

Curriculum Development in Indonesia (2014–2024): A Bibliometric Analysis of Research Trends and Scholarly Characteristics

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Abstract: The curriculum is a guideline for implementing education. Indonesia has experienced 11 curriculum changes. This study uses bibliometric analysis to examine the trends and characteristics of curriculum development in Indonesia. This bibliometric analysis method is carried out by collecting articles in the Dimensions database, which are processed using VOSviewer. The number of articles collected was 431, which were then filtered into 426 articles. This bibliometric analysis uses two approaches: performance analysis (journals, publication institutions, and educational organizations) and science mapping (citations, co-citations, bibliographic merging, and keywords). The results found that the number of curriculum development publications in Indonesia from 2014 to 2024 tended to increase. Universitas Pendidikan Indonesia, Universitas Negeri Padang, and Universitas Sebelas Maret have the highest publications on curriculum development. The keyword Development gets the highest occurrence value of 94. 2020 is the year with many keywords appearing, namely 24 keywords. This research is expected to encourage and increase innovation in curriculum development research in Indonesia.

Keywords: Development; curriculum; bibliometric analysis.

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INTRODUCTION

The curriculum in Indonesia has undergone several changes from the time of independence to the present. Curriculum changes in Indonesia have been made 11 times, starting from the 1947 curriculum, 1952, 1964, 1968, 1975, 1984, 1994, 2004, 2006, 2013, and the latest is the independent curriculum. These changes are certainly inseparable from the name of curriculum development. The trigger for curriculum development is a shift in the education system, technology, politics, society, and science, as well as the development of community life (Ananda & Hudaidah, 2021; Setiawati, 2022). The curriculum serves as a guide and instrument to achieve educational goals in a country (Insani, 2019). Therefore, in developing the curriculum, of course, it must have a strong basis and foundation. When likened to a curriculum with a building, the curriculum is a foundation that, if it does not have a solid foundation, is likely to collapse and suffer damage due to wind or earthquake. Likewise, if a curriculum does not have a strong foundation, it is vulnerable to manipulation, thus endangering students (Azis, 2018).

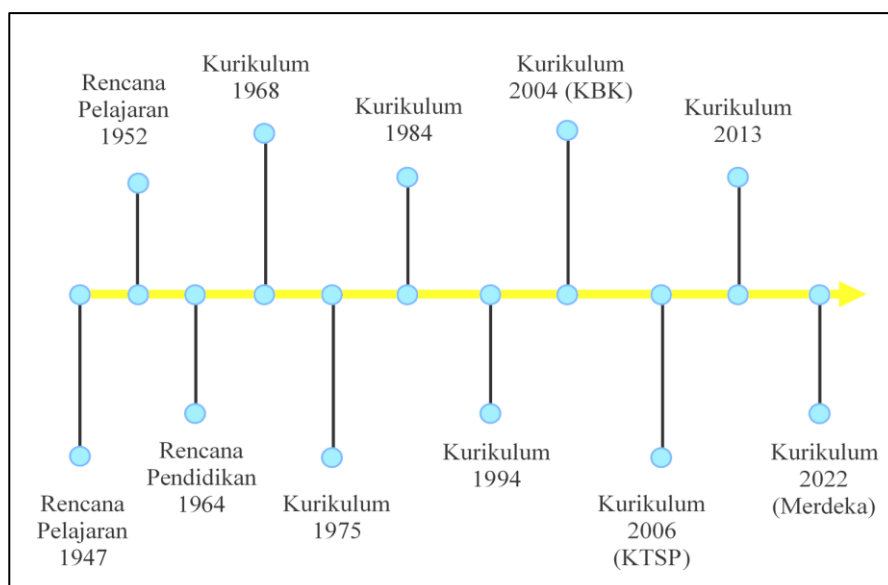


Figure 1. Curriculum Changes in Indonesia 1947-2022

When discussing curriculum, it can be understood that the primary focus is seen from the sum of all direct and indirect experiences, activities, and events that occur in a learning environment intended to promote learners' learning and development (Su & Zhong, 2022). For this reason, curriculum development is always a hope in achieving higher quality education than previous education. There are four things related to the dimensions of the curriculum concept: (1) A set of ideas that will become a blueprint for the creation of a new curriculum; (2) The planning aspect includes teaching methods and content, as well as a set of tactics and strategies in carrying out learning activities to achieve educational goals; (3) In terms of the activity dimension, all tasks that teachers and students complete during the school day are considered part of the curriculum; (4) About the outcome dimension, the curriculum closely monitors student performance to ensure that the performance is aligned with the expected results and advances the goals of the program that has been created (Martín-Alonso et al., 2021; Sari, 2022). It is, therefore, conceptualized as a policy implemented at the micro (classroom) level (Geletu & Mihiretie, 2023).

