (Farrow, Kavanagh, Samudra, & Dean, 2024; Mulya, Sakhiyya, Muslim, & Suryani, 2024; Kong & Wang, 2024)

The selection of Ki Hajar Dewantara's educational ideas as the foundation for developing future learning models is driven by their relevance and adaptability to the challenges of contemporary education. His philosophy aligns with the objectives of modern education, which seeks to empower students through personalized and inclusive learning experiences. By focusing on the unique needs and potential of each student, Dewantara's ideas offer a valuable framework for addressing the diverse challenges faced by educators today (Firmansyah & Nasucha, 2021; Abdillah, 2024).

Despite the significant contribution of Dewantara's educational philosophy, there remains a gap in research regarding the comprehensive evaluation of its application in modern educational models. While several studies have explored the relevance of his ideas in specific contexts, a broader bibliometric evaluation of recent research is necessary to fully understand the impact and potential of Dewantara's philosophy in shaping future learning models (Anninos, 2014; Bartoli & Medvet, 2014). This gap presents an opportunity for further research to explore the integration of Dewantara's ideas into various educational settings.

The novelty of this study lies in its bibliometric evaluation of recent studies on the application of Ki Hajar Dewantara's educational ideas in developing future learning models. By systematically analyzing the existing literature, this study aims to provide a comprehensive understanding of how Dewantara's philosophy can be integrated into modern educational practices. This approach not only highlights the enduring relevance of Dewantara's ideas but also offers new insights into their potential to transform educational models in the 21st century.

Research Method

This research employed a qualitative design, which is particularly suited for exploring qualitative aspects such as emotions, phenomena, ethnography, context, and literature. The selection of a qualitative design was driven by the researcher's aim to critically analyze studies on Ki Hajar Dewantara over the past decade, specifically through the bibliometric method (Drisko, 2015; Quick & Hall, 2015; Hesse, Glenna, Hinrichs, Chiles, & Sachs, 2018; Hsiung, 2018).

The method used in this study was bibliometric research, which involved mapping emerging topics across various academic disciplines using software tools such as Google Scholar, Scopus, and Web of Science. This method traced research trends, identified the countries producing publications, examined leading authors, and highlighted evolving research themes (Rodríguez, Contreras, & Oliva, 2019; Kuzhabekova, 2021; Liu, Yu, & Liu, 2021; Pham, Ta, Luong, Nguyen, & Vu, 2023). The decision to adopt the qualitative bibliometric approach was based on several considerations: First, bibliometrics enabled the mapping of research trends and the identification of key themes in the field of Ki

Hajar Dewantara's ideas, which aligned with the study's objective to explore the development of his ideas in the context of future learning models. Second, bibliometrics allowed for data visualization in the form of network maps, trend graphs, and other diagrams, providing a clearer and more comprehensive picture of emerging research issues. Third, using data from multiple publication sources (Google Scholar, Scopus, and Web of Science) enhanced the reliability of the findings. Including a broad range of data sources increased the validity and trustworthiness of the study.

The stages of utilizing the bibliometric research method were outlined in the diagram below:

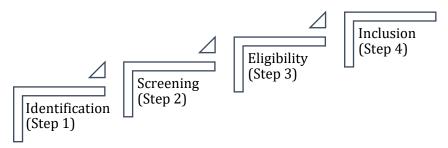


Figure 1. Stages of Using Bibiliometric Research Methods (Ahmad, Rehman, Iqbal, Faroog, Shahid, & Ullah, 2021)

The data collection process followed several steps: First, the topic was identified through the selection of key keywords, namely "Ki Hajar Dewantara," "learning model," and "educational development." These keywords were used to search for relevant articles in the Google Scholar, Scopus, and Web of Science databases. Second, data collection was conducted using the *Publish or Perish* software for Google Scholar and the search tools from Scopus and Web of Science. The data were then collected in RIS and CSV formats to be compatible with bibliometric analysis software such as VOSviewer and Citespace. Third, data filtering was applied using inclusion and exclusion criteria to ensure that only relevant articles were considered. The inclusion criteria consisted of articles that discussed Ki Hajar Dewantara's ideas, published between 2014 and 2024, and available in Indonesian or English. Exclusion criteria included articles that were irrelevant to the research theme, opinion-based articles, and those that were not fully accessible.

