

**INSTITUTION OF SOCIOLOGY TEACHING IN INSTRUMENTING  
MULTICULTURAL CONSTRUCTS IN SCHOOLS: BIBLIOMETRIC  
ANALYSIS WITH VOSVIEWER AND RSTUDIO BIBLISHINY**

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**ABSTRACT**

Education is usually associated with the educational opportunities and experiences provided to students with different backgrounds such as race, ethnicity, culture, and social class; in fact, multicultural education is commonly understood and practiced. The implications for education behind the complexity of multiculturalism as a concept have demanded the need to move towards social justice-oriented education. The type of writing used in this article uses a bibliometric analysis approach. This article examines the impact of sociology education on multicultural understanding in schools from the Scopus database between 1979 and 2022. To support the assertiveness and effectiveness of multicultural education, partnerships with the wider community complete the coherence of this approach. It is necessary to apply norms and standards that are compatible with multicultural education to form a school culture that supports diversity. Norms and standards This consistent method, aligned with multicultural education, should be applied to shape a school culture that supports diversity. The context of the teacher in daily life is able to encourage students not to be separated from the rules that apply by modeling to students how to live in a heterogeneous and homogeneous society in the midst of technological advances.

**Keywords:** *Sociology, Multicultural Society, Vosviewer, Biblioshiny*

**A. INTRODUCTION**

The multicultural phenomenon that we can encounter every moment of our daily lives has been defined in different ways (Moniz, J. B., 2023). Other authors have interpreted multicultural education in different ways (Wu, X. 2023). However, I define multicultural education as a field of study devoted to research using a variety of approaches for the development of policy and practice (Brown,

J. C., & Joyce, M. C., 2023) that enables all students to learn about diverse cultures so that they can see and accept the diverse characteristics around them (Atwater et al., 2023).

Atwater, B. D., et al. (2023) 96% of students and educators believe that sensitivity to diversity issues is important, but only 47% of student teachers feel that teacher education prepares them to work with diversity in the classroom (Hamza, K., et al., 2023). Teachers and students should look at concepts, issues, themes, and problems around them from different perspectives so that their understanding of their social environment is broadened (McCowan, T. 2023). Development, complexity, and its impact on students can foster a wise attitude toward viewing the surrounding environment very differently (Atwater et al., 2023).

Atwater et al. (2023) say that the most progress in embedding and incorporating multicultural education is in literacy practices, especially reading and writing. continuing the statement that by saying math and science are so high status that later they are "untouched by diversity," As expressed (Pensky, J., et al., 2023), teachers who have developed critical thinking, for example, recognize how to deal with different attitudes in their environment and most subtly in the classroom, and how it is the role of schools to identify and advocate for school policies and practices that create or exacerbate gender disparities in learning experience opportunities (Brant, C. A., & Willox, L. 2023) and engage students in conversations related to economic ability who are predominantly demographically and phenomenologically as well as politically and educationally minorities (Manalo-Pedro, E., et al., 2023).

School leadership and school culture will help students understand in advance how practices conform to or deviate from policies (Klnç, A., et al., 2023). It is stated (Hossain, M. 2023) that the homogeneous education system should be made more responsive to local culture and local needs, and school management and curriculum should be devolved to lower levels of government so that local education institutions and ordinary people should be given a voice and be more empowered, so that in the future decentralization of education will contribute to the 'deepening' of democratic culture.

Multicultural models and frameworks early on sought to create the epistemological nature of how education happens and have an ethical stance (Cowen, R., & Kim, T. 2023), saying clearly that the focus on equality and opportunity within a broader framework of social justice and educational equity (Kuria, E. K., & Kelly, C. 2023) Because so many in the field of multicultural education have opened the gateway to diversity, he believes that multicultural education is being tested for integrity. Kuria, E. K., & Kelly, C. 2023. Sociology is usually taught only to students from the Social Science stream. The Akidah and Akhlak sectors, along with topics such as relations with Muslims and non-Muslims and good deeds, are designed to equip students with Islamic teachings on these specific topics and include the values of respect and tolerance (Fathuddin, F., et al., 2023).

However, from the perspective of critical multiculturalism, the school curriculum should raise students' critical awareness of representations of race,

gender, and class (Soeterik, I. M., et al., 2023) and engage them in discussions about the construction of socio-political images from these images. The curriculum should not only contain critical descriptions of minorities but also encourage students from the majority to think critically about their status as the majority (Carter, A., et al., 2023). This pedagogical approach is based on the assumption that uncomfortable emotions are important in challenging dominant beliefs, social habits, and normative practices that maintain stereotypes and social injustice and in creating openings for empathy and transformation (Duggan, M., & Bishop, C., 2023). To support the assertiveness and effectiveness of multicultural education, partnerships with the wider community (not limited to parents and immediate community members) complement coherence (Meroni, C., & Velasco, V., 2023).