Quality education is one of the main pillars of achieving the Sustainable Development Goals (SDGs) set by the United Nations (UN). Of course, in realizing this, each country needs to carry out various curriculum developments, including Indonesia. However, of course, several challenges will be faced in curriculum development, such as when implementing a new curriculum. Whether or not the concept and implementation of the new curriculum in the field. Achieving success in curriculum implementation depends on teacher competence, curriculum design, stakeholder involvement, administrative support, and effective evaluation mechanisms (Yulianti, 2023; Yusmawati & Lubis, 2019). Judging from the three factors of successful implementation, there needs to be good communication from the government to teachers regarding programs and processes. The government can also provide teachers with opportunities to engage in various activities, which can improve professional skills and deal with new curriculum development (Rais, 2019). Therefore, curriculum development is not only about the learning process for learners but also about improving teachers' teaching experiences and methods (Kurnia, 2023).

Curriculum development is a complex process involving various aspects such as government policies, social needs, and developments in science and technology. These aspects will shape the development of teaching materials and adjustments to more innovative and relevant learning methods (Andini, 2019), so an important principle in curriculum development is adjustment to local, global, and learner socio-cultural needs. Research conducted by Noviani & Zainuddin (2020) states that the curriculum must be sensitive to the socio-cultural environment in which education occurs. Therefore, all stakeholders must collaborate in the curriculum development process, conduct regular assessments, and continuously adapt the curriculum based on comprehensive evaluations (Humairoh & Zahrudin, 2022). Local wisdom-based curriculum development with digital technology integration can be an innovative solution to balance local socio-cultural needs, and global competency demands through multi-stakeholder collaboration supported by a regular evaluation system.

The current curriculum has an orientation toward four schools of thought in its preparation, namely: 1) Social Efficiency, 2) Academic Scientific, 3) Learner-Centered, and 4) Social Reconstructionist orientation (Zweeris et al., 2023). These schools of thought address the purpose of education and how it affects teachers, students, and learning. Of course, in the ongoing development of the curriculum and the advancement of science, the orientation of the curriculum will also develop. Like the curriculum in Indonesia, which was previously achievement-oriented, it is now oriented towards learner competencies. Therefore, educators are expected to do more for their students' growth than just providing knowledge and skills (OECD, 2019). Therefore, the dynamics of the times and scientific advances continue to drive the evolution of the curriculum concept, as seen in the transformation of the Indonesian education system from output-based to holistic competency development. The implication is that teachers must facilitate learners' multidimensional growth beyond just transferring technical knowledge.

The curriculum change in Indonesia, namely Curriculum 13 to the Merdeka Curriculum, certainly impacts the learning process. The Merdeka Curriculum emerged as a solution to the educational problems exacerbated by the COVID-19 pandemic, with a decline in students' learning abilities (Rahmadayanti & Hartoyo, 2022). This curriculum also provides flexibility in learning, encouraging teachers and students to develop more creative methods and responsive to educational needs (Angga et al., 2022; Putri & Arismunandar, 2024). In contrast, Curriculum 13 emphasizes that schools should improve the quality of education through a scientific approach (Pawero, 2018). So, the importance of research on curriculum development to identify the importance of implementing the Merdeka Curriculum as a replacement for Curriculum 13. This also reminds us that education dynamics in Indonesia continue to develop. Thus, this curriculum transition is not just a change in curricular documents but a systemic transformation that requires the commitment and collaboration of all education stakeholders. This development also confirms that the dynamics of national education will continue to evolve in line with the changing times and increasingly complex future challenges.

The education curriculum development in Indonesia is undoubtedly based on the needs and context of the times. It can be seen in the Merdeka Curriculum as a manifestation of independent learning for students or the freedom to form themselves. Adilah et al. (2023) noted that in designing the curriculum, it must be able to adapt to local and global needs, so it requires evaluation to ensure that the effectiveness of the curriculum has been tested in different contexts. Research by Pratycia et al. (2023) stated

that between the 2013 Curriculum and the Merdeka Curriculum, curriculum renewal is important to answer contemporary educational demands and relevance to today's global challenges. This is especially important to improve the quality of education and human resources in Indonesia. Of course, this is based on the fact that curriculum development must continue to be carried out with the rapid changes in technology, social, political, and global culture.