To enhance the robustness of the analysis, data from various databases were used. The three primary databases utilized were Google Scholar, Scopus, and Web of Science. Google Scholar was chosen for its extensive coverage of academic articles published in Indonesia. Scopus was selected for its high-quality publications and peer-reviewed journal articles, while Web of Science (WoS) complemented the previous two databases by offering a wider scope of international research. Data collection was carried out through the *Publish or Perish* application, with Google Scholar serving as the primary data source (see Figure 2), complemented by journals, proceedings, papers, books, and other valid internet sources as secondary data.

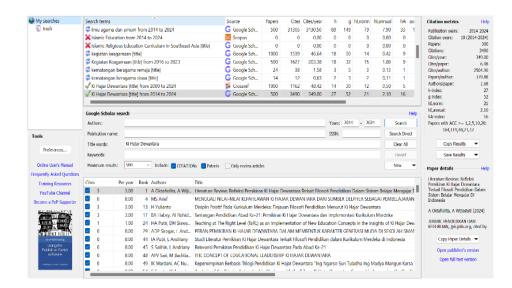


Figure 2. 500 Articles as Primary Data Sources from Google Scholar Database

After data collection, the next step was the analysis process. The data analysis employed in this study was descriptive data analysis. This approach allowed for exploratory reporting, validation of data accuracy, interpretation, and in-depth analysis. Once the data was collected from the Google Scholar database, it was critically described in narrative form (Nyland, 2018; Naeem, Ozuem, Howell, Ranfagni, 2023; Sun, Rosemary, Jiang, & Little, 2024).

The data analysis process followed these steps: First, data preparation was carried out by importing the collected data from Google Scholar, Scopus, and Web of Science into analysis software like VOSviewer and Citespace. Second, data cleaning involved removing duplicates, irrelevant articles, and correcting errors in spelling or metadata. Third, the cleaned data was visualized using VOSviewer and Citespace, resulting in a network map that illustrated relationships between topics, articles, and authors. Finally, data interpretation was conducted, focusing on identifying research trends, grouping themes, and identifying key researchers.

To ensure the validity and reliability of the research, several measures were implemented: First, the use of diverse databases (Google Scholar, Scopus, and Web of Science) ensured broader coverage and mitigated potential bias from relying on a single database. Second, clear inclusion and exclusion criteria guaranteed that only relevant articles were included in the analysis. Third, the use of reputable analysis software, such as VOSviewer and Citespace, supported the reliability and validity of the bibliometric results.

However, some limitations existed in this study. One limitation was the reliance on specific keywords for article searches. The chosen keywords may not have captured all relevant articles, particularly those that used different terminology. Additionally, access to articles was sometimes restricted, as not all indexed articles in the database were fully accessible. The limited data collection period could also have affected the number of articles identified. Despite these limitations, this research method aimed to provide a more comprehensive understanding of Ki Hajar Dewantara's ideas and their potential for shaping future learning models.

Results and Discussion

The main trend of the study shows that the number of publications related to Ki Hajar Dewantara has increased significantly over the last 10 years. The year with the highest number of publications was 2023, with 108 articles, while, as of the time of data collection in 2024, there were 58 publications. This upward trend indicates a growing interest in Ki Hajar Dewantara's ideas, especially in the context of educational reform in Indonesia. The findings demonstrate that Ki Hajar Dewantara's ideas remain relevant in contemporary discussions surrounding learning innovations and the development of character-based educational models.