It is important to incorporate norms and standards that are compatible with multicultural education to establish a school culture that supports diversity (Baidoo-Anu, D., et al., 2023). This can be achieved through students' enthusiasm for school and extracurricular programs. Student activities are one of the important components of this approach, as they are the core of the school process where they can acquire knowledge, skills, and values (Fathi, L., et al., 2023). To support the assertiveness and effectiveness of multicultural education, partnerships with the wider community (not limited to parents and close community members) complete the coherence of this approach (Meroni, C., 2023). Norms and standards Methods used with multicultural education should be applied to shape a school culture that supports diversity (Buzzai, C., et al., 2023; Hagenars, M., et al., 2023). For this reason, the author applies the idea of bibliometric analysis using Vosviewer and Rstudio Biblioshiny to examine the evolution of sociology education towards multicultural understanding in schools.

## **B. METHODS**

### **Ethics Statement**

Neither institutional review board approval nor obtaining informed consent is required as this is a literature-based study.

### **Study Design:**

A total of 120 documents accessed on August 10, 2023 with the keywords "Sociology" And "Education" And "Multicultural", there are as many as 120 documents obtained as a result of mapping and analysis based on suitability and compatibility with the research topic following the trend of data search results of research publications on "Sociology" And "Education" And "Multicultural" in Scopus. Each data or material displayed is analyzed through scopus.com (in the "Analyze search results" feature). In addition, the analysis is also assisted by the Bibliometric Analysis feature to be visualized (Mbarki, I., 2023; Patel, S. K., & Jhalani, P. 2023) The visualized data follows the calculated weight and also the existing data trends based on the data obtained. The results of identification and exploration based on 3 criteria relevant to the topic of sociology education on multicultural understanding in schools referring to (1) suitability of viewing to the research topic; (2) relevance to the research topic; and (3) research implications found or recommended (Al-Jabi, S. W. 2017; De Zeeuw, H, 2011).

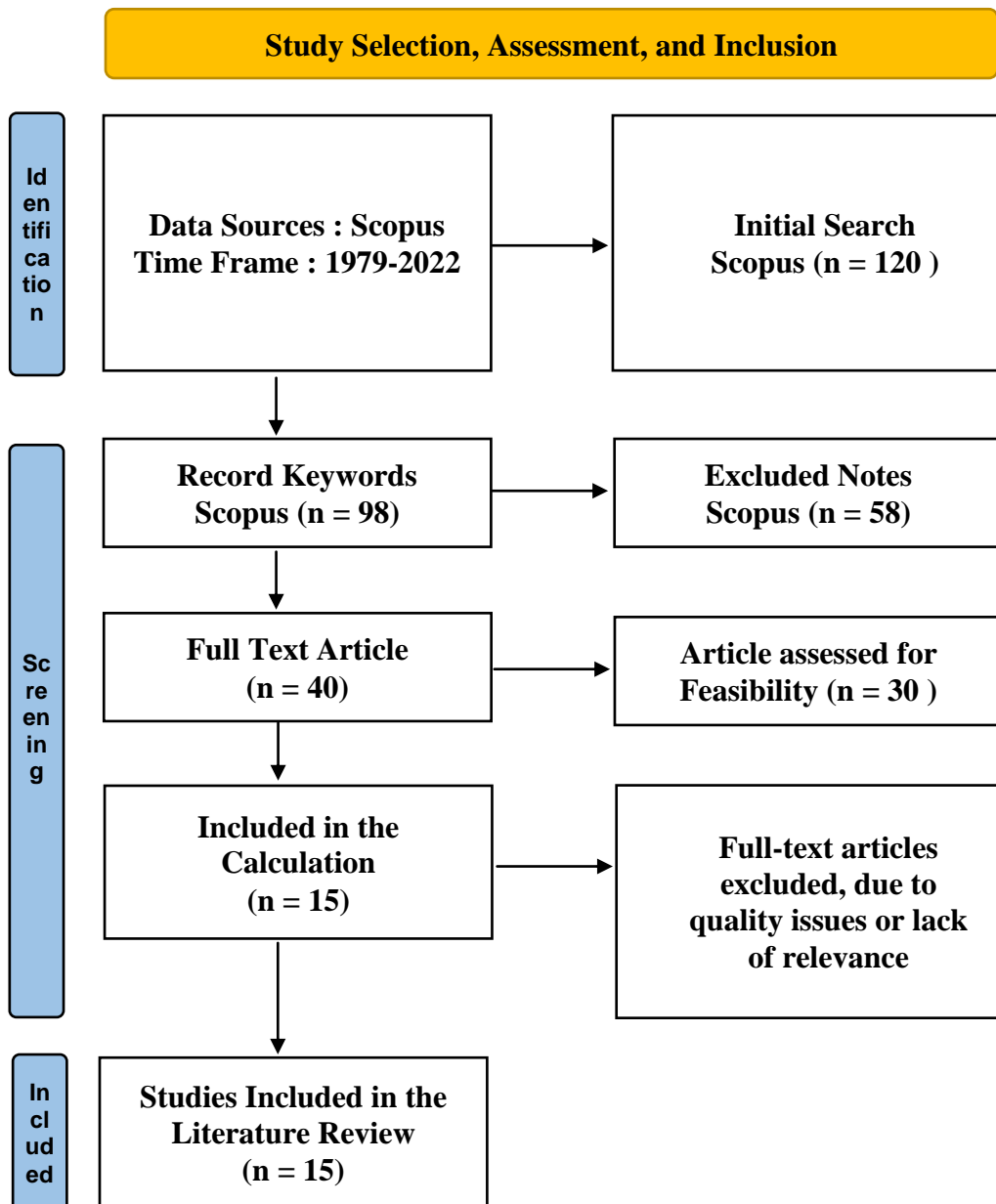
At this stage, each abstract is checked independently of the author. Minor disagreements were discussed and resolved in meetings where agreement was reached. According to the above criteria, 30 studies were removed. Second, the relevance and quality of 15 studies were assessed by reading the entire article. Then 15 studies were reviewed for eligibility and independently assessed according to the independent dimension quality criteria (Sofyantoro, F., et al., 2023; Ahmad, K., et al., 2023) with some criteria:

1. Accuracy: the research objectives are clearly stated, and the data collection methods are adequately described. References support important statements in the paper.
2. Consistency: the research design is consistent with the research objectives. Research questions are answered, or research objectives are achieved..
3. Completeness: the research approach of the study is described in sufficient detail.
4. Timeliness: the study was published between 1979 and 2022.

This led to the final selection of 15 research studies from 1979–2022 that directly addressed the question of the development of sociological education towards multicultural understanding in schools (see Table 1). In accordance with our inclusion and exclusion criteria, the limited number of remaining studies, despite an extensive search of the relevant literature, is a finding. This still very small number can already indicate the lack of research that examines the topics of "Sociology," "Education," and "Multicultural" that develop in the world in the Scopus database.

The data analysis of this study was analyzed through the keywords "(TITLE-ABS-KEY "Sociology" And "Education" And "Multicultural")" in the TITLE-ABS-KEY ("Sociology" And "Education" And "Multicultural") and TITLE-ABS-KEY ("Sociology" And "Education" And Multicultural) in the Scopus Database. All search data results are stored in CSV (Excel) files, which are then processed and examined using the Bibliometric Analysis Program.

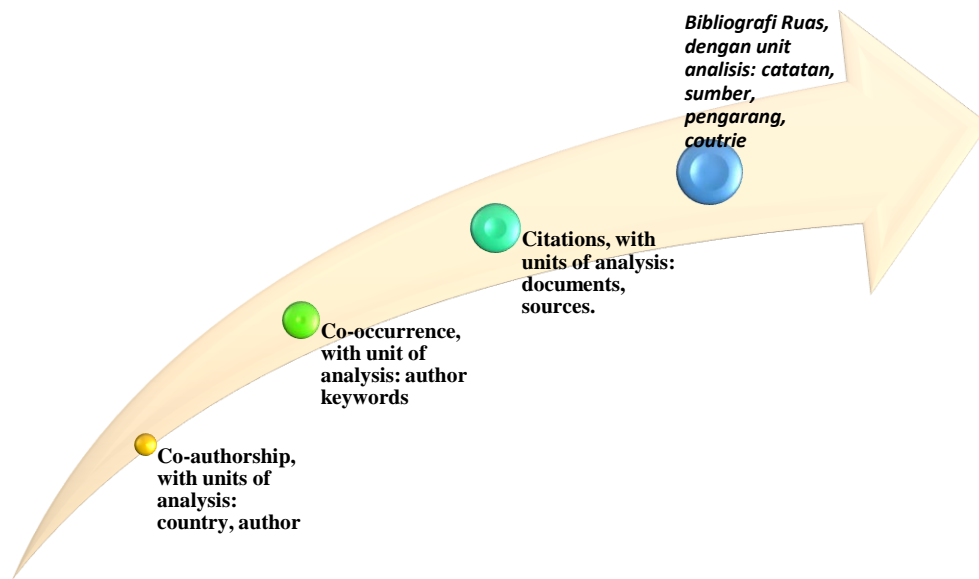
Bibliometric analysis is a tool to display and analyze Including Eligibility Screening Identified Records Scopus search identified (n = 120) the most relevant records included. Records after duplicates were removed (n = 98) Abstract titles and keywords of records read (n = 98) Records were excluded (n = 58). full-text articles (n = 40). Articles assessed for eligibility (n = 30) Then excluded due to quality issues or a lack of relevance (n = 15). The selected and reviewed documents (n = 15) were mapped in a systematic literature review (Pan, X., et al., 2018). The program can display and illustrate a visual bibliometric map with unique data through identification and analysis of the types of analysis that can be visualized in bibliometrics, as shown in Figure 1 below.