The transition from the 2013 curriculum to the Merdeka curriculum certainly needs to be mapped based on the transition situation in previously conducted studies. Given that the curriculum serves as the main framework for determining the direction of national education. Selamat et al. (2022) state that research on curriculum development evaluates the effectiveness of existing curriculum implementation, analyzes the challenges faced, and provides relevant recommendations for future improvements. Mapping and identifying research articles during the transition period from 2014 to 2024 is certainly an important thing to do. The analysis can provide a clear picture of the research focus and dominant areas and can be used to identify research gaps that have not been addressed. Research on the trends and characteristics of curriculum development can create changes and innovations that affect the learning process and the achievement of educational and research goals in the future. It is the researcher's great hope that the research conducted will be able to generate ideas for curriculum development that continue to be better in the future; this research is also expected to be able to represent the trends and characteristics of research discussing curriculum in Indonesia and be able to visualize them.

METHOD

The method used in this research is bibliometric analysis. Bibliometric studies study a collection of published literature using quantitative (performance analysis) and qualitative (word summary and theme/science mapping) methods (Fontenot & Mastorovich, 2024). Performance analysis to collect the results of contributions of research entities (e.g., authors, journals, organizations, and countries) in a particular field of study. Meanwhile, science mapping explains the relationship between concepts and research entities (citations, co-citations, bibliographic joins, and keywords) (Saleem et al., 2024). Using several published metrics in the analysis process, this bibliometric approach summarizes the volume and scope of scholarly research on a particular issue, distinguishing it from traditional literature review approaches (such as integrative, narrative, scoping, and systematic) (O'Connor, 2024). The application of bibliometric analysis plays an important role in the evolution of literature studies, where bibliometrics is combined with the investigation of publishing sources and cooperative relationships between authors and countries/regions to reveal the development of literature on specific issues (Xu et al., 2024). Therefore, the researcher used bibliometric analysis as the method for this study.

Researchers conducted data analysis using the VOSviewer application. The data taken by researchers comes from the Dimensions database. The stages of bibliometric analysis carried out by researchers are: 1) The first stage in this research is looking for keywords that will be used, namely *Perkembangan*, *Kurikulum*, and *Indonesia*; 2) The second stage is the initial search for articles using the Dimensions database, researchers conducted an initial search for articles with keywords that have been made and found 431 articles; 3) The third stage is filtering articles or reducing articles, in reducing articles researchers adjust articles to the research objectives and keywords that have been made where in this screening the articles taken are 426 articles which are then stored in CSV form;

4) The fourth stage is a data processing and data interpretation, at this stage the article is processed using VOSviewer to obtain data visualization and provide data representation in the form of variable maps in seeing trends and data characteristics.

