

Bibliometric Analysis of Character Education Development Maps in The Scopus Database

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Abstract

This study aims to determine the mapping of the development and direction of character education research in publications indexed by Scopus. This study used bibliometric analysis techniques to explore all publications indexed in the Scopus database on character education from 1962 to 2023. The data obtained were analysed using Excel and R/R-Studio. VOSviewer is used to visually analyse the simultaneous occurrence of keywords and document citations. The authors found 1,028 publications that fit the function, subject, and criteria set. The results of this study showed an annual growth rate of 9.26%, with the most publications on character education in 2021. The United States is the country that contributes the most publications with affiliations from Universitas Pendidikan Indonesia. Supriyadi T became the most prolific writer in character education development. The bibliometric analysis performed was limited to Scopus data. Other national and international databases should have been considered in the study. This study presents a brief overview of the literature accessible to character researchers and provides recommendations for future research.

Keywords : education, teaching, character education, development, and human

Introduction

The education system in Indonesia can be done with a formal system (Sawada et al., 1962), nonformal (Megawati et al., 2022), and informal (Hlobil, 2010). Education has four levels: early childhood education, elementary age, secondary age, and college (Sejati et al., 2019). There are differences in the learning process at all levels of education, but the same goal is to educate the nation's children (Nurmalasari & Swamarinda, 2018). In addition to making children bright, this is the same as the purpose of national education, which is to form character (Whittier, 2013).

Character is a moral value (Primaresty et al., 2023), a person's behavior toward God, others, and himself (Pasandaran et al., 2019). A person's character can sometimes be seen from his behavior (how he positions himself toward others), his way of speaking, his thinking, his culture, and his environment. In schools, the majority only prioritize an achievement that can make the school proud without seeing and improving students' character (Wu, 2015). In Islamic education, character education is essential because if the child's character is good, it will undoubtedly develop his education. Parental roles (Yakushkina et al., 2019) and teachers (Aritaningsih, 2019) are mutually sustainable. They must work together to foster good character in students and children by supervising and instilling in children related good habits and slowly leaving habits that are not good at school and outside school (Jones, 2005). This habituation is not only done by the method (Hadi & Ariyanto, 2018) guidance, reprimand, advice, or motivation for children (Ayuningtyas et al., 2020).

It is essential to conduct a critical analysis of existing research findings to pave the way for future research and provide projections as proposals for policymakers about areas of research that need to get a more significant portion of accelerated development. This evaluation procedure relies heavily on the availability of credible data. Bibliometric research is one tool that plays a role in mapping data on published studies. The Scopus database was used in this study because it has very high credibility.

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This study aims to map character development in publications indexed by the Scopus database from 1936-2023. The year 1936 was chosen as the starting year based on the Scopus database findings that the first two publications on character were found in that year.

Previous Research

In the field of character education (Ilhami Arsyah et al., 2019) revealed that the critical thing that must be maintained is the process of character development in students and a teacher. Character development in teachers must also be done because the teacher teaches knowledge to students and becomes an example to students. Character development is carried out for students to make them a person with good behavior despite the development of technology and information science in education because many students may begin to be taken care of by technological developments.

In the field of character education (Petrea-Sullivan, 2017) Reveals that the family, especially parents, plays an essential role in shaping a child's character or the child's personality because even though children are schooled in an educational institution, parents are the first school for their children. Parents certainly want to make their children bright, but these desires tend to forget the importance of developing character education in children as the basis of their personality. Parents try to provide enough facilities for their children, and they try to give a good life for their children. However, it will not be enough if children are not given religious education to further deepen their relationship with God. So general education, character education, and religious education are very continuous to make children who have charity.

Research Method

Bibliometric analysis methods were used in this study thoroughly in the form of document analysis and network analysis (Apriantoro et al., 2023). The data was obtained using the Boolean search engine to comb the Scopus database between 1936 and 2023. The search was conducted on July 22, 2023. Researchers use R and RStudio tools, VOSviewer, and Microsoft Excel to analyse documents and networks.

