Unveiling Depths The Regional Language Research in Brunei: Preservation, Globalization, and Cultural Identity using Bibliometric Analysis

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Abstract

By unravelling these complicated threads, the study provides insight into the interconnections among concepts, seminal contributions, and thematic evolution within this field. Research on the impact of globalization on local dialects is experiencing a simultaneous surge. The main focus of important academic works highlights the urgent necessity to safeguard languages and the intricate dynamics of the global dominance of Brunei's linguistic heritage. This scholarly investigation offers a thorough examination of the intricate progress in regional language research within Brunei, focusing on the relationship between preservation, globalisation, and cultural identity. This study uses bibliometric analysis and VOSviewer visualisation to investigate the scholarly landscape of Brunei's linguistic domain thoroughly. Publication patterns have evolved over time, starting from basic documentation of linguistic differences to now involving interdisciplinary partnerships that bridge linguistics with sociology and education. This study employs bibliometric analysis to examine the complex relationships and patterns that influence regional language research in Brunei. After refining the keywords, the study found only 43 documents out of 996 to be relevant. It was observed that articles were the most commonly published type, with Springer and Universiti Brunei Darussalam being the top publishers for studies on regional languages in Brunei. In VOSviewer analysis, the themes of 'tradition' and 'heritage' emerged as dominant, highlighting the importance of language and culture research in preserving linguistic heritage for future generations.

Keywords:, VOSview, regional language, evolution, Brunei

INTRODUCTION

Language, a non-physical yet influential symbol of cultural legacy, occupies a central position in the realms of conservation, globalisation, and individuality. Located in the central region bibliometric analysis of Southeast Asia, Brunei is a nation that exhibits a rich linguistic material, which serves as an evidence to its unique blend of historical, cultural, and ethnic influences. The study of regional languages in Brunei has seen significant development, reflecting the complex relationship between the preservation of local languages, the forces of globalisation, and the maintenance of cultural identity. Currently, the state of publication patterns in Brunei's regional

language research exhibits a significant contrast. There has been a notable increase in academic literature that focuses on the pressing need to save indigenous languages. According to Hikwa & Maisiri (2017) preserving indigenous languages is crucial. This spike can be attributed to a heightened awareness of the vulnerability of these languages in the context of advancing globalisation.

On the other hand, there is a noticeable increase in scholarly research investigating the mechanisms of language change, the process of cultural integration, and the consequences of a dominant global language on indigenous languages. This indicates an increased recognition of the changing linguistic landscape in the context of globalisation. Language ideologies have also gained attention, examining the connections between language use and political questions of diversity and socialization (Luykx, 2003). The predominant focus of the most widely read papers in Brunei's regional language study revolves around a number of fundamental themes. The existing body of research primarily focuses on the pressing necessity for implementing preservation methods, highlighting the socio-cultural importance of indigenous languages as valuable maintains of identity and knowledge. Furthermore, there is significant scholarly interest in studying the effects of globalisation on language dynamics, including the influence of dominant languages on local vernaculars. All of these themes intersect to create a vibrant dialogue, explaining the obstacles and prospects encountered within Brunei's linguistic context.

The publication patterns seen in this particular field demonstrate a spectrum of intellectual interests. The initial efforts primarily centred on the documentation and categorization of linguistic variations, laying the groundwork for comprehending the linguistic composition of Brunei. Over the course of time, there has been a change in the pattern, which has emphasised the urgent necessity to protect endangered languages and explore the socio-cultural consequences of language loss. For instance a research by Low, Mcneill & Day (2022) titled '*Endangered Languages: A Sociocognitive Approach to Language Death, Identity Loss, and Preservation in the Age of Artificial Intelligence*' mentioned language death entails significant cultural, personal, and ecological loss, and is often rooted in (neo-)colonialism. It represents the destruction of cultural genealogy and the loss of knowledge intrinsic to personal self-imagery and identity. It is worth noting that there is a noticeable inclination in contemporary scholarly works towards interdisciplinary partnerships, where linguistic research is combined with the fields of sociology, anthropology, and education. This tendency suggests a comprehensive strategy to solving the complex and diverse difficulties at hand.