**Table 1. Study Selection, Assessment, and Inclusion (presented using Bibliometrics of Visualization).**

**Source: Processed by researchers, 2023**

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**Figure 1. Systematic Literature Review analysis assisted with bibliometric tools.**

**Source: Processed from various sources, 2023**

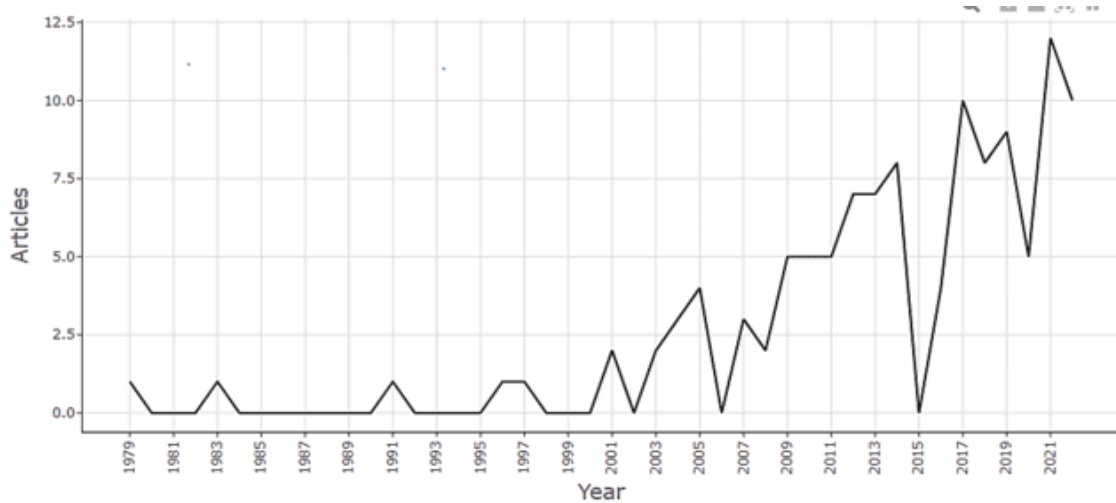
This systematic literature review analysis approach is used to help provide a data set that can be utilized by policymakers, academics, and other stakeholders to improve the quality of future research (Blessie, E. C., & Karthikeyan, E. 2012; Meng, X., et al., 2023). The systematic literature review method is also a comprehensive and reliable way of reviewing and evaluating scientific publications to understand the development of a particular research topic (Chassignol, M., et al., 2018; Fadhlina, A., et al., 2023). The analysis of this research is also to see how sociology education towards multicultural understanding in schools can be a path towards creating competent education in the future.

### **C. RESULTS AND DISCUSSION**

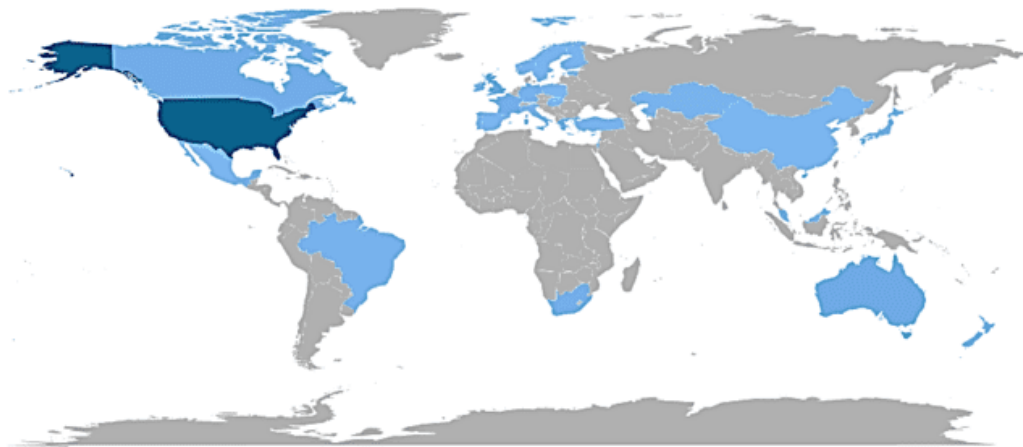
The following figures are the results of analysis from two bibliometric software tools. Most of them are quite clear and technically illustrate the results from around the world on how sociology education affects multicultural understanding in schools. According to Figure 2, the annual scholarly production for the keywords "Sociology," "Education," and "Multicultural" in the Scopus Database has been increasing since 1979, although it experienced a significant decline in 2015, surged up to a peak in 2021, and decreased slightly in 2022. Annual scientific production refers to the total number of articles published in the selected year range of 1979 to 2022.

Following the Figure 3 shows the relative comparison in scientific production across countries. Based on the color tone and the number of documents, it can be seen that countries such as the US (97 documents), the UK (14 documents), Australia (13 documents), Canada (10 documents), France (8 documents), and Greece (8 documents) are at the top level of knowledge base production in career education. The figure also means that the body of knowledge

in sociology education is trending worldwide, with varying degrees of empirical findings. With the indicator that the darker the color, the more publications come from that region or country, so that the USA is the highest country with 97 documents published.



