



Author Productivity of Minangkabau Article as a Media for Dynamics of Cultural Studies

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Abstract. The publication of research results as a form of scientific communication can be measured using bibliometric analysis. This study aims to describe the productivity of the authors of Minangkabau content articles published in 2017–2021. Search the data using the Publish or Perish 8 application in the Google Scholar database. Data analysis using Bibliometrix R. Based on search results, 489 scientific articles containing Minangkabau from 897 article authors were found. The results showed that: the productivity of scientific articles containing Minangkabau every year has increased in terms of quantity; the most prolific article writers produced five articles in a specified year range; the productivity of the author of the article shows a discrepancy with the provisions of the Lotka Law, where the productivity of scientific articles of Minangkabau content is still very low; and the author's collaboration in producing Minangkabau content articles is also still low, because there is not much relationship between the group of authors based on the results of visualization of bibliometric analysis. In the dynamics of cultural studies, the results of this research contribute as a medium for researchers to be able to develop research on Minangkabau-an.

Keywords: Author Productivity · Bibliometric · Bibliometrix R

1 Introduction

Scientific communication is an important activity for researchers to publish the results of their research. Through this activity, the researcher informs the results of the latest research that is his findings. Furthermore, the results of this study can be used again by subsequent researchers as a basis for further research or related new research. If researchers always use the latest research results as the basis for the next research, then science will grow. This is what scientific communication is all about.

One of the media used for scientific communication is the publication of articles in scientific journals. This media is the main reference for researchers to start a study. Based on data from GARUDA (Garba Referral Digital) a portal for the discovery of scientific references in Indonesia, to date there are 16,119 journals that can be accessed by the public [1]. These journals publish scientific articles that examine various fields

of science. These data prove that the existence of scientific journals is very important for researchers. Apart from the data above, researchers in Indonesia not only publish their research results in Indonesian published journals, many also publish research results in international journals in line with policies and appreciation for researchers who collaborate internationally.

Another database that researchers access to find scientific articles is Google Scholar. The study in this paper also uses scientific article data indexed by Google Scholar. The focus of the study is on the publication of articles with Minangkabau content. Minangkabau are the majority ethnicity that inhabits the province of West Sumatra, Indonesia, known for its matrilineal kinship system or maternal lineage [2]. The focus of this study was chosen considering that currently, especially in Indonesia, local wisdom is a topic that is quite widely discussed and associated with various aspects of life and the implementation of community and state activities [3].

The study and evaluation of scientific publications can be measured using bibliometric indicators [4]. The term bibliometric was introduced by Pritchard in 1969 as “the application of mathematical and statistical methods to books and other media of communication” [5]. The bibliometric method provides an opportunity to describe the content, structure and development of research. It can be concluded that bibliometric analysis is a quantitative method used to identify sources of information in terms of authorship and characteristics of publications that include bibliographical data [6].

In this paper, the bibliometric indicator is devoted to measuring the productivity of minangkabau content article authors in the time span of 2017–2021. Previous research related to bibliometric indicators has been carried out by many researchers. However, there has been no bibliometric study that discusses the productivity of article authors about certain ethnicities, including about Minangkabau. Research related to this includes discussing publications on local wisdom in a region [7;8].

This study is expected to be the basis for increasing the quantity and quality of research charged with Minangkabau, so that it can indirectly maintain aspects of local wisdom, especially about Minangkabau customs and culture.

2 Method

This study is a quantitative study with a descriptive approach. The method used is a bibliometric analysis related to the productivity of the author of the article. Data is collected from the Publish or Perish 8 (PoP 8) application using datasets found in Google Scholar. The data was traced using the keyword “Minangkabau” for publication with a time span of 2017–2021. Based on the search results, 489 Minangkabau content articles were found from 363 scientific journal titles.

To facilitate data analysis, the completeness of the bibliographic description was checked using the Mendeley application which includes the author’s name, article title, and the name of the article published. Furthermore, the results of data analysis were visualized using the application of Bibliometrix R. Bibliometrix R provides a comprehensive analysis for the author’s productivity studies, especially related to Lotka’s Law [9].

3 Results and Discussions

3.1 Productivity of Scientific Articles of Minangkabau

The publication of Minangkabau content articles from the range of 2017–2021 has always increased in terms of quantity. This can be seen from the data in the following table.