Research Trends on Ki Hajar Dewantara

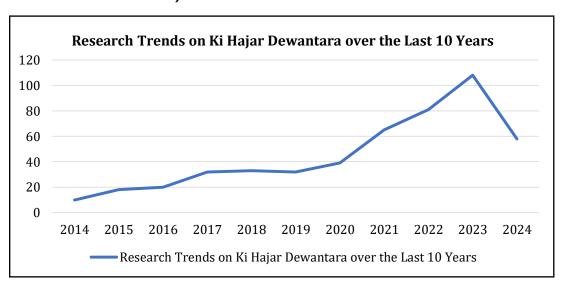


Figure 3. Ki Hajar Dewantara Publication Trend 2014-2024

Based on the data processed through the 2021 version of Microsoft Office on 500 articles found through the Google Scholar database, four publications were deemed irrelevant to the topics and criteria and were subsequently excluded, bringing the final count to 496 articles. As shown in Figure 3, research publications on Ki Hajar Dewantara from 2014 to 2024 have experienced a significant increase. The peak occurred in 2023, with 108 publications, followed by a moderate number in 2022 (81 publications). The lowest point was in 2014, with only 10 publications. It is also evident that, by 2024, there were 58 publications on Ki Hajar Dewantara, with the number expected to continue growing throughout the year.

The increasing trend in research on Ki Hajar Dewantara over the years reflects the enduring relevance of his work, character, and influence, particularly in the field of education. As the Father of Indonesian Education, his ideas have inspired educational reformers to instill a national spirit in students, starting at an early age. Moreover, Dewantara's teachings emphasize the development of a learner's potential, focusing on social sensitivity, cooperation, and tolerance—values that have played a crucial role in shaping the Indonesian educational landscape (Parker, 2014; Octarra & Hendriati, 2018; Ubaedillah, 2018; Arfani & Nakaya, 2019; Halimah, Yuliariatiningsih, & Mirawati, 2023)

Another significant factor contributing to the sustained interest in Ki Hajar Dewantara's ideas is their applicability across diverse educational institutions, including modern Islamic schools. These schools, which integrate Islamic values with Dewantara's educational philosophy, illustrate how his ideas can support the development of education that blends local culture with scientific progress (Parker & Raihani, 2011; Triwiyanto, Suyanto, & Prasojo, 2019).

Core Sources in National Publications on Ki Hajar Dewantara

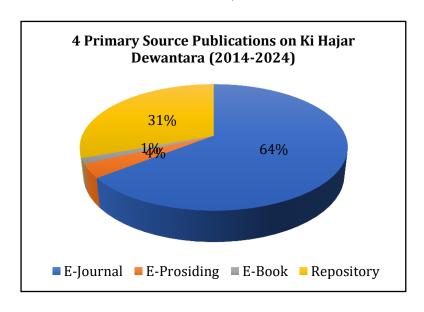


Figure 4. Main Sources of Publications on Ki Hajar Dewantara 2014-2024

A review of 500 articles from the Google Scholar database on Ki Hajar Dewantara, quantitatively analyzed through Microsoft Word, revealed four main sources of publication: e-journals, e-proceedings, e-books, and repositories. The most dominant source was scientific journals, accounting for 324 articles (64% of the total sample), followed by repositories (154 articles or 31%), proceedings (18 articles or 4%), and e-books (7 articles or 1%). The dominance of scientific journals suggests that publications related to Ki Hajar Dewantara have undergone a rigorous peer-review process, enhancing the validity of the findings. Furthermore, the significant presence of repositories from educational institutions highlights the importance of Dewantara's ideas in curriculum development and educational practices across various institutions.

Electronic journals, in particular, are a significant source of academic dissemination. They serve as a digital platform for storing, reviewing, and sharing research and ideas globally, facilitating easy access and rapid dissemination. This accessibility and convenience have made journals an essential resource for educational content, supporting the development of academic materials. Additionally, the content in scientific journals is generally well-argued, scientifically rigorous, and impactful, making them an ideal venue for the dissemination of knowledge. The global nature of journals also allows for the collaboration and exchange of ideas among researchers worldwide,

often with minimal costs (Tyagi, 2014; Antell, Foote, & Foote, 2016; Machimbidza & Mutula, 2019; Chan, Schillereff, Baas, Chadwick, Main, Mulligan, O'Shea, Pearce, Smith, Soesbergen, A. van, Tebb, & Thompson, 2020; Hancock & Price, 2020; Butt, Ahmad, & Shahbaz, 2021; Mohsin, Vayani, Akram, & Qamar, 2022; Vara, Rahimi, & Danesh, 2023).

