

# Social media as learning tools: a bibliometric study of educational applications

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## Abstract

The integration of social media into educational practices has emerged as a significant trend, influencing how students and educators interact with learning content. This bibliometric study investigates the growing body of research on social media as a learning tool, aiming to analyze publication trends, thematic focuses, and methodological approaches. Utilizing major academic databases such as SINTA and Google Scholar, the study reviews articles published over the past decade to map the landscape of social media in education. The analysis reveals a notable increase in research since 2020, with fluctuations in publication numbers indicating a dynamic and evolving field. Mixed-method approaches are prevalent, reflecting a comprehensive analysis of social media's impact. Research subjects primarily include students, with a strong focus on English as a Foreign Language (EFL). Data collection methods vary, with questionnaires being the most common instrument, although issues related to validity and reliability are noted. The findings highlight the broad applicability of social media in education, from enhancing engagement and communication to addressing challenges such as privacy and distraction. The study underscores the need for rigorous research practices and greater transparency in data collection to better understand and leverage social media's potential in educational settings. Overall, the study provides valuable insights into the current state of research on social media as a learning tool and offers recommendations for future research directions.

**Keywords:** social media, educational practice, mixed-method approaches

## INTRODUCTION

The integration of social media into educational practices has emerged as a transformative trend in recent years, reshaping how students and educators interact with learning content and each other. Social media platforms, traditionally used for social networking and communication, have increasingly been leveraged as tools for educational purposes. This shift has prompted a surge in academic research aimed at exploring the effectiveness and implications of using social media in educational settings. The present bibliometric study seeks to analyze the trends, themes, and impact of this body of research, offering a comprehensive overview of how social media is being utilized as a learning tool.

Social media's potential as an educational resource lies in its ability to facilitate collaborative learning, provide access to diverse resources, and enhance engagement through interactive features. Platforms like Facebook, Twitter, LinkedIn, and Instagram offer unique opportunities for students to connect with peers and experts, participate in discussions, and access a wide range of educational content. As these platforms continue to evolve, so too does their role in education, making it essential to understand their contributions and limitations through systematic research.

The growing body of research on social media in education reflects a broader trend towards digital and online learning environments. The advent of social media has coincided with the expansion of digital technologies in education, highlighting the need for scholars to investigate how these tools can be effectively integrated into teaching and learning practices. This bibliometric study aims to map the landscape of research on social media as learning tools, examining publication trends, research themes, and methodological approaches used in the field.

Previous studies have highlighted various ways in which social media can enhance learning outcomes, including increased student engagement, improved communication skills, and access to real-time information. However, there is also a growing concern about the potential challenges and limitations of using social media in educational contexts, such as issues related to privacy, distraction, and the digital divide. By analyzing the existing literature, this study seeks to provide a balanced view of the benefits and drawbacks of social media as an educational tool.

The focus of this bibliometric analysis will include an examination of publication trends over time, the distribution of research across different social media platforms, and the

predominant themes and topics addressed in the literature. Additionally, the study will explore the methodologies employed by researchers and identify gaps in the current body of knowledge. This comprehensive analysis aims to offer insights into the evolving role of social media in education and inform future research directions.

Understanding the impact of social media on education requires a thorough examination of existing research to identify key trends, challenges, and opportunities. This bibliometric study will contribute to the ongoing discourse on social media's role in learning by providing a detailed overview of current research and offering recommendations for future studies. By mapping the landscape of social media as a learning tool, the study will support educators, policymakers, and researchers in making informed decisions about the integration of social media into educational practices.

## **METHODS**

This bibliometric study employs a systematic approach to analyze the literature on social media as a learning tool, focusing on publication trends, thematic analysis, and research methodologies. The research begins with a comprehensive literature search in major academic databases such as SINTA and Google Scholar. Keywords including “social media,” “learning tools,” “educational technology,” and related terms are used to identify relevant publications. The search is restricted to articles published in peer-reviewed journals from the past decade to ensure the inclusion of the most recent and pertinent research.

Data extraction involves selecting studies based on predefined criteria, such as relevance to the topic, publication type, and research focus. Each publication is reviewed to extract key information, including the number of citations, authorship, publication year, and journal impact factors. This data is then organized into a bibliometric database to facilitate quantitative and qualitative analysis. The study categorizes the literature into different themes, such as the effectiveness of social media in learning, pedagogical strategies, and challenges associated with its use.

The analysis includes both descriptive and statistical methods to examine trends in the research. Descriptive statistics are used to present publication trends over time, distribution across journals, and geographic distribution of research. Statistical analysis, including citation analysis and co-authorship networks, is employed to identify influential papers, key researchers, and collaborative patterns within the field. Additionally, thematic analysis is

conducted to categorize and summarize the main research topics and findings related to social media as learning tools.