RESULT AND DISCUSSION

Performance Analysis

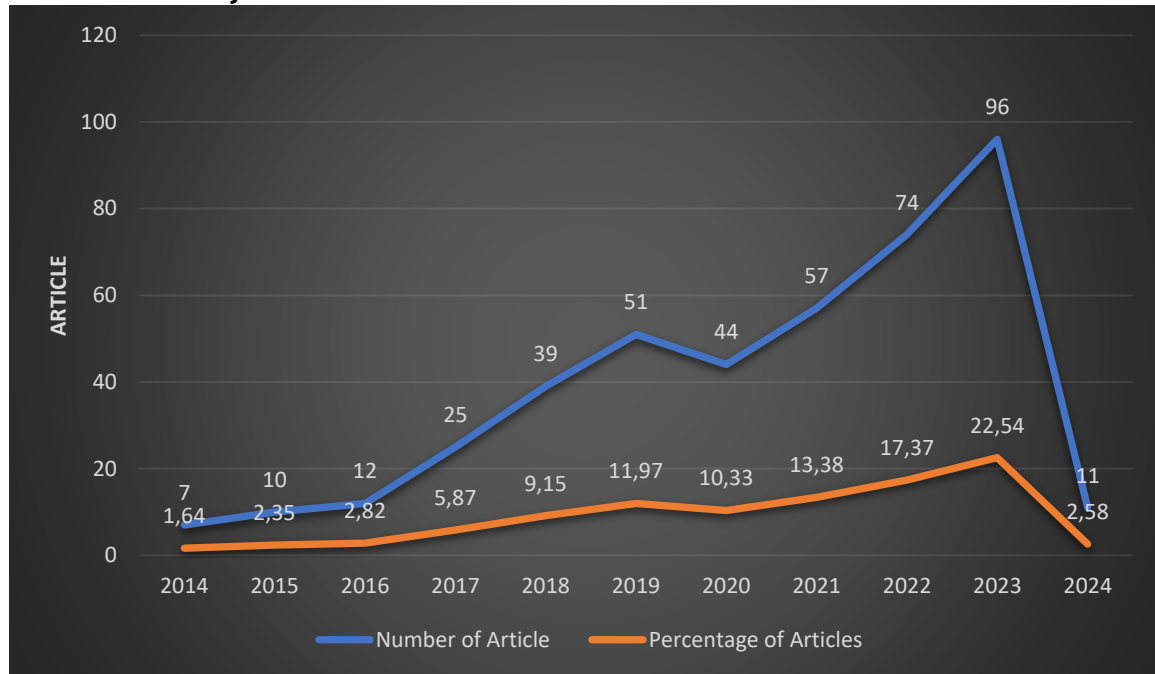


Figure 2. Number of published articles (2014-2024)

Figure 1 presents the number of articles published from 2014 to 2024. It can be seen that in 2014 the number of published articles amounted to 7 with a percentage of 1.64%; in 2015 the published articles amounted to 10 with a percentage of 2.35%; in 2016 the published articles amounted to 12 with a percentage of 2.82%, in 2017 the published articles amounted to 25 with a percentage of 5.87%, in 2018 the published articles amounted to 39 with a percentage of 9.15%, in 2019 the published articles amounted to 51 with a percentage of 11.97%, in 2020 the number of articles published was 44 with a percentage of 10.33% which decreased from the previous year, in 2021 the number of articles published increased to 57 with a percentage of 13.38%, in 2022 the number of articles published was 74 with a percentage of 17.37%, in 2023 the number of articles published was 96 with a percentage of 22.54%, and in 2024 the number of articles published was still 11 with a percentage of 2.58%. Generally, the number of articles published from 2014 to 2024 has increased, but only in 2020 has decreased.

Given that the number of articles on curriculum development published between 2014 and 2024 has increased, this indicates that researchers are prioritizing effective and innovative curriculum development and teaching methodologies. This can also explain why the trend analysis in the study of sustainable development goals (SDGs) is that education is the subject of increased research, illustrating greater attention to curriculum oriented towards sustainable development. Research conducted by Setiyowati et al. (2023) stated that research related to one of the sustainable development goals continues to increase. Of course, education is one of the goals of sustainable development. From 2019 to 2020, scientific publications regarding the curriculum experienced a decline; of course, this was

due to the COVID-19 pandemic, but after the pandemic began to be overcome, publications increased. This is because many challenges need to be researched regarding the post-Covid 19 curriculum.

Table 1. Institution Number of Documents

Institution	Number of Publications	Number of Citations
Universitas Pendidikan Indonesia	19	239
Universitas Negeri Padang	7	147
Universitas Sebelas Maret	5	16

The following performance analysis is in the section of educational institutions that publish curriculum development articles in Indonesia. Three educational institutions have the highest number of publications: Sebelas Maret University, with 5 publications and 16 citations; Padang State University, with 7 publications and 147 citations; and Universitas Pendidikan Indonesia, with 19 publications and 239 citations. These three universities certainly show that research on curriculum continues to be conducted and developed by universities that focus on education.

Higher education institutions play an important role in increasing the number of scientific publications, especially in education. The growth of scientific publications reflects the progress of research and shows the institution's contribution to the development of science and the overall quality of education. Thus, higher education institutions have a crucial role in creating scientific publications, especially in education. Universities are also the foundation for the advancement of education, so it is necessary to conduct research related to the curriculum to achieve quality education.

Table 2. Journal Number of Documents

Journal	Number of Publications	Number of Citations
Jurnal Basicedu	12	242
Edukatif: Jurnal Ilmu Pendidikan	8	169
Kwangsan: Jurnal Teknologi Pendidikan	6	13
JIIP: Jurnal Ilmiah Ilmu Pendidikan	5	0

Performance analysis is in the name section of journals that publish curriculum development, with the most publications in Indonesia from 2014 to 2024. From the results of data processing, four journals have the highest number of publications: JIIP: Scientific Journal of Education Science with 5 publications, Kwangsan: Journal of Educational Technology with 6 publications and 13 citations, Edukatif: Journal of Education Science with 8 publications and 169 citations, and Basicedu Journal with 12 publications and 242 citations.