The stages taken by researchers are in the form of the following steps: In the first stage, researchers will conduct a literature review on related themes to ensure that the research carried out is relevant to run with bibliometric topics. In addition, the literature review helps determine appropriate keywords and is considered to represent the scope of research.

In the second stage, researchers used boolean operators (TITLE (character) AND TITLE-ABS-KEY (education and development) to search Scopus, which yielded 231 documents. Further filtration was performed with boolean operators (LIMIT-TO (DOCTYPE, "ar") AND (LIMIT-TO (LANGUAGE, "English") to limit only English documents and articles as document types, resulting in a final document of 94.

In the third stage, analysis is carried out on the final search document using Scopus analyser and R and RStudio to determine the number of documents per year, documents by year, documents by journal, author, affiliation, country, and subject/field. Furthermore, analysis of the document network level was carried out with visualization through VOSviewer with Microsoft Excel data processing. The detailed research procedure can be seen in Figure 1 below.

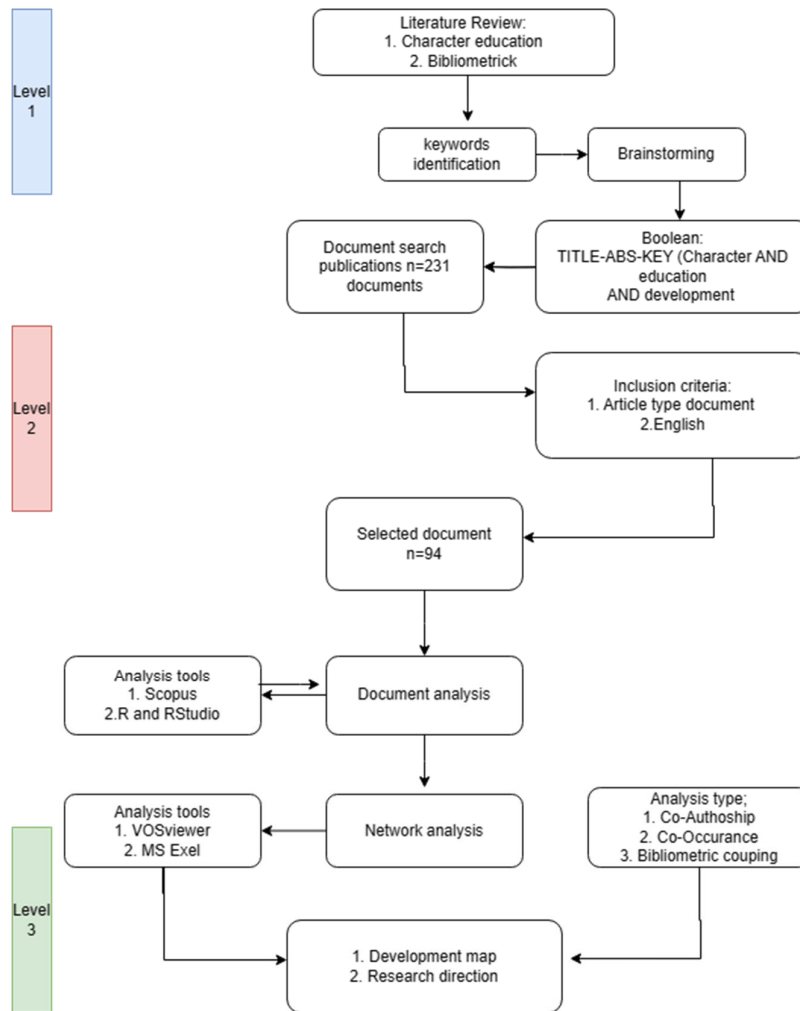


Figure 1. Research Flow Diagram

Result and Discussion

Document Analysis

The table below shows 422 documents produced over 61 years, including 651 authors, 95 single authors, 13,23% international co-authorship collaboration, and 10.249 references with an average citation per document of 5.416 citations.