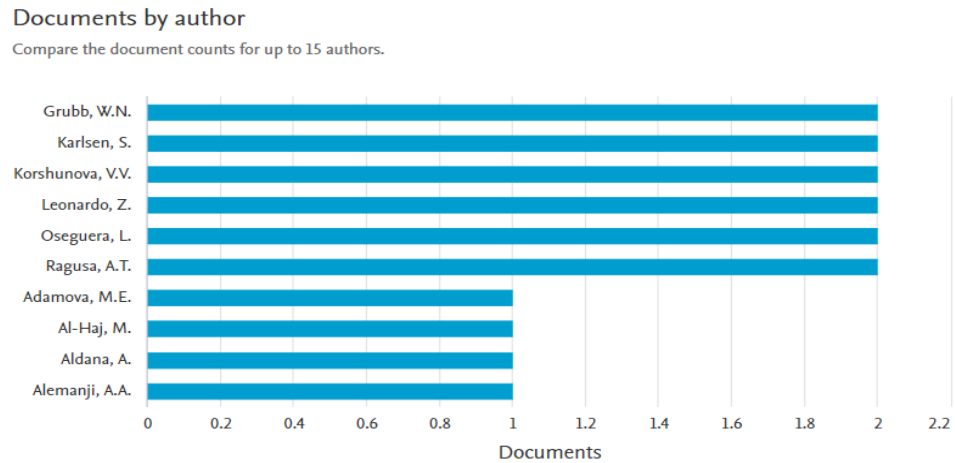
**Figure 2. Annual Scientific Production of the development of sociology education in a multicultural society within the scope of the school, source: processed by researchers through biblioshiny, 2023**



**Figure 3. World Map showing a country's scientific production source: processed by researchers through biblioshiny, 2023**

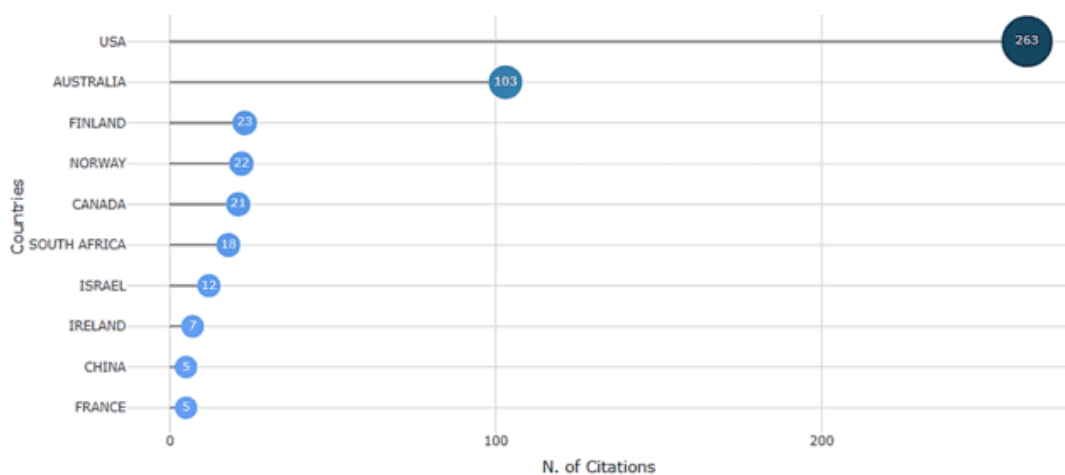
The term 'simple country publications', or country scientific production refers to the number of co-authorship publications originating from a single country, while the term 'multiple country publications', refers to publications resulting from international co-authorship. Therefore, Figure 4 adds evidence to the diagram with the authors' publications from the Scopus database and the publications of the top six authors in terms of sociological education towards

multicultural understanding in schools. With the six highest authors, there are Grubb, W. N. (2 documents); Karlsen, S. (2 documents); Korshunova, V.V. (2 documents); Leonardo, Z. (2 documents); Oseguera, L. (2 documents); and Ragusa, A.T. (2 documents).



**Figure 4. Author's Publications (1987-2022), Source: Processed through Scopus, 2023**

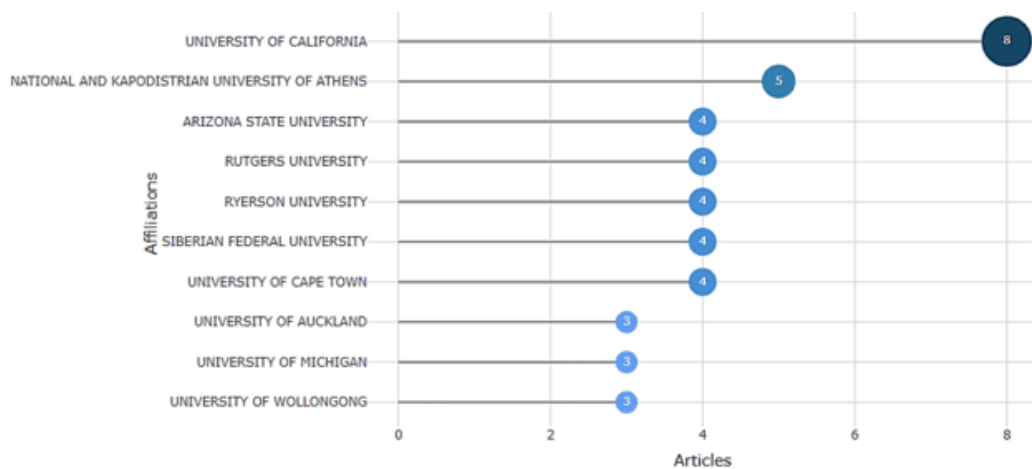
A citation is a reference to a quotation from or reference to a book, paper, or author, especially in a scientific work. Looking at Figure 5 of the citation figures for each country when it comes to citations related to sociology education on multicultural understanding in schools, it can be seen that the USA is leading ahead of Australia, Finland, and Norway. The rest of the countries follow behind, but they remain below the 20-citation mark compared to the top-ranked countries, such as the USA (263 citations).



