Trends and Issues in Research on Social Media and Collaborative Learning in PAI Learning from 2018 to 2023: Bibliometric Analysis

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Abstract

This article aims to identify and analyze trends and problems in research on social media and collaborative learning in Islamic Religious Education (PAI) from 2018 to 2023. The author uses a bibliometric study method using Publish or Perish and bibliometric software. The research results show that 1) RQ1: Distribution of Social Media Research and Collaborative Learning in PAI Learning (2018-2023), namely research authority is focused on social media, which is connected to several themes such as Islamic religious education (PAI), and Islamic education. shows that research orientation on social media topics is used in several studies related to PAI learning and Islamic teaching. However, no one has researched the relationship between social media and collaborative learning in PAI learning. So the researcher's orientation in further research needs to be to conduct research on social media in collaborative learning in PAI subjects; 2) RQ2: Network Theme in Social Media Research and Collaborative Learning in PAI Learning, namely the distribution of publication of articles related to "social media" starting in 2019 with one piece, and there is no increase until 2021 which is only 1 article per year, then experienced an increase in 2022 by two articles, and the peak occurred in 2023 with three publications in nationally accredited journals (Sinta). Meanwhile, the publication of articles about "collaborative learning" will only start in 2022 with two pieces. There will be no increase in 2022, which will only be two articles, and in 2023, there will be a significant increase of 5 articles published in nationally accredited journals (Sinta). Meanwhile, publications about "social media and collaborative learning in PAI learning started in 2022 with 1 article and increased in 2023 with two pieces; and 3) RQ3: Authors with the most citations (2018-2023), namely the five best authors with the highest number of citations in the 2018-2023 publication period, namely Susanto & Dwijayanto (27.27%) in 2022, followed by Kambali et al. (18.19%), Lubis et al. (13.63%), and Luthfiyah et al. (13.63%).

Keywords: bibliometrics, social media, collaborative learning, PAI Learning

1. Introduction

Islamic Religious Education (PAI) learning is one of the subjects that has a vital role in shaping the character and morals of students (Ainiyah, 2013; Efendy & Irmwaddah, 2022; Puspitasari et al., 2022; Zalsabella et al., 2023). PAI learning requires not only mastery of the material but also critical, creative, and collaborative thinking skills (Bahri & Supahar, 2019; Maulidia et al., 2023; Partono et al., 2021; Wahid & Hamami, 2021). To achieve these goals, strategies and learning methods suited to the conditions and needs of students, especially in today's digital era, are needed. One of the learning strategies and methods that can be used in PAI learning is social media and collaborative learning (Dwistia et al., 2022; Khasanah et al., 2023; Rofiah, 2013).

Social media is an online platform allowing users to share, interact, and collaborate (Kartini et al., 2022; Setiadi, 2016; Zuniananta, 2021). Social media can potentially increase student motivation, participation, and learning outcomes, especially among millennials familiar with technology (Hartati, 2023; Hastini et al., 2020; Zazin & Zaim, 2020; Sururi et al., 2020). Collaborative learning involves cooperation between students in small groups to achieve common goals (Amiruddin, 2019; Ode et al., 2017; Tenrisau, 2023). Collaborative learning can improve students' social,
communication, and problem-solving skills and enrich their experience and understanding of learning materials (Damanik, 2023; Husain, 2020).

Social media and collaborative learning in PAI learning have challenges and obstacles that must be overcome to provide optimal student benefits (Pramesti et al., 2023; Rizal, 2023; Widyawati & Sukadari, 2023). These challenges and obstacles include a lack of digital literacy, limited infrastructure and internet access, data security and privacy issues, and the potential to spread inaccurate information or hoaxes (Santiuia et al., 2020; Valentine, 2023). Therefore, an in-depth and comprehensive study of how social media and collaborative learning can be integrated with PAI learning effectively and efficiently.

Research on social media and collaborative learning in PAI learning has a broad and diverse scope (Suci et al., 2022; Warsah et al., 2021). Some research topics that are often researched include the influence of social media and collaborative learning on learning outcomes (Al-Rahmi & Zeki, 2017; Bozanta & Mardikyan, 2017; Hajarudin, 2023; Liu et al., 2022), motivation (Goddess, 2022; Hafsa, 2018; Spiritual, 2022), skills (Ghiary et al., 2018; Sry Shafariyati, 2019), attitudes (Ansari & Khan, 2020), and student values; development of learning models, methods, strategies, and designs that use social media and collaborative learning; analysis of student and teacher needs, difficulties, and preferences related to social media and collaborative learning; and evaluation and improvement of the quality of social media and cooperative education in PAI learning.