Table 1. Project-based Learning Research Summary

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	1980:2023
Sources (Journals, Books, etc)	162
Documents	257
Annual Growth Rate %	3,56
Document Average Age	6,7
Average Citations Per Doc	5,416
References	10249
DOCUMENT CONTENTS	
Keywords Plus (ID)	292
Author's Keywords (DE)	779
AUTHORS	
Authors	651
Authors Of Single-Authored Docs	95
AUTHORS COLLABORATION	
Single-Authored Docs	96
Co-Authors Per Doc	2,64
International Co-Authorships %	13,23
DOCUMENT TYPES	
Article	257

Documents by Year

The figure below shows the development of publications on the theme of character education based on the 2021 document that emerged from 1962, which in that year was still at an undeveloped level, the highest peak was reached in 2020 and above, and the lowest around the early years.

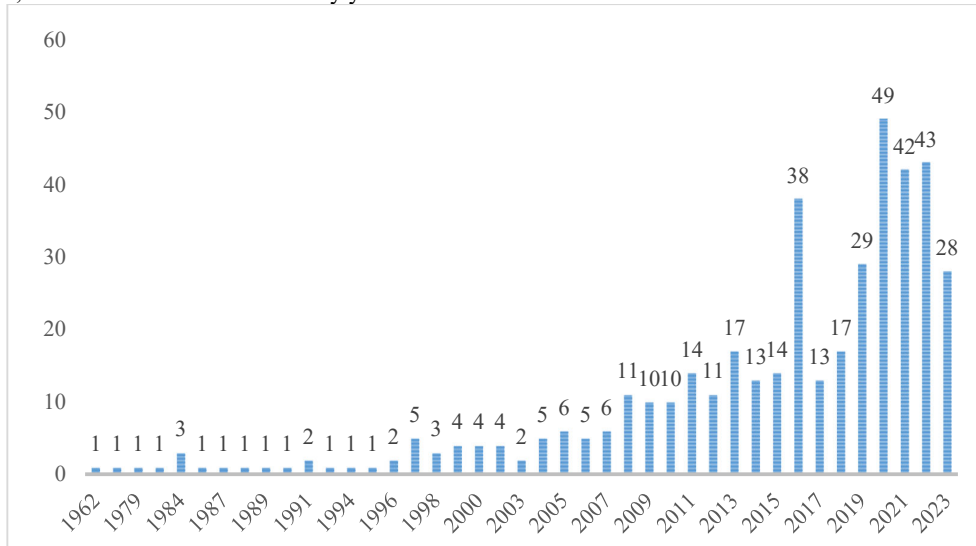


Figure 2. Development of Publication by Year

Most Influential Authors

The figure below shows the ten most influential authors in publications on character education are Supriyadi, T leads with five documents, followed by Donaldson, Haslip, Komalasari, and Muhtar, who each lead three documents, and followed by Angelides, Arthur, Barlo, Casmana and Elias who each.