The number of publications and the number of citations in four journals, namely JIIP: Scientific Journal of Education Science, Kwangsan: Journal of Educational Technology, Edukatif: Journal of Education Science, and Basicedu Journal indicates that there is a need to increase educational journals that focus on the curriculum field to create more optimal curriculum development in the future. The deepening of curriculum development can be focused on journals that open topics and the scope of the curriculum. With the number of journals that open the topic and scope of this curriculum, of course, research on the curriculum regarding the development, evaluation, or implementation of the curriculum

Table 4. Cluster Analysis of Co-occurring Keywords

Cluster	Number of Keywords	Keywords
Cluster 1	15	Challenge, Change, Concept, Culture, Curriculum Development, Goal, History, Learning, Policy, Principle, Procces, Qualitative Method, Science, Teaching, Time
Cluster 2	10	Analysis, Curriculum, Development, Education, Evaluation, Implementation, Information, Quality, Technology, World
Cluster 3	9	Karakter, Metode, Pendidikan Islam, Sistem, SMK, Society, Tujuan
Cluster 4	7	Child, Effort, Need, School, Skill, Student, Teacher

In Table 4, it can be seen that there are 4 keyword clusters from the data processing results by having different color lines; it can be seen in Figure 3 that there are 4 colors, namely red, yellow, green, and blue. Cluster 1 has 15 keywords with red line color: Challenge, Change, Concept, Culture, Curriculum Development, Goal, History, Learning, Policy, Principle, process, Qualitative Method, Science, Teaching, and Time. Cluster 2 has 10 keywords with green line color; the cluster keywords are Analysis, Curriculum, Development, Education, Evaluation, Implementation, Information, Quality, Technology, and World. Cluster 3 has 9 keywords with a blue line color; the cluster keywords are *Karakter, Metode, Pendidikan Islam, Sistem, SMK, Society, and Tujuan*. Cluster 4 has 7 keywords with yellow line color; the cluster keywords are Child, Effort, Need, School, Skill, Student, and Teacher.

The proximity between keywords in each cluster can be an interesting topic to research. For example, a Teacher in the yellow cluster can be related to Development in the green cluster. Of course, this shows that the keywords in each cluster become trends and characteristics of research on curriculum development from 2014 to 2024. These results can also form new interesting research topics by connecting the keywords of each cluster. Linking the keywords of each cluster for this new research can certainly form innovative research on the curriculum.

Table 5. Keywords With the Most Occurrences

Rank	Keywords	Occurrences
1	Development	94
2	Study	91
3	Curriculum	89
4	Education	81
5	Metode	78
6	Sistem	49
7	Lembaga	47
8	School	46
9	Teacher	42
10	Karakter	38
11	Implementation	37
12	Skill	37
13	Pesantren	36
14	Analysis	36
15	Learning	35

Table 5 shows the data processing results using VOSviewer to get keywords with the most occurrence values. Researchers took 15 keywords with the highest occurrence value related to curriculum development. The keywords that have the most occurrences are Learning with a value of 35 occurrences, Analysis with a value of 36 occurrences, Pesantren with a value of 36 occurrences; Skill with a value of 37 occurrences, Implementation with a value of 37 occurrences, Karakter with a value of 38 occurrences, Teacher with a value of 42 occurrences, School with a value of 46 occurrences, Lembaga with a value of 47 occurrences, Sistem with a value of 49 occurrences, Metode with a value of 78 occurrences, Education with a value of 81 occurrences, Curriculum with a value of 89 occurrences, Study with a value of 91 occurrences, dan Development with a value of 94 occurrences. The keywords that appear are of course interrelated with research topics that discuss curriculum in Indonesia.

Keyword Development, which has occurrences 94, and Curriculum, which has occurrences 89, prove the focus of research on curriculum development. The keyword Analysis here, which has 36 occurrences, shows that the method used in curriculum development research is Analysis. The keywords that appear are trends and characteristics of research on curriculum development. Of course, data processing results where keywords appear with high occurrence values can be connected to new research. By linking keywords with these high occurrences, the research will become more innovative; for example, future research not only discusses curriculum development but is linked to the Sistem, which has occurrences 49, or with other keywords such as Pesantren, which has occurrences 36. By making the most of these findings, researchers can create work that is not only original but also transformative, encouraging breakthroughs in education. Ultimately, such an approach will strengthen the education research ecosystem in Indonesia while ensuring that curriculum development is always aligned with the challenges of the times and the evolving needs of society.