**Figure 5 Most Cited Countries source: processed by researchers through biblioshiny, 2023**



Most often, citations are also compared in terms of the affiliated institution that published the subject of the career. Thus, Figure 6 is a continuation that shows the relevant institutions that are highly cited in the aspect of developing sociological education towards multicultural understanding in schools. University of California with 8 documents and actively generating knowledge base in this field, followed by National Kapodistrian University of Athens with 5 documents; Arizona State University, Rutgers University, Ryerson University, Siberian Federal University, and University of Cape Town with 4 documents each; and finally followed by University of Auckland, University of Michigan, and University of Wollongong with 3 documents each.



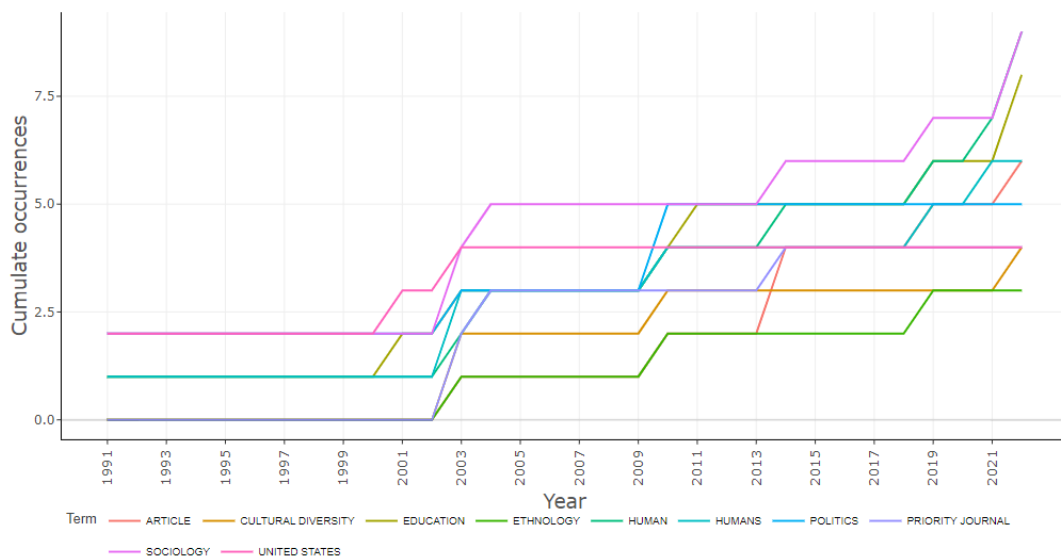
**Figure 6. Most Relevant Affiliations. Source: processed by researchers through biblioshiny**

This bibliometric analysis was further validated with Vosviewer software to show the number of citations among countries. Based on Figure 7, the larger the node, the more citations from each country. In addition, each color represents a cluster or field that is commonly discussed in the subject of developing sociological education towards multicultural understanding in schools. These clusters are automatically generated based on the number of countries with a developmental index of the development of sociological education towards multicultural understanding in schools. With each cluster,

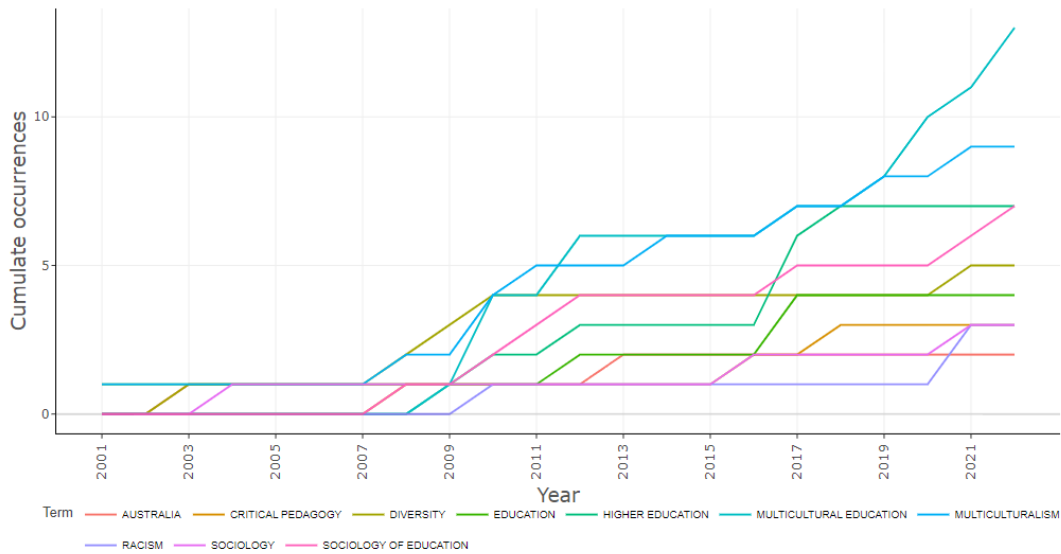


**Figure 7. citation of the most cited countries. Source: processed by researchers through Vosviewer, 2023**

The next analysis aims to compare keyword trends over the years since 1979. Figure 8 shows the cumulative keywords related to the development of sociology education towards multicultural understanding in schools. As shown, most publications are concentrated on sociology and humanities, which experienced a significant increase until the peak of 2022, followed by education. Other keywords are seen to be related to the development of sociology education towards multicultural understanding in schools.