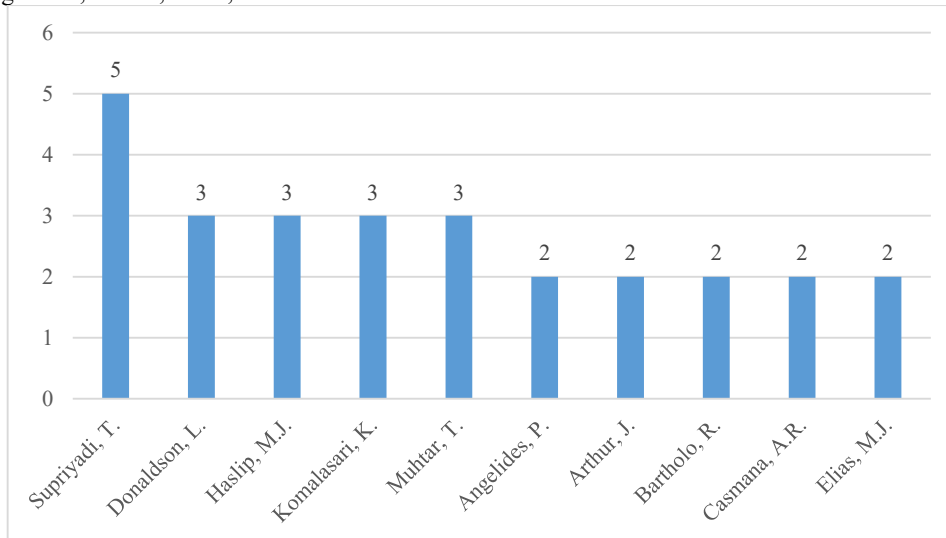


Figure 3. Most Influential Authors

Documents by Affiliation

The figure below shows the ten most influential affiliations in publications about character education at the Indonesian University of Education, with a publication of 10 documents, showing ten documents, followed by Kazan Federal University with nine documents, etc.

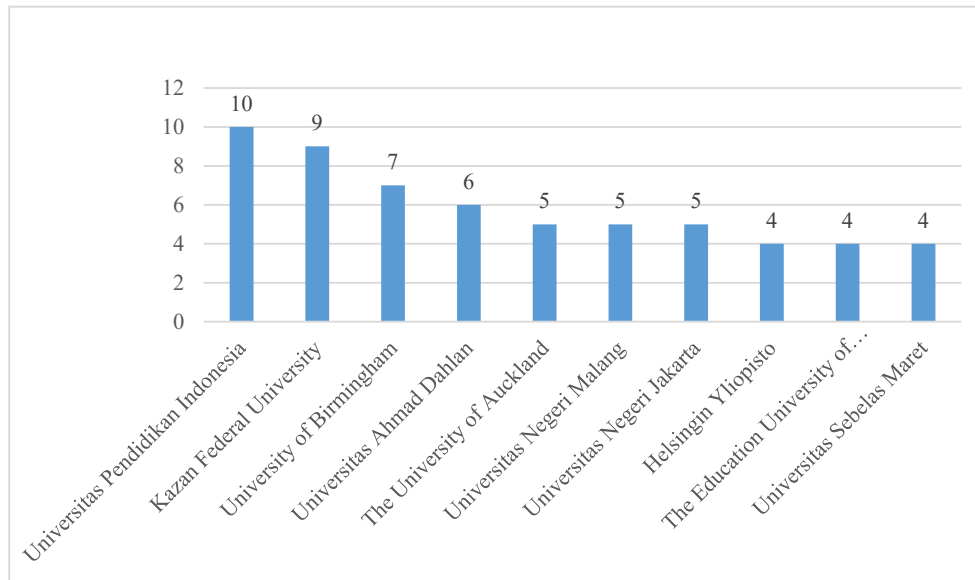


Figure 4. Most Influential Affiliates

Documents by Country

The figure below shows ten publications by country with the theme of character education. Asian countries dominate with 7 Asian countries, while European countries rank second. This shows that in research with the character education theme, the United States leads publications with 95 documents, followed by Indonesia with 62 documents.