Bibliometric analysis is a quantitative approach that provides insight into the development of scholarly discourse, revealing complex trends within the field of regional language research in Brunei. Bibliometric analysis is a statistical method used to analyze and evaluate academic literature in a specific field. The process entails evaluating the quantity of publications, authorship, citations, and additional elements to gauge the influence and advancement of research (Saputro, et al., 2023). By examining citations, frequency, and impact, this analysis reveals the interconnections between ideas, identifies key contributors, and traces the growth of themes. The present analysis provides illumination on a diverse range of interconnected research threads, showcasing the development of ideas and the rise of influential works that

have influenced the course of regional language research in Brunei. In the context of an increasingly integrated globalised society, Brunei faces the challenge of safeguarding its language legacy in light of the widespread influence of globalisation. This empirical research examines the dynamics of language preservation, tracing its evolutionary course and considering the intricate relationship between global integration and cultural identity. This statement calls upon scholars, policymakers, and communities to collectively engage in an exploration that delves into the complexity of language, seeking to comprehend its profound influence on the social and cultural aspects in Brunei.

LITERATURE REVIEW

Bibliometric analysis is a valuable method for examining, visualising, and comprehending the volume, patterns, and interconnectedness of research output in various fields, such as cultural heritage, globalisation, and the cultural landscape. Bibliometric analysis is a reliable and accurate approach of quantifying the impact of an article on the advancement of knowledge. It is widely employed as a means of examining patterns and evaluating the effectiveness of research within a specific field (Herdianto et al., 2021). Within the contexts of language preservation, identity, and culture, bibliometric analysis can be employed to investigate the progression of regional languages and their influence on cultural heritage. For instance, a bibliometric analysis conducted on the subject of intangible cultural heritage tourism in China revealed that the integration of intangible cultural heritage with tourism and rural revitalization is a prominent area of research(Chen et al., 2022). Similarly, a bibliometric analysis focused on cultural heritage research in the humanities demonstrated that the concept of cultural heritage has expanded to encompass political, societal, and ideological connotations, as well as contentious and conflicting aspects.

Among other examples of studies related to revitalization and preservation of language to local languages are (Siregar, 2022) titled 'Effective and Efficient Treatment of Regional Language Preservation Strategies in the Nusantara'. Indonesia, as an archipelagic country with a population of around 200 million (BPS 2000), also called the Continent of Maritime Nusantara, is a cultural variety extending from Sabang to Merauke. One of the cultural assets of the Nusantara is the native regional language (BD). BD, in this Nusantara, has now suffered obstacles and risks to its existence. The obstacles exist in the form of neglect of respect, upkeep, and preservation of BD. This article aims to investigate the state of regional languages in Indonesia. Those variables can cause their extinction, consider the consequences of the extinction of these languages are significant from an ethnolinguistic context, and in the end, want to present an overview of options to overcome these challenges. This study is designed to provide feedback for various individuals, notably speakers of regional languages, to pay greater consideration to their regional languages' lives and future sustainability. The research that provides the basis for this scholarly article begins with a literature review and observation. The results in this work are the formulations of strategies, methods, and models relating to the preservation of regional languages (BD) (Siregar, 2022).

Bibliometric analysis studies using VOSViewer are conducted extensively in non-linguistic or linguistic fields. Bibliometrical analysis studies are largely conducted in the fields of science, technology, and the study of global issues. For example a reseach by Ariyanto (2023) titled *'Analisis Bibliometrik Trend Penelitian Pemodelan Matematis Menggunakan Database Google Scholar, Publish or Perish, dan Vosviewer'*. This study determines the topic of mathematical modeling by looking through Google Scholar publications from 1951 to 2022. The 71-year collection of articles used in this study came from Google Scholar. "Mathematical modeling" with an English content filter is used in this study. Publish or Perish and Vos-viewer software and basic statistical techniques were used to conduct a bibliographic analysis. This study shows co-occurrences of keywords and citations. The analysis reveals an important research trend in mathematical modeling that began 71 years ago. Utilizing concepts from mathematical modeling, the large cluster network map demonstrates the dominance of the health sector. Theoretical advancements, economics, industry, and environment still dominate the field of mathematical modeling research. There has not been any research on social or cultural mathematical modelling-bibliometric method re-identification of keywords supporting problem-solving with mathematical models.