Based on Table 1, it can be seen the number of increases in Minangkabau content articles in each year. A fairly high increase occurred in 2019, which was an increase of 27 articles from 2018. Furthermore, a high increase also occurred in 2021, namely 20 articles from 2020. Overall, the increase in the number of publications of Minangkabau articles for each year shows that the study of Minangkabau is an interesting topic for researchers.

In line with the increase in the quantity of articles, citations to published Minangkabau content articles have also increased. A visualization of the increase in the number of citations can be seen in the following figure.

Figure 1 shows the development of the Minangkabau content article citation range from 2017 to 2021. The increase in article citations occurred in 2019 and 2021. The average citation of articles in 2019 was 19.27. Articles published in 2021 have a fairly high citation from previous years, which is an average of 37.07. This may indicate that researchers for minangkabau content refer a lot to scientific articles published in 2021.

Table 1. Article Productivity per Year.

Year	Articles
2017	74
2018	78
2019	105
2020	106
2021	126

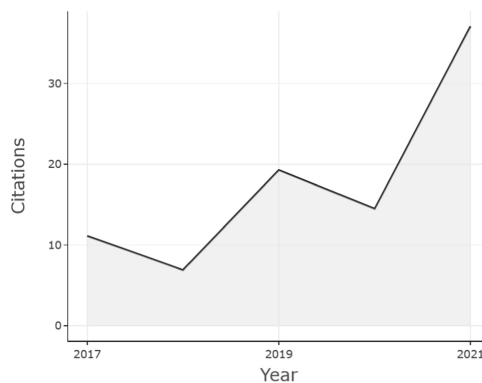


Fig. 1. Average Citations per Year

3.2 Author Productivity of Scientific Article of Minangkabau

The author of a scientific article makes the greatest contribution to the development of a science. The author of scientific articles containing Minangkabau from 2017–2021 totaled 897 people. Based on the analysis using Bibliometrix R, the productivity of the author of the Minangkabau payload article can be seen in the following figure.

Figure 2 shows the ten most prolific authors producing scientific articles containing Minangkabau in the range of 2017–2021. The most publications were produced by Hidayat, A. T. and Juita, N. with a total of 5 articles. Furthermore, eight authors each produced four scientific articles in the five-year span. On average, productive writers for Minangkabau content articles produce four articles in five years.

If identified in more detail, the productivity of the ten productive authors each year can be seen in the following figure.

In Fig. 3 can be seen the productivity of ten authors for the publication of articles in each year. A large circle indicates a quantity of more articles generated, while a small circle indicates fewer articles generated in a given year.

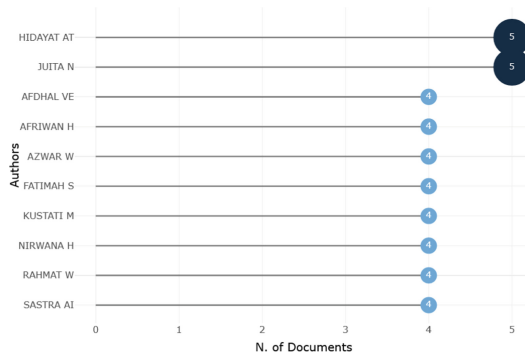


Fig. 2. Author Productivity

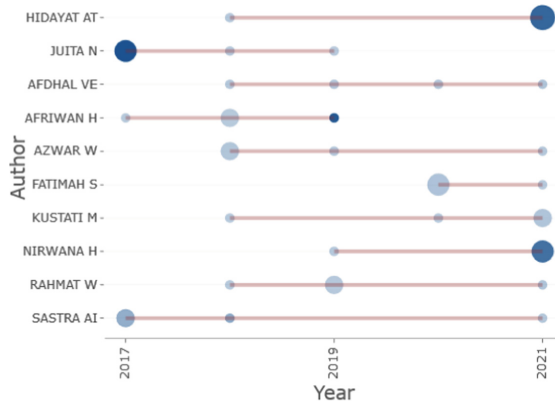


Fig. 3. Author Productivity per Year

Author Hidayat, A. T. produced more articles in 2021 than in 2018. Meanwhile, this author did not produce article publications in 2017, 2019, and 2020. Furthermore, Novia, J. produced more articles in 2017 than in 2018 and 2019. This author did not produce the publication of the article in 2020 and 2021. For the third order of authors, namely Afdhal, V. E., produces article publications every year from 2018 to 2021. Through this picture, it can be known that this author annually produces one article each, because the number of articles generated from the range 2017–2021 is an article empty. This author did not produce the publication of the article in 2017. For the other seven authors it is also described in the same way.