**Figure 8. Analysis of Keyword pluses in terms of Cumulative Word Growth among Selected Articles. Source: processed by researchers through Biblioshiny**

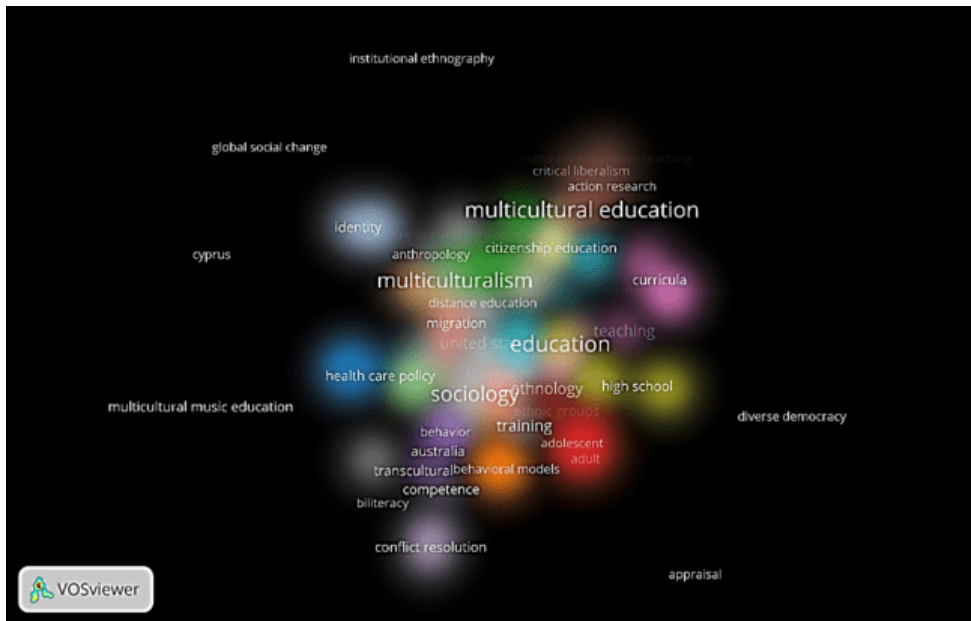


**Figure 9. Author Keyword Analysis in terms of Cumulative Word Growth among Selected Articles. Source: processed by researchers through Biblioshiny**

Figure 9 shows the cumulative count by author keywords. These are referred to as index terms, and they are automatically generated from the title of the cited article. The descriptive nature of author keyword terms is that they must appear more than once in the bibliography and are organized from multi-word phrases into single terms. Thus, author keywords complement traditional keyword or title searches in bibliometric analysis. Compared with the previous figure, the increasing trend of sociological education development towards multicultural understanding in schools seems to emphasize the impact of multicultural education, followed by multiculturalism and higher education, according to the Scopus database. In general, most of the author's keyword analysis is not much different compared to the use of keyword plus. The following bibliometric analysis will also consider which journals tend to publish more articles on sociological education in multicultural societies in terms of sources.

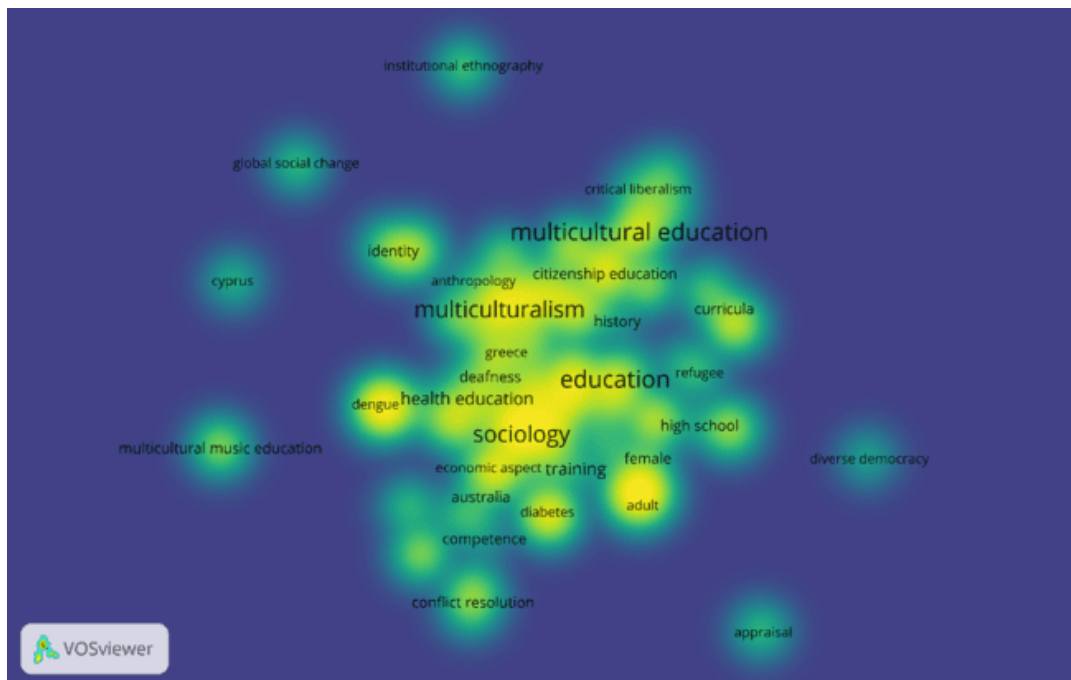
In the next section, figure 10, this bibliometric analysis will explain the information obtained from the co-occurrence of keywords. This implies how the keywords are interconnected and clustered in the database. With the help of Vosviewer, the minimum number of keyword occurrences was set to 10 using full counting. Therefore, a total of 65 keywords were analyzed and presented in a network view. It was found that the keywords were clustered into six groups (with four different colors), as shown in Figure 11. The following Figure 11 is an alternative and clearer representation of the keywords clustered according to their themes by Vosviewer. Technically, the larger the node, the denser the publication. The distance between the nodes also shows how closely the publications are cited across fields of study.