Meanwhile, bibliometric analysis is used to conduct special studies on regional language development, revitalization, and maintenance. Most related bibliometric studies focus on language and the use of regional language in schools, education, and in-depth social science research. For instance, a research by Mohd Nazmi Mohd Khalli & Muhammad Farid Azlan Halmi (2023) *'Analisis Bibliometrik Kajian Sains Sosial Di Universiti Malaysia Sabah (Ums) Dalam Pangkalan Data Scopus Sehingga Tahun 2021'*. The study examined social science publications based on data from the Scopus database, spanning from UMS's founding until 2021. Using a keyword search, the study used bibliometric analysis to scrape 1,308 publication records from the Scopus database. According to the research, there is still work to be done before UMS publications in the social sciences can be published in journals with a Scopus index. Using VOSviewer to map studies reveals that the majority of researchers in the social science cluster's keyword record are located in the literature, finance, economics, psychology, and geography clusters. However, creating a meaningful cluster equal to any other cluster is extremely rare in historical, cultural, religious, and other clusters. The study, which looks at the shortcomings of researchers in getting their manuscripts published in indexed journals, takes the form of a publication report that can be accessed via the Scopus database.

Furthermore, Kanugrahan (2023) conducted a research regarding 'Bibliometric Analysis Of French Language Learning Media In Writing Classes'. The purpose of this study is to determine which learning materials are most and least used when teaching French in writing classes. The study employs a qualitative descriptive methodology, and the data gathering and bibliometric analysis procedures are the penalty methods. 21 articles and papers from the Google Scholar database were used as research data; this is unquestionably a study of media learning in writing classes. 21 data journal purchases were later processed and analysed using data collection procedures. Of these, 9 studies used visual media, 3 used visual audio media, and 10 used digital technology; no research employing audio media was found in relation to writing

skills. According to the VOSviewer software investigation, the majority of technology-based media research was carried out between 2018 and 2022.

The literature review that has been presented makes it abundantly evident how crucial bibliometric analysis is while conducting research in any subject of study. In addition to identifying research gaps, bibliometric analysis can assist in analysing author networking in previous publications. Analytical bibliometric studies can also access previous studies on mathematical modelling, extending back up to 70 years, as done by Ariyanto (2023). In regard to this, research involving bibliometric study of languages, such as Brunei's regional languages, must be considered significantly. There has not been any research on the dynamics of language preservation, tracing its evolutionary relating to global integration and cultural identity. Future researchers can use the study's implications as a starting point to produce high-quality research.

METHOD

Bibliometric analysis involves quantitative and visual approaches to analyze and map the knowledge landscape. Various software tools such as CiteSpace and VOSviewer are used for this purpose, enabling the visualization of research trends, identification of research hotspots, and understanding the structure and temporal dynamics of a field (De la Vega Hernández et al., 2023). The method used in this research is quantitative study using VOSviewer software to analyze and visualize co-situational networks (co-citation). Bibliometric studies involve numbers and rules for evaluating and viewing the frequency and relevance of the field of study over a specified period. Several processes have been controlled in investigating developments as methods in the study. The process consists of first determining the search keyword. The selection of keywords is important to compile the studies that have been conducted, and in this case, the keyword used is 'evolution regional language, Brunei, preservation, language, identity, culture.'

Keywords are applied in the Publish or Perish tool with a limited-year search mode from 2000 to 2023. The selected article database platforms Google Scholar. The purpose of both of these platforms selected is because the exposure of research-related keywords is wider and can collect as much research as has been carried out. The second process is to filter the search results to adapt to the needs and focus of the study. The article data collected is in the RIS file format. This format facilitates visual production in the VOSviewer application and is also required in the Mendeley reference management software for research bibliographies. The third is to compile statistical data of search results; after the article data is filtered and produced, it can be compiled as the sum of studies, publications, and authors related to the field and context of the study. The final process is to perform bibliometric data analysis using VOSviewer software. VOSviewer is a software tool used for constructing and visualizing bibliometric networks, and it can work efficiently with large amounts of data ((*VOSviewer - Visualizing Scientific Landscapes*, n.d.). It is designed to conduct bibliometric analyses and create visualizations from selected databases, including publications, awarded grants, patents, clinical trials, and policy documents.