3.3 Author Productivity Based on Lotka’s Law

Lotka’s law is often used as a proof for the productivity of authors of scientific articles in both the field of science and the social field of the humanities. Lotka’s law specifies that the number of article authors who have contributed to one work is 60% of the total number of authors. For proof of Lotka’s Law in the author of the Minangkabau content article, you can see the following table.

Based on Table 2 it is known that the number of authors who contribute to one article is much more than the authors who produce two, three, four, and five articles. To find out the compatibility of the predictions of Lotka’s Law with the author of the observational article, it can be seen in the following figure.

Table 2. Author Productivity Based on Lotka’s Law.

Documents written	N. of Authors	Proportion of Authors
1	784	0.874
2	76	0.085
3	27	0.030
4	8	0.009
5	2	0.002

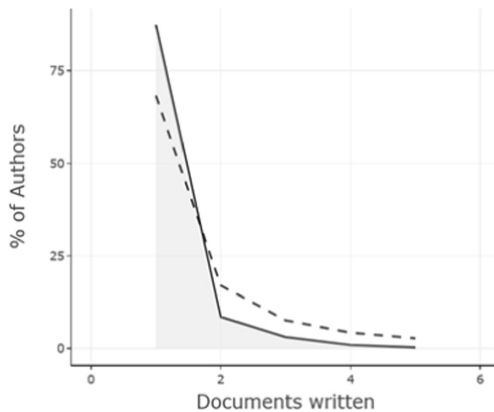


Fig. 4. Author Productivity Based on Lotka’s Law

Figure 4 shows the results of observations and the results of Lotka’s Law predictions of the author of the Minangkabau content article. Through the picture, it is known that for the productivity of article writers, the content of Minangkabau is far above 60%. The curve with the unbroken garid is the result of observation and the curve with the dotted line is the result of the prediction of Lotka’s Law. This indicates that the author’s productivity is not in accordance with Lotka’s Law. This indicates that the productivity of Minangkabau content article writers is still low in 2017–2021. Through the results of this analysis, it is hoped that in the future the writing of articles for Minangkabau content can increase considering that currently many programs are studied and developed based on local wisdom, especially those containing Minangkabau in the West Sumatra region by various groups.

3.4 Author Collaboration

The writing of scientific papers is expected to develop with the collaboration of authors both in terms of quantity and in terms of collaboration in the field of science. This is also researched based on article writing data for Minangkabau content. The productivity of Minangkabau article writers in article writing collaboration can be seen in the following picture.

Based on Fig. 5, it can be seen that of the 897 authors of articles containing Minangkabau, there are seven groups of authors who are the highest in collaborating on article writing. The seven authors are Juita, N., Kustati, M., Rahmat, W., Lipoeto, N.I., Reniwati, R, Ahmad, C, and Akmal, A. This visualization also shows that collaboration between authors of minangkabau content scientific articles is still low. This is also shown from the absence of relationships between each group of collaborating authors and other groups.