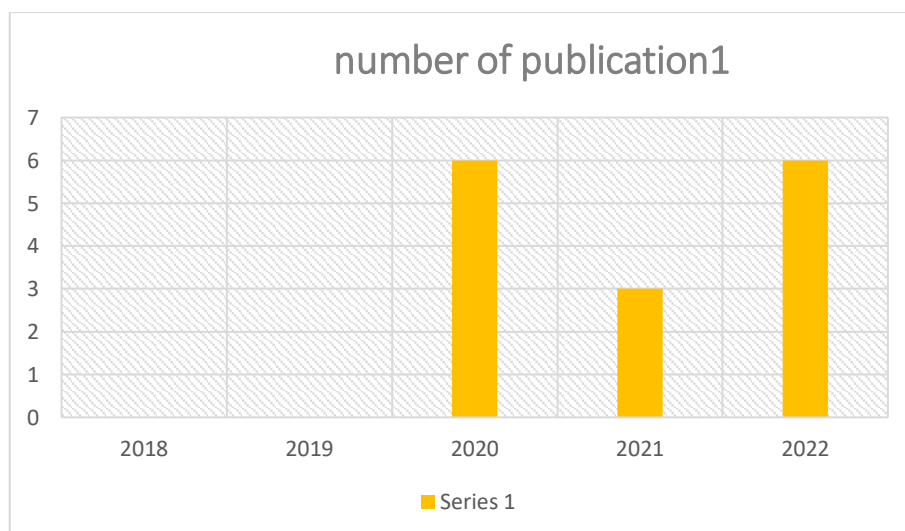
To ensure the validity and reliability of the findings, the study employs rigorous inclusion and exclusion criteria for the selected articles and uses multiple reviewers to cross-check data extraction and analysis. The results are then synthesized to provide an overview of the current state of research on social media in education, highlighting emerging trends, research gaps, and future directions. This methodological approach ensures a comprehensive and objective analysis of the literature, offering valuable insights into the role of social media as an educational tool.

## RESULTS AND DISCUSSION

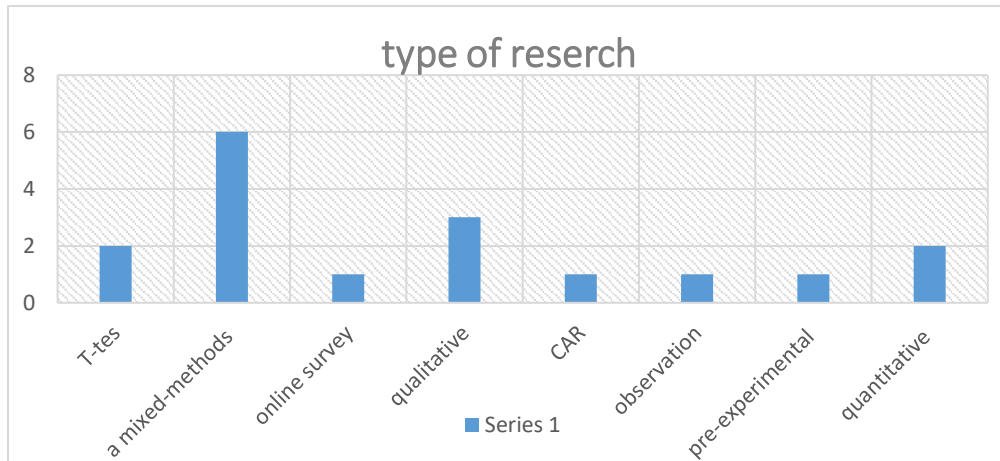
### Results

#### *Numbers of publications*

The number of publications of articles indicates how often the research was conducted in a certain period. Alluding to the graph shown in the Figure below, article reviews can be found since 2020 referring to the table below, the number of publications since 2020 began to emerge from previous years and then decreased again in 2021 and rose again in 2022. The trend of increasing the number of publications about social media as a learning tool shows that there is a significant increase in the number of researchers who actively investigate social media as learning tools.