VOSviewer can be used to identify research trends, understand the structure and temporal dynamics of a field, and reveal major contributors to a research field, such as countries, institutions, and scholars (*Subject and Course Guides: Bibliometric*

Analysis and Visualization: VOSViewer, n.d.). It can also be used to create interesting and communicative data visualization facilities, such as term maps of a field of knowledge. According to (Eck et al., 2010), VOSviewer can work efficiently with large amounts of data and produce interesting and communicative data visualization facilities. This method is valuable for providing an overview of the body of literature in a specific area and for understanding the evolution and topography of the knowledge base within a field (De la Vega Hernández et al., 2023).

RESULTS AND DISCUSSION

Following the analysis that has been carried out, the findings of this study will be discussed on the basis of: type of document, year of publication, number of publications , and publishing place. Based on the collection and selection of data in Google Scholar using the Perish or Publish tool, the study found 996 documents. However, after conducting further research, namely re-filtering related keywords, the results found only 43 documents related to the theme and keyword of the study. The data can be seen in the table below.

Table 1: Frequency of Document Type

Document Type	Total Publication	Percentage (%)
Article	25	58%
Book Chapter	6	14%
Book	5	12%
Writing Paper Series	3	7%
Thesis	4	9%
Total	**43**	**100.00**

In the context of Brunei Darussalam, the findings revealed five distinct categories of research about the development and preservation of regional languages, language, regional identity, and cultural practices. Papers of the article type were the most widely published, accounting for 58 percent (%) of the total 25 documents. On the other hand, the Writing Paper Series was among the least published, accounting for just seven percent (3 documents). Evidently, this demonstrates that the author's propensity to publish studies in articles is more prevalent than other types of publications, such as book chapters. The publication procedure in the form of an article, which is quicker and more straightforward than the process of writing a book or a thesis, which takes more time, is the only possible explanation for this. According to the year of publishing, however, there has been an increase in the study of regional languages in Brunei compared to twenty years ago. The following is a table that details the year in which the document was published:

Table 2: Frequency total of publication according to year

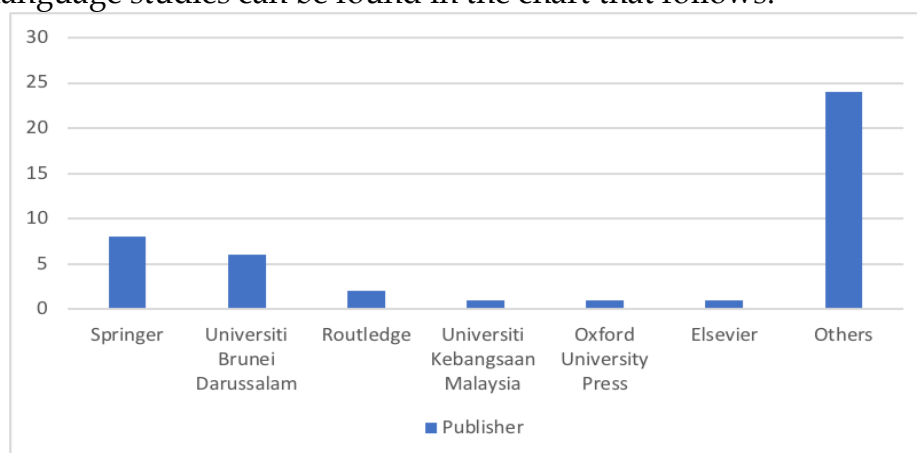| No	Year	Total Publication
1	2003-2008	5
2	2009-2012	9
3	2013-2017	8
4	2018-2020	8

5	2020-2023	13
	Total	**43**

Based on the data, the trend of research related to regional languages in the context of preservation, identity, and culture is significantly increasing. It is interesting to note that the papers that were discovered through a search on Google Scholar and published twenty years ago are written in English. The evidence demonstrates that the writers are making an effort to publish studies associated with the preservation of languages with a broader audience; this includes not only speakers of Malay-speaking nations but also those who have fields that are relevant to the preservation of languages. Furthermore, from the perspective of the publisher, it was discovered, based on research and analysis, that Springer and the University of Brunei Darussalam were the publishers that published the most studies on regional languages in Brunei. An illustration of the distribution of publishers in Brunei's regional language studies can be found in the chart that follows:

Graph 1: List of Publisher

Scholars play a crucial role in reinforcing findings, providing an overview of existing research, explaining concepts or theories, and identifying gaps and novel areas for further research. Research gaps are questions or problems that need to be addressed by existing studies or research within a field. They can include unexplored ideas, problems with study design, or factors that constrain the applicability of study findings. Identifying research gaps is fundamental in literature reviewing, and various methods, such as scoping reviews, umbrella reviews, and evidence mapping, are used to identify, prioritize, and display these gaps. Scholars often look for gaps, flaws, and limitations in primary research to continue the academic conversation by addressing them through their primary research. Understanding and addressing research gaps are essential for advancing field knowledge and guiding future research efforts. Therefore, it is feasible to look at advancements and identify concerns in studies, particularly in regional language in Brunei, as well as research gaps by employing bibliometric analysis.

Visualization Using VOSviewer

In bibliometrics, knowledge mapping is a method of visualizing a field of knowledge. Bibliometric mapping helps researchers acquire a comprehensive and scientific understanding of a knowledge field, identify emerging trends, and reveal

major contributors to a research field, such as countries, institutions, and scholars. Visualization is done by creating a landscape map that can display topics from variety of contexts and knowledge.
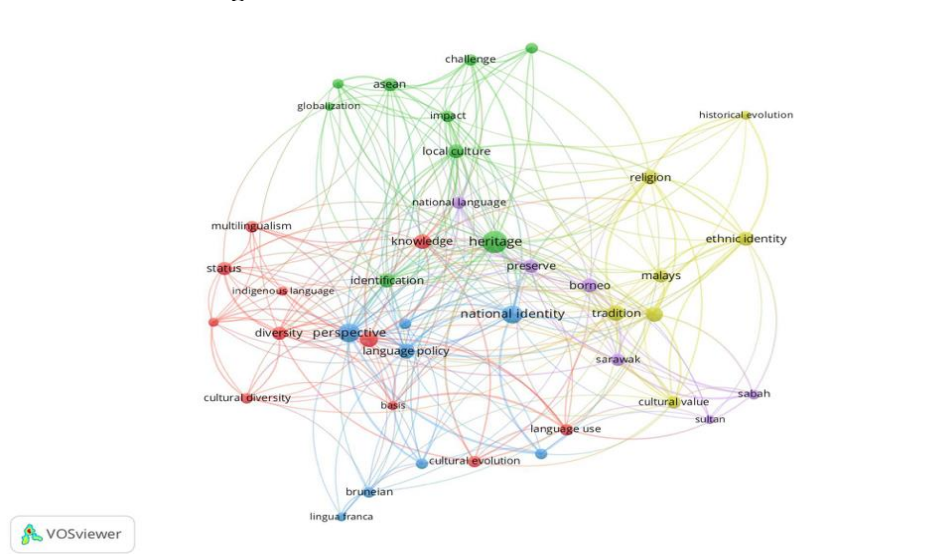

Figure 1: Visualization Regional Language research VOSviewer on *Network Visualization*

Figure 1 above illustrates how many keywords surround the terms "heritage," "preserve," "national identity," "tradition," and "perspective," which have a high density. It is clear that the subject has not yet seen much pioneering since some keywords are beginning to get dense and numerous studies have already been conducted on it. The researchers out there need to give extensive thought to the various concepts and methodologies that might be developed in regional language study related to the preservation and revitalization of languages. Researchers should use this as an opportunity to conduct more thorough research on languages in the future, particularly in the field of linguistics and culture. VOSviewer's visualization in the form of density visualization can be seen in Figure 2 below as evidence of the focus of studies that have been conducted related to regional languages in Brunei:
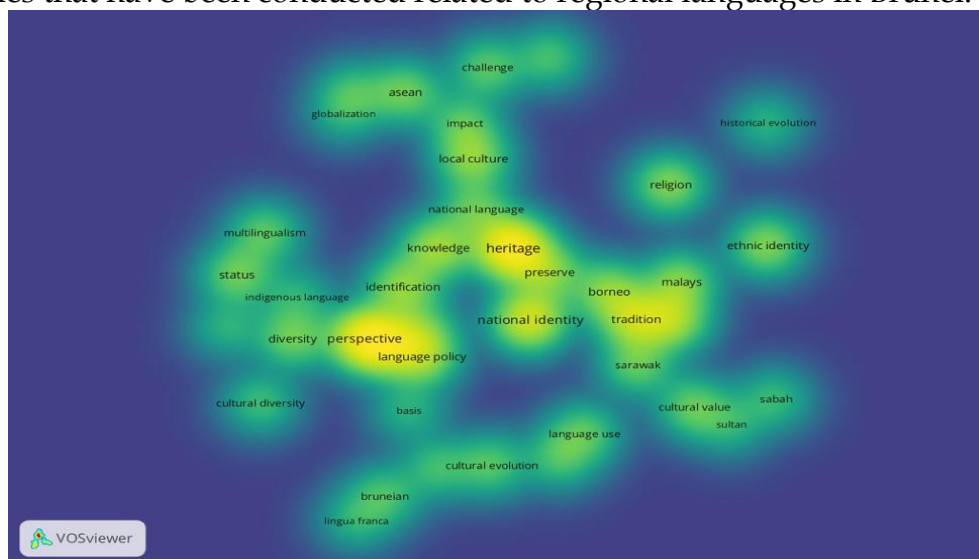