**Figure 12 Groups of Keywords Generated from Bibliometric Analysis.**  
**Source: processed by researchers via Vosviewer, 2023**

Alternatively, Figure 12 shows the density of keywords, as shown in the figure below in yellow. The development of sociology education on multicultural understanding in schools is reviewed in terms of education, impact, systematic review, results, students, and management.



**Figure 13. Density of Keyword Visualization from Bibliometric Analysis.**  
**Source: processed by researchers through Vosviewer, 2023**

## Discussion

The results of bibliometric analysis have shown the trend of sociology education towards multicultural understanding in schools because the data were taken from the Scopus database. In terms of selective content analysis, this section will highlight some content analysis of the most cited articles regarding trends in the development of sociology education towards multicultural understanding in schools (Worley, C., & Young, J., 2023). Finally, there will be some discussion on the limitations and challenges in the development of sociology education towards multicultural understanding in schools and some future suggestions for future research (Allbright, T. N., 2023).

On a personal level, research has found that different teaching approaches and a more cultural approach can have different benefits for students (Lee, J. 2023). For example, a study showed that students who were interested in cultural education improved their identity formation (Rocha, J., 2023). In other words, personality traits (such as identity formation stage, career adaptability, and emotional stability) improved their personal development through culture-based education (Hou, Y., et al., 2023). In Indonesia, the government has increased allocation and investment in culture-based character education in schools. A study was conducted to determine the outcomes of culture-based character education and whether culture-based education in schools can reduce socio-economic disparities (Amanda, M. T., et al., 2023).

They found that parents' education level was positively related to students' career development but tended not to influence their career development competencies. Moreover, students who were positively influenced by career development competencies were less influenced by their parents' socioeconomic status (Zheng, L., et al., 2023). This study implies that good implementation of culture-based education in schools can narrow the gap in students' career development regardless of their parents' socioeconomic background (Buck, G. A., et al., 2023). A study in Latvia has also proven that the implementation of future career education is well done by schools, companies, and municipalities (Bohvalovs et al., 2023). This resulted in an increase in students' career choices, and there was a positive correlation between students' plans and the quality of their career management portfolios, which had a positive impact on their career and professional development (Küçükaydn, M. A. 2023).

## D. CONCLUSION

As a necessity to support students' future capabilities, every staff involved in the development of sociological education towards multicultural understanding in schools must support the development of students' social character and adaptability (Kusminin, K. 2023). In achieving these initiatives, culturally-based educators must also act to increase students' competitiveness, while at the same time instilling a sense of independence and security in current conditions (Hakkola, L., & Ropers-Huilman, R. 2018). The bibliometric findings of this study indicate that culture-based education is becoming a trend in the body of knowledge, covering a wide range of contexts and disciplines (Gupta, R., et.al, 2019).

The paper also highlights that developing culture-based education and their professional competence is about helping students be effective in their character choices and also helping them in their student focal points (Brayboy, B. M. J., & Castagno, A. E. 2009). This important point is also validated by other studies that show that character self-growth is a contributing factor to one's career decisions (Eva, N., et al., 2019). As a necessity to support students' future character abilities, any teacher involved in culture-based education should support the development of students' social capital and adaptability (Bartell, M. 2003). In achieving this initiative, culture-based educators must also act to increase students' competitiveness while at the same time instilling a sense of independence (Kaur, A. et al., 2016). The bibliometric findings of this study indicate that culture-based education is becoming a trend in the body of knowledge, covering a wide range of contexts and disciplines (Zhang, X. L., et al., 2020).

The paper also highlights that developing culture-based education and their professional competencies is about helping students to be effective in their character formation, as well as addressing future career expectations (Lavy, S. 2020). This important point is also validated by other research that shows that self-character formation is a contributing factor to students' character growth.

#### ACKNOWLEDGMENTS

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