This research uses a bibliometric study method, which analyzes bibliographic data from scientific articles or journals related to social media and collaborative learning in PAI learning. The research is expected to contribute to the development of science, especially in PAI learning. This research can also provide information and recommendations for researchers, practitioners, and policymakers related to social media and collaborative learning in PAI learning.

2. Research Method and Materials

This research uses a bibliometric study method, which analyzes bibliographic data from scientific articles or journals related to the research topic (Budianto, 2023; Riswamo & Rahmat, 2023), namely trends and problems of social media research and collaborative learning in PAI learning from 2018 to 2023. Bibliometric study methods can measure and map research patterns and characteristics in a field of science, such as development, productivity, collaboration, impact, and research topics in a field of science (Anna et al., 2021; Ellegaard & Wallin, 2015; Haryani & Sudin, 2020; Herawati et al., 2022; Jannah et al., 2023; Ogutu, 2023; Septiyanto et al., 2023; Tapan et al., 2018).

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bibliometric software (biblioshiny); 6) Interpret and present the results of bibliometric analysis using tables, graphs, and maps, and provide explanations and implications of the results of the analysis.

3. Results and Discussion

The search results identified 14 documents, which were then analyzed using vosviewers and bibliometrics (biblioshiny) software. The analysis includes the frequency distribution of social media and collaborative learning in PAI learning per year (2018-2023), the distribution of themes, and the author with the most citations.

3.1. RQ1: Distribution of Social Media Research and Collaborative Learning in PAI Learning (2018-2023)

Based on the search results in the Google Scholar database, 14 articles were obtained, with a distribution of publication frequency peaking in 2023 with seven articles identified. Related publications on social media and collaborative learning are seen as something new, especially in PAI learning, so attention to PAI learning using social media and collaborative learning is relatively lacking. Interestingly, research orientation has increased significantly from 2021, which initially only had three articles. In 2022, it dropped to 2 pieces, and in 2023, as many as 7 articles were republished, and a significant increase was experienced. This shows that research orientation on social media and collaborative learning in PAI learning are fundamental topics researchers and academics focus on exploiting (see Figure 1). The distribution of research on social media and collaborative learning in PAI learning is still very minimal among researchers. However, there may be a very significant increase in 2024. Based on the search results using all keywords
based on ("social media" OR "collaborative learning") AND ("Islamic education" OR "PAI"), they then generated data as shown below (see figure 2).

![Annual Scientific Production](image)

**Figure 2.** Frequency distribution of publications on "social media and collaborative learning in PAI learning" from 2018-2023

Articles found through the Publish or Perish application are stored in the form of RIS, then opened through the Mendeley application to be checked whether data such as titles, abstracts, keywords, author names, etc. are complete and correct, then verified based on the restrictions specified in the research method, and verified article data is stored in BibTeX form and visualized with Bibliometrix software (Bibioshiny) to illustrate all major topics related to the research topic. The visualized article contains all keywords, titles, and abstracts containing social media, collaborative learning, and PAI learning. Figure 2 shows that the research authority focused on social media connected to several themes, such as Islamic religious education (PAI) and Islamic education. This indicates that the orientation of research on social media topics is used in some research related to PAI learning and Islamic teaching. However, no one has researched the relationship between social media and collaborative learning in PAI learning. So, the orientation of researchers in future research needs to conduct research on social media in collaborative learning in PAI subjects.

Social media-based learning and collaborative learning in PAI learning need to be further exploited, considering the importance of collaborative learning using social media in PAI learning (Dwistia et al., 2022; Zazin & Zaim, 2020; Septi, 2022). One way to determine the extent to which researchers have researched social media and collaborative learning in PAI learning is to use bibliometric analysis using Bibliometrix (Bibioshiny). The bibliometric study gives other researchers a comprehensive view of the instructional impact of social media and collaborative learning in PAI learning (Fought, 1982; Lestari & Fitriani, 2016; Noris et al., 2023; Parson, 1998). This provides a complex picture for PAI subject teachers to utilize social media-based learning in the classroom (Magfiroh et al., 2023). One study shows...
that teachers’ ability to use social media can help students conduct collaborative learning in PAI learning in the classroom (Pramesti et al., 2023; Sry Shafariyat, 2019).