Figure 2: Visualization Regional Language research VOSviewer on *Density Visualization*

Figure 2 shows a large cluster that contains the concept of regional language studies with various networks of advanced concept development. On the right side of the diagram clearly shows the concept of 'tradition' is more dominant. This shows that the research of culture is significant in the study of regional languages, in line with the context of the research which is in examining the development of regional languages from the perspective of revitalization, globalization and culture or tradition. However, among all the visualization parts above, the concepts and keywords 'heritage', and 'perspective' are the most dominant. This proves that the significance of regional language studies is to preserve and as a heritage for future generations.

VOSviewer is a powerful tool for bibliometric analysis, allowing researchers to visually and accurately examine the impact of their work on knowledge advancement. It is particularly useful in the context of language preservation, identity, and culture, particularly in the context of regional languages and their influence on cultural heritage. In Brunei, bibliometric analysis has been used to investigate the state of regional languages, their extinction, and the consequences of their extinction. The analysis of bibliometric data using VOSviewer has been conducted extensively in non-linguistic or linguistic fields, such as science, technology, and global issues. The research has highlighted the importance of bibliometric analysis in identifying research gaps, analyzing author networking, and accessing previous studies. This approach is particularly useful in studying languages like Brunei's regional languages, as there is a lack of research on the dynamics of language preservation and its relationship to global integration and cultural identity.

VOSviewer serves as a software application utilized for conducting bibliometric analysis, allowing for the visualization of research trends, identification of research hotspots, and understanding the structure and temporal dynamics of a field. In Brunei, the study analyzed the evolution regional language, preservation, language, identity, and culture. The research found that the study focused on five distinct categories: article type, book chapter, book, writing paper series, and thesis. The study found that the trend of research related to regional languages in the context of preservation, identity, and culture is significantly increasing. The research was published in English, indicating that writers are making an effort to publish studies related to the preservation of languages with a broader audience. Springer and the University of Brunei Darussalam were the publishers that published the most studies on regional languages in Brunei. The visualization of regional language studies in Brunei shows a high density of keywords surrounding the concepts of heritage, preserve, national identity, tradition, and perspective. The research of culture is significant in the study of regional languages, particularly in the context of revitalization, globalization, and culture. This visualization provides a comprehensive understanding of the field and enables future research efforts.

CONCLUSION

Bibliometric analysis is highly significant from a theoretical and practical perspective in regional language contexts, especially when it comes to language revitalization, preservation, identity, and culture. Its theoretical significance stems from its capacity to measure the amount of research produced in a local language, providing information on the scope and depth of studies, writings, and conversations

that take place in that language. Bibliometrics reveals the intellectual footprint of a language by examining the volume, significance, and patterns of publications; this helps to illuminate the language's scholarly contributions as well as possible areas for improvement. Practically, bibliometric analysis serves as a crucial tool for assessing the health of a language in academic and research domains. It facilitates the identification of significant literary components, prolific writers, and important study topics in the field of regional languages. Through the identification of key areas requiring focus and funding, this analysis offers legislators, educators, and language activists a road map for organising language preservation initiatives. It also makes it easier to create focused initiatives that support increased scholarly output in regional languages, which in turn promotes the languages' viability and expansion.