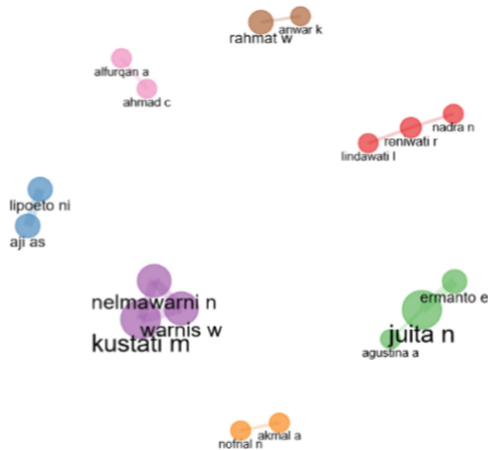


Fig. 5. Author Collaboration

3.5 Bibliometrics as a Media for the Dynamics of Cultural Studies

Local culture has its own challenges with the presence of the era of globalization. Various parties play an important role in maintaining what is the local culture of the community, especially the Minangkabau culture which is ideally guided by the Basandi Syarak Custom, Syarak Basandi Kitabullah (ABS-SBK). One of the parties that can play such a role is the researcher. From the scientific side, researchers can contribute to maintaining local culture through scientific publications as a result of cultural studies. Cultural studies have significant value as an effort to overcome crises and anticipate the excesses of globalization. The courage to study a culture, means that it must also have the courage to redefine a culture as a process of meaning that is negotiated in the entire social interaction [10].

Based on bibliometric analysis of the author of the Minangkabau content article, the dynamics of Minangkabau cultural studies can be said to lead to positive developments. This is shown by the increase in the number of publications of scientific articles of Minangkabau content for each year. The emergence of the Minangkabau study center initiated by several institutions is also an important factor in the dynamics of Minangkabau cultural studies. This is expected to increase more Minangkabau studies which will indirectly have an impact on the sustainability of Minangkabau culture.

In line with the implementation of cultural studies, especially Minangkabau culture, bibliometric analysis can be used as a medium to find out the extent to which this cultural study has been carried out by researchers. Through the results of this study, Minangkabau researchers can develop strategies to increase research productivity in the future. In addition, it is also necessary to consider the collaboration of researchers both with local researchers and international researchers.

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References

1. Garuda: Garba Rujukan Digital. <https://garuda.kemdikbud.go.id/>.
2. S. Meiyenti and Syahrizal. 2014. Perubahan Istilah Keekerabatan dan Hubungannya dengan Sistem Keekerabatan pada Masyarakat Minangkabau. *Jurnal Antropologi: Isu-Isu Sosial Budaya*, 16(1), 57–64, <http://jurnalantropologi.fisip.unand.ac.id/index.php/jantro/article/view/13/16>.
3. Nerson, A. P. Utama and B. Setiawan. 2022. Aktualisasi Kearifan Lokal dalam Pembangunan Daerah untuk Menciptakan Integrasi Bangsa Indonesia yang Berbudi Luhur. *J-STAF*, 1(2), 146–154, <https://ejournal.alfarabi.ac.id/index.php/staf/article/view/54/21>
4. M. A. Joshi. 2022. Bibliometric Indicators for Evaluating the Quality of Scientific Publications. *The Journal of Contemporary Dental Practice*, 23(6), 258–262, <https://www.thejcdp.com/doi/pdf/https://doi.org/10.5005/jp-journals-10024-1525>.
5. W. Glanzel. 2003. Bibliometrics as a research field: a course on theory and application of bibliometrics indicator, http://www.norslis.net/2004/Bib_Module_KUL.pdf

6. V. Ungern-Stenberg. 1995. *Applications in teaching bibliometrics*. 61st IFLA General Conference – Conference Proceedings – August 20–25, 1995. <http://www.ifla.org/IV/ifla61/61-ungs.htm>.
7. G. S. Margaretha, W. Erwina and E. Lusiana. 2021. Local Knowledge Mapping in Universitas Padjadjaran Journals. *Indigenous Knowledge*, 1(1), 13–22, <http://jurnal.unpad.ac.id/ik/article/view/32631/15167>.
8. T. Kwanya and J. Kiplang'at. 2016. Indigenous Knowledge Research in Kenya: A Bibliometric Analysis. *Proceeding of the 11th International Knowledge Management in Organizations Conference on The Changing Face of Knowledge Management Impacting Society*, 48, 1–7, <https://doi.org/10.1145/2925995.2926018>.
9. S. K. Jalal. 2019. Co-authorship and Co-occurrences Analysis Using Bibliometrix R Package: A Case Study of India and Bangladesh. *Annals of Library and Information Studies*, 66(Juni), 57–64, <https://core.ac.uk/download/pdf/229207865.pdf>.
10. S. Arybowo. 2010. *Kajian Budaya dalam Perspektif Filosofi*. *Jurnal Masyarakat dan Budaya*, 12(2), <https://jmb.lipi.go.id/jmb/article/download/110/91>.

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