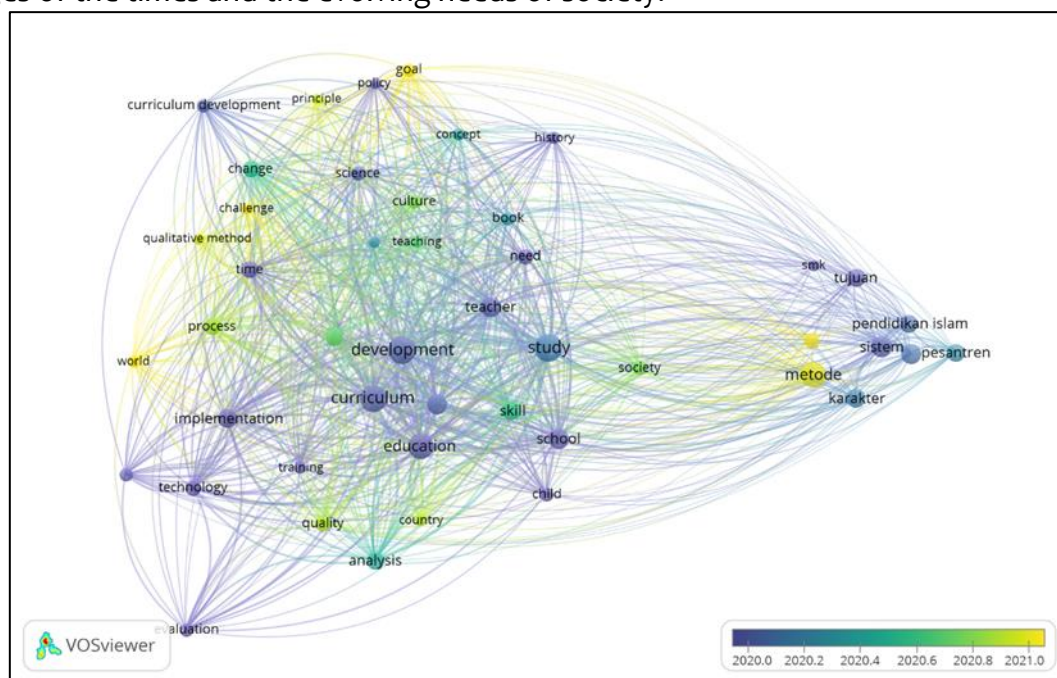


Figure 4. Network Number of Years Keyword Appears

Table 6. Number of Years Keyword Appears

Year	Number of Keywords	Keywords
2021	4	Challenge, Goal, World, Perkembangan Teknologi
2020	24	Change, Concept, Culture, Curriculum Development, Learning, Principle, Process, Qualitative Method, Science, Teaching, Analysis, Curriculum, Development, Quality, Karakter, Metode, Pendidikan Islam, Pesantren, Sistem, Society, Effort, Skill, Student, Teacher
2019	12	History, Policy, Time, Education, Evaluation, Implementation, Technology, SMK, Tujuan, Chid, Need, School
2018	1	Information

In Table 6, the data processing results can be analyzed based on the years the keywords appear. Four years appear from the results of the data processing that has been done, namely 2018, 2019, 2020, and 2021. In 2018, one keyword appeared: Information. 2019 has 12 keywords that appear: History, Policy, Time, Education, Evaluation, Implementation, Technology, SMK, Tujuan, Child, Need, and School. 2020 has 24 keywords that appear, namely Change, Concept, Culture, Curriculum Development, Learning, Principle, Process, Qualitative Method, Science, Teaching, Analysis, Curriculum, Development, Quality, Karakter, Metode, Pendidikan Islam, Pesantren, Sistem, Society, Effort, Skill, Student, Teacher. 2021 has 4 keywords that appear, namely Challenge, Goal, World, and Perkembangan Teknologi.

In 2018, the only keyword that appeared was Information, of course, this is an opening about curriculum development information in Indonesia. An increase in keywords occurred in 2019, where 12 keywords appeared, such as Policy and Evaluation, which certainly shows that the research has focused on curriculum policy and evaluation. Many keywords appeared in 2020, where there were 24 keywords. Of course, research topics develop and expand from curriculum development connected with engaging, relevant, and innovative topics. In that year, there was also a connection between Curriculum Development and Pendidikan Islam, Pesantren, Culture, and Skills. These results certainly enrich the topics that can be researched in relation to curriculum development.

The researchers used bibliometric analysis in this study to provide a comprehensive understanding of curriculum development in Indonesia. The researchers emphasized the study's usefulness for policymakers, researchers, and educators interested in this topic. The researchers identified articles, authors, journals, and progress made in the curriculum. The researchers also found important areas that need attention and knowledge gaps that need to be filled: 1) the foundations of curriculum creation, 2) current research topics, and 3) future orientations of these sectors.