Productive Researchers in Ki Hajar Dewantara Research

The identification of productive researchers in the field of Ki Hajar Dewantara's educational philosophy was carried out using the VOS Viewer application, version 1.6.20. The analysis focused on 500 articles sourced from the Google Scholar Database, covering the period from 2014 to 2024. The process for reviewing the researchers involved several steps using VOS Viewer. After opening the application, the "Create" option was selected, followed by choosing the "Create a Map Based on Bibliographic Data" option. The data source was then selected as "RIS" format, and for the counting method, a minimum of 25 documents per author was established. From the initial pool of 701 researchers, six researchers met the criteria and were selected, as shown in Figure 5.

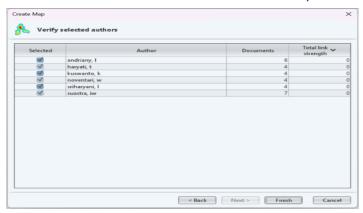


Figure 5. Productive Researchers Who Produced Publications on Ki Hajar Dewantara 2014-2024

Based on Figure 5, the analysis revealed that the six most productive researchers in this field were Liesna Andriany (6 articles), Titik Haryati (4 articles), Kuswanto (4 articles), Widya Noventari (4 articles), Leni Sriharyani (4 articles), and I Wayan Suastra (7 articles). These researchers have made significant contributions to the academic discussion surrounding Ki Hajar Dewantara's ideas. Their consistent work indicates a dedicated group of scholars focused on advancing the literature on Dewantara's educational philosophy.

In terms of research topics, the most frequently discussed themes included "character education," "independent curriculum," "learning models," and "cultural values." These themes reflect the widespread application of Ki Hajar Dewantara's ideas in the development of curriculum and character-based educational models in Indonesia. For instance, the independent curriculum aligns with Dewantara's idea of "education that liberates students," while the character-based learning model often incorporates the concept of the Tri Center of Education, which emphasizes the collaborative roles of family, school, and community in shaping students' development.

From a global perspective, Ki Hajar Dewantara's educational philosophy shows similarities with the ideas of prominent global figures like John Dewey and Paulo Freire. Dewantara's notion of liberating education aligns closely with Dewey's concept of experiential learning and Freire's notion of "liberation education." As such, Dewantara's educational thinking not only holds national relevance but also resonates with global educational discussions, particularly in humanistic and participatory education.

Building a Better Indonesian Education through Ki Hajar Dewantara Research Mapping

In order to further enhance the future development of Indonesian education, a mapping of emerging research topics related to Ki Hajar Dewantara's ideas was conducted. This mapping was performed using the VOS Viewer application, version 1.6.20, based on 500 articles retrieved from the Google Scholar database over the past decade (2014-2024).

The mapping process involved selecting the "Create a Map Based on Text Data" option, followed by reading data from reference manager files in RIS format. The counting method chosen was Binary Counting, with a minimum of 4 occurrences of a term, resulting in the identification of 83 key terms out of a total of 2,422 items. As shown in Figure 6, these 83 terms were automatically re-selected by the application, and 50 terms were identified as significant for further research exploration, as shown in Figure 7.

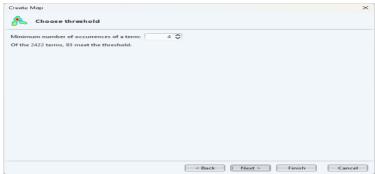


Figure 6. Binary Counting Results with a Minimum Number of Occurrences of a Term

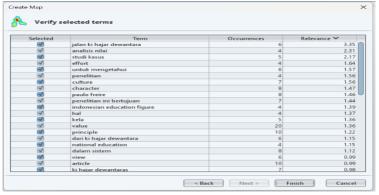


Figure 7. The Results of 50 Terms Re-selected by the Application as Relevant to the Research Topic on Ki Hajar Dewantara

The final step involved the mapping of emerging issues that can be further developed through Ki Hajar Dewantara research. The visualization of these issues, based on network visualization display mode, can be seen in Figure 8. This network visualization provides a comprehensive overview of the key topics and emerging trends in the field, offering valuable insights for the future development of educational models grounded in Dewantara's ideas.