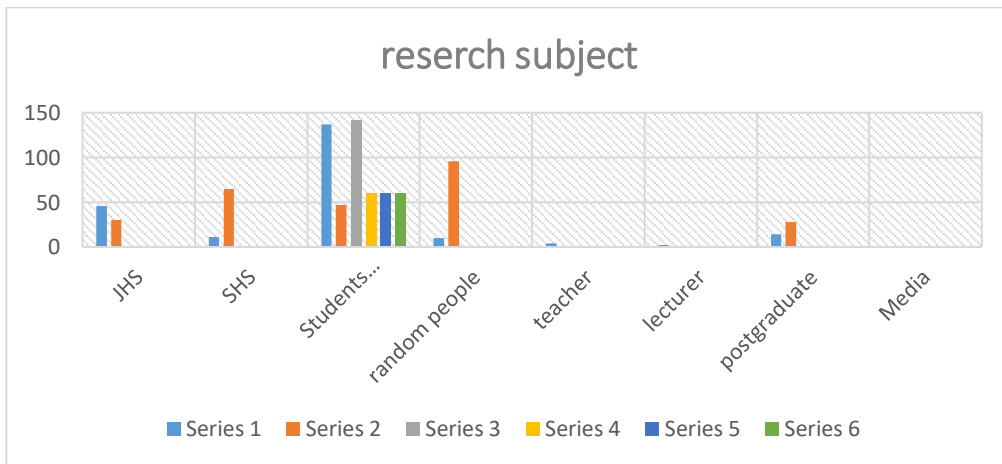


*Type of Research*



Most of the datais collected using quality methods where this research relates to and supports the data used. The type and design of the study determines the focus of the study. Based on the data as in the table above, several aricles that have discussed social media as learning tools from 2020 to 2022 the mixed method is the most popular method that has recently been used by researchers, especially in languages to manage data more accurately by combining qualitative with quantitative.

*Research Subject*



The participants or samples used in the research article are very diverse. It is a good thing that science should now examine alternative learning in every element that will be involved. Based on the picture Above, the most tested research subjects were students with a total number of about 529 people, successively followed by random people aged 20 to 25 years as many as 116 people and then followed by high school students with a total of 76 students

,junior high school with a total of 76 students, then there was also a postgraduate as many as 62 people, 4 teachers, 2 lecturers and 1 media.

### *Topic*

Learning tools is a theme with many topics. There are some topics that are considered easy and some that are still difficult for students (Fauzi & Fariantika, 2018; Fauzi & Mitalistiani, 2018). derived from the analysis, there are some articles that use only one particular topic; while others highlight with several different topics. Based on the table below, several topics were selected by researchers in their research at the level of lecturers, teachers, postgraduates, random people, students, high school and junior high school. In particular, EFL (English foreign language) is the most widely used topic for conducting research. A total of 4 publication articles review social media as learning tools with the theme EFL (English foreign language).

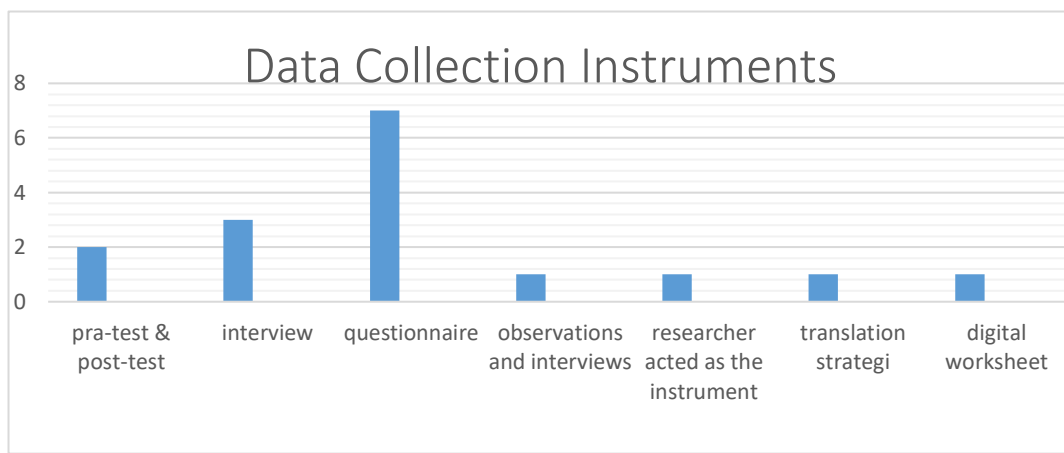
<b>Topics</b>	<b>Number of articles</b>
EFL	4
Students' Perception	1
impact of social media	1
innovative teaching method	1
Need Analysis	1
ONLINE LEARNING	1
ESL	1
STRATEGY	1
Students' Voices	1
Students' Motivation	1
Teaching Materials	1

### *Data Collection Instruments*

In conducting research, researchers need instruments to help them collect data. Social media as learning tools can be measured by various instruments developed by previous researchers. Based on the graph shown below, the test is the most widely used instrument to collect data about Social media as a learning tool.