Performance Analysis

The publication of curriculum development in Indonesia from 2014 to 2024 has increased yearly. Of course, this increase is a breath of fresh air for researchers to develop research on curriculum, especially in Indonesia. This increasing curriculum development is also inseparable from new science and technology findings. Technological factors and

social changes can cause curriculum changes, requiring the curriculum to adapt to modern challenges (Mahmudah, 2023). Such rapid technological and social changes certainly require increased publications about the curriculum in Indonesia. This can also be a hope to find a better curriculum in the future. Publications allow policymakers, educators, and new researchers to improve and develop the curriculum constantly. Creating a quality curriculum will create quality human resources as well.

Increased research on curriculum is so important in education, especially during the transition period between Curriculum 13 and the Merdeka Curriculum. One of the advantages of increasing publications on the curriculum is that it can open up space for new ideas and ideas aimed at quality education. Increased curriculum research is also needed to evaluate the extent to which this policy has been successful and what can be improved in its implementation. In addition, Marlia et al. (2024) state that curriculum research evaluates the constraints faced in curriculum implementation and provides important insights to improve and refine practices in the field. Therefore, these studies are important in improving the curriculum during the transition from Curriculum 13 to the Merdeka Curriculum for the better.

Researchers highlighted educational institutions and journal institutions that host curriculum development publications where the institution focuses on advancing the education curriculum in Indonesia. Three universities and four journal institutions in the disthatidistributem publications have the most significant documents and publications. Higher education institutions can create innovations in developing the existing curriculum. Higher education institutions can provide a foundation for curriculum development, improving education quality sustainably (Mulyasa & Aryani, 2022). The curriculum is important in educational institutions' teaching and learning process, so innovations must be made so that teaching and learning activities continue to run and achieve the goals set. The curriculum can affect how education is directed, what is taught, and how it is taught, all of which affect the credibility of graduates of an educational institution; therefore, the curriculum plays an important role in education (Julaeha et al., 2021).

Curriculum development must have a strong foundation and basis. Seeing an increase in the publication of articles and educational institutions regarding the curriculum from 2013 to 2024 does not eliminate the foundation and basis for its preparation. The curriculum created will touch several foundations. Curriculum foundations include philosophy, society and culture, individuals, and learning theories (Mubarok et al., 2021). The foundation of the curriculum is essential because it forms the values and principles of education that are the basis for its development. These foundations will also be inseparable from the curriculum in Indonesia. Moreover, education in Indonesia is strengthened by the rich cultural diversity and characteristics of community life (Mubarok et al., 2021). The curriculum needs to play an active role in filtering or social control. Social values no longer per current needs and circumstances are removed, and new values are created. Therefore, curriculum development and improvement must be in line with the demands of society, overcome future problems, and consider advances in science and technology (Yuliyanto & Andriyati, 2022).

The foundation for forming the Merdeka Curriculum in Indonesia has been discussed in depth by paying attention to various aspects. A good curriculum must be produced from a philosophical foundation and in-depth research (Achmad, 2021). The strategic step of changing Curriculum 13 to the Merdeka Curriculum aims to improve the quality of education and adapt to the evolving needs of society. Ensuring that each

curriculum component is mutually supportive and integrated to meet the stated educational objectives is important. The implementation of the Merdeka Curriculum must, of course, be accompanied by a common understanding that is strengthened by a strong and consistent philosophical foundation so that the Merdeka Curriculum is not only considered as a replacement for Curriculum 13 but also as a new paradigm that needs to be adapted by all parties involved in education.

Science Mapping

Analysis of publications and authors based on the results of data processing conducted in five publications, and the authors have the most citations. As seen in Table 3, the author with the most citations has 142 citations. The number of quotes shows that many researchers have researched curriculum development in Indonesia. Publishing research findings in peer-reviewed scientific journals or magazines is a standard and efficient method for presenting and disseminating findings (Arta, 2019). These authors can encourage the interest of new researchers to develop their research in the field of curriculum. Scientific writing that contains the results of studies, research findings, ideas, and other works provides many possibilities as material for disseminating work and communicating the results of work with educators or other parties involved in the field of education (Arta, 2019). Hence, publishing findings in scientific journals and magazines is important when developing the curriculum.

Research publications regarding curriculum development in Indonesia that are widely cited are the relevance of the Merdeka Curriculum to the 21st century. This shows that curriculum development in Indonesia must be in its current state. The Merdeka Curriculum is designed to be more flexible and responsive to student needs (Angga et al., 2022; Putri & Arismunandar, 2024). The design considers that 21st-century learners must be formed according to student's interests and talents. Teachers must provide free space for students to develop independently without pressure from any party. The curriculum transformation towards the Merdeka Curriculum is not just a change in curricular documents but a pedagogical revolution that directly changes the teaching and learning patterns and processes in schools towards 21st-century skills. This will allow an allegation between Merdeka's curriculum and 21st-century skills development, which can also prepare it for the global market.