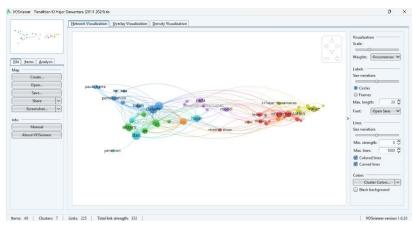


Figure 8. Mapping Issues that Can Be Developed from the Research on Ki Hajar Dewantara with the Network Visualization Display Mode

Figure 8 above, it is evident that the 50 items identified, which represent 60% of the 83 re-selected items, were divided into seven distinct clusters. The first cluster consists of 10 items, including concepts such as "application," "case study," "implementation," "Indonesian education figure," "learning," "Merdeka curriculum," "principle," "research show," "student," and "theory." The second cluster contains 9 items, such as "system," "from Ki Hajar Dewantara," "with," "teacher," "this," "Ki Hajar Dewantara about," "according to Ki Hajar Dewantara," "in addition," and "system." The third cluster also includes 9 items, including "in," "things," "class" (kela), "methods," "Paulo Freire," "education," "this research," "figures," and "to know." The fourth cluster is comprised of 8 items: "value analysis," "character," "culture," "effort," "Ki Hajar Dewantara's ideas," "national education," "teaching," and "value." The fifth cluster consists of 6 items, such as "the path of Ki Hajar Dewantara," "model," "niteni" (reflection), "on," "this research is purposeful," and "case studies." The sixth cluster includes 4 items: "and," "beating," "thinking," and "research." Lastly, the seventh cluster contains 3 items: "articles," "Islamic education," and "views."

The research topics related to Ki Hajar Dewantara were connected to 225 research links, with 322 links exhibiting strong relationships. These stronger links, marked by larger circles, include central terms such as "Hajar," "system," "implementation," "value," "figures," "education," "teaching," and "models." Conversely, weaker links, represented by smaller circles, correspond to topics that have been less explored, including terms like "research," "things," "class," "besides," "from Ki Hajar Dewantara," "Ki Hajar Dewantara about," "case studies," "the path of Ki Hajar Dewantara," "niteni," "research show," "views," "independent curriculum," "national education," "Indonesian education figure,"

"culture," "character," "effort," and "value analysis." The presence of smaller circles signals that these topics have not been extensively researched, offering opportunities for further exploration in future studies.

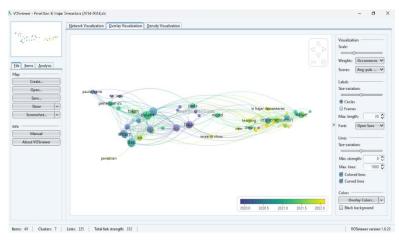


Figure 9. Appearance of Network Topics Nearby from Research on Ki Hajar Dewantara with Overlay Visualization Display Mode

Based on Figure 9 above, it is evident that the most frequently discussed topics by researchers in 2022 include "research findings," "views," "applications," "independent curriculum," "articles," "Indonesian education figures," "national education," "efforts," "Ki Hajar Dewantara's ideas," and "research." These discussions reflect the significant focus on Ki Hajar Dewantara's contributions to Indonesian education, particularly in areas such as curriculum innovation, character education, and national identity within the context of educational reform.

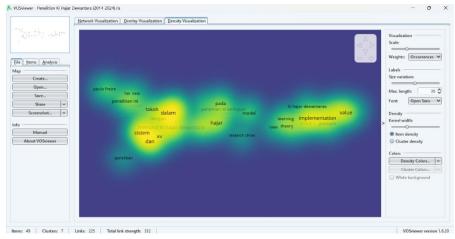


Figure 10. Mapping Issues that Can Be developed from Research on Ki Hajar Dewantara with the Density Visualization Display Mode

Based on Figure 10, which presents the density visualization display mode, several research topics that have been frequently explored by researchers are highlighted in bright yellow. These topics include systems, Ki Hajar Dewantara's ideas, education, thinking, students, implementation, articles, independent curriculum, principles,

teaching, national education, culture, and values. These bright topics signify areas of high research activity, indicating their prominent role in the ongoing academic discourse surrounding Ki Hajar Dewantara. Conversely, some topics are dimmer and less frequently discussed, including value analysis, application, Indonesian education figures, learning, views, theory, research findings, models, niteni, Jalan Ki Hajar Dewantara, case studies, methods, Paulo Freire, and research. These less frequently discussed topics offer valuable opportunities for further investigation and development in future research.