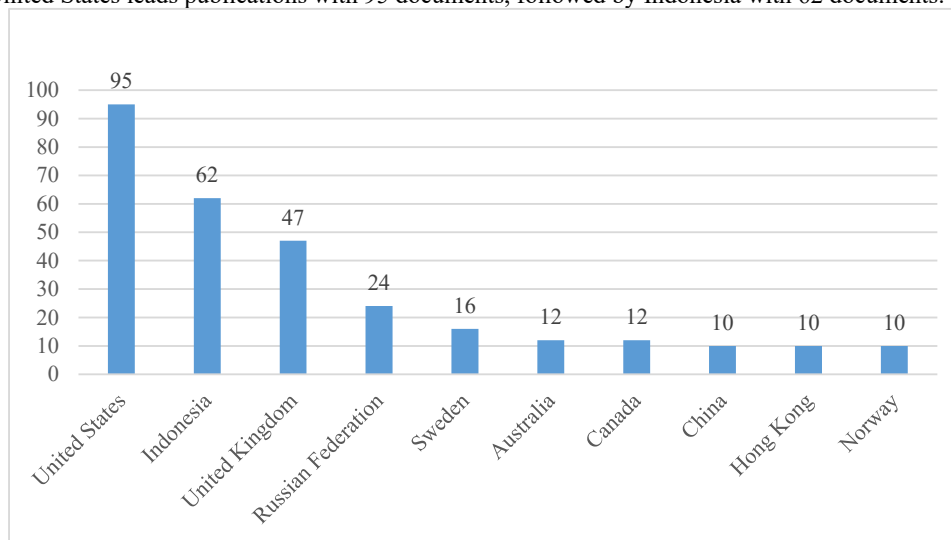


Figure 5. The Number of Publications by Country

Documents by Source

The figure below shows that the most publications published in the International Journal Of Scientific And Technology Research And Sustainability Switzerland with jump 8, followed by Education Sciences with seven and followed by Action In Teacher Education, International Journal Of Instruction, Journal Of Education For Teaching and Physical Education And Sport Pedagogy with the same jump which is 6. He was followed by the Early Childhood Education Journal, International Journal Of Environmental And Science Education, Journal Of Teacher Education, and Universal Journal Of Educational Research with five publications.