3.2. RQ2: Networking Themes in Social Media Research and Collaborative Learning in PAI Learning

The network of research themes on "social media and collaborative learning in PAI learning," which was then visualized with Bibliometrix (Bibioshiny), showed that the topic "social media and collaborative learning in PAI learning" is often used on several occasions to improve students' critical thinking, ethnomathematics, teaching strategies, ethnoscience, ethnobiology, and ethnobotany skills. Based on the results of the research theme on "social media and collaborative learning in PAI learning," it was then divided into 8 clusters consisting of 2 primary collections shown in cluster 1, namely social media (Red) and cluster 2 on collaborative learning (Blue). While the research area on ethnoscience can be seen in Figure 4.

![Figure 4. Frequency Distribution of Themes about Social Media and Collaborative Learning in PAI Learning from 2018-2023](image)

The spread of related article publications about "social media" began in 2019 with 1 article, and there was no increase until 2021, which was only 1 article each year, then increased in 2022 by two pieces, and the peak occurred in 2023 with three publications in nationally accredited journals (Sinta). Meanwhile, the publication of articles on "collaborative learning" only started in 2022 with two pieces. There was no increase in 2022, which was only two articles; in 2023, there was a significant increase of 5 articles published in nationally accredited journals (Sinta). Meanwhile, publications on "social media and collaborative learning in PAI learning" began in 2022 with 1 article and increased in 2023 by two pieces. The orientation of publications on "social media and collaborative learning in PAI learning" will continue to increase along with the times and the interest of researchers in the field. Given the importance of collaborative learning, some researchers integrated social media into collaborative learning in PAI subjects. Social media-based collaborative learning is believed to improve the learning outcomes of PAI subjects and students' critical thinking.

3.3. RQ3: Authors With the Most Citations (2018-2023)

This third question answers the authors with the most citations during the vulnerable period 2018-2023. Based on the search results from 14 articles can be seen in the table 1.

Based on the table 1, it can be seen that the five best authors with the highest number of citations in the 2018-2023 publication period, namely Susanto & Dwijayanto (27.27%) in 2022, followed by Kambali et al. (18.19%), Lubis et al. (13.63%), and Luthfiyah et al. (13.63%). Teachers must facilitate social media-based collaborative learning in PAI learning, the latest research trend to improve students' scientific literacy (Betra, 2023; Puspitasari & Resmalasari, 2023). Social media-based collaborative learning in PAI learning is believed to increase student activeness and student
thinking skills due to effective communication between students and teachers using social media (Afifandasari, 2021; Anggita, 2023).

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Citation</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susanto, Dwijayanto</td>
<td>2022</td>
<td>6</td>
<td>27.27</td>
</tr>
<tr>
<td>Kambali, Muslikh, Hidayat, Abdurakhman</td>
<td>2023</td>
<td>4</td>
<td>18.19</td>
</tr>
<tr>
<td>Lubis, Suryani, Syahputra, Sahila</td>
<td>2023</td>
<td>3</td>
<td>13.63</td>
</tr>
<tr>
<td>Luthfiyah, Suciani, Ruslan</td>
<td>2022</td>
<td>3</td>
<td>13.63</td>
</tr>
<tr>
<td>Indrioko</td>
<td>2023</td>
<td>2</td>
<td>9.10</td>
</tr>
<tr>
<td>Hasan</td>
<td>2021</td>
<td>2</td>
<td>9.10</td>
</tr>
<tr>
<td>Ulum, Rahman, Maharani, Purnomo</td>
<td>2021</td>
<td>1</td>
<td>4.54</td>
</tr>
<tr>
<td>Adawiyah</td>
<td>2019</td>
<td>1</td>
<td>4.54</td>
</tr>
</tbody>
</table>

4. Conclusion

The spread of published articles related to social media and collaborative learning in PAI learning has increased significantly from 2021, which initially only had three pieces then in 2022, it dropped to 2 articles. In 2023, as many as seven articles were republished, and a significant increase was experienced. The spread of related article publications about “social media” began in 2019 with one piece, and there was no increase until 2021, which was only 1 article each year, then increased in 2022 by two articles, and the peak occurred in 2023 with three publications in nationally accredited journals (Sinta). Meanwhile, the publication of articles on “collaborative learning” only started in 2022 with two pieces. There was no increase in 2022, which was only two articles; in 2023, there was a significant increase of 5 articles published in nationally accredited journals (Sinta). Meanwhile, publications on “social media and collaborative learning in PAI learning began in 2022 with 1 article and increased in 2023 by two pieces. The five best authors with the highest number of citations in the 2018-2023 publication period, namely Susanto & Dwijayanto (27.27%) in 2022, followed by Kambali et al. (18.19%), Lubis et al. (13.63%), and Luthfiyah et al. (13.63%). Social media-based collaborative learning in PAI learning is the latest research trend that teachers must facilitate to improve students’ scientific literacy.

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