The current Merdeka Curriculum prioritizes project-based learning (PJBL) and problem-based learning (PBL) models that focus on students being able to think critically and creatively. This is in contrast to Curriculum 13, which emphasizes students' scientific approach (Pawero, 2018). The difference shows that the fast-changing era of information and technology requires students to have scientific knowledge and skills that can be used practically in everyday life and in the workplace. Real, experience-oriented learning will make students more relevant and ready to face complex challenges in an increasingly sophisticated and technologically integrated society. In this context, the Merdeka Curriculum is designed to produce individuals ready to face future challenges by emphasizing the development of 21st-century skills commonly called 4C (critical thinking, creativity, communication, and collaboration) (Indarta et al., 2022).

From 2014 to 2024, there was a curriculum transition period in Indonesia, which certainly created changes and new concepts about the curriculum. Changes in education, especially related to the Merdeka Curriculum, have become dominant in public and academic discussions because of the significant changes in educational patterns in

Curriculum 13 and the Merdeka Curriculum. This difference in concept follows how the socio-culture in society develops. The independent curriculum, which has the concept of character education, aims to create students with noble character by Pancasila. In this Merdeka Curriculum, character education is contained in the teaching material for the Pancasila Student Profile Strengthening Project (P4). In the Pancasila Student Profile Strengthening Project program, students are formed into students who are independent, critical, creative, cooperative, and devoted to God. Therefore, research on this new concept in the curriculum in Indonesia was conducted to determine the extent of success and to be evaluated in the future.

The Merdeka curriculum, which focuses on character education, can incorporate local values in students. Integrating moral and character values through a strict habituation process in school education (Rakhmawan et al., 2023). Even this character education can be linked to religious education teaching materials in each school. Integrating religious education and character education can reflect religious values in students' daily lives so that they can understand and apply religious teachings in a broad social context. This character education also needs to be linked to the cultural conditions that exist in society. Of course, with the vast territory of Indonesia and various cultures, this character education will undoubtedly be more interesting when associated with local culture. Therefore, character education in the Merdeka Curriculum is one of the differences from the previous curriculum concept.

The transition from Curriculum 13 to the Merdeka Curriculum creates schools that play a role in implementing programs in the Merdeka Curriculum, which are called *Sekolah Penggerak*. These schools are designed to be role models in applying the principles of independent learning and presenting innovations in the learning process that are based on local characteristics and student potential. In this *Sekolah Penggerak*, schools will be free to adapt teaching materials and learning methods to improve students so that teachers move actively in the learning process (Sumarsih et al., 2022). Therefore, the *Sekolah Penggerak* acts as a very important agent of change in realizing the Merdeka Curriculum, ensuring that the education provided can prepare students to become a virtuous generation and ready to face future challenges.

Curriculum development in Indonesia must be improved to maintain a better quality of education. Every change in the curriculum in Indonesia is the demand of the times that are changing so rapidly. This development led Indonesia to create the Merdeka Curriculum to replace Curriculum 13. The new concepts in the Merdeka Curriculum show that Indonesia's education world continues to develop. Character education and *Sekolah Penggerak*, one of the new concepts in the Merdeka Curriculum, certainly want graduate students who can compete with other countries. So that human resources in Indonesia can develop better through education. Thus, the process of developing the national curriculum must be seen as a dynamic cycle that requires the collective commitment of all education stakeholders to realize the Indonesian nation's goal of educating the nation's life through improving the quality of human resources that are superior, characterized, and able to compete in the global arena.

CONCLUSION

Bibliometric analysis provides a comprehensive picture of publications, authors, trends, characteristics, and evolution of curriculum development in Indonesia. The development of curriculum publications in Indonesia has increased yearly from 2014 to

2024. Curriculum development in Indonesia, which continues to show a positive trend, can encourage further research in the curriculum field. The importance of curriculum development is also closely related to policy and encourages future curriculum development innovation. A strong foundation and basis in curriculum development is also essential in achieving educational goals. Strengthening the foundation and basis of the curriculum can create educational effectiveness and efficiency. Having 41 keywords regarding curriculum development in Indonesia proves that the theme can continue to be developed in research. Seeing the number of clusters with 4 different color networks can be new research material with variables that are rarely studied but actually interrelated. Therefore, other researchers in the field of curriculum can contribute to the development of education in Indonesia.

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