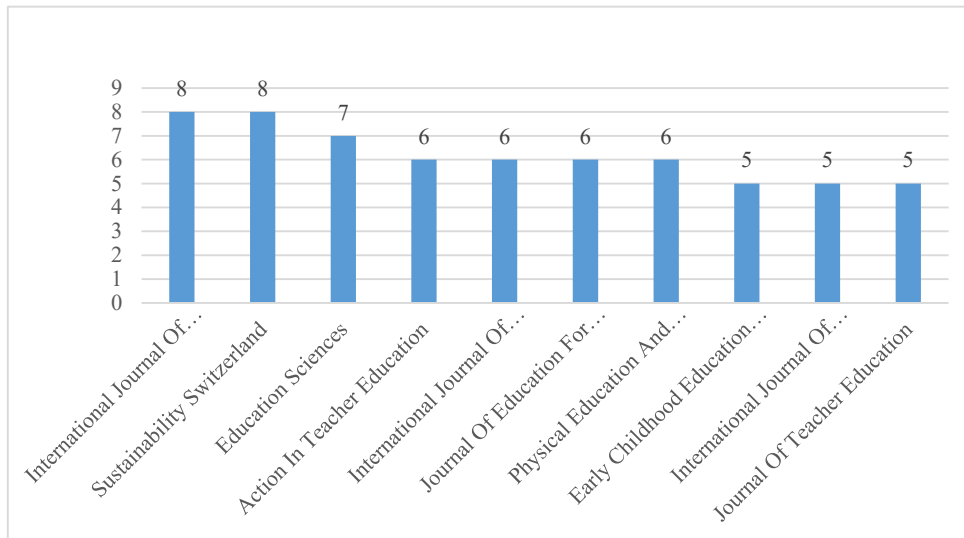


Figure 6. Most Active Journal

Three-Field Plot

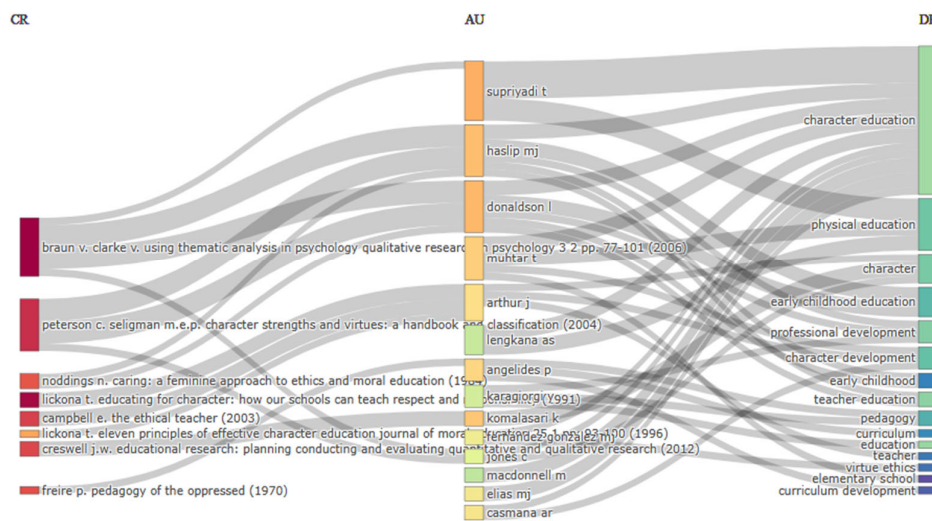


Figure 7. Three-Field Plot

The picture above contains three observed elements: Journal publication name, author name, and theme/topic used. The three elements are then connected by gray plot lines that are linked to each other. Based on the journal's name, each journal shows which authors often contribute to their publications, especially those with the theme of character education.

The size of the plot indicates how much publication is associated with the plot. Based on the image above, several journals. The journal that has published the most research on character education is the Journal Braun v. Clarke v. Using thematic analysis in psychology qualitative research (2006) displayed in dark red and connected with the author, namely Haslip Mj. Based on the image above, there are 14 authors. The size of the bar chart shows how many research results each author has published. Among the 14 authors who wrote the most character education articles is Supriyadi T.

In the third element, each research topic is connected to the author who publishes research results with that theme. The analysis results show 15 keywords, including character education, physical education, character, early childhood education, etc. This shows that these keywords are closely related to research topics in character education.

Corresponding Author's Countries

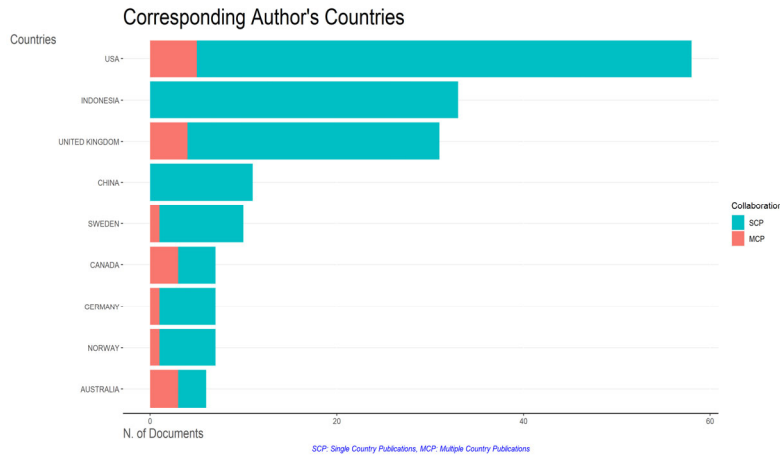


Figure 8. Corresponding Author's Countries

The picture above shows that most Multiple Country Publications come from the U.S.A., then the United Kingdom, and followed by Canada. Meanwhile, most Single Country Publications come from the U.S.A., Indonesia, and the United Kingdom. Corresponding Author's Countries from this study are dominated by countries from the European continent: the United Kingdom, Sweden, Germany, and Norway.