In essence, the educational process is continuous, providing meaningful and transformative learning experiences for individuals. Meaningful education serves as a vital compass, guiding the future generation. According to Lynch and Sargent (2020), students, as both subjects and objects of education, gain invaluable experiences through motivating education, supporting each other, honing their psychometric skills, and engaging directly in practical activities. Then, building upon the findings of this study, it is crucial to develop education further, especially through its role in guiding the learning process, nurturing professional educators, and facilitating the growth of teachers' competencies. The role model of Ki Hajar Dewantara, with his emphasis on character education, provides a solid foundation for these efforts. Additionally, the study suggests the potential for the formulation of innovative educational practices, such as integrating new learning models and adapting Ki Hajar Dewantara's principles to modern educational contexts (Smets, Struyven, & Zhang, 2020; Brooms, 2022; Collins & Garrity, 2023; Forsler, Nilsson, & Walan, 2024).

Renewable innovations in education can also be developed through bibliometric reviews, offering a pathway to explore new ideas. Bibliometric analysis of recent studies can identify emerging topics, such as STEM education methods, ICT-based education integration, the value of moderation in religious teachings, and the application of AI tools like ChatGPT for learning and assessment (Baako & Abroampa, 2023; Pradana, Elisa, & Syarifuddin, 2023; Su & Yang, 2023; Hasan & Juhannis, 2024; Sun, Ding, Wang, Liu, Wang, Zhu, & Liu, 2024). Additionally, education reforms, inspired by Ki Hajar Dewantara's exemplary contributions, remain central to the development of character-based learning models. As Towaf (2017) and Taufikin (2021) have noted, Dewantara's values of humanism, independence, patriotism, environmental consciousness, and cultural appreciation continue to shape educational practices. These values, deeply rooted in Indonesian culture, underscore the enduring relevance of Dewantara's educational philosophy in the 21st century.

The findings of this study have significant implications for future educational development. First, Ki Hajar Dewantara's ideas should be further integrated into national curriculum policies, especially within the framework of the independent curriculum, which prioritizes character-based education. Second, the application of the Three Centers of Education, which emphasizes the roles of family, school, and society, should be further strengthened in formal education settings. Third, future research should explore the intersection of Dewantara's ideas with technology-based education approaches, particularly in the context of hybrid and project-based learning models.

This study also offers several recommendations for future research. Further investigations should examine Ki Hajar Dewantara's contributions to global education systems, exploring how his ideas might be applied beyond Indonesia. Additionally, research could explore the alignment between Dewantara's philosophy and the humanistic principles prevalent in global educational discourse. Another key area for future research is the impact of implementing Dewantara's character-based educational models and community-driven learning approaches. Despite the comprehensive nature of this study, certain limitations must be acknowledged. The primary data sources for this research—Google Scholar, Scopus, and Web of Science—are widely used and reliable, but some publications may have been overlooked due to variations in search terms or restricted access to certain articles. Future research could address these limitations by incorporating additional databases such as ProQuest or EBSCOhost to broaden the scope of the data.

In conclusion, this section of the results and discussion has provided an in-depth analysis of the key findings and their implications for educational development. Beyond identifying trends, the study has explored the significance of these trends in the context of education policy and practice in Indonesia, while also placing them in an international framework by comparing Ki Hajar Dewantara's ideas to the work of global educational theorists such as John Dewey and Paulo Freire. This comparative perspective further highlights the global relevance of Dewantara's educational philosophy.

Conclusion

The results of this study reveal a significant upward trend in research on Ki Hajar Dewantara over the past decade, with ongoing opportunities for further exploration. Notably, the highest number of publications occurred in 2023, with a total of 108 articles, followed by 81 articles in 2022. The lowest publication frequency was observed in 2014, with only 10 articles, while the number of articles in 2024 remains limited, with only 58 articles published so far. This upward trajectory indicates a growing interest in Dewantara's ideas, particularly in the context of developing character-based learning models and the independent curriculum. These findings reaffirm the enduring relevance of Ki Hajar Dewantara's educational philosophy in contemporary discussions about humanistic, participatory, and value-driven education.