Bibliometrics plays a key role in language revitalization by raising awareness of and support for regional languages. It strengthens the significance of these languages and supports the idea that they are more than just spoken vernaculars but also powerful platforms for intellectual debate and information dissemination by highlighting the scholarly accomplishments and contributions made in them. Reviving interest and respect in one's linguistic history through this acknowledgment is crucial for the preservation and revival of endangered or marginalised languages. Furthermore, regional language bibliometric analysis aids in the preservation of historical and cultural identities. Through scholarly publications, it assists in recording indigenous knowledge, customs, and cultural differences embedded in the language. Since languages are cultural heritage carriers, bibliometrics helps to protect this legacy by highlighting the literature, folklore, and indigenous knowledge that are kept inside these linguistic domains.

REFERENCES

Ariyanto, K. (2023). Analisis Bibliometrik Trend Penelitian Pemodelan Matematis Menggunakan Database Google Scholar, Publish or Perish, dan Vosviewer. *Indo-MathEdu Intellectuals Journal*, *4*(2), 155–163. https://doi.org/10.54373/imeij.v4i2.150

Chen, J., Guo, Z., Xu, S., Law, R., Liao, C., He, W., Land, M. Z.-, & 2022, undefined. (2022). A Bibliometric Analysis of Research on Intangible Cultural Heritage Tourism Using CiteSpace: The Perspective of China. *Mdpi.Com*. https://doi.org/10.3390/land11122298

De la Vega Hernández, I. M., Urdaneta, A. S., & Carayannis, E. (2023). Global bibliometric mapping of the frontier of knowledge in the field of artificial intelligence for the period 1990–2019. *Artificial Intelligence Review*, *56*(2), 1699–1729. https://doi.org/10.1007/s10462-022-10206-4

Herdianto, R., Windyaningrum, N., Masruroh, B., Setiawan, M. A., & Artikel, R. (2021). Filsafat Pendidikan dan Perkembangannya: Kajian Bibliometrik berdasarkan Database Scopus. *Belantika Pendidikan*, *4*(2), 44–56. https://kayonmedia.com/jurnal/index.php/bp/article/view/101

Hikwa, L., & Maisiri, E. (2017). Preservation of indigenous knowledge through indigenous languages in Zimbabwe. In *Handbook of Research on Theoretical*

Perspectives on Indigenous Knowledge Systems in Developing Countries (pp. 289-309). IGI Global.

Low, D. S., Mcneill, I., & Day, M. J. (2022). Endangered Languages: A Sociocognitive Approach to Language Death, Identity Loss, and Preservation in the Age of Artificial Intelligence. *Sustainable Multilingualism*, 21(1), 1-25.

Luykx, A. (2003). Whose language is it anyway? Historical fetishism and the construction of expertise in Bolivian language planning. *Current Issues in Comparative Education*, 5(2), 92-102.

Mohd Nazmi Mohd Khalli, & Muhammad Farid Azlan Halmi. (2023). Analisis Bibliometrik Kajian Sains Sosial Di Universiti Malaysia Sabah (Ums) Dalam Pangkalan Data Scopus Sehingga Tahun 2021. *MANU Jurnal Pusat Penataran Ilmu Dan Bahasa (PPIB)*, 34(1), 1–18. https://doi.org/10.51200/manu.v34i1.4388

Saputro, D. R. S., Prasetyo, H., Wibowo, A., Khairina, F., Sidiq, K., & Wibowo, G. N. A. (2023). Bibliometric Analysis Of Neural Basis Expansion Analysis For Interpretable Time Series (N-Beats) For Research Trend Mapping. *Barekeng: Jurnal Ilmu Matematika Dan Terapan*, 17(2), 1105-1114.

Siregar, I. (2022). Effective and Efficient Treatment of Regional Language Preservation Strategies in the Nusantara. *Journal of Humanities and Social Sciences Studies*, 4(2), 16–22. https://doi.org/10.32996/JHSSS.2022.4.2.3

Subject and Course Guides: Bibliometric Analysis and Visualization: VOSViewer. (n.d.). https://researchguides.uic.edu/bibliometrics/vosviewer

VOSviewer - Visualizing scientific landscapes. (n.d.). VOSviewer. https://www.vosviewer.com/