Most Global Cited Document

Table 2. Most Global Cited Document

Paper	Total Citations	T.C. per Year
Cohen J, 2009, Teach Coll Rec	923	61,53
Roeser Rw, 2000, Elem School J	544	22,67
Demetriadis S, 2003, Comput Educ	144	6,86
Boyd Mp, 2011, Lang Educ	111	8,54
Carr D, 2006, Oxf Rev Educ	95	5,28
Lee H, 2013, Int J Sci Educ	87	7,91
Williamson B, 2017, Learn Media Technol	83	11,86
Tabachnick Br, 1999, Sci Educ	82	3,28
Johnson Ke, 2015, Mod Lang J	77	8,56
Clandinin Dj, 1989, Curric Inq	75	2,14

The paper with the most significant total citations is the paper in 2009 with 923 citations. The paper with the largest T.C. per Year Cohen J, 2009, Teach Coll Rec is 61.53. From the table below, the year of publication does not affect T.C., because in the earliest year, namely 1989, citations only amounted to 75, while in the most recent year, namely 2017, citations amounted to 83.

Network Analysis

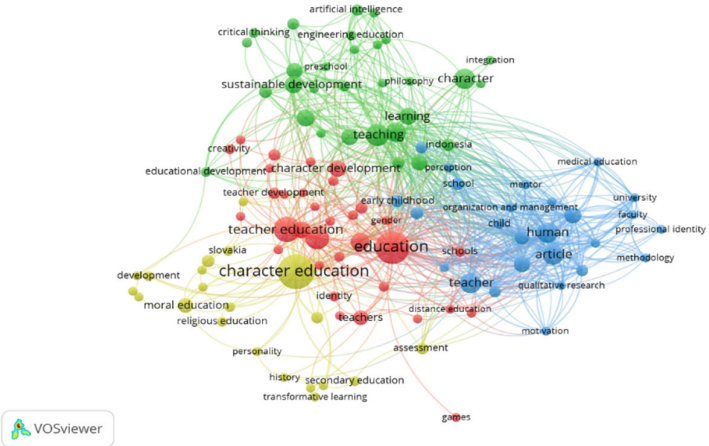


Figure 9. Occurrence Analysis

The figure above shows the occurrence analysis of research related to character education with a minimum cluster size of 20. Based on the image above, there are 4 clusters formed. Character education is the dominating keyword in the largest cluster with occurrence 46.

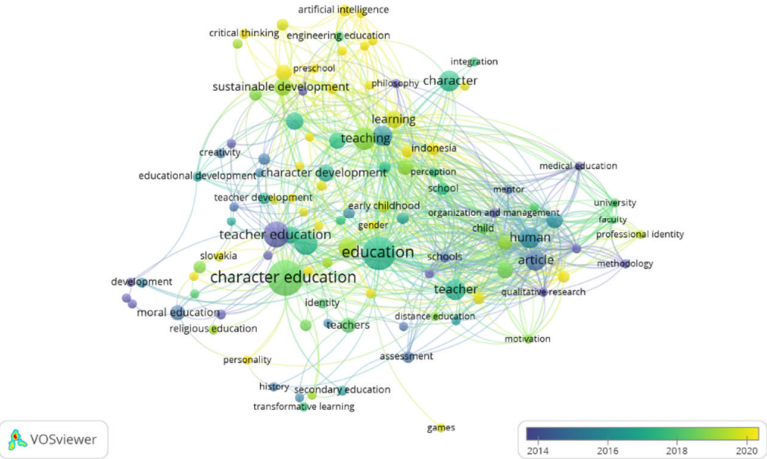


Figure 10. Keyword Network Analysis

The image above shows an analysis of keyword networks based on overlays. The keywords learning, sustainability, elementary school, Indonesia, and curricula are keywords with usage in the current year. In comparison, the keywords education, teaching, and human had relatively long usage around 2014.

of education. Based on Cartographic Analysis, it is known that there are four main themes, namely cluster 1 has a theme about strategy. Cluster 2 has a theme of Components that enable the educational process. Cluster 3 has a theme on implementation in education. Cluster 4 has a theme of character development education.

Research has limitations, only doing analysis on the Scopus database without considering other databases and only considering English documents. Future research is expected to explore other databases, such as W.O.S., and consider analysis with more complex languages.

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