From 2018 to 2022. In some studies whose instruments were observed There were 5 articles in 2020, which used question instruments 3, which used pre-test and post-test instruments There were 1, those using interview instruments there were 3, those using observation instruments there were 1. Then in 2021 there are 3 articles, those that use the instrument there are 2, those that use the instrument a digital worksheet there are 1, those that use the interview instrument there are 1. Then in 2022 there are 5 articles, which use the instrument The Researcher acted as the instrument there is 1, the using the questionnaire

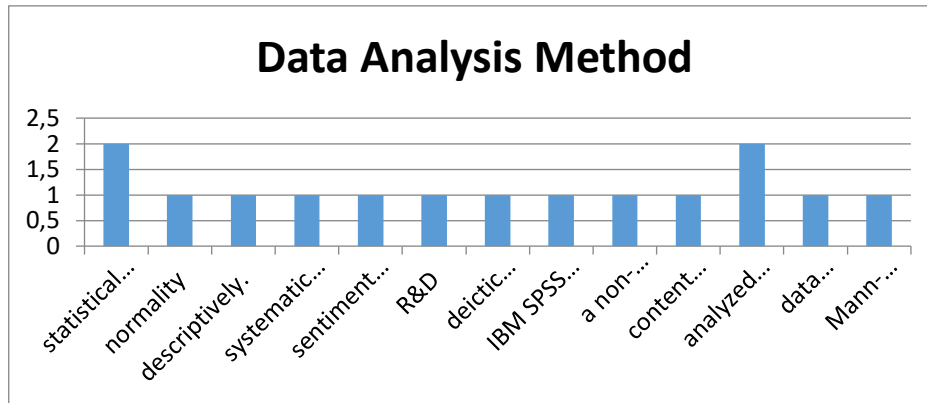
instrument There are 2, who use the instrument a post-test 1 , who use the instrument the translation strategies there is 1. some tests can be given to measure Social media as learning tools. The most commonly found in Indonesian publications is questionnaire Tests (QT). Some who use the test as the main data collection technique do not inform whether the instrument has been tested for validity and reliability. It is a key point that the validity and reliability of the instrument should be tested before it is used to collect any data (Bajpai & Bajpai, 2014). In other words, information about validity and reliability is considered important to convince the target reader.



### *Data Analysis Method*

In a study where in every research method that uses qualitative, it must also use descriptive analysis, even using mixed methods must be described using language narratives

This data analysis is also influenced by the research instruments used, in the table above the most widely used is statistical analysis and qualitative analysis because most of the instruments used are varied. The accuracy of the selection of methods for data analysis will determine the degree of validity of a study. These findings make it clear that researchers often use interview instruments and questionnaires to compare the achievements of two groups or classes.



## Discussion

The analysis of publication trends reveals a notable increase in research focused on social media as a learning tool since 2020. This rise, observed through fluctuating publication numbers, suggests a growing interest and recognition of social media's potential in educational settings. The initial surge in publications in 2020, followed by a dip in 2021 and a resurgence in 2022, indicates an evolving research landscape as scholars adapt to new challenges and opportunities presented by social media in education. This trend highlights a dynamic field where research efforts are responsive to emerging educational needs and technological advancements.

Regarding research types, the predominance of mixed-method approaches reflects a broader trend in educational research towards integrating quantitative and qualitative methods. This methodological preference allows for a more comprehensive analysis of social media's impact on learning. Mixed-method research combines the strengths of both qualitative and quantitative approaches, providing richer insights into how social media tools affect educational outcomes. This trend aligns with the growing emphasis on nuanced and multi-faceted evaluations of educational technologies.

The diversity of research subjects underscores the broad applicability of social media in education. Students remain the primary focus, reflecting their central role in educational research. The inclusion of various demographic groups, such as random individuals, high school students, and postgraduates, indicates an attempt to understand the effects of social media across different educational levels and contexts. This diversity in research subjects suggests that scholars are exploring social media's impact on various learner groups, aiming to generalize findings across different educational settings.



The topics covered in the research reveal a strong focus on English as a Foreign Language (EFL), which is the most frequently studied area. This emphasis on EFL suggests that social media's role in language learning is a significant area of interest, potentially due to the increasing use of digital platforms for language practice and instruction. Other topics, such as student motivation and innovative teaching methods, indicate an interest in understanding how social media can enhance various aspects of learning and teaching.

The data collection methods employed in the studies vary, with questionnaires being the most commonly used instrument. This preference highlights the ease and efficiency of gathering large-scale data on student perceptions and experiences with social media as a learning tool. However, the variability in instrument types and the occasional lack of reported validity and reliability raise concerns about the robustness of some studies. Ensuring rigorous testing of instruments is crucial for obtaining reliable and generalizable results, which can inform effective educational practices.

## CONCLUSIONS

This bibliometric study reveals a growing body of research on social media as a learning tool, with an increasing number of publications and a diverse range of research topics and subjects. The use of mixed-method approaches and the emphasis on EFL suggest a nuanced exploration of social media's role in education. However, the variability in data collection instruments and the need for greater transparency in reporting validity and reliability highlight areas for improvement. Overall, the findings underscore the significant impact of social media on educational practices and point to the need for ongoing research to fully understand and leverage its potential in learning environments.

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