In terms of publication sources, the study finds that the majority of publications (64%) were sourced from journals, with 324 articles, while repositories accounted for 31% (154 articles). Moreover, the study identified six researchers who have made notable contributions to the literature on Ki Hajar Dewantara. These researchers include Liesna Andriany (UISU) with 6 articles, Titik Haryati (UPGRI Semarang) with 4 articles, Kuswanto (UPI) with 4 articles, Widya Noventari (UNS) with 4 articles, Leni Sriharyani (UM Metro) with 4 articles, and I Wayan Suastra (Undiksha) with 7 articles. The primary contribution of this study lies in its identification of key research trends, the categorization of related topics, and the identification of prominent researchers within the field. The novelty of this study is its use of a bibliometric approach to map

Dewantara-related publications, enabling the visualization of trends, researcher networks, and under-explored research topics. Drawing on data from Google Scholar, Scopus, and Web of Science, this study provides a comprehensive overview of the application of Ki Hajar Dewantara's ideas in diverse educational contexts.

The study also highlights the global relevance of Ki Hajar Dewantara's educational principles, particularly his concept of character-based education, which aligns with the humanistic educational principles promoted by John Dewey and Paulo Freire. Dewantara's ideas, while rooted in the local context of Indonesia, have global implications, especially in the areas of value-based education and project-based learning. This indicates that Dewantara's thinking is not only crucial for national education reform but also has the potential to contribute significantly to the global education discourse.

The implications of this research for Indonesian education are substantial. First, Ki Hajar Dewantara's principle of the Three Centers of Education can be more widely integrated into national education policies, with a particular focus on strengthening the roles of family, school, and community. Second, his emphasis on character-based education can be more effectively incorporated into the development of Indonesia's national curriculum, especially within the context of the independent curriculum, which promotes project-based learning. Third, the role of technology in supporting value-based learning warrants further exploration, particularly in the context of hybrid and project-based learning environments.

Future research should focus on several key areas. One area of exploration could be the application of the Tri Central Education principles in technology-based learning and distance education. Another important avenue for future research would be to investigate the potential for adopting Ki Hajar Dewantara's ideas in international educational contexts, comparing them with the educational models of other countries. Furthermore, further investigation is needed into the application of Dewantara's principles in community-based education, particularly in non-formal education settings.

Overall, this study significantly contributes to the understanding of Ki Hajar Dewantara's educational philosophy and its relevance for the development of future learning models. It also reinforces Dewantara's position within the global educational landscape by emphasizing the alignment of his character-based education ideas with the concepts of experiential learning and humanistic education, as introduced by John Dewey and Paulo Freire.

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Ethical Statement

This study adhered to ethical guidelines to protect and respect participants throughout the research process. Informed consent was obtained from all participants, who were fully briefed on the study's purpose, procedures, and their right to withdraw at any time without consequences. Participants' privacy and confidentiality were maintained by ensuring that no personally identifiable information was collected, and all data were anonymized and securely stored. The study focused on minimizing harm by avoiding sensitive topics and only using aggregated data in reporting. Ethical approval was obtained from the relevant institutional review board, and the research was conducted with respect for cultural, religious, and personal diversity, ensuring that the questionnaire was inclusive and respectful of all participants. Through these measures, the study upheld the highest ethical standards in research involving human subjects.

CRediT Authorship Contribution Statement

- **Author 1:** Conceptualization, Methodology, Investigation, Writing—Original Draft.
- **Author 2:** Formal Analysis, Data Curation, Visualization, Writing—Review and Editing.
- **Author 3:** Resources, Supervision, Project Administration, Funding Acquisition.

Conflicts of Interest

We declare that there are no conflicts of interest related to this research. All authors have provided disclosure statements, and there are no financial or personal relationships that could influence the work presented in the manuscript.

Data Availability

The data are available upon request.

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